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JOURNAL
of the
Malayan Branch
of the
Royal Asiatic Society

25072

Vol. VIII

1930

891.05

J.M.B.R.A.S.



This Journal forms the continuation of the Journal of the Straits Branch, Royal Asiatic Society, of which Nos. 1-86 were published 1878-1922.

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1931

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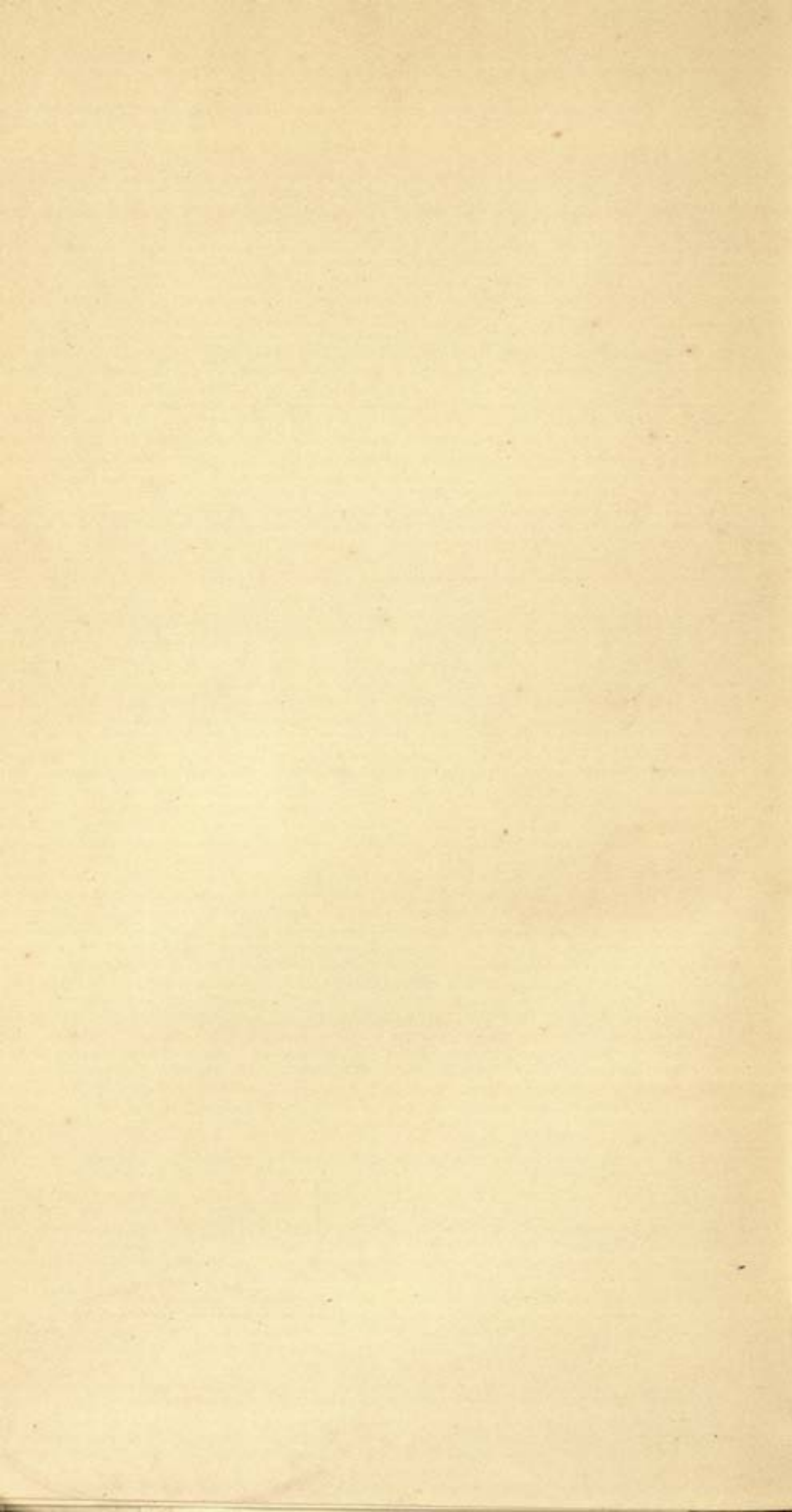
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Vol. VIII

Part I

JOURNAL

of the

Malayan Branch

of the

Royal Asiatic Society

=====
April, 1930.
=====

This Journal forms the continuation of the Journal of the Straits Branch, Royal Asiatic Society, of which Nos. 1-86 were published 1878-1922.

SINGAPORE
PRINTERS, LIMITED.
1930



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Annual Report.

of the
Malayan Branch, Royal Asiatic Society
for 1929.

Membership. On the last day of the year the Society consisted of 644 members as against 631 for the end of 1928. The membership roll included 14 Honorary Members, 2 Corresponding Members and 628 Ordinary Members.

The deaths include a recent President and two Honorary Members. Sir Hayes Marriott, K.B.E., C.M.G., only retired as President of the Society on 16th December 1928 and his death occurred very shortly after his arrival in England. He was elected a member of the Society in 1902, served as Councillor and Vice-President and finally as President in 1928. The Society was also notified of the death of Mr. W. R. Collyer, I.S.O., which took place in 1928. The late Mr. Collyer was elected a member in 1894 and in the Annual Report for 1907 we read:—

“In recognition of the long services of Mr. W. R. Collyer as Vice-President of the Society the Council elected him an Honorary Member of the Society.”

Mr. H. C. Robinson was also recently elected an Honorary Member (1927). He also was one of the senior members of the Society his election dating from 1904. Mr. Robinson served on the Council of the Society in 1920 and was a Vice-President on several occasions. His services to Malaysian Zoology are too well known to need more than mention here; he was co-author of a number of important papers contributed to the journal of the Society.

Thirty-eight new members were elected in 1929 as against forty-four in 1928.

The new members are:—

Abu Bakar, H. H. Tungku	Ehlers, R. H.
Anderson, D. K.	ffranck Sheppard, M. C.
Baddeley, S.	Gracie, A. J.
Beville Archer, J.	Gray, G. L.
Blagg, F.	Gregg, J. F. F.
Brooke, Miss Joyce	Griffiths Williams, G. C.
Cobden Ramsay, A. B.	Humphreys, A.
Corner, E. J. H.	Ingle, D.
Dalley, J. D.	Mace, N.
de Langlade, Baron Francois	Macgregor, R. O. C. R.
Dickinson, Mrs. W. G.	Mahmud bin Jintan
Edmett, L. R. J.	Pagden, H. T.

Phillips, W. J.	Smith, J. H.
Raja Rayman bin Raja Abdul Hamid	Smythe, H. W. St. Aubyn
Richards, D.	Stephenson, E. F.
Roberts, W. R.	Tait, W. S.
Scott, Hon. Mr. John, c.m.g.	Tatham, T. P. H.
Sloan, T. I.	Terry, R. A.
Smith, C. R.	Whyte, R. P.

Council. The Council records with regret the departure from Malaya of its distinguished patron, Sir Hugh Clifford, c.c.m.g., G.B.E. The President, the Hon. Mr. R. O. Winstedt, c.m.g., D.LITT., resigned in December on the occasion of his departure for Europe on furlough and Mr. C. Boden Kloss was elected President for the remainder of the year.

Annual General Meeting. The Annual General Meeting was held in the Society's Room at the Raffles Museum on February 18th.

Journal. Three journals were issued during the year. The Council intended to produce four numbers but an unexpected delay occurred in the delivery of the manuscript for Part IV when it was too late in the year to arrange for the printing of other papers.

The volume for the year consists of pp. I-XXXIII, 1-472, plates I-X and many text-figures.

The first part consists of a long treatise by Mr. E. N. Taylor, of the Malayan Civil Service, entitled "The Customary Law of Rembau." Parts two and three are both miscellaneous in character. Altogether the three journals include nineteen articles by ten contributors and should thus contain something to interest most members of the Society.

Finances. For several years past the Society has received a regular income from the Governments of the Straits Settlements and Federated Malay States.

In 1924 the Government of the Straits Settlements granted an annual subsidy of \$1,000 for five years; and in 1929 contributed a further sum of \$500.

The financial assistance rendered by the Government of the Federated Malay States also took the form of an annual subsidy of \$1,000 starting from 1924. In the first instance it was granted for three years and then renewed for a further period of three years. The two Governments came to the assistance of the Society at a critical moment of its existence and the Council desires to express its gratitude for the help it has received from official sources during the past six years.

Since the Society received its first annual grant from the Governments in 1924, six volumes of its journal have been published, the average number of pages in a journal being 468.

In 1929 all government subsidies ceased but, taking the long view, the financial position of the Society remained unsatisfactory. It was therefore decided to ask both Governments to continue their support for a further period of three years.

The Council is happy to announce that the appeal has met with success. The Government of the Straits Settlements has promised a contribution of \$500 per annum for a further period of three years starting in 1930: the Government of the Federated Malay States has granted \$500 for the year 1930 and has promised to consider the position again at the end of the year.

Payments for printing include \$1,340.70 for 1928 Journals. The Society's holding of \$2,200 in the S.S. 5½ per cent. loan, was transferred at par to Penang Municipal debenture stock 1929 (4¾%).

Delegation to Java: Presentation of Raffles' Bust to the Royal Batavian Society of Arts and Science.

An interesting event took place at the end of the year when a delegation went to Java and, on behalf of the Society, presented a bronze copy of the Chantrey bust of Sir Stamford Raffles to the "Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen" (the Royal Batavia Society of Arts and Letters).

At the time of the British occupation of Java, Raffles was the President of the Royal Batavia Society and on the eve of his final departure from Batavia consented to the Society's request to allow its agents in London to prepare a bust of himself as soon as possible after his arrival in England. Circumstances prevented the fulfilment of this project. Now, after an interval of one hundred and thirteen years, the omission is repaired and the Royal Batavian Society has received, at the hands of the Malayan Branch of the Royal Asiatic Society, the bust of one of its most distinguished Presidents for which it has waited so long.

The delegation to Java consisted of the President, Mr. C. Boden Kloss and the Hon. Secretary.

On the morning of the 23rd December a simple ceremony took place in the Weltevreden cemetery at the grave of Olivia Mariamne Raffles, the wife of the great proconsul.

Mr. Ch. J. I. M. Welter, Vice-President of the Council of the Indies and President of the Batavian Society of Arts and Sciences, laid a wreath on the grave in the name of the Society. Mr. Boden Kloss expressed thanks for the kindly thought which inspired this action and wreaths were also laid on the tomb on behalf of the

Malayan Branch of the Royal Asiatic Society, the British Protestant Community, the Raffles Society of Batavia, the Royal Empire Society and the Batavia Cricket Club.

On the evening of the 23rd of December in the hall of the Royal Batavia Society in the Presence of H. E. the Governor-General of the Netherlands East Indies, members of the Council of the Indies, the General Commanding the India Army, the heads of the various departments, members of the Consulate Corps, Professors, the members of the Society and a large gathering of the British Community, the formal presentation of the bust was made by Mr. Boden Kloss. Speeches were made by Mr. Ch. J. I. M. Welter, Mr. Boden Kloss, Prof. B. Schrieke and Sir Josiah Crosby, K.B.E. (British Consul-General).

A full account of the proceedings will appear in an early number of the journal for 1930.

F. N. CHASEN,
Hon. Secretary.

MALAYAN BRANCH, ROYAL ASIATIC SOCIETY

Receipts and Payments for the year ending 31st December, 1929.

RECEIPTS.				PAYMENTS.			
Cash				Printing.			
Balance at	Mercantile	Bank		Journal	Vol. VI part 2	..	\$ 668.00
January, 1st 1929	..	..	\$9,272.01	Vol. VI part 4	..	..	672.70
Petty cash in hand, 1-1-29	..	..	57.22	Vol. VII part 1	..	..	1,950.10
Brought forward from 1928	..	..	10.00	Vol. VII part 2	..	..	555.50
				Illustrations	..	..	347.43
				Reprints for authors	..	..	225.00
			9,339.23				
Subscriptions.							
For year 1928 and previously	..	..	200.00	Stationery	..	..	\$4,418.73
For year 1929	..	..	1,925.00	Furniture	..	..	234.61
For year 1930 & Subsequently.	..	..	285.00	Postages & other petty expenses	..	..	418.00
Life-memberships	..	..	185.00	Cheque commission, stamps,	..	..	182.25
				cheque books	..	..	16.98
Sales of Journals and Maps	..	..	2,595.00	Balance in Mercantile Bank	..	..	8,758.20
			532.90	December, 31st 1929	..	..
Government Grants.				Petty cash in hand December,	..	..	24.97
Straits Settlements	..	..	500.00	31st 1929	..	..	408.00
F. M. S. . . . .	..	..	1,000.00	Salaries	..	..
Interest.							
On investments	..	..	295.00				
On current account	..	..	199.61				
			494.61				
			\$14,461.74				\$14,461.74

Examined and found correct.

E. J. H. CORNER.

M. R. HENDERSON,

Hon. Treasurer.

List of Members for 1930.

(As on 1st January, 1930)

*LIFE MEMBERS.

Patron.

1930. CLEMENTI, H. E. SIR CECIL, K.C.M.G.

Honorary Members.

Year of Election.

- 1903, 1923. ABBOTT, DR. W. L., North-east Maryland, U.S.A.
1890, 1918. BLAGDEN, DR. C. O., School of Oriental Studies,
Finsbury Circus, London, England.
1921. BRANDSTETTLER, PROF. DR. R., Luzern, Switzerland.
1903, 1917. GALLOWAY, SIR D. J., Singapore. (Vice-President,
1906-7; President, 1908-13).
1895, 1920. HANITSCH, DR. R., 99, Woodstock Road, Oxford,
England. (Council, 1897-1919; Hon. Treasurer,
1898-1906, 1910-11, 1914-19; Hon. Secretary,
1912-13).
1922. Johore, H. H. THE SULTAN of, G.C.M.G., K.B.E., Johore
Bahru, Johore.
1903, 1927. MAXWELL, SIR W. G., K.B.E., C.M.G., 123, Oakwood
Court, Kensington, W. 14, England. (Council,
1905, 1915; Vice-President, 1911-12, 1916, 1918,
1920; President, 1919, 1922-3, 1925-6).
1921. Perak, H. H. THE SULTAN of, K.C.M.G., K.C.V.O.,
Istana Negara, Bukit Chandan, Kuala Kangsar,
Perak.
1890, 1912. RIDLEY, H. N., C.M.G., F.R.S., 7, Cumberland Road,
Kew Gardens, Surrey, England. (Council, 1890-4,
1896-1911; Hon. Secretary, 1890-3, 1896-1911).
1916. Sarawak, H. H. THE RAJAH of, G.C.M.G., Kuching,
Sarawak.
1885. SATOW, SIR E. M., Beaumont, Ottery St. Mary,
Devon, England.
1894, 1921. SHELLABEAR, REV. DR. W. G., 20, Whitman Avenue,
West Hartford, Conn., U.S.A. (Council. 1896-
1901, 1904; Vice-President, 1913; President,
1914-18).
1921. SNOUCK-HURGRONJE, PROF. DR. C., Leiden, Holland.
1921. VAN RONKEL, DR. P. H., Zoeterwoudsche Singel 44,
Leiden, Holland.

Corresponding Members.

1920. LAIDLAW, DR. F. F., Eastfield, Uffculme, Devon, England.
 1920. MERRILL, DR. E. D., New York Botanical Garden, Bronx Park, New York City, U.S.A.

Ordinary Members.

1921. *ABDUL AZIZ, ENSKU, Johore Bahru, Johore.
 1926. ABDUL AZIZ BIN AHMAD, District Forest Office, Taiping, Perak.
 1927. ABDUL GHANI BIN MOHAMED, Medical College, Singapore.
 1926. ABDUL HAMID BIN DATO KAYA, District Office, Klang, Selangor.
 1926. ABDUL HAMID BIN HUSSAIN, Pasir Mas, Kelantan.
 1918. ABDUL MAJID BIN HAJI ZAINUDDIN, HAJI, Political Intelligence Bureau, Singapore.
 1926. ABDUL MALEK BIN MOHAMED YUSUF, District Office, Bentong, Pahang.
 1926. ABDUL MANAF BIN MOHAMED HASSAN, Monopolies and Customs Office, Alor Star, Kedah.
 1926. ABDUL RAHMAN BIN YASSIN, 3, Jalan Chat, Johore Bahru, Johore.
 1923. *ABDULLAH BIN JA'AFAR, DATO, C.B.E., Tarom, Johore Bahru, Johore.
 1916. ABRAHAM, H. C., Topographical Department, Taiping, Perak.
 1929. ABU BAKAR of Johore, H. H., Johore Bahru.
 1907. *ADAMS, SIR A., K.B.E., Penang. (Vice-President, 1919).
 1921. ADAMS, C. D., The Residency, Sibn, Sarawak.
 1917. ADAMS, R. H., Singapore.
 1909. *ADAMS, T. S., Kuala Kangsar, Perak.
 1919. *ADELBORG, F., Pelepah Valley Rubber Estates, Kota Tinggi, Johore.
 1927. AGAMA, J., Forest Department, Sandakan, British North Borneo.
 1927. AHLSTON, A. T., Changkat Tin Dredging Ltd., Batu Gajah, Perak.
 1925. AHMAD, H. H. TUNGKU, ISTANA MARBLE, Johore Bahru, Johore.
 1926. AHMAD BIN MOHAMED ISA, District Office, Sungai Patani, Kedah.
 1926. AHMAD BIN OSMAN, District Office, Pekan, Pahang.
 1926. AHMAD BIN YAHYA, 363, Serangoon Road, Singapore.
 1921. AHMAD JALALUDDIN, Malay College, Kuala Kangsar, Perak.
 1926. AHMAD ZAINALABIDIN, TENGKU, Kota Bharu, Kelantan.
 1922. ALEXANDER, C. S., c/o The Crown Agents, 4, Millbank, London, England.

1924. ALEXANDER, J. A., 50, National Mutual Buildings, Smith Street, Durban, South Africa.
1927. ALLEN, B. W., Police Office, Kuala Lipis, Pahang.
1914. ALLEN, H. C. W., Boustead & Co., Ltd., Singapore.
1921. ALLEN, HON. MR. L. A., Perlis, Kedah.
1921. ALLEN, W. H. R., "Allerton," St. Anthony's Road, Blundellsands, Liverpool, England.
1927. ALOR STAR GOVERNMENT ENGLISH SCHOOL UNION, Alor Star, Kedah.
1926. AMBLER, G., Outram Road School, Singapore.
1929. ANDERSON, D. K., Mercantile Bank, Kuantan, Pahang.
1926. ANDERSON, CAPT. H. A., Commissioner of Police, Kota Bahru, Kelantan.
1921. ANDREINI, CAPT. E. V., Lower Rejang, Sarawak.
1929. ARCHER, J. B., Kuching, Sarawak.
1926. ARIFF, DR. K. M., The New Dispensary, 217, Penang Road, Penang.
1926. ATKIN-BERRY, H. C., Swan and Maclaren, Singapore.
1926. AUGUSTINE, J. F., Government English School, Alor Star, Kedah.
1908. *AYRE, C. F. C., Ipoh, Perak.
1929. BADDELEY, CAPT. S., c/o Harrison & Crosfields, Sandakan, British North Borneo.
1926. *BAGNALL, HON. MR. J., Straits Java Trading Co., Ltd., Singapore.
1919. *BAILEY, A. E., Keecha, Park Road, Leamington Spa, England.
1923. BAILEY, HON. MR. A. S., Kuala Lumpur, Selangor.
1926. *BAILEY, JOHN, British Vice-Consulate, Nakawan Lampang, Siam.
1915. BAIN, NORMAN K., Kuala Kangsar, Perak.
1926. BAIN, V. L., Forest Department, Bentong, Pahang.
1912. BAKER, CAPT. A. C., M.C., Adviser's Quarters, Muar, Johore, (Council, 1928).
1926. BAKER, LT. J. S.
1899. *BANKS, J. E., The American Bridge Co., Cambridge, Pa., U.S.A.
1920. BARBOUR, DR. T., Museum of Comparative Zoology, Harvard University, Cambridge, Mass, U.S.A.
1928. BARCOCK, F. G., Meranti Lapan Estate, Lahat, Perak.
1926. BARNARD, B. H. F., c/o Lloyds Bank, Burnham-on Sea, Somerset, England.
1921. BARNES, J. R., Kuching, Sarawak.
1926. BARRACLOUGH, F. C., Victoria Institution, Kuala Lumpur.
1923. BATHURST, H. C., Labour Department, Penang.
1914. BAZELL, C., Malay College, Kuala Kangsar, Perak. (Hon. Librarian, 1916-20; Hon. Treasurer, 1921-22).

1926. BEACH, N. B., Kinta Kellas, Batu Gajah, Perak.
 1921. BEARD, H., The Asiatic Petroleum Co., Ltd., Miri, Sarawak.
 1923. BECKER, F. E., Wessyngton Estate, Rengam, Johore.
 1928. BECKETT, O., Land Office, Malacca.
 1925. BEE, R. J., c/o F.M.S. Railways, Kelantan.
 1921. BELGRAVE, W. N. C., Department of Agriculture, Kuala Lumpur.
 1910. *BERKELEY, CAPT. H., I.S.O., Clink Gate, Drowitwich, England.
 1927. BEST, G. A., Botanic Gardens, Singapore.
 1928. BEYER, PROF. H. O., 212, Nebraska Street, Manila, Philippine Islands.
 1912. *BICKNELL, J. W., U. S. Rubber Plantations, Medan, Sumatra.
 1884. BICKNELL, W. A., 2, Philips Avenue, Exmouth, Devon, England.
 1922. BIGGS, L. A. C., c/o Bank of New Zealand, Napier, Hawkes Bay, New Zealand.
 1924. BIRD, R., Batu Pahat, Johore.
 1926. BIRKINSHAW, F., Agricultural Department, Kuala Lumpur.
 1926. BIRTWISTLE, W., Fisheries Department, Singapore.
 1908. *BISHOP, MAJOR C. F., R.A.
 1922. BISHOP, D. A., Raffles Institution, Singapore.
 1923. BLACK, J. G., Asst. Adviser's Office, Trengganu.
 1921. BLACK, MAJOR K., M.C., General Hospital, Singapore.
 1926. BLACKBURN, H. K., Malim Nawar South Ltd., Malim Nawar, Perak.
 1923. *BLACKER, DR. G. O., "Sentosa," Brooklands Road Sale, Manchester, England.
 1929. BLAGG, F. O., Kuching, Sarawak.
 1926. BLAIR, R. W., Institute for Medical Research, Kuala Lumpur.
 1884. BLAND, R. N., 25, Earl's Court Square, London, S.W. 5. (Council, 1898-1900; Vice-President, 1907-9).
 1921. BLASDELL, REV. R., Frewsbury, New York, U.S.A.
 1926. BLOOMFIELD, C. W., Education Department, Alor Star, Kedah.
 1925. BLYTHE, W. L., Chinese Protectorate, Johore.
 1926. *BOSWELL, A. B. S., Forest Department, Taiping, Perak.
 1910. BOULT, F. F., The Residency, Kuching, Sarawak.
 1919. *BOURNE, F. G., Coroner's Office, Singapore.
 1921. BOYD, R., Co-operative Societies Department, Penang.
 1927. BOYD, T. R., Hongkong Bank, Kuala Lumpur, Selangor.
 1928. BOYD, MR. JUSTICE T. STIRLING, Kuching, Sarawak.
 1910. *BOYD, W. R., Colonial Secretariat, Singapore.

1913. BRADDELL, R. ST. J., Braddell Brothers, Singapore.
1926. BRETHERTON, E. H. S., c/o Lloyds Bank Ltd., 6, Pall Mall, London.
1926. BRIDGES, DR. D., Alor Star, Keddah.
1897. BROCKMAN, SIR E. L., K.C.M.G., c/o F.M.S. Agency, Cockspur Street, London, England.
1929. BROOKE, Miss JOYCE, c/o Secretariat, Singapore.
1926. BROOKS, A. C., Government Analyst's Office, Singapore.
1909. BROOKS, C. J., Church Gate House, Woolpit, Suffolk, England.
1915. BROWN, C. C., Taiping, Perak. (Vice-President, 1925).
1910. BROWN, D. A. M., Glugor, Penang.
1921. BROWNE, T. W., St. Hilier Estate, Bahau, Negri Sembilan.
1913. *BRYAN, J. M., Borneo Co., Ltd., 28, Fenchurch Street, London.
1887. BRYANT, A. T., The Moorings, Falmouth, Cornwall, England. (Council, 1907-10; Vice-President, 1912, 1914-16).
1926. BUCKLE, Miss D. M., Raffles' Girls School, Singapore.
1926. *BURTON, W., Kuala Lumpur.
1921. BUTTERFIELD, H. M., Alor Star, Kedah.
1913. *CALDECOTT, A., Post Office, Kuala Lumpur, Selangor.
1925. CALLENFELS, DR. P. VAN STEIN, Madiun Ponorogo, Java.
1916. CAMPBELL, PROF. J. A., National Institute for Medical Research, Hampstead, London, England. (Council, 1917, 1919).
1926. CARDON, REV. FR. R., Taiping, Perak.
1926. CARDWELL, H. F., Tangkah Estate, Tangkah, Johore.
1925. CAREY, H. R., Malay College, Kuala Kangsar, Perak.
1924. CARR, C. E., Tembeling, Pahang.
1927. CARROLL, A. F., Forest Office, Kuala Lipis, Pahang.
1926. CARVER, G. S., Donaldson and Burkinshaw, Singapore.
1921. *CAVENDISH, A., Kuala Lumpur, Selangor.
1926. CHAN SZE ONN, 64, Market Street, Singapore.
1906. CHAPMAN, W. T., c/o The Crown Agents, 4, Millbank, London.
1926. CHARTER, J. R. N., Johore Bahru, Johore.
1921. CHASEN, F. N., Raffles Museum, Singapore, (Council, 1925; Hon. Secretary, 1927—).
1924. *CHEESEMAN, H. R., Education Department, Johore Bahru, Johore.
1926. CHELLIAH, D. D., Anglo Chinese School, Penang.
1913. *CHOO KIA PENG, Kuala Lumpur, Selangor.
1913. CHULAN, HON. RAJA DI HILIR, C.M.G., Kuala Kangsar, Perak.

1927. CLARK, B. F., c/o Adamson Gilfillan & Co., Ltd., Pontianak, W. Borneo.
1921. CLARK, H. T., Education Office, Singapore.
1926. *CLARKE, G. C., "Tilton," 14, Gallop Road, Singapore.
1929. CLARKE, W. L., Sibuluan, Sarawak.
1923. CLARKSON, H. T., Raffles Hotel, Singapore.
1921. CLAYTON, G. E., Alor Star, Kedah.
1926. CLAYTON, HON. MR. R. J. B., The Residency, Kota Bharu, Kelantan.
1911. *CLAYTON, T. W., Alor Star, Kedah.
1925. CLEGG, R. P., c/o H. Clegg Sunnymede, Princes Road, Felixstowe, Suffolk, England.
1917. CLIFFORD, G. F. W. Lawas (Sarawak) Rubber Estates, Ltd., Lawas, Labuan.
1929. COBDEN-RAMSAY, A. B., c/o The Secretariat, Singapore.
1922. COCHRANE, THE HON. MR. C. W. H., The Residency, Taiping, Perak.
1922. COE, CAPT. T. P., Kota Bharu, Kelantan.
1926. COLEMAN, C. G., High School, Malacca.
1920. *COLLENETTE, C. L., Gothic Lodge, Woodford Green Essex, England. (Council, 1922).
1926. COLLINS, G. E. P., c/o Mansfield & Co., Ltd., Penang.
1928. COLOMB, R. E., Forest Department, Telok Anson, Perak.
1926. COMMANDANT, THE, Police Depot, Kuala Lumpur, Selangor.
1926. CONSERVATOR OF FORESTS, F.M.S. and S.S., Kuala Lumpur.
1923. COOKSON, W. S., Seldings Estate, Selama, Perak.
1926. COOPE, A. E., Federal Secretariat, Kuala Lumpur, Selangor.
1928. COOPER, B., Survey Department, Malacca.
1927. COOPER, C. B., Jalan Ah Fook, Johore Bahru, Johore.
1926. COOPER, R. H., The Eastern Smelting Co., Kuala Lumpur.
1929. CORNER, E. J. H., Botanic Gardens, Singapore.
1925. CORRY, W. C. S., Asst. Collector Land Revenue, Kuala Lumpur.
1926. COSGRAVE, DR. A. K., Kuala Lumpur, Selangor.
1921. COULSON, N., Kota Bharu, Kelantan.
1921. COWAP, J. C., Government Analyst's Office, Singapore.
1923. *COWGILL, J. V., Land Office, Kuala Lumpur, Selangor.
1921. CRANNA, GORDON, Young Men's Christian Association, Singapore.
1921. CROCKER, H. B., Kuching, Sarawak.
1922. CROSS, A. B., c/o Cross and Wright, Seremban, Negri Sembilan.
1921. *CULLEN, W. G., c/o Price Waterhouse & Co., Aguiar 71, Havana, Cuba.

1925. CULLIN, E. G., Lumut, Dindings.
 1927. CUMMING, C. E., Floral Villa, Ipoh, Perak.
 1928. CUNNINGHAM, F., Port Dickson, Negri Sembilan.
 1923. CURTIS, R. J. F., District Office, Dindings.
 1926. DAKERS, C. H., Police Courts, Singapore.
 1929. DALLEY, J. D., F.M.S. Police, Kuala Lumpur.
 1922. DALTON, H. G., Subur Rubber Estates, Ulu Sepatang P.O., Perak.
 1923. DALTON, N. D., Gadek Estate, Tampin.
 1910. *DALY, M. D., Kuala Lumpur, Selangor.
 1924. DATO MUDA ORANG KAYA KAYA, Panglima Kinta, Jalan Istana, Ipoh, Perak.
 1918. *DAVID, P. A. F., c/o The Crown Agents, 4, Millbank, London.
 1926. DAVIDSON, J., c/o Caldbeck, Macgregor & Co., Kuala Lumpur.
 1928. DAVIDSON, W. W., c/o Public Works Department, Batu Pahat, Johore.
 1925. DAVIES, D. J., Sungei Purun Estate, Semenyih, Selangor.
 1927. DAVIES, E. R., Malay College, Kuala Kangsar, Perak.
 1926. DAVIES, G. C., Victoria Institution, Kuala Lumpur, Selangor.
 1927. DAWSON, C. W., Colonial Secretariat, Singapore.
 1928. DAWSON, W., Merewether Road, Lumut, Dindings.
 1923. DAY, E. V. G., Asst. Adviser's Office, Besut, Trengganu.
 1926. DEL TUFO, M. V., Labour Office, Penang.
 1922. DENNY, A., Sungai Pelek Estate, Sepang, Selangor.
 1903. *DESHON, H. F.
 1929. DICKINSON, MRS. W. J., Bandoeng, Java.
 1897. DICKSON, E. A., Batu Gajah, Perak.
 1921. *DICKSON, REV. P. L., Long Marston Vicarage, Tring, Herts, England.
 1927. DIRECTOR OF PUBLICATIONS, Princes Street, Westminster, London, S.W.1, England.
 1927. DODD, G. C., District Judge, Malacca.
 1920. DODDS, DR. H. B., Kulim, Kedah.
 1926. *DOLMAN, H. C., Forest Office, Kuala Kangsar, Perak.
 1923. *DOSCAS, A. E., Coleman, Department of Agriculture, Kuala Lumpur, Selangor.
 1922. DRURY, CAPT. F., Bukit Zahara School, Johore Bahru, Johore.
 1921. DRYBURGH, A. M., Colonial Secretariat, Singapore.
 1926. DUFF, DR. R. W., Taiping, Perak.
 1910. DUNMAN, W., Grove Estate, Grove Road, Singapore.
 1926. DUNN, DR. E. R., Haveford College, Haveford, Penn., U.S.A.
 1915. *DUSSEK, O. T., Sultan Idris Training College, Tanjong Malim, Perak.

1922. EBDEN, W. S., 11, Scotland Road, Penang.
 1922. ECKHARDT, HON. MR. H. C., Alor Star, Kedah.
 1922. EDGAR, A. T., Suffolk Estate, Sitiawan, Perak.
 1929. EDMETT, L. R. J., Kuching, Sarawak.
 1927. EDUCATION DEPARTMENT, Alor Star, Kedah.
 1926. EDWARDS, MAJOR W. A. D., Baling, Kedah.
 1885. EGERTON, SIR WALTER, Fair Meadow, Mayfield, Sussex, England.
 1929. EHLERS, R. H., Kuala Gris Estate, Ulu Kelantan.
 1921. ELDER, DR. E. A., The British Dispensary, Singapore.
 1926. ELEY, H. J., "Axwell," 18, Stomcliffe Avenue, West Southbourne, Bournemouth, England.
 1922. ELLES, HON. MR. B. W., The Residency, Alor Star, Kedah.
 1918. ELLIOTT, F. M., Treskelly, Maruhull, Dorset, England.
 1924. ELSTER, C., Kuala Han Estate, Kelantan.
 1926. ENSOR, T. D., c/o Messrs. Neill & Bell, 1, Old Market Square, Kuala Lumpur, Selangor.
 1913. ERMEN, C., c/o Lloyds Bank, Brixham, South Devon, England.
 1923. *EU TONG SENG, O.B.E., Sophia Road, Singapore.
 1924. EVANS, I. H. N., The Museum, Taiping, Perak. (Vice-President, 1926-7; 1928-9).
 1925. FAIRBURN, HON. MR. H., Stevens Road, Singapore.
 1927. FARRELLEY, G. A., Sandakan, British North Borneo.
 1909. FARRER, R. J., C.M.G., Municipal Offices, Singapore, (Council, 1925-7).
 1929. FENWICK, C., c/o The Borneo Co., Kuching, Sarawak. (Council, 1912-13).
 1911. *FERGUSON-DAVIE, RT. REV. C. J.
 1909. FERRIER, J. C., 28, Fenchurch Street, London, England.
 1928. FINDLAY, C. S., c/o Secretariat, Singapore.
 1917. FINLAYSON, DR. G. A., "Changi," West Moors, Dorset, England.
 1919. *FINNIE, W., 73, Forest Road, Aberdeen, Scotland.
 1925. FITZGERLAND, DR. R. D., c/o Glyn Mills & Co., 3, Whitehall Place, London, S.W.1, England.
 1924. FLEMING, E. D., Chinese Protectorate, Taiping, Perak.
 1926. FLIPPANCE, F., Botanic Gardens, Penang.
 1897. *FLOWER, MAJOR S. S., Spencersgreen, Tring, Herts, England.
 1928. FOENANDER, E. C., District Forest Office, Mentakab, Pahang.
 1926. FORBES, G. D., Kinta Kellas Estate, Batu Gajah, Perak.
 1926. FORD, P. B., 60, Klyne Street, Kuala Lumpur, Selangor.

1923. FOREST BOTANIST, THE, Forest Research Institute, Dehra Dun, U.P. India.
1921. FORRER, H. A., District Court, Kuala Lumpur.
1918. *FOXWORTHY, DR. F. W., Forest Department, Kuala Lumpur, Selangor. (Council, 1923, 1926-7).
1921. *FRASER, F. W., The Badminton Club, 100 Piccadilly, London, W.1.
1908. *FREEMAN, D., 16, St. Catherine's Road, Southbourne, Bournemouth, Hants, England.
1926. FRODA, A. H., Ipoh Club, Ipoh, Perak.
1910. *FROST, HON. MR. MEADOWS, Resident Councillor, Malacca.
1922. FULLER, J. C., c/o General Post Office, Malacca.
1912. *GALLAGHER, W. J., U. S. Plantations Inc., Medan, Sumatra.
1924. GAMMANS, L. D., East Court, East Cosham, Hants, England.
1917. *GARNIER, REV. Keppel, Penang.
1923. GATER, B. A. R., Institute for Medical Research, Kuala Lumpur.
1926. GATFIELD, W. H., Chinese Protectorate, Singapore.
1928. GEAKE, F. H., c/o Government Analyst, Singapore.
1920. GEALE, DR. W. J., Kuala Krai, Kelantan.
1926. *GEORGE, J. R., The Chartered Bank, Singapore.
1917. *GERINI, LT.-COL. G. C.,
1927. GERMAN, R. L., Federal Secretariat, Kuala Lumpur, Selangor.
1928. GILLET, PROF. E. W., Raffles College, Cluny Road, Singapore.
1923. GILMOUR, A., District Office, Klang.
1902. *GIMLETTE, DR. J. D., Hillside, Upper Weston, Bath Somerset, England.
1922. *GLASS, DR. G. S., Municipal Offices, Penang.
1928. GLOVER, A. H., Municipal Offices, Malacca.
1918. GLOYNE, G. B., c/o Burt Myrtle & Co., Batavia, Java.
1916. GOODMAN, HON. MR. A. M., Chinese Protectorate, Singapore.
1922. GORDON, T. I. M., General Post Office, Singapore.
1920. GORDON-HALL, CAPT. W. A., c/o The Crown Agents, 4, Millbank, London.
1926. GOSS, P. H., Survey Department, Malacca.
1909. GOULDING, R. R., Survey Department, Johore Bahru, Johore.
1929. GRACIE, A. J., Kuala Trengganu, Trengganu.
1926. GRAEME, A. W. S., Sentul, Selangor.
1927. GRAHAM, H. GORDON, Sungei Kruit Estate, Sungkai, Perak.
1924. GRAHAM, W. H., Malacca.
1929. GRAY, G. L., Sandakan, British North Borneo.
1928. GREAD, R. E., Sitiawan, Lower Perak.

1923. GREEN, DR. P. WITNERS, Johore Bahru, Johore
 1926. GREENE, R. T. B., Institute for Medical Research, Kuala Lumpur.
 1929. GREGG, J. F. F., Land Office, Malacca.
 1928. GREGSON, CAPT. H. ST. JOHN-RUSSEL-DE LVS, Chartered Bank, Singapore.
 1924. GREIG, G. E., Kuala Lumpur, Selangor.
 1926. GRICE, N., Chinese Protectorate, Johore Bahru, Johore.
 1923. GRIEVE, C. J. K., Post Box No. 58, Klang, Selangor.
 1921. GRIFFITHS, C. S., Kuching, Sarawak.
 1911. GRIST, D. H., Department of Agriculture, Kuala Lumpur.
 1922. GUBBINS, W. H. W., c/o Mansergh and Taylor, Seremban, Negri Sembilan.
 1926. GUMMER, W. A., Survey Dept., Kulim, Kedah.
 1925. GUNN, R. F., Education Department, Penang.
 1916. GUPTA, SHIVA PRASAD, Naudansahu Street, Benares City, India.
 1923. *HACKER, DR. H. P., Zoological Department, University College, London, W.C.1, England.
 1923. HAINES, MAJOR O. B., Selama, Perak.
 1923. HAKE, H. EGMONT, Barker & Co., Kuala Lumpur.
 1923. HALFORD, SIDNEY, F. M. S. Railways Construction Department, Kuala Lumpur, Selangor.
 1927. HALL, A. S., c/o Gammon & Hall, Ltd., Taiping, Perak.
 1914. HALL, J. D., c/o Colonial Secretariat, Singapore, (Council, 1924, 1926-28).
 1911. *HALLIFAX, F. J., Oakwood, Brampton, Cumberland, England.
 1915. HAMILTON, A. W., Chief Police Office, Alor Star, Kedah. (Vice-President, 1922, 1925, 1929—).
 1918. HAMPSHIRE, HON. MR. A. K. E., Kuala Lumpur, Selangor.
 1922. HAMPSHIRE, HON. MR. D. H., c/o Boustead & Co., Ltd., Kuala Lumpur, Selangor.
 1924. HAMZAH BIN ABDULLAH, Land Office, Kuala Lumpur, Selangor.
 1923. HANCOCK, A. T., 22-2, Tanglin Road, Singapore.
 1922. HANITSCH, P. H. V., 99, Woodstock Road, Oxford, England.
 1909. HARRINGTON, A. G.
 1922. HARROWER, PROF. G., Medical College, Singapore.
 1921. HASHIM, CAPT. N. M., Parit Buntar, Perak.
 1926. *HASTINGS, W. G. W., 56, Klyne Street, Kuala Lumpur, Selangor.
 1928. HAUGHTON, A. DE BURGH, Kua'a Reman Rubber Estates, Ltd., Kuantan, Pahang.
 1926. HAWKES, CAPT. W. B., c/o T. Orchard, Esq., The Grange, Hallatrow, near Bristol, England.

1921. HAWKINS, G., The Secretariat, Kuala Lipis, Pahang.
 1925. HAY, A. W., Chinese Protectorate, Singapore.
 1919. HAY, M.C., Kemaman, Trengganu.
 1921. HAYES, L. J., Fraser & Co., Singapore.
 1904. *HAYNES, A. S., Federal Secretariat, Kuala Lumpur, Selangor. (Council, 1920).
 1928. HEAH JOO SEANG, c/o Hin Giap Co., 195, Victoria Street, Penang.
 1922. HELTINGS, G. S., Estate Duty Officer, Kuala Lumpur.
 1926. HELPS, A., Alor Star, Kedah.
 1923. HEMMANT, G., C.M.G., Colonial Secretariat, Singapore.
 1926. HENDERSON, CAPT. A. M., Sandala Estate, Sandakan, British North Borneo.
 1925. HENDERSON, L., Sultan Idris Training School, Tanjong Malim, Perak.
 1921. HENDERSON, M. R., Botanic Gardens, Singapore, (Council, 1928; Hon. Treasurer 1928—).
 1923. HENGGELE, A. A., Kuala Lumpur, Selangor.
 1917. HEREFORD, G. A.
 1927. HEROD, E. J., c/o The British Borneo Timber Co., Sandakan, British North Borneo.
 1926. HERON, F. R., Singapore Cold Storage Co., Singapore.
 1921. HEWITSON, C., c/o Lyall & Evatt, Singapore.
 1923. *HICKS, E. C., Education Department, Alor Star, Kedah.
 1878. HILL, E. C., 26, Highfield Hill, Upper Norwood, London.
 1922. HILL, W. C., Singapore Oil Mills, Ltd., Havelock Road, Singapore.
 1922. HINDE, C. T., Mersing, Johore.
 1923. *HODGSON, D. H., Forest Department, Kuala Lumpur, Selangor.
 1921. HOLGATE, M. R., c/o Education Department, Malacca.
 1926. HOLL, E. S., Kuching, Sarawak.
 1923. HOLLAND, A. D., Kapoewas Rubber Co., Ltd., Sungei Dekan, Pontianak, Borneo.
 1922. HOLTUM, R. E., Botanic Gardens, Singapore. (Hon. Treasurer, 1923-6, 1928; Vice President 1929—).
 1921. HOOPS, HON. DR. A. L., Singapore. (Council 1929).
 1897. HOSE, E. S., C.M.G., The Manor House, Normandy, Guildford, England. (Vice-President, 1923, 1925; President, 1924).
 1926. HOWITT, C. R., Jasin, Malacca.
 1926. HOWL, CAPT. F. W., c/o Federal Secretariat, Kuala Lumpur.
 1891. HOYNCK, VAN PAPENDRECHT, P. C., 38, Avenue Hoche, Paris VIII, France.
 1909. HUBBACK, T. R., Sunlaws, Bukit Betong, Kuala Lipis, Pahang.

1922. HUGGINS, CAPT. J., Federal Secretariat, Kuala Lumpur.
1909. HUGHES, J. W. W., District Office, Klang, Selangor.
1926. HUGHES, R. W., Boustead & Co., Ltd., Singapore.
1929. HUMPHREYS, A., Kuching, Sarawak.
1922. HUNT, CAPT. H. NORTH, District Office, Raub, Pahang.
1921. HUNTER, DR. P. S., Municipal Offices, Singapore.
1926. HUSSAIN BIN MOHAMED TAIB, District Office, Temerloh, Pahang.
1929. HUTCHINSON, DR. W., Kuching, Sarawak.
1925. HYDE, A., c/o Colonial Secretariat, Singapore.
1926. *INCE., H. M., Langkon, British North Borneo.
1929. INGLE, D., Kota Belud, via Jesselton, British North Borneo.
1922. IRVINE, CAPT. R., c/o Mrs. Romanes, 28, St. Alban's Road, Edinburgh, Scotland.
1921. ISMAIL BIN BACOK, DATO, Johore Bahru, Johore.
1926. ISMAIL BIN HAJI PUTEH, Monopolies and Customs, Kulim, South Kedah.
1921. IVENS, F. B., c/o Bannon & Bailey, Kuala Lumpur.
1921. *IVERY, F. E., Alor Star, Kedah.
1926. JACKSON, A., Mansfield & Co., Ltd., Singapore.
1925. JACQUES, E. V. H., Kuching, Sarawak.
1922. JAGO, E., District Office, Tanjong Malim, Perak.
1918. *JAMES, D., Goebilt, Sarawak.
1927. JAMIESON, M., c/o Government Analyst, Singapore.
1907. JANION, E. M., 5, Gracechurch Street, London, E.C.3, England.
1918. JANSEN, P. J., 6, Wilhelminalaan, Park de Kieviet, Wassenaar, Holland.
1926. JEFFERSON, J. P., Miri, Sarawak.
1926. JEFFERSON, J. W., Education Office, Clark Street, Kuala Lumpur, Selangor.
1921. *JERMYN, L. A. S., Government English School, Batu Pahat, Johore.
1926. JERVOISE, R. S., Krian, Perak.
1910. JOHNSON, B. G. H., Crossways, Littlehampton, Sussex, England.
1925. JONES, A. E. THORNLEY, Mansfield & Co., Ltd., Singapore.
1918. *JONES, E. P.
1913. JONES, S. W., Johore Bahru, Johore.
1919. *JORDAN, A. B., Sanitary Board, Ipoh, Perak.
1926. KAHAR BIN YAMTUAN ANTAH, Tengku, Kuala Pilah, Negri Sembilan.
1926. KASSIM BIN CHE ISMAIL, State Council Office, Alor Star, Kedah.
1921. KASSIM BIN SULTAN ABDUL HAMID HALIMSAH, Tengku, Alor Star, Kedah.
1921. *KAY-MOUAT, DR. J. R., Medical College, Singapore.

1927. KEBLE, W. T., Sandakan, British North Borneo.
 1926. KEET, MRS. H. G., c/o The Inspector of Schools, Singapore.
 1926. KEIR, A., Education Office, Taiping, Perak.
 1926. KEITH, H. G., Forest Department, Sandakan, British North Borneo.
 1921. *KELLIE, J., Dunbar Estate, Neram Tunggal, P.O. Chegar Perah, Pahang.
 1913. KEMPE, J. E., Weir Cottage, Knighton, Radnorshire, England.
 1920. *KER, W. P. W., Paterson, Simons & Co., Ltd., Singapore.
 1920. *KERR, DR. A., Wireless Road, Bangkok, Siam.
 1926. KHOO SIAN EWE, 24, Light Street, Penang.
 1921. KIDD, G. M., District Office, Tampin, F.M.S.
 1920. KING, E. M., Kong Lee (Perak) Plants, Ltd., Bagan Serai, Perak.
 1927. KING, S. E., The Chinese Protectorate, Singapore.
 1926. KINGSBURY, DR. A. N., Institute for Medical Research Kuala Lumpur, Selangor.
 1926. KINNEIR, DR. D., Rim Estate, Jasin, Malacca.
 1921. KITCHING, T., Superintendent of Surveys, Trengganu.
 1900. KLOSS, C. BODEN, Raffles Museum, Singapore. (Council, 1904-8, 1923, 1927-8; Vice-President, 1920-1, 1927; Hon. Secretary, 1923-6).
 1915. KNIGHT, V., Fairgreen Cottage, Glemsford, Suffolk, England.
 1914. LAMBOURNE, J., Department of Agriculture, Kuala Lumpur.
 1926. LAMIN BIN KASSIM, Police District, Lahat, Perak.
 1929. LANGLADE, BARON FRANCOIS DE, Budu Estate, Raub, Pahang.
 1926. LANKAMIN BIN HAJI MUHAMMAD TAHIR, Kuala Krai, Kelantan.
 1925. LAWES, G. W., Police Headquarters, Kuala Lumpur, Selangor.
 1927. LAYCOCK, J., c/o Braddel Bros., Singapore.
 1926. LAYMAN, E. C. H., Section Engineers Office, F.M.S. Railways, Kuala Gris, Kelantan.
 1923. *LEASE, F. E., The Shanty, Chislehurst Hill, Chislehurst, Kent.
 1921. *LEE, L. G., Labu Estate, Brunei.
 1922. *LEGGATE, J., Railway Construction, Kuala Lumpur, Selangor.
 1913. *LEICESTER, DR. W. S., Kuantan, Pahang.
 1894. *LEMON, A. H., C.M.G., Hillbrow, Reigate, Surrey, England. (Vice-President, 1916-18).
 1920. LENDRICK, J., 30, Norre Alle, Aarhus, Denmark.
 1926. LEONARD, H. G. R., Treasury, Kuala Lumpur, Selangor.
 1925. *LEONARD, R. W. F., Mansfield & Co., Ltd., Singapore.

1926. LEUTHOLD, W. H., Hooglandt & Co., Singapore.
 1890. LEWIS, J. E. A., Harada 698, Kobe, Japan.
 1926. LEWIS, MISS M. B., 28, Stacey Road, Cardiff, S. Wales.
 1928. LEWIS, T. P. M., Maxwell Road, Ipoh, Perak.
 1927. LEYH, S. G. H., Colonial Secretariat, Singapore.
 1922. LEYNE, E. G., c/o The Chartered Bank of India, 38, Bishopsgate, London, England.
 1926. LIM CHENG KING, c/o The Criterion Press, Ltd., Penang.
 1915. LIM CHENG LAW, 70, Beach Street, Penang.
 1926. LIM ENG KAH, 6-J, Old Pudu Road, Kuala Lumpur, Selangor.
 1925. LINEHAN, W., Kuala Lipis, Pahang.
 1928. LOCH, C. W., Tronoh Mines, Ltd., Kampar, Perak.
 1926. LOGAN, S. S., Chartered Bank, Klang, Selangor.
 1918. LOH KONG IMM, 12, Kia Peng Road, Kuala Lumpur, Selangor.
 1914. LORNIE, HON. MR. J., The Residency, Kuala Lumpur, Selangor.
 1922. LOWINGER, V. A., Survey Department, Kuala Lumpur, Selangor.
 1907. *LYONS, REV. E. S., c/o The Methodist Publishing House, Manila, Philippine Islands.
 1926. MACASKILL, DR. D. C., Kuala Lumpur, Selangor.
 1920. *MACBRYAN, G. T. M., Bedil House, Sarawak.
 1926. MACDONALD, J., Chartered Bank, Kuala Lumpur, Selangor.
 1929. MACE, N., Survey Dept., Kuching, Sarawak.
 1910. *MACFADYEN, E., c/o Sports Club, London, England.
 1929. MACGREGOR, R. O. C. R., Sentool Estate, Djember, East Java.
 1920. MACKIE, VIVIAN, Kuala Lumpur, Selangor.
 1922. MACKNESS, L. R., Kuala Lumpur, Selangor.
 1921. MACMILLAN, I. C., S.S. Police, Singapore.
 1918. MADGE, RAYMOND, Kuala Lumpur, Selangor.
 1929. MAHMUD BIN JINTAN, Malay College, Kuala Kangsar, Perak.
 1924. MAHMUD BIN MAT, District Office, Kuala Lipis, Pahang.
 1923. MAHMUD BIN MOHAMED SHAH, Batu Pahat, Johore.
 1903. MAKEPEACE, W., 22, Holmes Grove, Henleaze, Bristol, England. (Council, 1914, 1916, 1920; Hon. Libr., 1909-12; Vice-President, 1917; Hon. Secretary, 1918-19).
 1928. MALACCA LIBRARY, THE, Malacca.
 1926. MALAY COLLEGE, THE, Kuala Kangsar, Perak.
 1927. MALLESON, B. K., Sungei Kruit Estate, Sungkai, Perak.
 1921. MANCHESTER, H. L., Municipal Offices, Singapore.
 1916. MANN, W. E., c/o Burt Myrtle & Co., Batavia, Java.

1929. MARJORIBANKS, DR. E. M., Kuching, Sarawak.
 1907. *MARRINER, J. T., Pantiles, Frinton, Essex, England.
 1926. MARSDEN, H., Institute for Medical Research, Kuala Lumpur.
 1920. MARSH, W., Municipal Offices, Singapore. (Council 1929).
 1927. MARSHALL, A. O., Borneo Motors, Ltd., Kuala Lumpur.
 1925. *MARTIN, W. M. E., 12, Norham Road, Oxford, England.
 1923. MARTYN, C. D., Jesselton, British North Borneo.
 1921. MATHER, N. F. H., Federal Secretariat, Kuala Lumpur, Selangor.
 1926. MATTHEWS, J. J., Krubong Estate, Alor Gajah, P.O., Malacca.
 1921. MAXWELL, C. N., Sitiawan, Perak.
 1922. MAY, P. W., c/o Spicers Export, Ltd., 51, Robinson Road, Singapore.
 1928. MAYNE, A. F., Kelubi Estate, Jitra, Kedah.
 1914. MEAD, J. P., Batu Gajah, Perak.
 1924. MEADE, J. M., Telok Anson, Perak.
 1928. MEE, B. S., Forest Department, Kuala Lumpur, Selangor.
 1927. MEGAT YUNUS BIN ISA, Land Office, Telok Anson, Perak.
 1928. MEYER, L. D., Revenue Surveys, Taiping, F.M.S.
 1926. MIDDLEBROOK, S. M., c/o Chinese Protectorate, Singapore.
 1926. MIDDLEMAS, N. A., Kuching, Sarawak.
 1926. *MILES, HON. MR. C. V., Rodyk and Davidson, Singapore.
 1926. MILLAR, G. R. M., Tranquerah, Malacca.
 1925. MILLER, G. S., Edendarroch, Loch Lomond, Scotland.
 1921. *MILLER, J. I., c/o Colonial Secretariat, Singapore.
 1926. MILLINGTON, W. M., The Residency, Kuala Trengganu.
 1925. MILLS, G. R., Kinta Kellas Estate, Batu Gajah, Perak.
 1926. MILLS, J. V., Solicitor-General's Chambers, Government Offices, Singapore. (Council 1929—).
 1924. MILLS, L. L., Kuala Trengganu, Trengganu.
 1925. MILNE, CHARLES, 420, Great Western Road, Aberdeen, Scotland.
 1919. MISSIONARY RESEARCH LIBRARY, 3041, Broadway, New York City, U.S.A.
 1924. MOHAMED IBNI SULTAN ABDUL HAMID HALIMSHAH, Tengku, Alor Star, Kedah.
 1922. MOHAMED ISMAIL MERICAN BIN VAFOO MERICAN NOORDIN, Legal Adviser's Office, Alor Star, Kedah.
 1927. MOHAMED NOOR BIN MOHAMED, Free School, Penang.
 1922. MOHAMED SAID, CAPT. HAJI, Bukit Timbalan, Johore.

1921. MOHAMED SALLEH BIN ALI, DATO, Johore Bahru, Johore.
1921. MOHAMED SHERIFF BIN OSMAN, Land Office, Alor Star, Kedah.
1926. MOHAMMED AMEEN AKBAR, 4, Birch Road, Kuala Lumpur.
1926. MOIR, G. T., c/o Sarawak Oilfields, Ltd., Miri, Sarawak.
1920. MONK, H. F., Grik, Upper Perak.
1926. MONTGOMERY, A., Kota Bharu, Kelantan.
1926. MOONSHI, DR. H. S., 742, North Bridge Road, Singapore.
1921. MORGAN, S., c/o The Chartered Bank of India, 38, Bishopsgate, London, England.
1926. *MORICE, JAMES, Kuantan, Pahang.
1920. *MORKILL, A. G., District Office, Malacca.
1920. MOWBRAY, G. A. DE C. DE, Commissioner of Land, Trengganu.
1926. MUMFORD, E. W., Police Department, Ipoh, Perak.
1915. *MUNDELL, H. D., c/o Sisson & Delay, Singapore.
1913. MURRAY, REV. W., Gilstead Road, Singapore.
1926. MYDDELTON, HUGH, The Residency, Tawao, British North Borneo.
1928. MCALISTER, D., Sandakan, British North Borneo.
1909. MCARTHUR, M. S. H., c/o The Crown Agents, 4, Millbank, London.
1920. MACCABE, DR. J. B., Kapoewas Rubber Estate, Soengei Dekan, Pontianak, Borneo.
1923. MCKERRON, P. A. B., Brunei, Borneo.
1910. McLEAN, L., c/o The Crown Agents, 4, Millbank, London.
1921. McLEOD, D., King Edward's School, Taiping, Perak.
1917. NAGLE, REV. J. S., 2732, N., Calvert Street, Baltimore Md., U.S.A.
1922. NASH, G. H., Kuala Pilah, Negri Sembilan.
1927. NATIVIDAD, P., Forestry Department, Sandakan, British North Borneo.
1926. NEAVE, J. R., Assistant Adviser, Kota Tinggi, Johore.
1926. NEIL, W. H. E., Topographical Surveys, Alor Star, Kedah.
1921. NEILSON, J. B., Inspector of Schools, Malacca.
1926. NICHOLAS, DR. C. J., General Hospital, Alor Star, Kedah.
1923. NICHOLSON, J. E. H., c/o The Eastern Extension Telegraph Co., Labuan.
1927. NISBET, W., E. A. Barbour, Ltd., Union Building, Singapore.
1928. NOBLE, C., Topographical Surveys, Taiping, Perak.
1906. NUNN, B., Galphay Manor, Ripon, England. (Council, 1922).

1923. O'CONNELL, LT. B. M., Police Officers Mess, Kuala Lumpur.
1926. OMAR BIN ENDOK, DATO, Segamat, Johore.
1911. O'MAY, J., c/o Harrisons & Crosfield, Ltd., 1-4, Great Tower Street, London, England.
1916. ONG BOON TAT, 51, Robinson Road, Singapore.
1926. ONG TENG NGAH, Victoria Institution, Kuala Lumpur, Selangor.
1923. OPIE, R. S., Box 140, Kuala Lumpur, Selangor.
1926. ORANG KAYA KAYA STIA BEJAYA DI RAJA, Kuala Kangsar, Perak.
1921. ORCHARD, H. A. L., Chinese Free School, Cecil Street, Singapore.
1927. *OSMAN BIN TALIB, Land Office, Taiping, Perak.
1920. O'SULLIVAN, T. A., Education Office, Kuala Lumpur, Selangor.
1913. OVERBECK, H., c/o Behn Meyer & Co., Ltd., Sourabaya, Java.
1925. OWEN, A. T., Bukit Batu Estate, Tampin, Negri Sembilan.
1929. PAGDEN, H. T., Agricultural Dept., Kuala Lumpur.
1922. PAGE-TURNER, F. W., Simanggang, Sarawak.
1919. PARK, MUNGO, P.O. Delivery 19, Kuala Lumpur, Selangor.
1908. *PARR, C. W. C., C.M.G., O.B.E., c/o The Crown Agents, 4, Millbank, London, England. (Vice-President, 1919).
1926. PARRY, B. B., P.O. Box 42, Miri, Sarawak.
1927. PARTRIDGE, A. T., Jesselton, British North Borneo.
1922. PASQUAL, J. C., Perlis, Kedah.
1921. *PATERSON, MAJOR H. S., c/o The Crown Agents, 4, Millbank, London, England.
1926. PATTERSON, MRS. M. W., 6, Cairnhill Circle, Singapore.
1921. PEACH, REV. P. L., 68, Larut Road, Penang.
1926. PEALL, G. T., Raffles Institution, Singapore.
1921. PEDLOW, J., Deputy Public Prosecutor's Office, Singapore.
1922. PEEL, HON. SIR W., K.B.E., C.M.G., Carcosa, Kuala Lumpur, Selangor.
1928. PENANG FREE SCHOOL, Green Lane, Penang.
1926. PENANG LIBRARY, Penang.
1921. *PENDLEBURY, H. M., Selangor Museum, Kuala Lumpur, Selangor.
1926. PENGILLEY, E. E., District Office, Pasir Puteh, Kelantan.
1924. PENNEFATHER-EVANS, J. P., F.M.S. Police, Kuala Lumpur.
1925. *PENRICE, W., c/o Mansfield & Co., Ltd., Singapore.
1914. PEPYS, W. E., c/o Federat Secretariat, Kuala Lumpur.

1920. PESKETT, A. D., African Direct Telegraph Co., Free Town, Sierre Leone.
1920. PETERS, E. V.
1929. PHILLIPS, W. J., c/o The District Office, Sandakan, British North Borneo.
1925. PIJPER, DR. G. F., Kramat 61, Weltevreden, Java.
1927. PITT, ISAAC, Brieb Estate, Bagan Serai, Perak.
1921. *PLUMMER, W. P., The Observatory, Bidston, Birkenhead, England.
1928. POWELL, I. B., Llanfihangel, Talyllyn, Breconshire, Wales.
1924. PURCELL, V. W. W. S., Chinese Protectorate, Penang.
1926. PURDOM, MISS N., Education Office, Kuala Lumpur, Selangor.
1906. PYKETT, REV. G. F., 5, Logan Road, Penang.
1926. QUAH BENG KEE, 15, China Street, Penang.
1926. RAE, CECIL, Ipoh, Perak.
1924. RAJA BENDAHARA OF PERAK, Kuala Kangsar, Perak.
1924. RAJA MUDA OF PERAK, Telok Anson, Perak.
1924. RAJA OMAR BIN RAJA ALI, Court House, Ipoh, Perak.
1926. RAJA PETRA BIN RAJA MAHMUD, District Office, Kajang, Selangor.
1929. RAJA RAZMAN BIN RAJA ABDUL HAMID, Kuala Kangsar, Perak.
1926. RAJA YA'ACOB BIN JA'AFAR, Magistrate, Klang, Selangor.
1924. RAMBAUT, A. E., Forest Department, Kuala Lumpur, Selangor.
1924. RASMUSSEN, H. C., c/o The East Asiatic Co., Singapore.
1917. RATTRAY, DR. M. J., c/o The Europe Hotel, Singapore.
1916. RAYMAN, L., Kuala Trengganu, Trengganu.
1923. READE, C. C., Kuala Lumpur, Selangor.
1926. *REAY, MR. JUSTICE J. McCABE, Judge's House, Johore Bahru, Johore.
1924. REED, J. G., Klang, Selangor.
1910. *REID, DR. ALFRED, Kuala Lumpur, Selangor.
1926. RENNIE, A. A., Kuching, Sarawak.
1921. *REX, MARCUS, Kuala Lumpur, Selangor.
1926. RHODES, H., c/o Logan & Ross, Penang.
1915. RICHARDS, HON. MR. A. F., Johore. (Council, 1923, 1926-7; 1929).
1929. RICHARDS, D., c/o Sanitary Board, Taiping, Perak.
1911. RICHARDS, R. M., c/o Caledonia Estate, Province Wellesley.
1923. RIDOUT, F. G., c/o Harbour Board, Singapore.
1926. *RIGBY, W. E., c/o The Chartered Bank, Singapore.
1929. ROBERTS, C. W., Lumut, The Dindings.
1912. ROBERTSON, J., c/o W. H. Rose, Burgh House, Burgh, Woodbridge, Suffolk, England.

1926. ROBINSON, F., Alor Star, Kedah.
 1911. *ROBINSON, H., 55, St. George's Square, London, S.W.1, England. (Council, 1916-20; Vice-President, 1922-3).
 1926. ROBINSON, P. M., c/o The Eastern Smelting Co., Ltd., Penang.
 1928. ROCHE, F. R., Rubber Estates of Krian, Ltd., Bagan Samak, Kedah.
 1916. ROGERS, A., P.W.D., Singapore.
 1926. ROGERS, M. F., Vimy Estate, Kundang, Kuang, Selangor.
 1924. ROOKE, C. E., Director of Railways, Cyprus.
 1921. ROSS, E. A., Singapore.
 1917. *ROWLAND, W. R., Schloss Kalling, Post Moosen a.d. Bils, Oberbayern, Germany.
 1922. RUSSELL, D. J. A., Kua'la Lumpur, Selangor.
 1924. RYVES, V. W., Takau Estate, Rantau, Negri Sembilan.
 1924. SAMAH BIN HAJI ALI, Pekan, Pahang.
 1926. SANGER-DAVIES, A. E., Forest Office, Kuala Lumpur, Selangor.
 1923. *SANSOM, C. H., Police Headquarters, Singapore.
 1919. *SANTRY, D., c/o Swan & Maclaren, Singapore.
 1896. *SAUNDERS, C. J., The Lawn, Barcombe Mills, Nr. Lewes, Sussex, England. (Vice-President, 1910-11, 1914-15; President, 1916-18).
 1923. SAVAGE, H. E., Kuala Trengganu, Trengganu.
 1926. SAYID HASSAN BIN SAYID ZAIN, Ag. Land Officer, Yen, Kedah.
 1926. SAYID JAN BIN SAYID ASGAR ALI, Government English School, Sungai Patani, Kedah.
 1922. SAYID MOHAMED IDID BIN ALI IDID, Alor Star, Kedah.
 1926. SAYID SHAIDALI, Government English School, Batu Gajah, Perak.
 1921. SCHIDER, DR. R., P.O. Box 12, Miri, Sarawak.
 1926. SCOTT, MISS A. M., Sentosa Hall, Singapore.
 1929. SCOTT, HON. MR. JOHN, C.M.G., Colonial Secretariat, Singapore.
 1920. *SCOTT, DR. WAUGH, Sungai Siput, Perak.
 1906. SCRIVENOR, J. B., Batu Gajah, Perak. (Vice-President, 1922, 1924, 1926-9).
 1915. *SEE TIONG WAH, Balmoral Road, Singapore.
 1922. SEHESTED, S., Chartered Bank, Penang.
 1927. *SELLS, H. C., Satuan, Burnham, Buckinghamshire, England.
 1926. SHANNON, S. L., Harvard Estate, Bedong, Kedah.
 1923. SHEARN, E. D., c/o Pooley & Co., Klyne Street, Kuala Lumpur.
 1926. SHEFFIELD, J. N., Topographical Surveys, Taiping, Perak.
 1927. SHEFFIELD, W. D., Tanjong Pau Estate, Jitra, Kedah.

1923. SHEIKH ABDULLAH BIN YAHAYA, LT., Bukit Timbalan, Johore.
1925. SHELLEY, HON. MR. M. B., Education Office, Singapore.
1929. SHEPPARD, M. C. FFRANÇK, Carcosa, Kuala Lumpur.
1925. SHORLAND, C. W., Labour Office, Penang.
1924. SIME, F. D., Bukit Lintang Estate, Malacca.
1926. SIMMONS, HON. MR. J. W., British Residency, Taiping, Perak.
1921. SIMPSON, P., Presgrave & Mathews, Penang.
1927. SIMPSON-GRAY, L. C., Labour Office, Ipoh, Perak.
1909. *SIMS, W. A., 30, Park Hill, Carshalton near London, England.
1928. SIVAM, M. S., District Office, Miri, Sarawak.
1928. SIVAPRAGASAM, T., District Office, Port Dickson, Negeri Sembilan.
1926. SKINNER, C. F., Beaufort, Jesselton, British North Borneo.
1921. SKRINE, W. F. DE V., c/o Sarawak Government Offices, Millbank House, Westminster, England.
1926. *SLEEP, A., Kuala Selangor, Selangor.
1929. SLOAN, T. I., c/o The British Borneo Timber Co., Sandakan, British North Borneo.
1922. SMALL, A. S., Treasury, Johore Bahru, Johore.
1922. SMART, DR. A. G. H., Chief Medical Officer, Penang.
1924. SMEDLEY, N., Raffles Museum, Singapore. (Hon. Treasurer, 1926-7; Asst. Hon. Secretary, 1928-9).
1928. SMITH, A. St. Alban, Seletar, Singapore.
1926. SMITH, C., Kuantan, Pahang.
1929. SMITH, C. R., Sandakan, British North Borneo.
1912. SMITH, PROF. HARRISON W., Papaari, Tahiti, Society Ids.
1924. SMITH, J. D. MAXWELL, Temerloh, Pahang.
1929. SMITH, J. H., Bruas Rubber Co., Bruas, Perak.
1921. SMITH, CAPT. S. R., Kuala Lumpur, Selangor.
1929. SMITH, W. T. H., Kuching, Sarawak.
1929. SMYTHE, H. W. St. Aubyn, Pundut Estates, Pundut, The Dindings.
1928. SOLLIS, C. G., Inspector of Schools, Penang.
1910. SONG ONG SIANG, C.B.E. Aitken & Ong Siang, Singapore.
1921. SOUTH, F. W., Department of Agriculture, Kuala Lumpur, Selangor.
1921. SPEERS, W. E., "San Souci" House, Larne Co. Antrim, Ireland.
1925. SPROULE, HON. MR. JUSTICE P. J., Supreme Court, Penang.
1927. STAINES, E. A. General Post Office, Kuala Lumpur.
1928. STANTON, W. A., Brooklands Estate, Banting, Selangor.
1925. STARK, W. J. K., Telok Anson, Perak.

1929. STEPHENSON, E. F., Electrical Inspector, Ipoh, Perak.
 1926. STEPHENSON, MISS E. M., Bukit Tanggah, Singapore.
 1926. STEVENS, E. H., c/o The British American Tobacco Co., Ltd., Keppel Road, Singapore.
 1920. STEVENS, HON. MR. JUSTICE, F. G., Supreme Court Singapore. (Council, 1914-15).
 1910. *STILL, A. W.
 1917. *STIRLING, W. G., c/o The Chinese Protectorate, Singapore. (Council, 1923-5, 1927-9).
 1921. STROOKE, G. BERESFORD, c/o The Secretariat, Nairobi, Kenya, East Africa.
 1928. STOOKES, DR. V. A., Sandakan, British North Borneo.
 1921. STOWELL, DE LA M., Bukit Mertajam, Province Wellesley.
 1926. STREET, A. C., 13, Palm Bungalow, Kuching, Sarawak.
 1926. STROUTS, E. A., Kuala Pilah, Negri Sembilan.
 1927. STRUGNELL, E. J., Forest Office, Kuala Lumpur, Selangor.
 1921. STUBINGTON, W. H., Bentong, Pahang.
 1910. STURROCK, HON. MR. A. J., P.W.D., Singapore. (Vice-President, 1924).
 1926. SULTAN IDRIS TRAINING COLLEGE, Tanjong Malim, Perak.
 1927. SUNGAI PATANI GOVERNMENT ENGLISH SCHOOL, Sungai Patani, Kedah.
 1921. SUTCLIFFE, H., Research Laboratory, Pataling, Selangor.
 1912. SWAYNE, J. C., Rejang, Sarawak.
 1926. SWINDELL, VEN. ARCHDEACON F. G., c/o Crown Agents.
 1923. SWORDER, G. H., Taiping, Perak.
 1926. SWORDER, J. C., Pekan, Pahang.
 1918. *SYKES, G. R., Chinese Protectorate, Kedah.
 1929. TAIT, W. G., Kuching, Sarawak.
 1925. TALALLA, H. B., 12, Perak Road, Kuala Lumpur, Selangor.
 1927. TALLACK, C. C., Silimponon, East Coast Residency, British North Borneo.
 1908. TAN CHENG LOCK, HON. MR., 59, Heeren Street, Malacca.
 1926. *TAN SOO BIN, 9, Boat Quay, Singapore.
 1929. TATHAM, T. P. H., Budu Estate, Raub, Pahang.
 1915. TAYLER, C. J., Kuala Sepang Coconut Estate, Sepang, Selangor.
 1928. *TAYLOR, E. N., Land Office, Telok Anson.
 1921. TAYLOR, E. R., Newlands, Grange - over - Sands, Lancashire, England.
 1925. TAYLOR, W. C., Butterworth, Province Wellesley.
 1925. TAYLOR, W. R., Maclaine Watson & Co., Batavia, Java.

1926. TEMPLETON, T. V., Alor Star, Kedah.
 1926. TERMANSEN, V., Kuala Hau, Kelantan.
 1921. TERRELL, A. K. à' B., Presgrave & Mathews, Penang.
 1929. TERRY, R. A., Survey Dept., Kuala Trengganu, Trengganu.
 1927. THAYER, K. V., Methodist Boy's School, Kuala Lumpur, Selangor.
 1927. THILLAIMUTHU, S., Kennedy Burkill & Co., Ltd., Ipoh, Perak.
 1921. *THOMAS, L. A., Chief Police Office, Singapore.
 1926. THOMAS, T. J., 129, Green Lane, Penang.
 1927. THOMSON, G. M., Gunong Ledang Estate, Tangkah, Johore.
 1920. THOMSON, HON. MR. H. W., British Residency, Taiping, Perak.
 1923. THORNE, HON. MR. JUSTICE W. H., Ipoh, Perak.
 1925. THURSTON, J. B. H., Kota Tinggi Estate, Kota Tinggi, Johore.
 1926. TIDMAN, S. T., Kerilla Estate, Kelantan.
 1926. TOYO BUNKO, 26, Kami-Fujimayecho, Hongo, Tokyo, Japan.
 1927. TURNER, R. A., Telok Anson, Perak.
 1923. UNDANG OF REMBAU, THE, Rembau, Negri Sembilan.
 1925. VENABLES, O. E., Seremban, Negri Sembilan.
 1928. VERNON, DR. G. H., Thursday Island, Australia.
 1927. VETHAVANAM, JAMES ROBERTS, Bungsar Road, Kuala Lumpur.
 1926. *WADDELL, MISS M.C., Government Girls School, Alor Star, Kedah.
 1922. WALKER, E. G., c/o United Engineers Ltd., Singapore.
 1926. WALKER, H. HOPSON, Klang, Selangor.
 1926. *WALLACE, W. A., Revenue Surveys, Taiping, Perak.
 1921. WALTON, B. S., Land Office, Malacca.
 1923. WAN IDRIS BIN IBRAHIM, Muar, Johore.
 1926. WAN MOHAMED ALI BIN WAN OMAR, District Office, Kuantan, Pahang.
 1922. WAN YAHYA BIN WAN MOHAMED TAIB, Alor Star, Kedah.
 1922. WARD, D. J., c/o The Chartered Bank, London, England.
 1927. WATSON, E. L., Kuala Lumpur, Selangor.
 1917. WATSON, J., Education Office, Kuala Lumpur, Selangor.
 1916. WATSON, J. G., Forest Department, Kuala Lumpur, Selangor.
 1916. WATSON, SIR MALCOLM, Klang, Selangor.
 1926. WELLINGTON, DR. A. R., Kuala Lumpur, Selangor.
 1926. WHEATLEY, M., Victoria Institution, Kuala Lumpur, Selangor.
 1926. WHEELER, L. R., c/o Royal Empire Society, London, W.C.2.

1927. WHITE, REV. GRAHAM, The Parsonage, Ipoh, Perak.
1910. WHITEHEAD, C. B., Lower Down Cross, Bovey Tracey, Devonshire, England.
1923. WHITFIELD, L. D., Education Office, Muar, Johore.
1929. WHYTE, R. P., Posts & Telegraphs Dept., Kuala Lumpur.
1926. *WILCOXSON, W. J., c/o The Straits Trading Co., Ltd., Singapore.
1926. WILHELM, DR. O., 114, Mittlere Strasse, Basel, Switzerland.
1926. WILKINSON, GODFREY, c/o Forest Office, Batu Gajah, Perak.
1923. WILKINSON, H. B., 65, Harcourt Terrace, London, S.W.10, England.
1920. *WILKINSON, R. J., C.M.G., Poste Restante, Mitylene, Greece.
1926. *WILLAN, T. L., Gopeng Road, Batu Gajah, Perak.
1921. WILLBOURN, E. S., Batu Gajah, Perak.
1926. WILLIAMS, A.
1922. WILLIAMS, E. B., Federal Secretariat, Kuala Lumpur, Selangor.
1921. WILLIAMS, E. T., Colonial Secretariat, Singapore.
1922. *WILLIAMS, F. L., Chinese Protectorate, Singapore.
1929. WILLIAMS, G. C. G., Singapore Club, Singapore.
1921. WILLIAMS, R. M., Paterson Simons & Co., Ltd., Singapore.
1927. WILLIAMSON, PROF. K. B., Medical College, Singapore.
1925. WILSON, C., Labour Office, Kuala Lumpur.
1926. WILSON, E. H.
1919. WILSON, F. K.
1910. *WINKELMANN, H.
1926. WINNINGTON-INGRAM, E. A., K. Lumpur, Selangor.
1923. WINSON, V. H., Office of the Senior Engineer, P. and T. Dept., Penang.
1904. WINSTEDT, HON. DR. R. O., C.M.G., D.LITT., Education Office, Singapore. (Vice-President, 1914-15, 1920-1, 1923-5, 1928; President, 1927, 1929).
1925. WITCOMB, L. A., Adamson, Gilfillan & Co., Ltd., Penang.
1918. WOLDE, B., 41, Cantonment Road, Penang.
1902. WOLFF, HON. MR. E. C. H., Sandihayes, Bitterne Park, Southampton, England.
1927. WOOD, D. D., Sandakan, British North Borneo.
1908. *WOOD, E. G., c/o King & Co., 65, Cornhill, London, England.
1913. WOOD, W. L., Istana Gardens, Johore Bahru, Johore.
1920. WOOLLEY, G. C., Jesselton, British North Borneo.
1922. WOOLLEY, H. W., Batu Gajah, Perak.
1927. WOOLLEY, J. B., Long Stanton Vicarage, Cambridge, England.

1922. WORLEY, N. A., c/o C. Worley, Esq., 3, Park Lane, Reigate, England.
1911. WORSLEY-TAYLOR, F. E., Newton Hall, Newton, Clitheroe, England.
1905. *WORTHINGTON, HON. MR. A. F., Kuala Lipis, Pahang. (Vice-President, 1924).
1921. WURTZBURG, MAJOR C. E., c/o Mansfield & Co., Ltd., Singapore. (Council, 1924-6; Hon. Secretary, 1915; Vice-President, 1927; 1929).
1914. WYLEY, A. J., Lebong Donok, Benkoelen, Sumatra.
1923. WYNNE, M. L., Police Office, Kuala Lumpur, Selangor.
1926. YAHYA BIN AHMAD AFIPI, 70, The Arcade, Singapore.
1923. *YATES, H. S., P.O. Box 95, Berkeley, California, U.S.A.
1917. *YATES, MAJOR W. G.
1928. YEOH CHENAG ANN, 117, Beach Street, Penang.
1920. *YEWDALL, CAPT. J. C., Sitiawan, Perak.
1927. YOUNG, C. G., Rubana Estate, Telok Anson, Perak.
1916. YOUNG, E. STUART, Caixa 675, Rio de Janeiro, Brazil, South America.
1904. *YOUNG, H. S., Rosemount, Tain, Rosshire, England.
1920. ZAINAL ABIDIN BIN AHMAD, Sultan Idris Training College, Tanjong Malim, Perak.
1927. ZUMSTEIN, R. B., Anglo Chinese School, Penang.
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RULES
OF
The Malayan Branch
OF THE
Royal Asiatic Society

I. Name and Objects.

1. The name of the Society shall be 'The Malayan Branch of the Royal Asiatic Society.'
2. The objects of the Society shall be:—
 - (a) The increase and diffusion of knowledge concerning British Malaya and the neighbouring countries.
 - (b) The publication of a Journal and or works and maps.
 - (c) The acquisition of books, maps and manuscripts.

II. Membership.

3. Members shall be of three kinds—Ordinary, Corresponding and Honorary.
4. Candidates for ordinary membership shall be proposed and seconded by members and elected by a majority of the Council.
5. Ordinary members shall pay an annual subscription of \$5 *payable in advance on the first of January in each year.*

No member shall receive a copy of the Journal or other publications of the Society until his subscription for the current year has been paid.

Newly elected members shall be allowed to compound for life-membership for \$100; other members may compound by paying \$50, or \$100 less the amount already paid by them as ordinary members in annual subscriptions, whichever of these two sums is the greater. Societies and Institutions are eligible for ordinary membership.

6. On or about the 30th of June in each year the Honorary Treasurer shall prepare and submit to the Council a list of those members whose subscriptions for the current year remain unpaid. Such members shall be deemed to be suspended from membership until their subscriptions have been paid, and in default of payment within two years shall be deemed to have resigned their membership*.

* **Bye-Law, 1922.** "Under Rule 6 Members who have failed to pay their subscription by the 30th June are suspended from membership until their subscriptions are paid. The issue of Journals published during that period of suspension cannot be guaranteed to members who have been so suspended."

7. Distinguished persons, and persons who have rendered notable service to the Society may on the recommendation of the Council be elected Honorary Members by a majority at a General Meeting. Corresponding Members may, on the recommendation of two members of the Council, be elected by a majority of the Council, in recognition of services rendered to any scientific institution in British Malaya. They shall pay no subscription; they shall enjoy the privileges of members (except a vote at meetings and eligibility for office) and free receipt of the Society's publications.

III. Officers.

8. The officers of the Society shall be:—

A President.

Vice-Presidents not exceeding six, ordinarily two each from (i) the Straits Settlements, (ii) the Federated Malay States and (iii) the Unfederated or other Protected States, although this allocation shall in no way be binding on the electors.

An Honorary Treasurer. An Honorary Secretary.

Five Councillors. An Assistant Honorary Secretary.

These officers shall be elected for one year at the Annual General Meeting, and shall hold office until their successors are appointed.

9. Vacancies in the above offices occurring during any year shall be filled by a vote of the majority of the remaining officers.

IV. Council.

10. The Council of the Society shall be composed of the officers for the current year, and its duties and powers shall be:—

(a) to administer the affairs, property and trusts of the Society.

(b) to elect Ordinary and Corresponding Members and to recommend candidates for election as Honorary Members of the Society.

(c) to obtain and select material for publication in the Journal and to supervise the printing and distribution of the Journal.

(d) to authorise the publication of works and maps at the expense of the Society otherwise than in the Journal.

(e) to select and purchase books, maps and manuscripts for the Library.

(f) to accept or decline donations on behalf of the Society.

(g) to present to the Annual General Meeting at the expiration of their term of office a report of the proceedings and condition of the Society.

(h) to make and enforce by-laws and regulations for the proper conduct of the affairs of the Society. Every such bye-law or regulation shall be published in the Journal.

11. The Council shall meet for the transaction of business once a quarter and oftener if necessary. Three officers shall form a quorum of the Council.

V. General Meetings.

12. One week's notice of all meetings shall be given and of the subjects to be discussed or dealt with.

13. At all meetings the Chairman shall in the case of an equality of votes be entitled to a casting vote in addition to his own.

14. The Annual General Meeting shall be held in February in each year. Eleven members shall form a quorum.

15. (i) At the Annual General Meeting the Council shall present a report for the preceding year and the Treasurer shall render an account of the financial condition of the Society. Copies of such report and account shall be circulated to members with the notice calling the meeting.

(ii) Officers for the current year shall also be chosen.

16. The Council may summon a General Meeting at any time, and shall so summon one upon receipt by the Secretary of a written requisition signed by five ordinary members desiring to submit any specified resolution to such meeting. Seven members shall form a quorum at any such meeting.

17. Visitors may be admitted to any meeting at the discretion of the Chairman but shall not be allowed to address the meeting except by invitation of the Chairman.

VI. Publications.

18. The Journal shall be published at least twice in each year, and oftener if material is available. It shall contain material approved by the Council. In the first number of each volume shall be published the Report of the Council, the account of the financial position of the Society, a list of members and the Rules.

19. Every member shall be entitled to one copy of the Journal, which shall be sent free by post. Copies may be presented by the Council to other Societies or to distinguished individuals, and the remaining copies shall be sold at such prices as the Council shall from time to time direct.

20. Twenty-five copies of each paper published in the Journal shall be placed at the disposal of the author.

VII. Amendments of Rules.

21. Amendments to these Rules must be proposed in writing to the Council, who shall submit them to a General Meeting duly summoned to consider them. If passed at such General Meeting they shall come into force upon confirmation at a subsequent General Meeting or at an Annual General Meeting.

Affiliation Privileges of Members.

Royal Asiatic Society. The Royal Asiatic Society has its headquarters at 74, Grosvenor Street, London, W., where it has a large library and collection of MSS. relating to oriental subjects, and holds monthly meetings from November to June (inclusive) at which papers on such subjects are read.

2. By Rule 105 of this Society all the Members of Branch Societies are entitled when on furlough or otherwise temporarily resident within Great Britain and Ireland, to the use of the Library as Non-Resident Members and to attend the ordinary monthly meetings of the Society. This Society accordingly invites Members of Branch Societies temporarily resident in Great Britain or Ireland to avail themselves of these facilities and to make their home addresses known to the Society so that notice of the meetings may be sent to them.

3. Under Rule 84, the Council of the Society is able to accept contributions to its Journal from Members of Branch Societies, and other persons interested in Oriental Research, of original articles, short notes, etc., on matters connected with the languages, archæology, history, beliefs and customs of any part of Asia.

4. By virtue of the aforementioned Rule 105 all Members of Branch Societies are entitled to apply for election to the Society without the formality of nomination. They should apply in writing to the Secretary, stating their names and addresses, and mentioning the Branch Society, stating their names and addresses, and mentioning the Branch Society to which they belong. Election is by the Society upon the recommendation of the Council.

5. The subscription for Non-Resident Members of the Society is 30/- per annum. They receive the quarterly journal post free.

Asiatic Society of Bengal. Members of the Malayan Branch of the Royal Asiatic Society, by a letter received in 1903, are accorded the privilege of admission to the monthly meetings of the Asiatic Society of Bengal, which are held usually at the Society's house, 1 Park Street, Calcutta.

EREDIA'S
DESCRIPTION OF MALACA,
MERIDIONAL INDIA,
AND
CATHAY.

TRANSLATED FROM THE PORTUGUESE
WITH NOTES

BY

J. V. MILLS, B.A. (OXON.)

Malayan Civil Service.

INTRODUCTORY NOTE.

Antonio Lourenco Caminha, writing in 1807, quotes from the *Bibliotheca Lusitana* of Diogo Barbosa Machado, "Manoel Godinho de Eredia was a distinguished mathematician: while residing at Goa, capital of the Asiatic Empire, he wrote the History of the Martyrdom of Luiz Monteiro Coutinho (which occurred in the year 1588 on the order of Raiamancor, King of Achem); the book was dedicated to the most illustrious D. Aleixo de Menezes, Archbishop of Braga; the dedication being dated at Goa the 11th November, 1615; it consists of manuscript folios with various illustrations".

Caminha adds, regarding Eredia's REPORT ON THE GOLDEN CHERSONESE, "The present work, of which we possess an old manuscript, we regard as one of the most valuable records in our literature; it was not known to Barbosa or his predecessors, whence the reader may realize its rarity."

At the present day, it is possible to enlarge considerably on this meagre account.

If the Irishism may be permitted, one is tempted to say that the most romantic episode in the life of Eredia lies in the first meeting of his parents-to-be.

Eredia himself recounts the story: how the gallant Juan de Eredia went to the Celebes in the suite of a missionary expedition; how he won the heart of Dona Elena Vessiva, the 15-year-old Bugis princess; how she stowed away on his junk; how the newly-baptized King of Supa, her father, made an armed demonstration on the shore; and how the Administrator in order to avoid a conflict which might have fatal results gave orders for the boats to sail—a proceeding which to-day would have resulted in the appearance of the reverend gentleman before a criminal court.

All ended happily, however: Juan de Eredia 'did the right thing,' he married the girl. This was in 1545: twelve years later the feud with her relations was healed, and friendly intercourse initiated between Malacca and 'Macassar'.

The princess became the mother of four children; a daughter, Anna Godinha de Heredia, and three sons, Father Domingos Godines de Heredia, Master of the episcopal school at Malacca, Father Francisco Godinho Aquaviva, Canon of Malacca, and Manuel Godinho de Heredia Aquaviva, the 'Discoverer' of Meridional India, that nebulous Austral Sphere which Eredia imagined to contain Marco Polo's 'Java Minor.'

The "Descobridor" was born at Malacca on the 16th July, 1563, and received his early education at the College of the Company of Jesus: at the age of 13 he went to Goa and completed his education there.

In 1579 he was received into the order of the Company of Jesus: but in the following year his Superiors bade him farewell in order that his inclination for exploration might be utilized in the service of the State.

After this, he tells us, "he devoted himself to the service of cosmography, with the title of "Cosmographer Major" of the State."

He also taught mathematics for many years; apparently during this period.

He found time, too, to marry a wife, Dona Vilante de Sampaio; and a daughter and a son were born to him in 1587 and 1588.

His most important achievement, however, lay in the preparation of new and up-to-date maps of the Asiatic countries: these maps he submitted to the King of Spain. It is obvious that His Majesty was greatly impressed; for on the 14th February, 1594, he issued an Instruction that Eredia was to effect the discovery of Meridional India: he was given the title of "Adelantado" (Governor General), was made a member of the Order of Christ, and was promised one-twentieth of the revenues which should accrue from the new-found lands, were he to obtain possession of them for the Crown of Portugal, which was held at this period by the King of Spain.

May be there are documents at Lisbon which throw further light on this subject.

But nothing happened for six years. Meanwhile Eredia had not been idle.

During the years 1597—1600 he wrote his REPORT ON THE GOLDEN CHERSONESE wherein, with a few words of tactful flattery, he urges the Viceroy, Dom Francisco da Gama, to despatch him on the voyage of discovery.

He also presses his request in a letter written, it would seem, in 1599 to condole with the Viceroy on the death of his only son—importunity which strikes one as the reverse of tactful.

At last the Viceroy moved.

In 1600 Dom Francisco da Gama commissioned Eredia to undertake the task of exploration in the name of His Majesty.

The succeeding Viceroy, Ayres de Saldanha, issued another Commission, which Eredia records in full: in addition to the privileges already mentioned, he is promised that an honourable marriage will be arranged for his daughter should he die after accomplishing the discovery.

So in 1600 Eredia went from Goa to Malacca and there completed his preparations for the southward voyage. He got no further, however: when he was on the point of departure, the General of the South, André Furtado de Mendoça, brought the information that the Dutch were holding the channels leading to the south between the islands on the east of Java.

Moreover, a succession of attacks by the Malays necessitated the retention at Malacca of the military force attached to the expedition.

So Eredia was perforce detained in Malaya: and during the succeeding four years or so performed a considerable amount of useful public service.

At Malacca he was occupied with the fortification and defence of the fortress, and assisted in the routine duties.

In addition, he explored the whole territory between the Muar and Linggi Rivers, and prepared plans showing the results of his discoveries. This work he performed in his capacity of "Descobridor," that is, officer commissioned to organize the work of exploration and discovery.

He also prospected for minerals and found deposits of various metallic ores.

But after 1602 his chief work was connected with naval activity, for which he had at his disposal the whole southern squadron of some 70 armed boats.

One suspects that after Heemskerk had captured the Portuguese ship from China off the Johore Coast in 1603, the Portuguese realized that their bases in the Straits required elaboration.

At any rate, in 1604, Eredia founded the fortress of Muar, and gave orders for the construction of other forts to defend the Straits of Singapore and 'Sabbaó' (now the island of Kundur, close to the Kerimuns).

At the same time he pursued a policy of aggression against the Malays; Johore was blockaded; relief ships were destroyed; Malay villages and orchards were fired; the boats were captured and their occupants killed.

Lastly, he joined General André Furtado de Mendoça in the capture of Kota Batu, the Malay capital of Johore.

There remains to be related the most interesting episode in Eredia's sojourn at Malacca.

Soon after his arrival, in 1601, he met an Alderman of Malacca, one Pedro de Carvalhaes, who told him of a voyage made by Chiaymasiouro, King of Demak in Java, to a southern land called 'Luca Antara'.

A brief description of this country is given in a letter written by Chiaymasiouro to the King of Pahang and in a certificate made by Pedro de Carvalhaes at Malacca on the 4th of October, 1601.

The incident confirmed Eredia's belief in the existence of the southern land, and he accordingly placed it with Marco Polo's Java Minor in his 'Meridional India', hoping to explore it when circumstances might permit.

But in 1605 or thereabouts his constitution broke down; he fell a victim, he tells us, to the malady known as "berebere"; and the General ordered him to return to Goa for the purpose of recruiting his health.

This he was the less disinclined to do because he was unable to acquire of any further information about 'Luca Antara', and the acquire any further information about 'Luca Antara', and the was no nearer fulfilment.

His intention was to return to Malacca with the new Viceroy Dom Martim Affonso de Castro who arrived at Goa in 1604.

However, he was still too ill to travel when the Viceroy left Goa in May, 1606; but the Viceroy promised him a relief galliot for the following spring.

Unfortunately the death of the Viceroy at Malacca at the beginning of 1607 dealt a further blow to his hopes. At this stage Eredia wrote once more to the King of Spain, conveying the information about Chiaymasiouro's voyage to 'Luca Antara'; and His Majesty in about 1609 instructed the Viceroy Ruy Lourenço de Tavora that arrangements for Eredia's expedition were to be made at once.

The success of Eredia's appeal to the King is the more remarkable because at this very time Quiros at Madrid was also seeking to be placed in charge of an expedition to discover the Austral land, and Quiros, in spite of an interview with His Majesty, was put off from day to day for some 7 years, from 1607 to 1614.

"The minds of Spanish statesmen were beset by the feeling that Spain's day of exploration was done.... To whom would this great and golden continent belong? Certainly not to the Spaniards, who now sailed the Pacific in fear of the guns of English and Dutch pirates." This was the crux of the situation: the Portuguese had lost the command of the sea when their Far Eastern fleet was defeated by the Dutch in 1606.

The story of Spanish exploration ends with the voyages of Quiros and Torres in 1606.

Eredia's expedition never eventuated.

But for the present he continued to hope. Nor was the King of Spain the only person to lend him encouragement: the discovery of the Austral land involved the extension of the Christian faith, so Pope Paul the Fifth favoured the undertaking with his approval, and the Insignia of the Order of Jesus, with the rewards of the Order and other favours, were bestowed upon the "Descobridor." Meanwhile Eredia was instructed by the Viceroy Ruy Lourenço de Tavora (1609—1612) to explore the district of 'Guzerat': and he drew up plans embodying the results of his surveys.

His heart, however, was still in 'Meridional India': and though the Dutch had discovered the northern coast of Australia in 1606, the discovery was not generally known.

Eredia wished to confirm the account given by Chiaymasiouro in 1601, and being unable to go himself, he adopted the best alternative, he sent someone else. In 1610 he gave secret instructions to a servant of his to join the fishermen on the south coast of Java and go with them to 'Luca Antara'.

This was done; the servant reached 'Luca Antara,' confirmed Chiaymasiouro's description of the country, and wrote to Eredia from Mataram in Java on the 14th of August, 1610. The next Viceroy, Dom Hierome de Azevedo (1612—1617), employed Eredia in prospecting for minerals in the district of Goa.

Eredia now turned his attention to writing.

In 1613 he wrote his DESCRIPTION OF MALACA, in 1615 the History of the Martyrdom of Luiz Monteiro Coutinho, and in 1616 the TREATISE ON OPHIR.

He was now a man of 53, and his dream of exploring the Austral land remained unfulfilled.

Nothing more is known about him.

Only one topic of universal interest presents itself in Eredia's writings; it concerns the identity of his 'Luca Antara' with Australia, and the 'discovery' of this country by Eredia in 1601, that is, 5 years before the Dutch first saw its shores.

Some writers, such as Ruelens, have accepted this identity; others, such as Major, have rejected it. The question, however lies outside the scope of this paper.

The local interest of Eredia's writings is considerable; as the reader will estimate it for himself, one can refrain from further comment, merely remarking that no less than six of Eredia's maps and illustrations have been thought worthy of reproduction in a recent book of more than ordinary merit, Collet's *Terres et Peuples de Sumatra*.

It may be found that Eredia states something not only of interest but of importance: this, however, is a matter for the savant.

The present paper is concerned primarily with the DESCRIPTION OF MALACA. The original document entitled DECLARACAM DE MALACA E INDIA MERIDIONAL COM O CATHAY is preserved in the Bibliothèque Royale at Brussels (No. 7264); it consists of 81 folios, including 56 maps and illustrations. The present English translation is based on the Portuguese transcript in Janssen's *Malaca, l'Inde Méridionale et le Cathay*: his French translation has been of very great help.

It were unbecoming in a mere tyro to criticize Janssen's devoted labours, particularly as they constitute the *fons et origo* of this essay: suffice it to say, then, that the French translation cannot be relied upon as accurate: nor can accuracy be guaranteed for the present careful but undistinguished rendering, since a condition precedent to accuracy is a correct transcription, and it is clear that Janssen was at a loss owing to his ignorance of such words as 'bude' (Malay, 'budi', 'the peepul-tree') and 'curacura' (Malay, 'kura-kura' 'a tortoise'). The present rendering constitutes the first attempt, it is thought, to place Eredia's writings before English readers at any length: and the translator is bound to admit that he is favoured with two advantages; first, there is no other translation (excepting two chapters) with which the rendering would invite unfavourable comparison; secondly, Eredia's reports are written (except for one passage) in much the same revolting jargon as modern English official reports, and the translator has therefore been exempted from the necessity to make an attempt at elegant writing: this is fortunate, for a public servant has little leisure to ponder purple passages.

The question of spelling is tiresome: Asiatic names (except in a few cases) have been reproduced as they appear in the transcript: on the other hand, the translator hesitates to infuriate the gentle reader by writing "Aegipto" or "Phtholemeo", and has therefore adopted the conventional English spelling in many instances where there seems no point in adhering to the original: some obvious mislections, too, have been amended: in case, however, the reader should wish to know the exact form which Eredia wrote, the translator adds at the end of this paper a list of the words in which he has deviated from Eredia's spelling.

Following the DESCRIPTION OF MALACA will be found some Notes on points of interest arising in the text. Though a few matters unfortunately remain unexplained, it is hoped that in most cases the Notes contain such information as is essential for understanding of the text, and such references to the most important of recent books and papers as will enable the reader to pursue his subject further. The gentle reader is urged to deal more than gently with these Notes: they have been written under considerable difficulties, and through lack of access to specialist libraries the translator has perforce committed the unpardonable sin of quoting from second-hand authorities. In any case, this first commentary cannot hope to be any less rudimentary than the earliest commentaries on Marco Polo.

But there are two good reasons, in addition to the incompetence of the commentator, why the commentary lacks completeness: first, because particular points have already been discussed at length in previous issues of this Journal, and secondly, because particular subjects lie outside this Branch's territorial sphere of interest.

It is clear, for instance, that Eredia was much interested in the Chinese and their civilization; yet his interest related to many matters which are for us taboo.

A similar sentiment is happily expressed by Hopkins (*The Guide to Kuan Hua*) in phrases too picturesque to blush unseen on Chinese students' dusty shelves, "Whether the Chinese of antiquity said 'hwei 7 guk' or 't'an 5 dam'; whence they came—these ancient but objurgatory speakers—from Babylon, from Accad, or Assyria, and who they were, Chaldees or Hittites, Proto-Medians or Ugro-Altaics, the lost Ten Tribes or natives of some old-world Parish of Stepney; whether the *I King* is a phallic gospel or a pocket-dictionary; where in the world Ta Ts' in and T' iao-chih could have been; and precisely how much remains of Lao Tzu after being translated by Balfour and analyzed by Giles—on these and kindred topics the *Kuan Hua Chih Nan* will throw no gleam of light".

J. V. M.

Singapore, 31st December, 1929.

ACKNOWLEDGEMENTS.

The translator desires to express his indebtedness to M. Georges Van Camphenout of Brussels for permitting the publication of the translations from Janssen's *Malaca, l'Inde Méridionale et le Cathay*, to the Conservator-in-Chief of the Bibliothèque Royale at Brussels for supplying the photographs of Eredia's maps, to the Trustees of the British Museum for permitting the publication of the translation from Caminha's *Ordenações da India*, to the Conservator-in-Chief of the Bibliothèque Nationale at Paris for permitting the publication of the translations from Eredia's *Tratado Ophirico*, to the Trustees of the Penang Library for granting a long loan of Janssen's book, to the Librarian of Raffles Library at Singapore for the loan of many reference books, and to the Council of the Royal Asiatic Society, Malayan Branch, for meeting the cost of reproducing the maps.

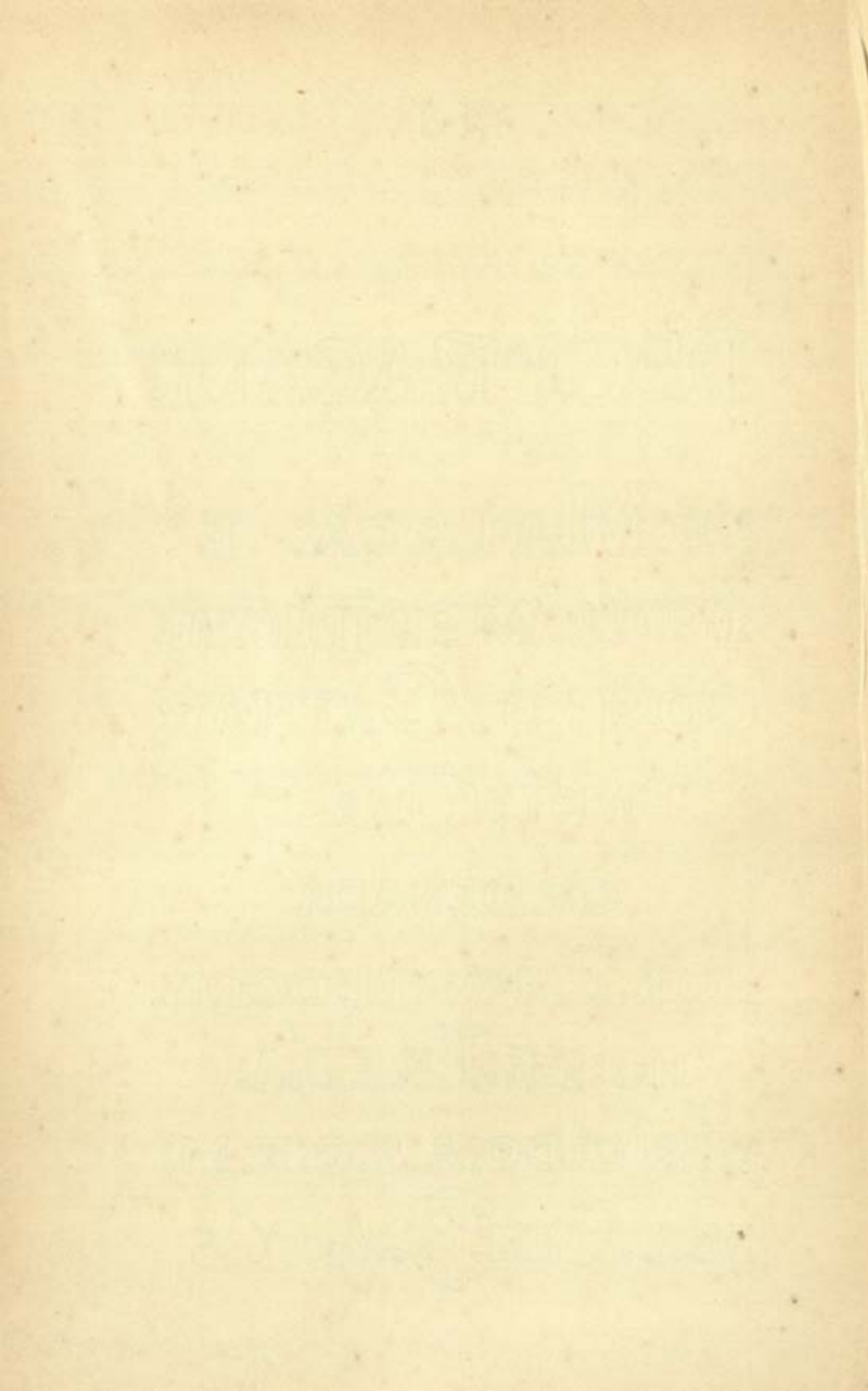
Acknowledgement of indebtedness to individual gentlemen is made in the body of the paper.

DECLARACAM:

DE: MALACA: E:
 INDIA: MERIDIONAL:
 COM: O: CATHAY:
 EM: iii: TRACT:

ORDENADA:

POR: EMANUEL: GODÍN:
 HO: DE: EREDÍA:
 DIRIGIDO: A: S: C: R: M:
 DE: D: PHIEL Rey de España. N. S.



1613.

DESCRIPTION

OF

MALACA

AND

MERIDIONAL INDIA

AND

CATHAY

IN THREE TREATISES

COMPOSED BY

EMANUEL GODINHO

DE EREDIA

ADDRESSED TO

HIS CATHOLIC ROYAL MAJESTY

DOM PHELIPPE

King of Spain. Our Sovereign.

TO THE KING OUR SOVEREIGN.

LIB. 1. REG. CAP. 8.

In the first book of Kings we find a statement of the duty which devolves upon a Prince's subjects to render loyal service in order to aid and assist him.

It gives me great pleasure, therefore, to lay at your disposal my treatise on Malaca and its district, and Meridional India, together with accounts of Cathay, and the cause of the fixation and variation of the navigator's needle, and other curious things.

This I now submit to Your Majesty.

As it deals with matters of extra-ordinary importance, may Your Majesty accept this small offering, tendered as it is because of my love for the prosperity and advancement of His States, and because of my affection for His people.

By accepting it, Your Majesty will fire me with resolution to render yet greater services.

May God guard Your Royal person through many happy years to govern His States and to be my protection.

At Goa, the 24th November, 1613.

Your Majesty's faithful servant,

EMANUEL GODINHO DE EREDIA.

TO THE READER.

PLATO. LIB. 31.
DIALOG. 7.

Plato says that in every art the first essential consists in the imitation of former masterpieces.

So I follow in the footsteps of the writers who described the many things which were of pre-eminent interest in their own times.

But present-day knowledge discloses errors in statements which were insistently asserted to be true; not that the authors lacked erudition or ability, but they were much too far away, in Europe and Egypt, to obtain accurate information about the Indias.

So I have been at particular pains to record the necessary facts, and to complete this work in the interests of general utility; not as being more learned or having greater authority to record curious matters, but as having more experience of conditions in the Indias.

I have divided this dissertation according to its subject-matter into 3 parts or treatises; the first deals with Malaca, and its district, and its foundation in the year 1411; the second deals with Meridional India, and the ancient intercourse therewith, and its aromatics which were known in the year 1295; the third deals with Cathay or Attay, and the Chinas, and the empire of Preste Juan, a Christian, who ruled all this portion of the Orient; it also deals with the accounts of Ophir and Tharsis, following the views of Josephus and St. Jerome, and it deals with the reason for the fixation of the navigator's needle, and for its variation from the North.

However grave may be its defects, I pray the reader will be tolerant when he observes them, not condemning my efforts, but accepting my work as designed to stimulate interest and enthusiasm in shedding light on certain things in the world about which our knowledge is all too scanty. Farewell.

PART I.

CONCERNING MALACA

AND ITS DISTRICT.

Table of Chapters in the First Part.

CHAPTER 1.	Concerning the Town of Malaca.
CHAPTER 2.	Concerning the District of Malaca.
CHAPTER 3.	Concerning Tanjon Tuan.
CHAPTER 4.	Concerning the antiquities.
CHAPTER 5.	Concerning the flora.
CHAPTER 6.	Concerning the fauna.
CHAPTER 7.	Concerning the foodstuffs.
CHAPTER 8.	Concerning the wines.
CHAPTER 9.	Concerning the name "Malaio".
CHAPTER 10.	Concerning the armed forces.
CHAPTER 11.	Concerning the fortresses.
CHAPTER 12.	Concerning the commerce.
CHAPTER 13.	Concerning the boats.
CHAPTER 14.	Concerning their occupations.
CHAPTER 15.	Concerning Ganoledan.
CHAPTER 16.	Concerning the Malaio Sea.
CHAPTER 17.	Concerning the nature of the land.
CHAPTER 18.	Concerning the temperate climate.
CHAPTER 19.	Concerning the medicines.
CHAPTER 20.	Concerning the sorceresses.
CHAPTER 21.	Concerning the Maumeth faith.
CHAPTER 22.	Concerning the mines.
CHAPTER 23.	Concerning the waterspout.
CHAPTER 24.	Concerning the bore.
CHAPTER 25.	Concerning Christianity.
CHAPTER 26.	Concerning the Malaio Kings.

(2) **CONCERNING THE TOWN OF MALACA.**

- (3) (5) "Malaca" means Myrobalans, the fruit of a tree growing along
 (6) the banks of a river called the Aerlele, which flows down from its
 (7) source on the hill of Buquet China to the sea, on the coast of the
 (8) mainland of Ujontana. It was on the south-east side of this stream
 (9) (11) that the Permicuri, first king of the Malayos, founded the town
 (12) called Malaca, so famous throughout the world.
 (13) It lies in 2 degrees 12 minutes of north latitude, at the inter-
 (14) section of the meridian and the vertical: it is in the torrid zone, in
 front of the first climate: the longest day is 12 hours 6 minutes.

PTOLEMY. Ptolemy does not mention the name "Malaca":
Cosmographia. it is a modern name given by the abovementioned

- (15) king who founded the town in the year 1411, during the ponti-
 ficate of Juan XXIV, when Dom Juan II was
 GARIBAY. King of Castile and Dom Juan I King of
History of the Popes. Portugal.

- (16) Before the foundation of the town, the place was inhabited by
 a fisher-folk, the "Saletes," who gathered in the shade of the
 myrobalan trees.

- (17) These fishermen employed pointed darts called "*soligues*,"
 with which they transfixed the fish swimming at the bottom of the
 sea: they used no other devices for catching fish. They were a
 wild, cannibal race, who inhabited the coast of Ujontana in the
 southern sea.

- (18) In ancient times the narrow isthmus of dry-land which ran
 (19) from the promontory of Tanjontuan (now called Caborachado) and
 (20) (21) joined the other promontory of Tanjonbalvala in Samâtta (corruptly
 Samâttra), extended between two seas, one on the north and the
 other on the south.

- (22) It was by this corridor that the natives from the mainland of
 Ujontana crossed over to Samâtta (which means 'Peninsula' or
 'Chersonese'), called by Ptolemy "Golden Chersonese": we shall
 discuss this later.

- (23) (24) Permicuri selected this spot in the interests of his own safety,
 for he stood in fear of the ruler of Pam, overlord of the countries
 of Ujontana, who was making warlike preparations to capture him,
 in consequence of the treachery which Permicuri had perpetrated
 (25) (26) in Sincapura, when he assassinated the "*Xabandar*," who was related
 to the lord of Pam, despite the kindness which the "*Xabandar*"
 had shown at his house in Sincapura, when Permicuri took refuge
 (27) (28) there in his flight from his father-in-law the Emperor of Java Major.

[Translator's Note.—The figures in the margin refer to the Notes which
 appear on p. 85 et seq.]

So Permicuri fortified himself on the crest of the hill, where he was safe and free from the fear of being taken and killed. Moreover, he employed the greatest industry and energy in extending the town on both sides of the river: and he developed his new state by establishing commerce and traffic with the surrounding peoples who all came to the port for the shad-fishery, since the roes or "*turubos*" pickled in brine formed a highly-esteemed dish. (29)

Then, when the port was open and frequented, merchants from Choromandel had recourse to it, especially the Chelis with their cloths. (30) (31) (32)

These people assisted in attracting the strangers from the surrounding islands, who peopled the port and popularized it, bringing their merchandise and exchanging their gold and spices for cloths.

This trade made Malaca one of the richest and most opulent States in the world.

For at this time the natives owned many "*bâres*" of gold: and this prosperity continued throughout the reigns of Permicuri's successors and descendants. (33) (34)

Permicuri was succeeded in order by Xaquemdarxâ, Soltan Medafarxâ, Soltan Marsuse, Soltan Alaudim, and lastly Soltan Mahameth who was overcome by Affonço de Albuquerque.

The latter conquered the state of Malaca a little more than 100 years after its foundation, on the 15th of August, 1511. (35)

After conquering the town of Malaca, the invincible captain built a stone and mortar fort at the bottom of the hill, almost along the edge of the sea-shore, on the south-east of the river mouth, on the same spot where Soltan Mahameth had his palaces and kept the treasures with which he retired up the river into the Hinterland.

He passed over to Pam on the other side of the peninsula, and thence to Bintam where he gathered strength to undertake expeditions against the fortress of Malaca. (36) (37)

After the fortress had been finished and stood complete with its artillery and garrison of soldiers, it created among the Malayos a feeling of intense dread and astonishment which lasted permanently to the great credit and honour of the Crown of Portugal.

For though the fortress was attacked time and again by the Malayo Kings and by other neighbouring peoples, it always proved victorious. (38) (39)

The fortress was in shape a quadrilateral, of which each side measured 10 fathoms: its height was 40 fathoms: on the east there was a circle formed by walls of stone and mortar: there was a well in the middle: so that in times of disturbance or war, the people with their supplies could take refuge inside the circle of the protecting walls. The castle or tower was as high as the hill. (40) (41)

It was not built on the top of the hill because it was preferable to place it at the foot, right on the sea, where it could easily be reinforced in time of war.

This tower constituted a starting-point for the subsequent construction of the earth walls around the habitations of the Malaes about the hill.

- (42) The system began at the point where the land juts into the sea on the west of the hill: nearby were built the Hospitals and the House of Mercy: here two ramparts of stone and mortar ran off at right angles, each skirting the shore: from their starting-point, both the ramparts ran in a straight line, the one northwards for a distance of 130 fathoms to the corner by the river mouth and the bastion of S. Pedro in front of the fortress: the other eastwards for a distance of 75 fathoms to the inward curve of the shore and the gate and bastion of Santiago.

- (43) Both these ramparts were constructed of stone and mortar: so too was another one which started from the bastion of San Pedro and the corner by the river mouth and extended for a distance of 150 fathoms from the gate of the Custom House Terrace, following the river in a north-easterly direction, as far as the acute angle constituted by the bastion of S. Domingos. From the gateway here an earth rampart extended in a south-easterly direction for a distance of 100 fathoms as far as the obtuse angle constituted by the bastion of the Madre de Deos.

- (44) Then, from the gate of S. Antonio, for a further distance of 100 fathoms, another earth rampart extended in a south-easterly direction, past the bastion of the Virgins, as far as the other gate and the bastion of Santiago.

Thus the total circumference of the walls amounted to 655 fathoms of 10 palms to the fathom.

At a later date Joao Baptista, the Architect-General, by order of the King, re-drafted the plans of the fortress; taking in more ground by a new trace for the wall on the south-east side in the flat lands which extended from the bastion of Santiago to the bastion of S. Domingos; and replacing the earth walls by new walls constructed of stone and mortar for the whole distance: but this defence-work was never executed.

In the whole circle of the walls, 4 gates were pierced, but only 2 were in common use and open for traffic, the gate by the Custom House Terrace and the Gate of S. Antonio.

- (44) Within the circle of the walls were situated the Castle, the Palaces of the Governor of the State, the Palace of the Bishop, the Hall of the Council of the Republic, the Hall of the Brothers of Our Mercy, together with 5 Churches, namely, the Cathedral of Our Lady of the Assumption, with its chapter and episcopal see, the Church of Mercy of Our Lady of the Visitation, the Church of Our Lady of the Annunciation in the College of the Company of Jesus at the top of the hill, the Church of S. Domingos in the Convent of the Dominicans, and the Church of S. Antonio in the Convent of S. Augustino: there were also 2 Hospitals.

Outside the walls lay 3 suburbs: the first called the suburb of Upe, on the other side of the river; the second called the suburb of Yler, or of Tanjonpacer, on the same side of the river as the fortress; the third called the suburb of Sabba, extending along the banks of the river. The most important of these suburbs is that called the suburb of Upe. (46) (47) (48) (49)

It obtains its other name of "Tranqueira" from the Rampart: there is a stone bastion constructed on the beach of the seashore, at a point 700 fathoms distant from the mouth of the river in a north-westerly direction: from this point a wall of earth extends in a straight line towards the east for 60 fathoms, past the ordinary service gate of Tranqueira as far as the earth gun-platform: thence, at an obtuse angle, another wall of earth runs in a straight line, in a south-easterly direction, through the marshy and swampy gardens lying inland, as far as the gate of Campon China which abuts on the river. (50) (51)

So the suburb of Upe with its country-houses and groves is encircled by a wall which protects it from the attacks of the Saletes: nevertheless when war-time organization prevails, it is entirely depopulated and abandoned, the whole population taking refuge within the walls of the fortress.

This suburb is divided into two parishes, S. Thome and S. Estevão. The parish of S. Thome is called Campon Chelim: it extends from the Bazar of the Jaos on the beach in a north-westerly direction, and ends at the stone bastion. In this quarter live the Chelis of Choromandel, who ought to be the Chalinges of Pliny, Book 6 chapter 17. (52) (53) (54)

The other parish, S. Estevão, is called Campon China: it extends from the above-mentioned Bazar of the Jaos on the beach and from the mouth of the river, in a north-easterly direction, for a distance of 400 fathoms along the bank of the same river to the gate and the earth-wall which forms part of the rampart; and beyond the marsh-land again, as far as the "Nypeiras" or Wild Palms beside the stream of Paret China. (55) (56) (57)

In this quarter of Campon China live the Chincheos, descendants of the Tochâros of Pliny, and stranger merchants and native fishermen.

PLINY.
Bk. 6. ch. 17.
Thocaros or
Chorios.

These two parishes of S. Thome and S. Estevão contain 2,500 Christians, including men, women, and children, in addition to other infidel natives.

All the houses comprised in this area are made of timber: they are roofed with tiles to ensure against risk of fire: the exigencies of war do not permit of stone and mortar buildings here.

A bridge constructed of stone and mortar crosses the mouth of the river, leading to the Custom House Terrace: on this bridge a sentry is posted, and guard is kept at night. (58)

- (59) (60) On the beach called the Bazar of the Jaos, at the mouth of the river, every variety of rice and edible grain is sold by the Jao merchants from Java Major: every day at day-break, in their boats or "*champenias*" (which resemble "*bateys*"), they discharge the foodstuffs from the junks and ships to sell them in that market generally.

- (61) The second suburb, that of Yler, containing houses of wood with roofs of thatch, lies on the same side of the river as the fortress, towards the south-east: it extends from the stream Aerlele for a distance of 600 fathoms as far as the fields of Tanjonpacer, where there is a "*bangacal*" or guard-house which is its sole protection.

In this suburb of Yler, containing 1,300 Christians besides other infidel inhabitants, is situated the Parish Church of Our Lady of Mercy: and from the stream or rivulet Aerlele another row of wooden houses runs eastward for 500 fathoms to the well of Buquet China providing excellent water which springs from the foot of the hill, on whose summit rises the Church of the Madre de Dios and the Convent of the Capuchins of S. Francisco.

- (62) Close by, further to the north, rises another hill called Buquetpiatto.

- (63) All around, the fields and swamps extend both south-east and south, as far as Buquetpipi and Tanjonpacer.

The last suburb, that of Sabba, extends from the moat at the bastion of S. Domingos: here wooden houses are built right over the water of the Malaca river: the swamps and marshes of the terrain are well suited to the mode of living of the fishermen here: they tie up the boats and the nets which they use for fishing all along the sides of their houses: they also traffic in timber and charcoal from the hinterland.

In this suburb is established the Parish Church of S. Lourenço: there are 1,400 Christians besides a large number of infidels who live in the swamps of "*Nypeiras*" or Wild Palms, from which they make "*Nyba*" wine by distillation.

- (64) Besides the three parishes just outside the walls, they have three more parishes in the interior of the country, S. Lazaro, Our Lady of Guadalupe, and Our Lady of Hope: stretching along the river bank. they contain 2,200 Christians besides infidel vassals, who live in the Hinterland on their farms where they raise cattle and farmyard animals.

- (65) The Christian population, only, in the 8 parishes amounts to 7,400 persons, besides the infidel native vassals in the jurisdiction of Malaca.

- (66) The administration of the State is organised as follows; there is a Governor appointed for three years, a Bishop and other dignitaries of the Episcopal See, municipal officers in accordance with the privileges of Evora, Ministers of the House of Mercy, Royal Officials
(67) for finance and justice, and the native "*Bendara*" having authority over the infidel vassals and strangers.

The State maintains the mendicant Orders, the College of the Company of Jesus with its schools and colleges, the Convents of the Orders of S. Domingos and S. Augustino, and the Capuchins of S. Francisco, with the ministers of the Christian religion.

Within the walls of the fortress live 300 married Portuguese men with their families and a garrison of soldiers for its defence. (68)

In fine, they have 4 religious Convents, 8 Parishes, 14 Churches, 2 Hospital Chapels, and some Hermitages and Oratories.

Chapter 2.

CONCERNING THE DISTRICT.

The district of Malaca abuts on the sea coast: commencing from the mouth of the River Panagim, it runs from north-west to south-east, a distance of 12 leagues, to the mouth of the River Muar. (1) (2) (3) (4)

The north and north-eastern boundary, running inland, forms a semi-circle with a diameter of 8 leagues, till it reaches the mountains of Batan Malaca and the sources of the rivers Panagim and Muar; that is to say, the source of a branch of the River Panagim near Sunecopon and Nany, and the source of another branch of the River Muar, near Jol. (5) (6) (7) (8)

In fact, Malaca territory is contained within a semi-circle 20 leagues in circumference running round from the mouth of the River Panagim to the mouth of the River Muar. Midway between the extreme limits along the coast lies the mouth of the fresh river and the happily-situated fortress of Malaca, built on the south-east bank of the river, by its entrance and mouth, at the foot of a hill, 6 leagues distant from the River Panagim and Caborachado, and an equal distance from the River Muar.

Between these two rivers Panagim and Muar there is a continuous stretch of coast, with other streams as well: thus, distant $1\frac{1}{2}$ leagues north-west from the mouth of the River Malaca, beyond the promontory of Tanjon Upé, comes the River Batantiga, whose source almost joins a branch of the River Malaca in the hills of Brettão; and further on, $2\frac{1}{2}$ leagues beyond Tanjon Chelim and Tanjon Bidara, comes the River Sunebaru, whose source is quite close to Sarvarátto, the Royal Orchard, and to the hills where stands the Church of Our Lady of Hope on the River Malaca; 2 leagues further on again from the River Sunebaru comes the big River Panagim, and then Caborachado. Towards the south-east, along the same coast, distant $1\frac{1}{2}$ leagues from the mouth of the River Malaca, comes the River Doyon, and then the promontory of Pungor, and Tollotmås: and further along, 2 leagues beyond Tanjon Palas, comes the pretty River Cassam with its lizards or crocodiles: and then $2\frac{3}{4}$ leagues further on, past Tanjon Gadin, comes the River Muar, where the "Descobridor," by order of the King, laid the foundations of the fortress on the 2nd day of February in the year 1604. (9) (10) (11) (12) (13) (14) (15) (16) (17)-(19) (20) (21) (22)

Finally, there is the River Malaca which flows into the interior round to a point 8 leagues distant from its mouth as the crow flies.

- The sea coast measures 12 leagues from the River Panagim to the River Muar: the territory belonging to the Crown of Portugal is comprised within a semi-circle, whose circumference measures 20 leagues, joining the mouths of these two rivers, together with
- (23) the islands off this coast, such as the island of Upe, called the Island of Pedra, opposite the promontory of Tanjon Upé, and the island Pulo Malaca opposite to the trees bearing the Myrobalan fruits called "*Malaca*," at the mouth of the stream Aerlele, whence a tongue of dry land extends as far as Pulo Malaca, which, being a hill, retains its insular formation while the tongue of flat land, through disintegration, has become a kind of swampy shoal: lastly,
- (24) there is the "big island," with 4 islets on the south and another islet on the east, nearly opposite the Point of Pungor.

- In the interior, the flat land as well as the mountains is completely covered with flowers and green medicinal plants: one finds
- (25) thick groves containing "*aguila*," "*calamba*," "*bejoim*," "*camin-*"
- (26) (27) "*ham*," camphor, dragon's blood, and other aromatics; in particular
- (28) (29) there are so many trees yielding gums and oils that one could fill a
- (30) ship's hold with their products: in addition there are orchards of
- (31) cultivated and wild fruits, many of which are very tasty and pleasant-flavoured, not found in other parts of the world, such as
- (32) "*Durioes*," a fruit resembling blanc-mange in taste and flavour, and of about the same consistency: there are other very excellent fruits
- (33)-(36) such as "*Mangostans*," "*tampoes*" "*rambês*," "*rambotans*,"
- (37)-(40) "*bachoês*," "*champadas*," "*chintes*" and "*buasducos*," besides other fruits which do not occur in India.

- (41) The forests, which produce large timber-trees, are the home of
- (42)-(46) elephants, "*badas*," tigers ("*arymos*"), tapirs, large snakes,
- (47)-(49) monkeys with the bezoar-stone, and all kinds of animals and birds of the chase, besides very beautiful singing-birds delightfully melodious.

- (50) The land is very fertile and suitable for the cultivation of all kinds of rice and grains: the local harvests can provide all the food-stuffs necessary for existence without having recourse to the produce brought by the foreign Jao merchants from Java Major.

- (51) These merchants control the trade at Malaca, for the natives are negligent and careless in the matter of husbandry: they do not make the best use of the fertile fields threaded with rivers and streams of good water, which run down from the interior to the sea and irrigate the Hinterland so effectually that it might produce a variety of herbs and plants as marvellous as those of Thessaly.

The natives dwell in their orchards and gardens along the banks of the Malaca River, living contentedly on the produce of the lands and fields, and raising large herds of cattle and smaller animals, besides geese, ducks, and fowls.

- (52) The greater part of the country is uninhabited and deserted, except in the district of Nany which is occupied by Monancabos

engaged in the trade in "*betre*," an aromatic plant which is chewed with a mixture of chalk and areca in order to tone the stomach. (53)

These Monancabos with their stocks of "*betre*" come down from Nany to the "*Pancalan*," whence they proceed by boat to the market-place at Malaca. (54)

It should be noticed that the River Malaca, running inland from its mouth, flows north and north-east for a distance of 4 leagues as far as the place known as Pulo, where there is the Hermitage of the Capuchins of S. Francisco: here it divides into two branches, the one called Machat, running north-east to Cottot and Ganur, the other called Batan Malaca, running north-west to Pancallan Nany, where live the above-mentioned vassal Monancabos. (56)

It is by the same route past Nany that one proceeds from Malaca to Rombo, head of the Malayo villages in a territory which belongs to the Crown of Jhor: Rombo also is peopled by Monancabos. (57)-(59)

In the forests of that district live the Banuas, a race as wild as the satyrs of Pliny, Book 1 chapter 2. (60)

These Banuās are soothsayers like the soothsayers of Thuscia and live on the mountain called Gunoledam, where dwelt the Queen Putry, a magician and enchantress like the Thessalian Erichtho, who, by the medicinal virtues of herbs and plants, turned women into the shapes of tigers and other animals and birds. (61)

Chapter 3.

CONCERNING TANJON TUAN.

From Tanjon Tuan, now called Caborachado, on the mainland of Ujontana, runs in a south-westerly direction the narrow Isthmus of land which joins the point of Tanjon Balvala in Samatta (corruptly Samattra), a peninsula or Chersonese called by Ptolemy the "Golden Chersonese" owing to its richness in

PTOLEMY.

Table 12. gold.

This isthmus was disintegrated under the influence of wind and wave, with the result that this portion of low land has been covered by the sea for a distance of 2 leagues between the point of Tanjon Tuan and the point of Tanjon Balvala: hence, as one sees by personal observation, to-day Samatta is an island 600 leagues in circumference, whereas in olden times it was a peninsula or Chersonese, (which means a land which is joined to another land by an Isthmus); as in fact was the case in the time of Ptolemy, in the year 163 after the birth of Christ our Saviour, 1248 years before the foundation of the town of Malaca. (1)

PTOLEMY.

year 163 after the birth of Christ our Saviour,
1248 years before the foundation of the town of
Malaca.

During the whole of that period there were no human habitations on the site of Malaca, which abutted on the sea to the south-east of the isthmus, where the Saletes lived in their boats along the beaches of this coast. Although the isthmus was washed by the seas

on both sides, on the south-east as well as on the north-west, only the sea on the north-west was navigable.

- (2) On this side of the isthmus stood the port of Sabbara, on the coast of the Cannibal-haunted mainland of Ujontana, and to this port came merchants from Choromandel on the Gangetic Gulf, an ancient race mentioned by Pliny in Book 7
PLINY. Bk. 7 ch. 2. chapter 2. Embarking in their rowing-boats, they ran down the coast of Asia from the mouth of the Ganges towards the coast of Ujontana until they reached the port of Sabbara near Parcelar, whence they could effect the further journey to the Golden Chersonese by crossing the sea from one coast to the other,
 (3) from Sabbara to the Port of Tacola, a great trade-centre: judging by
PTOLEMY. the positions given in Ptolemy's Table, this was
 (5) the trading-centre of Arû or Auro, with its traffic in gold and spices:
 (6) thence by river and mountain they crossed the country to Tico in the district on the opposite coast: it may be, however, that Tacola is the same place as Tico.

- This sea-route from Choromandel to the Golden Chersonese was
 (7) not very ancient, for it is not mentioned by Pliny, or the other writers,
HERODOTUS. STRABO. THEOPHRASTUS. PLINY. PTOLEMY. Herodotus, Strabo, Theophrastus, but only by Ptolemy, in whose time, in the year 163, communication was open and practicable with the Golden Chersonese and the other parts of the south.

- (8) The same native inhabitants of Ujontana and the Golden Chersonese appear to have been a most savage and wild race: the majority of them were Cannibals, devourers of human flesh; just as
 (9) at the present day the Battas of Samattra and the Nicobares of Nicobar retain and practise this evil and disgusting custom.
 They all go naked, without any clothing at all, just like satyrs.
 (10) For the progress of civilization in the South marches hand in hand with the intercourse between Choromandel and the Golden Chersonese.

- (11) This intercourse is not so ancient as the intercourse between
 (12) Egypt on the Red Sea and Choromandel and Tropobana, as appears
PLINY. Bk. 6 ch. 22. from Pliny, Book 6 chapter 22, confirmed by the Chaldaean history of the voyage of the Apostle
 (13) S. Thome, who by way of the Red Sea straits and Socottora passed to the port of Cranganor and Meliapor in Choromandel: this sea-
 (14) route was open in the time of Solomon.

Chapter 4.

CONCERNING THE ANTIQUITIES.

- (1) On the sea-coast of the Malaca district there still survive some ancient relics of Permicuri and the descendants who succeeded him:
 (2) for instance, at the place named Panchor there is the so-called "King's Pool": this is a Pool constructed of marble for the King to bathe in: it is fed by an ever-flowing spring of excellent water

which flows down to the sea between great rocks through woods and groves which are the haunts of deer, hares ("palandos"), and all kinds of animals and birds of the chase. (3)

A short distance away from Panchor in a north-westerly direction are the streams which feed the royal swimming-pool, the Aer Raya and the Aer Patry, and especially the Batugaja, which contains a fossilized marble figure of an elephant, a thing which the natives regard as a great marvel. (4) (5)

Avicena maintains, and even more so does Avicena. LAGUNA. Laguna, Book 5 chapter 4, that it is possible for animals to be converted into stone, especially by means of salts. At the sources of the Sunebaru there still remain the traces of the royal orchard of Sarvarrallos which resembled a terrestrial paradise, with plantations of trees bearing delicious fruits of every kind, and with every variety of flower, including fragrant and sweet-scented roses. At the Point of Tanjon Tuan or Caborachado, on the very summit of the Hill, there survives another building, which looks like a basin made of marble blocks or like the ruins of the base of a pyramid, in which Permicuri was buried: this is the origin of the name "Promontory of the Lord" or "Tanjon Tuan." (6)

In Tollot Mâs, south-east from the River Malaca, beyond the Point of Pungor along the same coast, there stands, at some distance from the sea, a great building of stone masonry, square in shape with sides at right angles, and full of trees, like a royal palace or a fortress: this structure seems to follow the architectural style of Andaro on the Ganges, as appears from Pliny, (7)

PLINY. Book 6 chapter 19.

In the quarter known as Tranqueira, on the opposite side of the River Malaca from the fortress, in a place belonging to Raya Mudiliar which later came into the possession of Dona Helena Vessiva, when digging to a depth of about 2 fathoms among the Mango trees, they discovered a decorative cross made of copper somewhat corroded: in shape it resembled the cross of Calatrava, the size being about 3 palms: it was superimposed upon a square block of marble, of the same size and length as the cross itself: it was found among the ruins of a tiled subterranean house resembling a Hermitage. (8)

It would appear to have been the cross belonging to some Christian from Meliapor, who came to Malaca in company with merchants from Choromandel, and was favourably received into the district under the protection of this Raya Modiliar.

Chapter 5.

CONCERNING THE FLORA.

The flora of the district may be divided into three different classes, aromatic trees, fruit-bearing and medicinal trees, and wild forest trees: the same applies to the plants and herbs.

Among the aromatic and scented trees there is the "*Aguila*," a tall stout tree with leaves like an Olive: the pith inside is bitter and oily. The "*Aguila*" is differentiated by an extra thin skin on the outside of the bark; if it loses this skin, the tree decays after 3 months through exposure to the weather, and then, owing to this decay, it exhales the scent which comes from the pith.

"*Calamba*" is derived from the oiliest pith of the same tree.

"*Bejuim*" called "*Caminham*" is another tall stout tree: the gum or liquor which oozes and exudes from clefts and holes in the bark we call "*Bejuim*".

It is the same with the camphor tree: it is a tall stout tree, and the camphor-liquor flows from the holes in the bark: the scented wood is much used in the carpenter's craft, for beds and tables of superior grade.

One finds different species both of camphor and of "*bejuim*".

There occur in the country many other scented woods, of which we will not make particular mention here.

- (1) Among the fruit-trees, the "*Doryão*" is a big, very tall tree: the fruit resembles a round head, and is covered with green pyramidal pricks: when ripe, it turns yellow, the skin is all thorny, and it splits open at the point into divisions and compartments like an orange-blossom: within these divisions are the lumps of fruit-substance, sweet and very delicious, having the consistency of blanc-mange, with a stone concealed inside each lump.

One finds many species of this fruit: the best and most creamy is the "*Doryão Tambaga*"; which to my mind is the finest fruit in the world.

The "*Mangostan*", a tree of no great height, bears a fruit which is round like the orange, with a thick rind: while unripe it is yellow, and after ripening it turns red: in the hollow interior lie its sweet juicy portions flavoured like the cloves of a head of garlic and containing a stone: this fruit is useful in illness as it is juicy and refreshing.

The "*Tampôe*" is another tree of the same height: it bears a fruit with a thick rind, the colour of cinnamon: in the hollow interior lie sweet portions flavoured like the cloves of a head of garlic and containing a stone: as it is sweet and rather hot they distil from it a wine which resembles Moscatel.

- (2) There are other native fruits such as "*bachoés*" "*rambotans*" "*rambes*", "*chintês*", "*champadês*", "*buasducos*" "*romanyês*", and others so numerous that we cannot now mention them, nor can we mention the other foreign fruits, that is to say, the fruits of India Intra-Ganges: for the country of Indostan and the Peninsula of the Promontory of Chory or Cape Comoryn have different natural characteristics from this other country of Ujontana in India Extra-Ganges. For the trees of the one place do not produce fruit in the other place: I mean to say, the trees of Ujontana do not produce fruit in Indostan: more likely are the trees of Indostan to produce fruit in Ujontana.

In the hinterland, moreover, one finds some trees of cinnamon, (4)
 “*canafistola*”, and “*tamarindi*”, as well as the Cobra-wood, which (5)-(7)
 has such potent anti-toxic virtue that it compels the snakes to do
 obeisance and lower their heads when they see the roots of this
 same wood.

The jungles or woods contain many kinds of big and tall trees
 for constructing boats and for every requirement, and in particular
 trees which yield gum and oil of which considerable shipments are
 made.

There is one big tall tree from which the gummy, oily liquor (8)
 flows through cracks in the bark: this liquor thickens and coagulates
 at the foot of the trees where it is collected by the natives.

The forests, moreover, contain some Brasil-wood trees, many (9)
 species of gum-bearing trees, and numerous cotton trees. There are (10)
 many species of plants, both cultivated and wild, particularly
 aromatic plants: round pepper, long pepper, “*renriure*”, “*lancoas*” (11)-(14)
 (another and hotter species) “*choncor*”, country saffron, (15) (16)
 “*casumba*” (resembling European saffron), and aromatic “*betre*”, (17) (18)
 besides numerous other plants which cannot be discussed in a short
 space. The wild palms called “*Nypeiras*” resemble the palms of
 India in shape and leaf—they are somewhat bigger than those date-
 palms; they have a big, stumpy base and grow in the swampy
 land.

At ground level there spring from the trunk of the palm the
 typical palm-branches with sprigs of large flowers among which
 hang the fruits in clusters like big pine-cones: from the flowers is
 derived a liquor from which wine is extracted by distillation: this (19)
 is the best wine in India. Sometimes the distillate is as strong as
 brandy. It differs from the wine which is made from the cocos-
 palm, and is produced in these parts by a superior process of
 distillation, similar to that in which grains are soaked in water and
 cooked, as mentioned by Pliny.

Chapter 6.

CONCERNING THE FAUNA.

Among the animals and birds which ordinarily occur in the
 district are many elephants, “*badas*”, tapirs, tigers, large snakes, a (1)
 great number of wolves and jackals, besides the animal called the (2)
 “*lynta*” which the elephant fears, as well as a great quantity of
 hares (“*palandas*”), stags, wild buffaloes, goats, cows, and every
 sort of cattle and farmyard animal.

So too among the birds, there are geese, ducks, domesticated
 and wild fowl, besides a great variety of birds with beautiful
 plumage and sweet harmonious songs, and a large number of
 peacocks.

“*LINTA*” called Among the animals, the “*lynta*” appears
 “*TAMBOLIM*.” worthy of mention: it is 3 palms long and in
 shape like a snail: this “*lynta*”, having thick hard scales like a

- tortoise, can withstand the elephant and wear it down till it dies of hunger: it merely seizes the trunk and fastens on to it, twining round so tightly that the elephant cannot throw it off and get rid of it, until after several days the elephant is worn out and overcome with hunger, and eventually gives in, is finished, and dies: this is what the natives relate. Among the great snakes or serpents, some
- (3) have in the middle of their forehead the carbuncle or luminous stone: for instance, the Monancabos allege they found a stone in the forehead of a dead snake, which they sold to the merchants of Meca in Arabia: it was a white crystalline stone with colours ranging from blue to red: it was only luminous at night, and emitted but a slight radiance for it was not larger than a partridge's egg in shape.

- The natives are firmly convinced that these stones grow in the forehead of serpents and large snakes in the country of Ujontana: though, properly speaking, the carbuncles are stones growing in the
- (4) forehead of an animal called "*lacocacho*", white in colour, with the shape of a cat or a large rat (but of a different species), which resorts to subterranean places and caves in the mountains, according to the accounts given by the natives of Gilolo and Saquita in Maluco.

In Corya and among the Chincheos are found large centipedes 3 palms long, with a glow which lights up a room: but this light proceeds, not from a stone, but from a luminous secretion.

- However, the King of Bâle, adjoining Java Major, had in his
- (5) palace a black grey-hound with 4 eyes, two natural ones to see with, and two others in its forehead; these resembled luminous stones, and illuminated the palace at night, no other light being required.

We do not yet know whether these were luminous stones or a luminous secretion. This was observed in the year 1594. Moreover the writers maintain that these carbuncles exist in Lybia in Africa: they are mentioned by Pliny in Book 37 chapter 7, and by Aristotle in the *Meteorologica*, Book 4 chapter 9: others consider that the Ruby is a carbuncle.

Chapter 7.

CONCERNING THE FOODSTUFFS.

- The foodstuffs of the natives comprise rice and grains growing above the ground as well as a variety of yams or tubers growing in the ground: the low-lying terrain of the country produces all these things in great quantity, particularly rice, of which there are many varieties: the best kind is the "*girical*", delicate and white: the
- (1) natives live on it as it were their daily bread: there is a darker rice on which the lower classes live.

This plant resembles corn, and demands the same husbandry to give the same results; the rice is then husked, sifted and washed; it is put in a pot with a certain proportion of pure water; it is then placed over a gentle fire; when softened with boiling, the rice constitutes a nourishing food.

There is also produced another kind of oily rice called "*Puloth*"; it is white, dark, or red; it is held in great esteem (2) because this kind of "*Puloth*" rice does not occur in Indostan (3) Intra-Ganges in India.

In addition to several other kinds of grains, there are shoots, beans, and legumes, cooked and spiced according to taste, on which the common people live.

Moreover the country produces a great quantity of yams or large tubers which grow in the ground; there are many varieties, resembling the "*camôttes*" of America; these yams, cooked or (4) baked, serve in place of bread; the substance inside the rind and skin is very tasty, like baked chestnuts.

In time of want, great famine, and distress, the people live on other roots and wild potatoes: these, without any other food, suffice to satisfy their hunger.

Although the same land produces this rice and grains, still the great majority of the natives obtain all their rice and grains by trading with the foreign Jao merchants from Java Major, with a view to re-sale in times of want and scarcity, which frequently occur in the intermittent warfare at Malaca.

Thus the fortress is always well provided with foodstuffs and water, and all the supplies necessary for its defence. The rice is cultivated in the swamps and marshy places of the low-lying lands, while every other sort of grain is cultivated on the heights of the hills: so that, in this way, the whole of the land can be put to profitable use.

Chapter 8.

CONCERNING THE WINES.

The wine proper to Malaca is that called "*Nypa*", made from (1) the "*Nypeiras*" or wild palms of the swamps: the palm-liquor (or drops from the incised flower), which is called "*tuâca*", is kept in (2) an earthen-ware jar, well corked: this "*tuaca*" or sweet liquor is (3) transferred to another larger receptacle also made of earthen-ware, in which, as in a still, it is distilled over a slow fire, and the "*tuaca*" is converted into white "*Nypa*"-wine, which is most highly (4) esteemed among the Malayos. Sometimes they make it as strong as fire, and as ardent as brandy, for use medicinally to counteract (5) the cold of "*berebere*".

The fiery wine has this property that when a cloth is soaked in it, the wine catches alight or burns without scorching the cloth. (6)

MARCO POLO. This wine is mentioned by Marco Polo the (7)
Bk. 2 ch. 25. Venetian in Book 2 Chapter 25.

A wine is also made from the cultivated cocos-palm: this is the (8) usual wine in Indostan Intra-Ganges in India: these palms predominate in the groves or vineyards of these parts: the liquor or sweet juice, treated over a gentle fire, in the same way as the "*Nypeira*", is converted into a mild wine.

- (9) Wine is also made from the fruit called "*Tempôe*": speaking briefly, they distil the pieces of fruit over a fire: this is esteemed the best wine of all, for it attains the flavour of Moscatel.
- (10) Lastly, a wine is made from rice, which is softened by being placed in water and then cooked: this method is mentioned by Pliny; it is also employed in America.

Chapter 9.

CONCERNING THE NAME "*MALAYO*".

- (1) The name "*Malayo*" does not appear to be derived from "*Malaca*", since to correspond with "*Malaca*" we should call the natives of the country "*Malachezes*" or "*Malacanos*".
- The name "*Malayo*" appears to be of more general application, since it extends to all the natives of Ujontana, whose territory lies between the Tropic of Cancer and the Equator; that is to say, from the Promontory of Ujon Calan in 8 degrees of North latitude as far as Point Romania opposite Pedra Branca in the South.
- (2) Throughout all this continental territory of Ujontana the Malay language is used, and the natives describe themselves as "*Malayos*".
- (3) (4) The metropolis used to be the port of Pam, where lived the ruler of this state, a vassal of the empire of Syam. So the name "*Malayo*" does not originate from "*Malaca*"; it would appear, rather, to be derived from "*Attayos*" or "*Attay*", a race from Seryca of the Scyths, to-day corruptly called "*Cattayos*".
- (5) (6) These people spread from the northern parts towards the south as far as the territory of Ujontana: and therefore the Malayos are descended from the Attayos or Cattayos. This opinion is confirmed by the physical resemblance between the civilized Malayos and the Attayos or Cattayos, although the latter are of a lighter colour than the dark-brown Malayos. The real natives of the country of Ujontana are the cannibal Banûas, negros with curly hair, who resemble the satyrs.
- (7) Although the district contains tail-less apes or monkeys, almost human in shape, living in the tree-tops of the forests, yet, generally speaking, all this country of Ujontana, prior to the advent of the Attayos of Scythia, was uninhabited or regarded as uninhabitable because it was in the torrid zone, as is affirmed by the ancients, and
- (8) ARISTOTLE. 2. by Aristotle, in 2 Meteorologica, chapter 5.
Meteorologica.
ch. 5.
- So in ancient times this country of Ujontana, as also the peninsula of Samâtta or the Chersonese, was unknown: and therefore no mention of it is made by those writers or by Pliny in his History.

We only have knowledge of the Golden Chersonese in connection with the trade of the emporium of Tacola, mentioned by Ptolemy in the year 163 after the coming of Christ Our Saviour.

PTOLEMY.

Although Indostan and Tropabana were situated in the torrid zone, yet intercourse and navigation were practicable there; this appears from Herodotus and from Pliny, who mentions the intercourse from Idumea and Egypt by way of the Red Sea, and it is confirmed by the Scriptures which mention the voyages of Solomon from the Port of Aziongaber.

3 KINGS 20, 10.
Paralipomenon 9.

3 Kings 20, 10, and Paralipomenon 9. (9)

The civilized Malayo natives are honey-coloured and of pleasant appearance, with oval face, rather small eyes, and medium nose: the head is covered with an abundance of black, bushy hair: round the forehead they tie a silk band or red cloth in place of a turban. (10)

Their bodies are well-built: they wear a thin "*baju*" or short shirt made of muslin, and round the waist a skirt of Choromandel cloth: this is rolled round so as to leave the right leg uncovered: in the waist they carry a knife 2 palms long: this is a dagger-blade called a "*Crys*". (11) (12) (13)

They walk with a confident gait: they go bare-footed without sandals. (14)

The majority of the Malayos are cheerful, roguish, and very wanton: ingenious and intelligent, but negligent and careless about studies and arts: they spend their time amusing themselves, and so, as a rule, few literati, mathematicians, or astrologers are to be found amongst them. (15) (16)

The Banuâs of the Hinterland, however, study the magical arts in the caves of Gunoledam, as men once did in the Pythian caves.

Chapter 10.

CONCERNING THE ARMED FORCES.

The armed forces of the Malayos do not follow the ordered military tactics of Europe: they only make use of attacks and sallies in mass formation: their sole plan is to construct an ambush in the narrow paths and woods and thickets, and then make an attack with a body of armed men: whenever they draw themselves up for battle, they acquit themselves badly and usually suffer heavy losses. (1)

The arms which they ordinarily use in warfare are the sword, shield, lance, bows and arrows, and blow-pipes with poisoned darts. (2)

At the present day, in consequence of intercourse with us, they use muskets and ordnance.

The sword, a blade measuring 5 palms in length, is called "*Padan*" among them: like the Turkish sword, it has a single edge. (3)

The dagger, called "*Cris*", a blade measuring 2 palms in length, is

made of fine steel; it bears a deadly poison; the sheath is of wood; the hilt is of animals' horn, or of rare stone, or of gold and precious gems.

The steel is treated in such a way that every injury is followed by immediate death when the wound draws blood. Iron, being constituted of earthy material, and of a substance which is more malleable than other metals (as Aristotle notes *Meteorologica* ch. 6. in 4 *Meteorologica*, chapter 6) yields a large quantity of rust and dross. So the natives soak the iron in water and in muddy pools for some time: they then treat it in the fire, refining it till the iron is clean and pure—a method mentioned by Pliny in Book 34 chapter 14.

Then, after polishing the blade of steel, they smear it with a poison so deadly that death soon ensues after any injury which draws blood, wherever inflicted.

- (4) (5) So these Malayos use much poison on all their weapons, especially the points of arrows, whether made of iron or wood, or the teeth of animals or fish, or of "*nyboés*".

Their bows are larger than the bows of Persia.

- (6) The lance called "*azagaya*" is 10 palms in length: these lances are much used as missiles.

There are other lances, as much as 25 palms long: besides a great number of "*soligues*" made of "*Nyboés*" and used as missiles.

- (7) Their artillery, as a rule, is not heavy: formerly they used mortars and swivel-guns made of various metals: to-day they employ larger pieces, and battery-cannon, besides many kinds of fire-arms, including small arms and arquebuses. Regarding the employment of artillery amongst the Malayos, we know that on the conquest of Malaca in the year 1511, Affonço de Albuquerque captured much small artillery, esmerils, falconets, and medium-sized sakers: these could not have come from Meca in Arabia where they use larger pieces of the second order, such as battery-cannon: probably these came from Pegû and Syam, where they had an establishment for casting smaller artillery of the first order, and a foundry for every other kind of metal-work; this they had learnt from the Attayos and the Chinas, who first introduced artillery, which was invented after the rebellions against the Empire of Attay or Cattay.
- (8) (9) (10) Thence the invention spread to Germany, and to Europe, and throughout the world, in the year 1378.

Chapter 11.

CONCERNING THE FORTRESSES.

- The fortresses and fortifications of the Malayos were usually structures composed of earth placed between plank uprights: many houses, too, were built in this style, besides stores or "*godoens*",
- (1) (2)

subterranean buildings in which the merchants stored the cloths from Choromandel to ensure against fire, for the houses were covered with thatch.

But we do find some buildings made of shaped stones joined together without mortar or pitch: this is the style of work adopted by the people who inhabit the mouth of the River Ganges: Pliny speaks of their buildings as the most ancient in the Indias Extra-Ganges.

In this simple style were built the principal fortresses and royal palaces; differing from the new style of architecture of which

VITRUVIUS.
Bk. 2 ch. 7.

Vitruvius treats in Book 2 chapter 7 of his work on architecture dedicated to Caesar Augustus.

Usually, however, the natives of Ujontana use fortifications and enclosures and palisades made of big timber, of which there is a large quantity along the River Panagim on the same coast, where one also finds another kind of timber, namely "*Nyboés*" palms, very hard and strong, for constructing defences: they are almost the same shape as the date-palms of Arabia.

This tree measures 8 fathoms from the ground to the top of the trunk, where there is a cluster of leaves resembling palm-leaves; it is quite round; massive, with a firm heart; rough, hard, and rather prickly: the outside bark is as tough as iron.

These "*Nyboés*" palms are used for fortifying the centres and towns of the civilized peoples, for as a rule the majority of the wooden houses in Ujontana are built on piles of this timber, especially at the ports in the inhabited areas of Malaca, Batusavar, Oulor, Pam, Patane, Perat, and Quedâ.

(3)
(4)-(7)

In addition to their fortifications, they dig deep pits in front of wooden fences: these pits contain traps and pointed sticks treated with poison; they also make use of holes covered with branches, and of traps set in ambush, with which they inflict much damage.

So in olden times their fortresses, besides being made merely of earth, were built in a simple form, without the proper military points: nowadays, in consequence of intercourse with us, they have built their fortresses with the proper defences required by the art of gunnery.

Chapter 12.

CONCERNING THE COMMERCE.

Intercourse and commerce by sea commenced on the foundation of Malaca in the year 1411.

Before that time, the western sea-coast of Ujontana was inhabited only by the "*Saletes*", fishermen who had no other trade or business but fishing for shad; they used the roes, called "*Turabôs*", which they pickled in brine. This fish is esteemed more highly than any other by the Malayo nobles.

So under the rule of Permicuri, founder of this state, a beginning was made with the trade in spices and metals, which were exchanged for the cloths of Choromandel and of the Ganges,

according to the ancient custom referred to by Homer, as noted by Pliny in Book 33 chapter 3.

PLINY.
Bk. 33 ch. 3.

- (1) Merchants from those regions came together at the port of Malaca, which was situated on the Sabaric and Perimulic Gulfs: this was after the isthmus had been destroyed and submerged in consequence of the storms, thus allowing the two gulfs to unite in one Malayo sea.

The merchants from Choromandel, especially the Chelis, engaged in this trade, and settled in the district of Upé, on the opposite side of the River Malaca from the fortress: from here they carried on intercourse with Choromandel, and from there with Egypt: so that Malaca became a big place, with a large population consisting of people from the vicinity and of strangers from the south.

Through the agency of the latter, all kinds of spices, aromatics, metals, precious stones, and pearls found their way from foreign ports to Malaca, where they were exchanged for cloths, and all passed from Malaca to Choromandel and Egypt, where the trade centred in Alexandria.

- (2) It is to be noted that this trade from Alexandria in Egypt to the Promontory of Chory and Choromandel and Tropobana, and thence along the coast to Ujontana and Samatta or the Golden

Chersonese, had commenced and was being regularly conducted in the time of Ptolemy, in the year 163: but it went to the trading-centre at the port of Tacola in the Chersonese, and not to the port of Malaca belonging to the Saletes.

PTOLEMY.

- (3)-(5) From Alexandria in Egypt the merchants passed to Cayro, once called Bubalis, and thence to the sea-port of Sues, also called Zuem: here they embarked in "*alfragattas*", "*gelues*", or "*taurins*", and sailed through the Red Sea to Adem in Arabia: thence, following the coasts of Arabia, Persia, and Indosthan past the Promontory of Chory, they put in to port in Choromandel and Tropobana: from here, following the coast past the mouths of the Ganges, they passed to Ujontana, to the trading-centre of Sabbara, which was the most frequented port of Ujontana, situated on the Sabbaric Sea on the near side of the isthmus.

- (6) This may well have been the port of Calam, the centre of a district which extended as far as the Promontory of Ujuncalan: this port, lying at the entrance to the Parcelar Channel, they called Sabbac, because the land was swampy: and therefore Ptolemy calls the place Sabbara and the sea the Sabbaric Sea, because Sabbaro was the principal port. From here, going by land across the Isthmus of Tanjontuan in Ujontana, they passed to Tanjonbaluata in Samatta (or the Golden Chersonese) and to the port of Tacolâ: this should

be Tico, the centre of the trade from the Hinterland of Samatta, now called Samatra.

Moreover, from the port of Sabbara, they sailed across the Sabbaric Sea from Ujontana to Samâtta or the Golden Chersonese, to the port of Arû, in olden times called Auro, whence the name "Golden Chersonese" was derived: thence they passed along the rivers of the Hinterland to Tico.

From here, with a cargo of gold, aromatics, and spices, they returned to the port of Sabbara: thence, following the coast of Ujontana and the harbours of the Ganges, they came to port in Choromandel, and passed on to Adem in Arabia: after entering the straits of the Red Sea or Mare Rubrum, they disembarked at the port of Cossayr in Ethiopia: from here they travelled by land on camels to the canal of the River Nile, and from this point they utilized the favourable current to make the journey in boats as far as the port of Alexandrya. (8)

In the time of Solomon this trade and commerce was being (9)

SOLOMON. regularly conducted at Asion Gaber in Idumea,

a port on the Red Sea, where king Josaphat's fleet suffered shipwreck,

KINGS. as is mentioned in the Scriptures, 2 Kings 9, and

Bk. 2 ch. 9 and 4 Kings 22.

Bk. 4 ch. 22.

In the time of Gaius Caesar, the son of Augustus, one finds that the navigation of the Red Sea off the coast of Arabia was in operation: as is stated by Pliny, Book 2 chapter

PLINY. 69. In Book 6 chapter 22, also, Pliny mentions (10)

a vassal of Annio Plocanio as one of the

PLINY. farmers of the Red Sea taxes: which clearly

Bk. 6 ch. 22. shows that this traffic was very ancient: according

to Pliny navigation extended along the coast of Arabia and Persia (where Carmanya was) as far as the port of Hipparos in Tropobana or Ceylam.

No historian goes on to deal with the sea-route to Ujontana and Samatta or the Golden Chersonese till we come to Ptolemy who mentions the trade of the emporium of Tacola in the Golden Chersonese in the year 163. (11)

The next writer is Marco Polo the Venetian who made his return voyage from Meridional India or Java Minor to Tropobana (12)

and the Red Sea straits in the year 1292: his account shows that he (13)

had no knowledge of Malaca: for at that time the site of Malaca (14)

was uninhabited, while in the forests of the hinterland lived cannibals who devoured human flesh: these same cannibals spread to (15)

Samâtta or the Chersonese, and even to the present day this evil

and disgusting practise persists among the Bâtas of Samatra. So

it may be concluded that in those times there were no civilized (16)

people in Samatra and Ujontana, except on the other or eastern coast

of Ujontana, where there was intercourse with Attay or Cathay. (17)

Hence the general commerce and trade of Ujontana began with

Pemicuri, on the foundation of Malaca, in the year 1411. Among

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the natives, the principal trade was with India Intra-Ganges and India Extra-Ganges; this being the commerce carried on by the

PLINY. Scythians of Seryca and Attay from Attacôris, as
Bk. 6 ch. 17. mentioned by Pliny in Book 6 chapter 17.

- (18) These latter were the people who founded the China empire
(19) of Attay or Cathay, which lorded it over Asia, including India Intra-Ganges and India Extra-Ganges, as far as Meridional India on the Tropic of Capricorn.
(20) For the trade of Attay or Cathay extended throughout every
(21) part of the East: this is clearly shown by the subsisting traces of China influence, such as the port of Chimlao or Chilao in Ceylam or Tropobana, and the port of Chimdy or Sindi in India, and the port of Cochim, and other ports which are mentioned in their histories as ports of the China trade, and as paying royal tribute to the Emperor of China in token of vassalage.

Chapter 13.

CONCERNING THE BOATS.

- (1) The native boats of Ujontana are of no great size.
(2) The "*bâlos*", used for cargo, are propelled by means of breast-oars: they also have sails which are almost the same shape as the sails of "*alfragattas*".

They use no hard wood except for the hull, all the upperworks being covered with leaves of "*Nypciras*" palms interlaced with cane rods, for preventing the entrance of the sea-water.

- (3) They have 2 masts or poles fitted with rigging made of "*rôttas*" rope, and sails of matting made from another kind of palm,
(4) the "*Pongo*".

They have 2 rudders running through the poop of the "*bâllos*", one on each side, to guide the ship.

These "*rotas*" are long, thin plants: the thicker varieties in this country are as thick as sugar-canes, and quite solid, with knots: it is of these that they make the ropes and hawsers of the boats which sail with cargoes of spices and metals along the coast of Ujontana and the Chersonese, and to the neighbouring islands as well: the natives do not, however, venture to navigate the ocean in these boats because they are made of fragile timber.

- (5) In naval warfare they use different boats, smaller ones, about
(6) the size of "*lancharas*" and of "*bantis*" propelled by breast-oars: they have 2 rudders and 2 masts.

- (7) For service in fishing and for river-traffic they use "*ballôes*"
(8) (9) and "*nambangues*", with small hand-paddles worked by mere arm-power: they travel swiftly, singing harmoniously in chorus.

- So the inference is that the Malayos are not accustomed to navigating the Ocean, for they only make coasting voyages along the
(10) shores of Ujontana: from a starting-point by the island of Pulo

Catay in the district of Pattane, situated on the east coast in 8 degrees of latitude, they pass round to the other or western coast of Ujontana, to Taranda and Ujon Calan situated in the same latitude in the district of Queda: this stretch of territory lies within the region of the Malayos and the same language prevails throughout. (11)

It is to be noted that the eastern coast of Ujontana was peopled and frequented before the other or western coast: thus the histories relate that Malayos inhabited Pattane and Pam before the foundation of Malaca.

At that time the ruler of Pam governed Syncapura: and the monarch who resided in Pathane, the metropolis of the Malayos, was tributary to the empire of Syam, for right down to the present day the Malayos regard the latter as their master: while the Head of the principal empire and administration was the Emperor of Attay, for India Intra-Ganges and India Extra-Ganges and Meridional India were tributary to him, and their ports were frequented by his boats, differing in shape from European boats, in the course of their voyages across the Ocean.

For they used "*juncós*" or "*sômas*", tall boats like freight-bearing carracks, with 2 rudders and masts and with sails made of woven palm-leaves and of matting, traversed by bamboos at definite intervals, so that they could fold and gather up the sail with despatch when the wind-storms came on. (12) (13) (14)

These bamboos are usually 5 or 6 fathoms long, and thick round as a man's arm: the inside is hollow, the distance from one knot to the next being 4 palms. This country produces great quantities of bamboos, long and short, thick and thin.

MARCO POLO.

Bk. 2 ch. 36.

PLINY.

These canes are mentioned by Marco Polo the Venetian in Book 2 chapter 36, and by Pliny in his Natural History.

They also use smaller boats called "*lorchas*" and "*lyolyo*": these boats have only two oars, one on each side: these oars serve both to guide and to propel the boats when they traffic on the rivers. (15) (16)

But the tall boats, called "*juncos*" or "*samas*", resembling freight-bearing carracks, voyage across the Ocean and the Mangic Sea or Great Gulf, and travel to Meridional India, as is stated by (17)

MARCO POLO.

Bk. 3 ch. 11.

PTOLEMY.

Table 12.

Marco Polo in Book 3 chapter 11, and by Ptolemy in his Table 12 of Asia: whereby it is shown that the Meridional Sea was navigated more frequently on the eastern coast than on the other or western coast of Ujontana by the

Attayos and by the people of Java Major and Java Minor: for both these nations used big boats like carracks for their trading-voyages, as our own experience shows.

This navigation of the Ocean was directed by the constellation of Urssa, and not by the navigator's needle, of which Marco Polo had no knowledge during his voyage in Meridional India.

- (18) For in point of fact the navigator's needle was invented by the Attayos or Cathayos, who used a seamstress' needle rubbed on a loadstone or magnet: this needle was placed gently upon the surface of the water in a vase of glass or porcelain so that it did not sink to the bottom: the needle pointed to the Pole, and was used in their voyages by the Chincheos, the best mariners of Attay, to whom is attributed this invention which has extended throughout the world: this seamstress' needle was called the navigator's needle in the time

CHRONICLES OF of the Ifante Dom Amrique of Portugal, the PORTUGAL. mathematician and the first discoverer, in the

- (20) year 1450. The Attayos used boats which crossed the Ocean, and they trafficked with the continent of Asia, especially with the place called Simdi, which was their point of embarkation: it was situated on an island inhabited by merchants of Sim: in their language Simdi means "Island of Sim": even down to to-day it is called Tatâ or Cattâ, because of its connection with Catta or Attay.

In olden times this district was called Gedrosia, as Pliny PLINY. states in Book 6 chapter 20: and the river was Bk. 6 ch. 20. called Indo or Sandus, as is stated by Pliny, and pointed out by Ptolemy.

- (21) They also traded with Cochim or Cosim, which means "district of China": and the imperial coronation-stone of the Empire of Malavar clearly shows that the ruling power reposed in the hands of the satrap who was placed in authority and maintained there by the Emperor of Attay.

- (22) They also traded with Simlao or Chimlao in Tropobana, a town
(23) inhabited by people from Sim and by Jaos.

It was from the former people that it derived its name of Cilaó or Ceylaó, because they held the island and the capital and the court of the State.

Not far from the court was the pagoda used as the burial-place of the Kings of Ceylaó, called Tropobana by Pliny in book 6

PLINY. chapter 22, and by Ptolemy.
Bk. 6 ch. 22.

PTOLEMY.

- These boats from Attay differed from the boats used in the Red Sea straits in the time of Solomon and King Josaphat and in the time of Ptolemy: these latter were "*alfragattas*" or "*gelues*" and
(24) "*taurins*" or "*lagueys*", in which they sailed along the coast of Arabia, and Persia, and Indostan, to the promontory of Chory, and
(25) to Polybotra on the Ganges, which was a depot for the trade from Attay to Tropobana. In those days they used rowing-boats and hugged the coast: this is shown in the Scriptures in the description of the voyage made by the prophet Jonnas, where the sailors were forced by stress of weather to row to land; Book 1.

And so, as the boats were merely rowing-boats and the navigator's needle was unknown, it was difficult to navigate the Ocean at a great distance from land; hence the Red Sea boats usually hugged the coast.

Chapter 14.

CONCERNING THEIR OCCUPATIONS.

The usual occupations of the Malayos are as follows.

The nobles, "*Orancayas*", spend their time in pastimes and recreations, in music and cock-fighting, a royal sport in which they stake much money: they have the art of selecting cocks which from the particular nature of their plumage will be victorious. (1) (2)

The bad practice of cock-fighting occurs among all these nations of the Orient.

Young girls called "*rajavas*" are dancers and singers: they have soft, sweet voices, and dance and sing in harmony with the sounds of drums or "*rabanas*": they are highly appreciated by the Malayo nobles: and are to be found at all the merry-makings and royal feasts and solemn banquets. Although wine-drinking is prohibited among the Maumetthanos, it does not prevent the Malayos from drinking the "*Nypa*" wine from Pulo: and this more than anything else is the chief cause of their indulgence in wanton pleasures. (3) (4) (5) (6)

Very few of them have any inclination for the arts and sciences: and even those who are of a more inquiring turn of mind, content themselves with learning to read and write and to study Arabic with the masters from Meca who proceed to the south.

Others, actuated by self-interest, occupy themselves with trade and commerce in spices and metals.

Only in time of war do they practise with arms and musketry. They do not use horses although they obtain a fair number from Java and Bima, for in accordance with ancient usage they retain the custom of walking barefooted, without sandals or shoes. (7)

The common people have better characters, for they usually occupy themselves with mechanical arts to earn their livelihood: many of them are very accomplished craftsmen at carving and also at alchemy, imparting a fine temper to iron and steel for making arms.

Their servants go in for the cultivation of foodstuffs, for the manufacture of wine from the "*nypeiras*", and for fishing, from which they derive great profit.

There are no weavers: they are too negligent, and content themselves with the cloths of Choromandel and Bengala, which are exchanged for the metals and the "*calim*" which this country produces. It is the same with foodstuffs: they neglect cultivation because they can obtain supplies from Java Major. So that the servant classes and the common people are satisfied with maintaining themselves from the profits of their labours: and the money which they obtain, they spend on feasting and amusement and play: they then strive to obtain more money to spend on other feasts, without laying by any store for a future competency in their old age. They (8)

- (9) live only for the day: and the story went of the "*Xabander*" of Bencales, that he usually spent the revenues of the port in amusements and wanton feasts.

- (10) It may be remarked that some of the "*rajavas*", the dancing girls, by using certain incantations and words, invoke and call up evil spirits, becoming themselves possessed and entranced. They then disclose things which will occur in the future, and things which are now occurring in distant places, and they reveal profits and losses and thefts.

- (11) So they were prohibited in the district of Malaca by the first Bishop, Dom Jorge de Sancta Lucia, either because they communicated with the devil, or because they obtained their powers from the sap of the herb "*Vilca*", which is used in America.

- (12) The women are immodest, and think it a fine adventure to have lovers, whose conversation they seek the whole of the day, and, much better still, during the night.

They are always using immodest expressions and lewd words in their conversation, to indulge their sensuality.

This bad practice is commonly tolerated among the Malayos with a view to avoiding unnatural vice: though the king, when away from home, makes use of the "*saronraja*", which means "the king's sheath".

The practice in regard to marriage customs conforms with the doctrine of Maumetho.

- (14) The most diligent of the people are the wild Banuas of the Hinterland: these devote themselves to learning magic arts in the caves of Gunoledam, as men did in the Pythian caves, acquiring proficiency in effecting withcraft and sorcery. As herbalists, too, they disclose the virtues of the medicinal plants and herbs to the more curious of the Malayos.

(1) Chapter 15.

CONCERNING GUNOLEDAM.

- (2) The mountain of Gunoledam resembles Mount Athlante or the Sybilline caves.
PLATO IN THE
TIMAEUS.

It is a lofty mountain half a league in height, and rather more than a league in circumference at the base: it rises in isolation, there being no other mountain in the surrounding country.

To this mountain (according to the story of the Malaio) retired the Queen Putry, companion of Permicuri, founder of Malaca: here the enchanted Putry remains for ever immortal and here she lives to this day by her magic arts.

She makes her home in a cavernous cave on the summit of the mountain, and here she lies on a raised couch decorated with dead men's bones: she takes the form of a beautiful young girl, adorned with silk and gold.

Round about this cavernous cave are planted thickets of bamboo, from which proceed harmonious voices and sounds of flutes and other musical instruments, like the music of tambourines in the

MARCO POLO. Desert of Lob, mentioned by Marco Polo the (3)
Bk. 1 ch. 44. Venetian, in Book 1 Chapter 44.

Some distance away from the cave and the bamboos are groves of trees bearing delicious fruits of every kind; here are heard the harmonious songs of birds.

Farther away from this grove are the forests occupied by tigers (4)
who guard the Queen Putry, enchanted like
LUCAN. another Syrcé or the Thessalian.

This story must be a fairy-tale: but the natives regard it as true: for they assert that on the mountain of Gunoledam there is a certain cavern, like those Pythian and Sybilline caves, where the wild Banuas learn the magic arts, and hold communication with the devil in the dark caverns, where, without their seeing anyone, they hear the voice which reveals the virtues of the miraculous medicinal plants and herbs, as well as the methods of preparation and the proportions of component substances which are effectual for producing different results, beneficial and harmful.

For these communications they use the sap of the herb "*vilca*" (5)
which is found on this mountain of Gunoledam, as well as in America: drinking a potion of this, they hold communication with

the devil or with this Putry, who, like the
LUCAN. Thessalian Eritho, magician and sorceress, or
like Syrcé the enchantress, changed from the form of a woman to
that of animals and birds, according to the doctrine of Tages. (6)

The wild Banuas in the same manner, and using the same art (7)
and formulae, transform themselves from human form into tigers and lizards or crocodiles, and other animals, birds, and fishes, besides being sorcerers who know what is remote and distant, like the sorceress of Tuscia who disclosed things which were happening in places far away.

In this connection I will mention the first Bishop of Malaca, (8)
Dom Jorge de S. Lucia, whose virtues should always be exalted.

He wished to stop the great injury done by these wild Banuas from the interior who changed themselves from men into tigers ("*arymos*"), came by night to the town of Malaca, and killed unresisting children and women. He purposed to excommunicate them, and offered up prayers in public in the Cathedral Church.

Then, after the High Mass and after the procession at the Feast of the Assumption of Our Lady Protectress of this fortress, he solemnly excommunicated these tigers ("*arymos*").

From the moment of the excommunication, the tigers have never again entered the villages nor killed a man, woman, or child.

For this the Christians gave thanks to God.

The infidels and Mouros were astounded at this miracle, and (9)
many Chelias, idolatrous natives of Malaca, were converted, in the (10)
year 1560.

1930] *Royal Asiatic Society*.

Chapter 16. CONCERNING THE MALAYO SEA.

The Malaio Sea, properly speaking, is the land-enclosed sea between the mainland of Ujontana and the Golden Chersonese: it is the sea of the gulfs, that is, the Sabaric and the Perimulic Gulfs, mentioned by Ptolemy in his Table.

And because this Malaio Sea is situated between the two coasts of Ujontana and the Golden Chersonese or Samatra, it is protected from the fierce Ocean waves: for the most part it is smooth and quiet, resembling the level surface of a pond: on the other hand when storms occur according to the position of the planets, this sea waxes furious, and destroys the boats upon the coast, without any possibility of saving them. As a rule these storms come from the north or north-west or north-east, but when they come from the south they are all the more violent.

- (1) The tempests which occur are of 2 kinds, Ecnephia, and

- (2) ΕΚΝΕΦΙΑΣ ΤΥΦΩΝ. Tiphon, as Aristotle states in Book 3 of the *Meteorologica*, chapter 1: the ecnephia being a simple storm, while the typhon is a violent storm accompanied by a whirlwind.

ARISTOTLE.

Bk. 3 Meteor. ch. 1.

Any movement of this Malaio Sea is usually a furious disturbance, caused by the winds and tempests, as is remarked by Aristotle

ARISTOTLE.

in Book 2 chapter 1, in the third part which deals with the movement of the sea: the direction is north-west to south-east, during the flow and the ebb of the tide through the straits lying between the two shores of Ujontana and Samatra.

This Malaio Sea appears to be the more clear and transparent because it enjoys the heat of the torrid zone: it differs from the thick and dense sea of the frigid zone: and therefore pumice-stones and some kinds of coral are produced in this sea.

- (3) Storms arise with rapidity because the sea is nitrous and windy.

- (4) The fishes of this land-enclosed sea are shad, very tasty, dorados, red fish, excellent Tagus-fish, seer-fish, pomfrets, rays, and dog-fish, besides a great quantity of lobsters, prawns, and cray-fish: the most numerous fishes are the "*laramparam*" and small prawns on which the common people live: in this land-enclosed sea one rarely finds whales, though there is no lack of sharks, nor of lizards or crocodiles.

- (11) One species of crab is found here which is not seen in any other part of the world, for this crab has a tail a palm long: it is called "*balancâs*": the shell is in the shape of a half-moon: on the convex side of the shell it has its eyes: underneath on the concave side it has legs like those of a crab: the stomach is full of roe in the form of round grains, of which a dish is made. It has a tail a palm long, resembling a three-sided nail with a point.

One always finds these "*balancâs*" coupled, male and female: they are scattered about the beach where the waves are breaking.

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One also finds large turtles, 15 palms in circumference. (13)

When they wish to lay their eggs, they come from the sea to the beaches and sands, and here they deposit their eggs, which resemble the yolks of hens' eggs and have a thin, very soft shell: the eggs occur in large quantities and the people make their meals of them.

From the covering of the turtle they obtain plates of turtle-shell as big as one's palm: these constitute very valuable merchandise.

One finds quantities of coral-branches, white and black, resembling plants growing on the rocks in the sea. (14)

It is said that amber occurs in the Malaio sea: this must be brought up by the flood tide from the ocean off Nicobar: for amber is found in the Nicobar sea, and the native Nycobares exchange it for cloths with the ships which sail through that channel. (15)

It is worthy of note that in the month of October the Malaio Sea rises an ell higher than it usually rises during any other lunar month of the year: for this high tide floods the greater part of the country, like the summer flood in Egypt which so astonished Julius

LUCAN. Caesar in olden times, as Lucan states in Book 10 *Pharsalia*. 10 of his *Pharsalia*.

The cause is that in the Mountains of the Moon the Nile has great lakes of water, which, in the winter months of June, July, and August, are frozen up, owing to the cold which prevails on the mountains of such great altitude: then comes the heat of summer and melts the ice: the result is the flooding of the Nile and the inundation of Egypt.

The same cause, namely, the waters from the Belor Mountains of the Scyths and Tartaria, (which are the highest mountains in the

PLATO world and therefore contain the most water, as in the *Phaedo*. Plato notes in the *Phaedo*), may be partly responsible for the inundation of Malaca, in the month of October, during the Asiatic summer, when the waters flow down through the Ganges. (16)

But since the inundation of Malaca depends on the lunar conditions during October, occurring both when the moon is in conjunction and when it is in opposition, it is clear that it is the moon which is the cause of the flooding, since it is the source of humidity

ARISTOTLE. at that point of the Zodiac, as is stated by

PLINY. Aristotle, who is followed by Pliny in Book 2 *Bk. 2 ch. 10, 2.* chapter 10, 2. (17)

And experience shows that particular inundations occur in one area which do not occur in another area only slightly more than a league away, and in a locality where there is no river: which proves that waters issue from caverns in the main or the sea, particularly at the major conjunctions of Saturn and Jupiter, when the three planets begin to close together, as is stated by Aleabicio, Naboth, and other astrologers.

Chapter 17.

CONCERNING THE NATURE OF THE LAND.

The land of Ujontana has a different nature from other countries in the same, the torrid, zone: as is clearly seen from its producing different trees and fruits.

Although the earth as a whole may be composed of a general terrestrial mass, cold and dry in its nature, that is to say, of a mass composed of small particles, mixed with water, and although there may be more of this mixture than of other elements, as Aristotle declares in the *Meteorologica*, Book 4 chapters 4 and 6, yet the globe as a whole is not entirely composed of a mass with a uniform nature: rather, it contains

metallic patches, in some parts of one nature and in other parts of a different nature, varying in colour, and varying in hardness and density according as they contain more or less water, and according as a greater or less number of elements enter into their composition, as is stated by the philosophers.

This truth is exemplified in the difference between the fruits of Malaca and the arboreal produce and fruits of Indostan, India Intra-Ganges, Arabia, and Persia: for the land in each case has a different nature and mass or metallic patch: and therefore the fruits of the one part do not grow in the other part which has a different nature, as experience shows.

Difference in zone cannot be the sole reason, because Ujontana, Indostan, Arabia, Africa, and America are all situated in the same, the torrid, zone: and each of these countries produces different fruits and arboreal products, varying in form and nature, according as more or less elements enter into the composition of the earth.

Then, as these mixtures vary, the earth is fruitful in one part and sterile in another.

So that the land of Ujontana, where the mixture is moderate and the heat watery and oily, produces delicious fruits and every kind of rice and grain, and marvellous medicinal plants, and scented sweet-smelling trees such as "*aguila*", "*calamba*", "*bejoim*", and camphor, besides a great quantity of gum and oils.

- (1) In places the earth produces a continuous stream of earth-oil, called "*Minhat Tana*", like the fountains mentioned by Pliny and the writers on America who describe the fountain or well of Copey in the Island of Lobos.

This land is mineral-bearing, because it contains more water than heat: for the water and its vapours transform themselves into

metals, that is to say, metals are generated from the watery vapours, as Aristotle notes in the 4th book of the *Meteorologica*, part 2, chapter 16: and therefore Plato affirms that metal is generated from water.

PLATO.
Metal aquarum genera.

And as this land, in parts, partakes of a certain degree of hardness and is compressed, it produces stones, in accordance with the

ALBERT. views of Theophrastus, Albert, and Aristotle.

Bk. 1, pt. 2, ch. 14.

So it is clear that the land of Ujontana produces these two kinds of substances in the ground, namely, fossil stones and metals, (as Aristotle declares at the end of the 3rd book of the *Meteorologica*), while the greater part of the country is semi-mineral.

Chapter 18.

CONCERNING THE FRESH CLIMATE OF MALACA.

The air in this district of Malaca is very fresh and healthy, quite the reverse of what was imagined by the ancient writers, (1)

PTOLEMY. Aristotle and Ptolemy, who maintained that the part of the world which lay between the Tropics of Cancer and Capricorn was very hot and fiery; especially the area lying within 12 degrees north and south from the Equator, which was appropriately called "torrid" on account of its fierce heat. This zone of land was regarded by the ancients as uninhabitable and deserted, whereas they did not know anything about it: for Julius Caesar, an

LUCAN. astrologer and investigator of nature, was able to extend his discoveries along the Nile from the Tropic of Cancer only as far as the beginning of Ptolemy's first climate on the parallel of Meroe.

It is in this zone in a latitude of 2 degrees 12 minutes at the point of the zenith where the Meridian and the Vertical intersect, that there is situated the happy land of Malaca on the continent of Ujontana: and it is our present-day experience of this land which leads us to form an opinion diametrically opposed to that of the philosophers.

For this country of Ujontana is the most fresh and pleasant in the world; we have a climate which is wholesome and vivifying, and suitable for the preservation of health and human life, with a temperate mixture of heat and humidity: but neither of these factors is so excessive as to be harmful or detrimental, for the heat is mitigated by the watery vapours, and, on the other hand, the heat mitigates the humidity caused by the showers and rains which prevail the whole year round, according to the lunations, in this region.

In consequence of this humidity there arise vapours and exhalations which form the rain-clouds which deaden the heat by continual shade: for, as a rule, the sky is covered and overcast with clouds, so that the land is well shaded, humid, quite damp, and fresh, with excellent airs and delicious breezes, as Aristotle remarks in Book 1 chapter 9.

In consequence of this freshness, some people have imagined, without stating it dogmatically, that the Paradise was situated at the Equator.

As the land is nitrous and windy, it is very subject to storms, both minor storms called "Ecnephia" ΕΚΝΕΦΙΑ and major storms called "Tiphon" (ΤΥΦΩΝ); the latter we usually call a "Typháo" or furious tempest; and when it occurs, there are always wrecks at sea, and destruction and ruin on land; it travels with such fury and violence that it tears the roofs from the houses and uproots trees, and sometimes the boats are flung from the sea upon the land, on to the fields of the country.

Being almost on the equator, this country enjoys double seasons: there are 2 high solstices at the beginning of Aries and Lybra, and 2 low solstices at the beginning of Cancer and Capricorn.

Consequently it enjoys 2 summers when the sun stands at the equinoctial points and it enjoys 2 winters when the sun stands at the points of the Tropics of Cancer and Capricorn, as is explained by Alfragano. Although there are showers and rains during all the lunations throughout the year, the winter times at Malaca when the biggest rainfall is experienced occur in June and December at the low solstices, and the hottest temperatures occur in March and September at the high solstices.

Although the philosophers and Alfragano attribute these solar phenomena to the high and low solstices, yet experience shows some variation in the climates of different longitudes at the equator: thus, in Indostan in India Intra-Ganges winter time occurs on the western coast in June, July, and August, while during the same period it is summer time on the other or eastern coast, one coast being separated from the other by a distance of 50 leagues longitudinally.

So the variation cannot be attributed to celestial causes, but is rather due to a terrestrial characteristic, namely, the direction of the wind, for on the western coast winter occurs with the south and west winds, while on the other or eastern coast of Indostan winter comes in with the north and east winds.

- (2) Experience shows that at the meridian of Malaca winter begins in the most southerly region with the advent of the southerly winds: for winter is first enjoyed in the region of Tymor situated in 10 degrees of south latitude in March, April, and May: later on winter is enjoyed by the countries on the equator, such as the inhabitants of Malaca, called "Amphicians", in June, July, and August: during this same period winter is enjoyed by the more northerly latitudes as far as the Tropic of Cancer: thence the winter passes to higher latitudes beyond the Tropic in September, October, and November, until it reaches the Arctic Circle and the coast of the Frozen Sea and the Promontory of Tubin in December, January, and February.

The longest day at Malaca is 12 hours and 6 minutes, the day and night being almost equally long.

The Antipodes of Malaca are in Popayana, in that part of (3)
America which is called Peru.

Chapter 19.

CONCERNING THE MEDICINES.

The ordinary medicines of the Malayos, for use in fevers and (1)
other ailments, are the roots of plants, and miraculous herbs, and
things taken from birds and animals, especially horns, claws, and
stones.

The doctors whom they employ are for the most "*Dayas*," (2)
female physicians who are excellent herbalists, having studied in the
schools of Java Major.

These "*Dayas*" physicians employ these plants and herbs in the
form of plasters, and syrups, and potions, or pills, in order to relieve
the distress caused through illness by means of heating or cooling
roots.

As a rule they grind or pound these roots or leaves of wild plants
and herbs in a mortar, and mix them all up into a paste for plaster
or pill: that is to say, either a simple paste of one substance or a
paste composed of various different substances, both for use as
plasters and unguents, and for use as potions and syrups or pills,
choosing the nature of the herb with regard to the humour of the
infirmity, and with regard to the age of the moon, following the
doctrine of Galen, Book 3 chapter 6.

GALEN.

Bk. 3 ch. 6.

From the furrows on the face of the patient they recognize
maladies which will be fatal.

From the throbbing of the temples they distinguish between
illnesses which are acute and rapid, and those which are chronic and
lingering: and they recognize the crises and the endings of illnesses
by the breathing or the weakness of the invalid, following almost
exactly the prescription of the Centiloquio of
Ptolemy, and the rules of Galen, Book 3
chapter 6.

GALEN.

Bk. 3 ch. 6.

Moreover, certain apprentices of the wild Banuâs act as doctors,
for they understand the properties of all the miraculous herbs and
plants: in curing maladies they make use of incantations, as though
their medical treatment depended on magic and diabolical arts, for
at the first glance they recognize the interior ailments of the human
body.

The plants and herbs which they ordinarily use in their medi-
cines are the following: clove, nutmegs, cinnamon, pepper-corns, long (3) (4)
pepper, "*betre*", saffron-root, saffron-flowers, ginger, "*lancoas*", (5)
another and hotter kind of ginger, "*conchor*", "*bancalê*", "*dringo*," (6)-(8)
"*pulacary*", canaphistola, "*tamarindi*", "*cayoular*", "*cayotay*", (9)-(11)
and innumerable other roots about which a special treatise could be
written.

Some of these plants are very hot, like the burning "*lancoas*"; while others are only slightly hot, like the aromatic "*betre*"; others again are cool and temperate.

All these they use in their mixtures and concoctions, to allay and mitigate heats or colds, following in some cases the rules of Galen.

- Among the miraculous roots is the "cobra-wood" of Malaca, which has such virtue and excellence that it makes the serpent do obeisance at the mere sight of it: as happened at Malaca; by the river was a serpent or cobra 12 fathoms in length, which came down from the jungle to drink at the river after having swallowed a deer which it had crushed to death at the foot of a tree; on its return it met a Malaio carrying this "cobra-wood" root, when it bent its head in motionless obeisance; then some Monancabos came up, beat it to death, and took it to the Governor at the fortress; 35 sailors carried it on a "*pinga*"; that was in the year 1560.

Chapter 20.

CONCERNING THE SORCERESSES.

- The sorceresses make extensive use of herbs, plants, trees, and animals for their enchantments and transformations, in which they
- (1) employ the magic formulae of Tâgos: thereby they inflict a great deal
 - (2) of harm, especially the witches who kill infants before their baptism on the fifth day after birth, or while they are still *en ventre sa mère*, by bewitching them and piercing them with a death-dealing wind.
 - (3) To avoid this harm, the natives are accustomed to hold a feast in the house where the birth took place, summoning parents and friends to keep watch and guard on the fifth day after the birth, as though this day were critical and ominous, pregnant with the germ of future good or evil for the child: for this is usually the critical day when harm or death comes to the child, being prior to baptism which takes place on the eighth day after birth.
 - (4) These sorceresses who are enchantresses, witches, and cheiromantists, apprentices of the wild Banuâs from the cave of Gunole-dam, by means of magic incantations compel the obedience of lizards or crocodiles, elephants, tigers, and huge cobras and serpents: and they can capture and kill these animals as did the enchantress from the Hinterland who bound herself by a promise to deliver the town
 - (5) of Malaca from a lizard of the river of Chim, which killed the people, and for so doing she received a reward.

Other enchantresses transform themselves from women into the forms of lizards and other animals and birds, in order to do evil, like the ancient Syrcé.

- Some of these enchantresses were captured and excommunicated
- (6) by the Bishop of Malaca, Dom Jorge de S. Lucia.

There are other kinds of sorceresses or witches, called "ponteanas", who are usually found hanging in high trees and poplars or "budes": these "ponteanas" are said to be the women who have died in childbirth, and are therefore the enemies of men: these "ponteanas", particularly, ought to the demons, because their backs open out into flames. (7) (8)

This magic art was never approved by the ancient idolaters: in former times, it was punished by the Emperor Nero, and it was particularly discouraged by the Pontiffs of the Church and the Christian Princes, as an abominable art which should be repressed in the commonwealths of the world.

I cannot refrain from mentioning how on two days at the points of the equinox, especially at the equinox when the sun enters the sign of Libra, on the day called "Divâly", the trees, plants, and herbs possess such power and virtue that they are compelled to speak, disclosing each one its properties as a potent and curative remedy. For this reason some persons lurk in the woods on that night, to learn the virtues of the herbs: and I have been so informed by many persons who found themselves by chance in the woods on that day, how the plants raised their voices at the moment of midnight: but this would appear to be the work of the devil. (9)

Chapter 21.

CONCERNING THE MAUMETA FAITH.

The faith adopted by the Malayos is that of Mahameth, corruptly Maffamede; they have all been Mouros from the time of Permicur, the first king, to the present day. For the faith of Mahameth arose in Arabia in the year 604 after the birth of Christ Our Saviour, spread in the following year through Arabia, Persia, Indostan, the Ganges, and part of Africa, and later was preached in India Extra-Ganges and Meridional India in the year 709. Marco Polo the Venetian, during the voyage on which he touched at Meridional India or Java Minor on the Tropic of Capricorn, met Mouros at the sea-port of Ferlech in the year 1295. (1) (2)

YEAR 617.

Chronicles of Arabia.

Moreover the faith of Maumeth was accepted in Patane and Pam on the eastern coast of Ujontana, and in certain islands of the Aromatic Archipelago, especially at the port of Bantan in Java Major.

Later it was accepted and encouraged by Permicur at Malaca in the year 1411.

It survives until the present day, but in a debased form and without being strictly observed, among the Malayos of Ujontana, of Jor, and Batusavar.

- (3) These Mouros break the precepts of the Alcoram, for they retain the use of wine and pork, which is prohibited by this faith, and they are little inclined for ceremonies and observances; they are entirely taken up with amusements and luxuries; very few understand Arabic, and they scarcely ever study the writings of the
- (4) (5) Alcoroés, except it be some "*Mula*" or "*Casis*" from Arabia.

So that the faith was accepted at the sea-ports, with its veneration of Mahamet, son of Abdala, an idolater, and of Imyna, a Jewess, as Garibay states.

- (6) While in the Hinterland there were idolaters practising the idolatry of the Bragmanes, descendants of the Perumal who was
- (7) born of a cow: their histories tell of Perumal, from whom are descended the peoples of the world, as from Adam: they assert that the Bragmanes were born from his head, the Rajás from his breast, the Chettis from his stomach, and the common people from his feet.

- It is to be noted that, generally speaking, all the idolaters and heathen in the Indias practise two kinds of idolatry: the first kind is the worship of the heavens and the elements, fire, air, water, earth: the second kind is the worship of statues and tombs, and distinguished persons, and animals, and birds, following the idolaters of Greece, Rome, and Egypt: for at Athens in Greece they worshipped
- (8) the "*sabbia*", and the raven, and the cock: and at Rome in Italy they worshipped Februa the goddess of fevers, and the ram Amon, and the goose of Trapeia: and in Egypt they worshipped the dog of Osiris.

The idolaters of the Aromatic Archipelago hold this heresy about souls, that they are immortal because from one dead body the soul passes to another body produced by conception in the womb: this heresy appears to be generally held among the heathen, as the Venerable Bede mentions.

This heresy brought luck to a native of Malaca who was at the port of Tymor.

As he bore a facial resemblance to the dead brother of the King of Camanaca, the King welcomed him with tears in his eyes, as though it really was his dead brother, maintaining that it actualy was he, because the dead man's soul had transmigrated to him: so he received him like a brother, and gave him what he needed, and made up his cargo of sandalwood, whereby the Malacano was enriched.

And they maintain yet other ridiculous heresies, for they allege that the human race is descended from animals, birds, and plants. as for instance that the Perumal was descended from a cow. For their histories maintain that the family of the Kings of Gilolo and Maluco was born from the eggs of a cobra or serpent, and the Kings of Lubo in Macazar from the pith of a bamboo from the clumps, and other people from stones, and from particular things of no consequence: these stories resemble the *Metamorphoses* of Ovid.

So we finish our brief account of the faiths of Mahameth and Perumal.

Chapter 22.

CONCERNING THE MINES OF UJONTANA.

So far as our discoveries and our knowledge of the country extend, the mines of Ujontana are as follows:—gold, silver, mercury, tin, iron, precious stones, semi-minerals, nitre, and colours. (1)–(3) (4)–(9)

PLINY.

Bk. 33 ch. 4.

JOB. 28.

While Pliny in Book 33 chapter 4 deals extensively with gold, and in chapter 12 with other metals, the Scriptures too in the Book of Job, 28, deal extensively with these metals, showing how silver draws certain properties and elements from its veins, and gold has a certain place where it accumulates, and iron is obtained from the earth by mining, and stone when disintegrated by heat is converted into copper.

For metals are like plants which are hidden and covered in the ground, and there is some similarity in the manner in which they are produced, for one finds branches and trunks from which they extend in large and small veins, having internal connection and correspondence; hence, in a way, it seems that these metals grow like plants: not that they have real vegetative growth and the inner life of plants, except as regards their mode of production in the earth, for under the influence of the planets and with the passage of time these metals increase in quantity: they are usually found in barren and rugged lands as though such lands formed the nutriment of metals, while fertile land forms the nutriment of plants. (10) (11)

Nevertheless in Ujontana we find metals in a land which is fresh and covered with trees in consequence of the continuous showers and rains, and this fact differentiates it from the mineral lands of Europe: for instance, there is the district containing the gold mines in Pam, where the gold appears as grains in the stone, while sometimes gold is found as a thick golden stick, like the gold which the King of Lao offered as a present to João da Sylva, Governor of Malaca, in the year 1590.

For the country of Ujontana is mineral-bearing: and besides mines of gold, silver, mercury, "*calem*", tin, and iron in great abundance, it also contains mines of nitre and red lead and other colours: and there is a large quantity of precious stones, topazes, with traces

PLINY.

Bk. 37 ch. 5.

Bk. 3 ch. 4.

of diamonds and emeralds, as Pliny points out in Book 37 chapter 5 and Book 3 chapter 4.

Moreover, in the neighbouring islands one finds gold in great quantity, besides other metals and minerals and precious stones, for instance in the Golden Chersonese or Samatra, in the district of Campar and Priamon where the Monancabos live, also in Macassar in the Celebes and at Bazarmacem in Borneo, where the most prolific diamond- and topaz-mines exist on the river of Sucadana. (12) (13) (14)

Finally, a quantity of gold and "*Tombaga*" is found in Timor. (15)

- (16) The gold occurs in the form of grains, and also in the form of
 (17) dust in the earth-quarries: these metallic earths are washed with water from the river, when the earth is rejected and the gold is recovered.

The sands of the rivers in Campar are found to contain gold when they are washed.

- (18) Gold also occurs in mines of red stone, such as those of Gelé in Pam.
 (19) Above all, gold is found in mines of red sand at Sylata: in this case the gold is recovered by a process of smelting and not by washing.

With regard to silver or silver ores, the people do not utilize them, either from ignorance or because of the toil involved in the smelting process as understood in Europe. The same thing applies to mercury: although they do make more use of this, especially in the very prolific "*Calem*"-mines in Perath and Calan, and many other parts.

Chapter 23.

CONCERNING THE WATERSPOUT.

- (1) The waterspout, well known to mariners, is a white column-shaped cloud which reaches down from the altitude of the clouds till it drinks in the sea, from which this column by a secret force imbibes the water little by little and draws it up to the heights, swelling and enlarging the column through the part which is full and satiated: when the column is entirely saturated and quite full of water, the columnar waterspout recedes and incorporates itself in the clouds: and the salt water suddenly extends visibly over the film of the clouds, and is dissipated in raindrops, as our experience demonstrates, contrary to the opinion of Aristotle, who
 ARISTOTLE.
Bk. 1 ch. 9. asserts that the rains are derived solely from vapours, Book 1 chapter 9.

Others maintain that the rains are caused by winds, because the south winds cause showers and the north winds aridity and drought: we find winds of both kinds in these parts of the Indies.

It cannot be doubted that the saltiness or bitterness of rain-water is chiefly due to terrestrial influence: some rain-water is poisonous and death-bearing, causing the death of cattle: these and other differences in the nature of rain-water are due to the differences in the vapours, terrestrial, marine, or mixed, which are raised by the influence of the sun and stars to the heights of the aetherial regions, in the same manner in which, by some secret influence, the water of the sea rises to the heights in the columnar spout of cloud.

One sees clearly by actual experience how the white columnar spout descends from the clouds until it drinks in the sea, and then the spout recedes, black, saturated, and full of water: and afterwards the whole canopy of clouds contracts until there is a big shower of sweet water without the least taste of terrestrial salt inmixed.

I met with these columnar spouts, while making discoveries in Meridional India, right up as far as the gulf of Nicobar and the ocean of Ujontana: they also occur in other parts of the south as usual marine phenomena.

It seems to be a very marvellous thing: it usually happens because at sea there is a deficiency of thin terrestrial vapours; so at one gulp the columnar spout raises the heavy salt water; then this water generates vapours, airs, and clouds till the whole is one heavy mass: thus functions the Carybdis of the waterspout, imitating the Carybdis of the sea who withdraws and sucks the water to the cavern in the centre of the earth.

Chapter 24.

CONCERNING THE BORE.

NATIVES.

The bore in the waves is a disturbance of the sea: there occurs, as it were, a seething of the water, in consequence of which the sea breaks into flowery wavelets: it covers the space of an Italian mile and for this distance nothing can be discerned except this flowery effervescence of the sea, while the surface of the ocean all around is as level as a pond, without any flowery waves. (1)

This bore travels from place to place, either carried by the Ocean current or impelled by its own individual motion: at first sight it looks like shoal-water; yet the boats often pass through the bore.

The fables of the Malayos aver that souls are travelling over the ocean from one part to another, or passing, as in "*cafillas*", from the Golden Chersonese or Gunoledam in Ujontana to the River Ganges, whose waters are regarded as sacred: the Ganges is the object of the highest veneration among the people, for they think that at its sources there lies a certain paradise which is the resting-place of souls, like the Elysian Fields sung by the poets and mentioned by Plato. The same thing is maintained by the Bragmanes, magicians, of Bisnagar, who ascribe immortality to the inhabitants of Casin, at the sources of the Ganges, where the head of Ramaraya, Emperor of Canara, is buried, that he may enjoy immortality in that lagoon of ghosts and spectres. (2) (3)

Chapter 25.

CONCERNING CHRISTIANITY.

Directly after he had conquered the kingdom of Malaca, and founded the fortress for the defence of the State, in August, 1511, Afonso de Albuquerque began to work for the enhancement of Christianity, and to favour all those who desired to be baptized and to enter the bosom of the Church, as did the faithful "*Bendara*" and his family: from then until now their house has shown great

loyalty to the State and to the Christian religion: and at the present day his son the faithful Dom Fernando serves in this same office of "*Bendara*".

Moreover, baptism was accorded to many Chelis, merchants and farmers, some of whom were worth 10 or 12 "*bares*" of gold, and to many natives and

CHRONICLES OF
INDIA.

Damian De Goes.

strangers, so that the Christian faith grew strong in Ujontana and the Golden Chersonese, and in the Aromatic Archipelago of the South.

Thus in consequence of commercial intercourse and of this good example neighbouring countries sought baptism and tendered obedience and vassalage to the King Dom Manuel of Portugal.

On his death there succeeded to the throne of Portugal the Prince Dom Joao the Third, who in the course of his administration ordained what was necessary for the service of God and for his royal State.

- (1) In particular, for the extension of Christianity in the Indias, he despatched the Very Reverend Master Father FRANCISCO XAVIER, of the Order of the Company of Jesus, to be administrator of the Christian organization.

The latter left Portugal for India in the year 1542, in the company of the Governor Martim Affonso de Sousa; and proceeded to the port of Malaca, where he was informed of the desire entertained by the Kings of those parts to receive the baptism.

- (2) To that end he took ship and baptized the Kings of Maluco and Ternate, and the neighbouring Monarchs. As he was not able to accede to the call of all, he despatched as apostolic nuncius the Reverend Father Vicente Viegas, administrator of Malaca, to visit and baptize the other Kings and Monarchs of the Aromatic Archipelago, for he himself was on his way to China and Jappaó, where he died in sanctity after performing miracles.

- (3) Father Vicente Viegas set out from Malaca in the boat or junk of Antonio de Paiva: he went from port to port visiting and baptizing until he came to the port of Machoquique in Macazar, where he was well received by the Kings of Machoquique and Supa: they at once granted permission to the Father to build his church in the sea-port of Machoquique; and the Father Vicente Viegas and the Portuguese commenced the establishment of the hermitage of S. Raphael in the month of February in the year 1545.

Here, at a later date, the Kings of Machoquique and Supa, after being thoroughly instructed in the doctrines and catechisms, were baptized with great solemnity; namely, Dom Juan Tubinanga, King of Supa, and his Queen, Dona Archangela of Linta, together with all their children, particularly Dona Elena Vessiva.

Moreover, Dom Manuel of Linta and all his royal family, with a view to being baptized, moved from the district of Supa and Lynta to the port of Machoquique, and stayed in the royal palaces of his

cousin Lapituo, King of Machoquique, and Tamalina the Queen, who had both been instructed for baptism, in the same year 1545.

To ensure a better understanding of this story, I will give the account of their conversion to Christianity as it appears in the writings of the Reverend Father Domingos Godinos de Eredia, master of the school attached to the see of Malaca; it runs as follows. (4)

I, Father Francisco Luis, Archdeacon, Provisor, and Vicar-General of the see of Malaca appointed by the very Reverend Chapter during the vacancy in the see, &c., certify that among the papers which I received from the archives of the see of Malaca, I found an authentic account of the introduction of Christianity in Macazar, written by the Reverend Father Domingos Godinos de Eredia, master of the school attached to the see: this authentic account has since been lost, but I made an accurate reproduction copied word for word as written below: this copy I have handed to my brother Manuel Godinho de Eredia: and as he has asked me to authenticate the affair in order that this act of Christianity might prove for the greater service of God, I swear by the most sacred things that this is the whole truth.

Bertholemeu de Martinho, ecclesiastical writer, was instructed to write this at Malaca on the 16th of August in the year 1605.

Account of the beginnings of Christianity among the Kings of Macazar, established during the Pontificate of Paulo the Third, in the year 1545; written by Domingos Godines de Eredia, Master of the School attached to the see of Malaca.

The Licentiate Vicente Viegas, Sacerdotal Administrator of the Church at Malaca, on the request of the Kings in the Province of Buguis in Macazar, embarked in a junk with some Portuguese and set out from the port of Malaca in the monsoon of January: after a prosperous voyage he reached the sea-port of Machoquique on the first of February in the year 1545: here the Administrator and the Portuguese were well received and treated by the King of Machoquique, Lapituo, and by Pasapio and the other kings in the district of Supa and Lynta, who had betaken themselves to that port to be baptized. By permission of Lapituo the Father Administrator built the hermitage of S. Raphael, where with great solemnity he baptized the Kings of Supa and Lynta, namely, Dom Juan Tubinanga, King of Supa, and his Queen Dona Archangela of Linta, and their children, particularly Dona Elena Vesiva; he also baptized Dom Manuel of Lynta and his royal family: they all stayed in the royal palaces of his cousin Lapituo and of Queen Tamalina, who had both been instructed in the catechisms, in order that they might be baptized after they had been thoroughly taught and instructed in the doctrines.

When the time came for the junk to return to Malaca, at the moment of embarkation, when they had bidden farewell to Lapituo and his royal family, there occurred a disturbance and a riot in

- (5) which weapons were displayed, because Dona Elena Vesiva had
- (6) secretly embarked in the junk in the company of Juan de Eredia, to whom she had become attached or affianced against the wish of her parents.

As they all gathered on the shore at day-break with arms in their hands in quest of the Portuguese, the Administrator, in order to avoid a conflict which might have fatal results, then and there gave orders to raise the sails of the boat and weigh anchor and set out from the port of Machoquique and make the journey to Malaca.

This affair made King Lapituo and King Pasapio and the other people who had been baptized so offended with the Portuguese that they broke with them, and the Portuguese lost their friendship.

But by the grace of God they did not fall away from the Catholic faith: on the contrary they remained Christians until death, always protecting the hermitage of S. Raphael with the sacred images and crosses through a long period, as long as they themselves lived: but on their death they were succeeded by strangers who conquered these states by force of arms, and in so doing destroyed the fortresses and the hermitage of S. Raphael.

- (7) So in a few days the junk performed its journey and arrived at the port of Malaca, where in open Church according to the Council of Trent Dona Elena Vesiva took as her husband Juan de Eredia, by whom this radiant mother bore sons and daughters, Domingos, Manuel, Francisco, and Anna.

When an interval of 12 years had elapsed after the incident at Machoquique, Dona Elena Vesiva wished to repair the breach of friendship and to restore the old-time intercourse and commerce, so she wrote some letters to the Kings of Machoquique and of Supa and Linta, successors of Dom Juan Tubinanga and of King Lapituo, and particularly to her cousin Tamolina, Queen of Machoquique; by means of these letters she opened the gates of commerce and intercourse between the Portuguese and the Macazares, the intermediary being a noble ambassador named Fernão Peres Dandrade, who was selected by the people and the citizens to carry these letters and other letters from the Governor of the fortress and from the Council of the city; in the year 1558 he proceeded from Malaca to the port of Machoquique where he was well received and honoured by all these Kings and Monarchs.

And from then onwards these people for their part continued to carry on the trade in spices, aromatics, and many kinds of foodstuffs, that is, rice and grains, from Machoquique in Macazar to Malaca; and from that time these Kings sent offerings and presents to Dona Elena Vesiva, until she reached the age of 45 years, when she fell ill and departed this life on the day of S. Elena the Queen, the twentieth of May in the year 1575.

She was buried with solemn funeral pomp in the mother Church at Malaca, her body being enclosed in a wooden coffin, with the inscription setting out the date of her death and the year 1575.

FATHER FRANCISCO LUIS.

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I have mentioned the fact of her baptism because it is proper for me so to do, as being the legitimate son of Dona Elena Vesiva; for God granted that she was baptized from her idolatry in order to direct me into the service of God and of the Crown of Portugal and Castile, with the new discoveries in Meridional India.

She, owing to her devotion, never used the armorial bearings of the Crown of Supa and Machoquique, but the starry sky was, as it were, the home of her happiness and glory; for, by reason of her good works, charity, and continual penance, one may presume that she enjoyed the celestial realm whose representation was emblazoned on her escutcheon.

(8)

Chapter 26.

CONCERNING THE KINGS OF THE MALAYOS.

To conclude this first part, I will make summary mention of the Kings of Malaca, from the first Permicuri to Alaudin of Batusavar. (1) (2)

Permicuri, by birth a Jão of Palimbam in Samatta or the Golden Chersonese allied himself in marriage with the lords and monarchs of Patane and Pam who belonged to the family of the Malaïos, and was succeeded by the following Malaïo Kings: Xequê Darxa, Soltan Medafarsa, Soltan Marsuse, Soltan Alaudin, and the last Soltan Maahumet, who was overthrown and destroyed by the invincible captain Affonço de Albuquerque, when his royal state was conquered and Malaca subdued on the 15th of August in the year 1511.

After his defeat, Soltan Mahamet retired up the river; whence he passed through the hinterland to the eastern coast of Pam; he withdrew to Bintão, an island containing iron, and fortified it as a base from which to attack and carry on war against the Portuguese of Malaca: he always got the worst of the fighting, and eventually, tired and old, handed over the state to his son, the prince. (3)

On the death of Soltan Mahamet this prince went over to Ujontana, to the district of Jor and Cottabatu, where he raised his state to importance.

On his death he was succeeded by Raya Ale, who had the great prudence and sagacity to become reconciled with the Portuguese, and offered to be a vassal of the King of Portugal: and a trade in spices and metals, including a large quantity of tin or "*calim*", grew up between the ports. (4)

In order to aggrandize his lineage and descendants, he allied himself in marriage with the house of Achem; he married the daughter of Raja Mansor, who came to Cottabatu in pomp with a great fleet of galleys from Achem: this woman had some sons, for instance, King Alaudin who has ruled from the death of Raja Ale 1930] *Royal Asiatic Society*.

- to the present day: owing to the bad counsels of his younger brother
- (5) Raja Benco, he had quarrels with the Portuguese, and extended a
 - (6) friendly reception to the Hollanders in another town, Batusavar; because the Portuguese, particularly the famous captain Dom Paulo de Lima, had destroyed Cottabatu in the year 1588.

PART II.

CONCERNING MERIDIONAL INDIA.

TABLE OF CHAPTERS IN PART II.

- CHAPTER 1. Concerning Meridional India.
- CHAPTER 2. Concerning the certificate of Chiaymasiouro, King of Damut.
- CHAPTER 3. Concerning Pero de Carvalhaes, Alderman of Malaca.
- CHAPTER 4. Concerning the places which are "antiscian" and "perioecian" to Lucaantara.
- CHAPTER 5. Concerning white, brown, and black peoples.
- CHAPTER 6. Concerning certain fortuitous discoveries.
- CHAPTER 7. Concerning the Island of Luca Veach.
- CHAPTER 8. Concerning the certificate regarding Luca Veach.
- CHAPTER 9. Concerning the scanty information about Meridional India in olden times.
- CHAPTER 10. Concerning the expedition to Meridional India.
- CHAPTER 11. Concerning the Commission, with the promise of the Habit and the title of Governor.
- CHAPTER 12. Concerning the certificate regarding the Cross in the district of Malaca.

Chapter 1.

CONCERNING MERIDIONAL INDIA.

- (1) Meridional India includes the mainland which extends from
 (2) the promontory of Beach, a province of gold, in 16 degrees of south
 latitude, to the tropic of Capricorn and the Antarctic circle: it
 (3) (4) includes many other provinces, such as Maletur and Lucach, which
 are larger than Beach: and it includes other lands still unknown in
 (5) the sea in which lies the island called Java Minor, so celebrated
 among the ancients and so little known to the moderns, together
 (6) (7) with other neighbouring islands, such as Petan, Necuran, and Agania.

- Almost all these lands produce great quantities of gold, cloves,
 (8) (9) nutmegs, sandal-wood, and the herb "*birco*", in addition to other
 spices and aromatics not known or seen in Europe, as is affirmed by

- (10) PTOLEMY 12. Ptolemy in his Table XII of Asia, and by
 MARCO POLO. Ludovico Vartomano in his writings, and by
Bk. 3 ch. 13. Marco Polo the Venetian, who speaks as an eye-
 witness, having stayed for a long time in this Java Minor, as he
 describes in his Book 3 Chapter 13.

It is to be noted that in the year 1269, 231 years before the
 discovery of the Oriental Indias, during the time
 GARIBAY. of Pope Clemente IV and Gregorio X, when Dom
History of the of Pope Clemente IV and Gregorio X, when Dom
Popes. Affonso III was King of Portugal, Marco Polo
 the Venetian, son of Nicolao Polo, a merchant engaged in the trade
 MARCO POLO. with Constantinople, set out with his father from
 Venice and Constantinople to see the world.

- By way of Persia and Zamarchand or Turcastan, and the desert
 of Lop in Tartaria, he passed to the great province of Cattay (the
 ancient Attay of Pliny), to the court of the Emperor Cublay or
 gran Cam, and thence to China Mangim, now called Nanquim: from
 (11) (12) the port of Chinsay he embarked in a junk or lorchia for Java Major
 (13)-(15) (Bantan and Sinda): thence through the gulf and straits of Bale,
 (16) between certain islands, Sondur and Condor, he proceeded south-
 wards to the province of Beach, a land of gold, where there is such
 a quantity of this metal that the wild native Jaos use nuggets of
 earth or golden lumps as money: thence he set out to the island of
 Petan, producing aromatics: and leaving to the west the shoals of
 Maletur, a land of spices, he passed to the south till he
 arrived in the island of Java Minor, a fertile and fresh land
 filled with forests of cloves, nutmegs, and white and red sandal-
 wood, as well as large quantities of camphor and other aromatics and
 spices never seen in Europe, especially the herb "*birco*"; this is
 transplanted as a young shoot, and after a space of three years they
 tear it out by the root.

This island produces great elephants, and rhinoceros or "badas", and other remarkable and valuable animals, and monkeys so shapely that they resemble human beings.

MARCO POLO. The island was governed by 8 kings and satraps: Marco Polo the Venetian personally visited the following 6 kingdoms: Ferlech, Basman, Samara, Dragoian, Fanfur, and Lambri. The people were idolaters: though in Ferlech he found Mouros: from which it may be inferred that the sea-route to Meridional India was open and that the inhabitants of the sea-coast were civilized and tractable, but this was not the case with the inhabitants of the Hinterland, who were wild cannibals, devourers of human flesh. (17)-(21)
(22)
(23)
(24)

Further to the south are situated the islands of Necuran and Agania, very prolific in cloves, nutmegs, sandal-wood, and all kinds of spices: here too the herb "birco" occurs.

Still further to the south, running south-east and west, lies the mainland of Lucach: this ought to be the same continent on which is situated the peninsula of Beach, a province of gold.

Further to the west lie the islands of Angaman major and minor, or Lucatambini, inhabited by women, and Lucapiatto, uninhabited. (25)
(26) (27)

Although Marco Polo the Venetian did not state precisely the degree of latitude of Java Minor, he declares that he could not see the constellation of Urssa minor from the Point of Samâra: thus demonstrating that Java Minor was situated more or less on the

MARCO POLO. Tropic of Capricorn: this is stated in Book 3 Bk. 3 ch. 16. Chapter 16.

ANNALS AND "LONTARES" C. JAVA. Moreover the "Lontares" and Annals of Java Major (in which Bantan and Sunda are situated) (28)

mention Meridional India and its commerce and trade: as appears in the poems, vulgar songs, and histories of the Empire of Mattaron, which speak of the ancient sea-route from Java Major to Java Minor.

The traffic in gold and spices created one of the world's great trading-centres in Java Minor: its ports were frequented by merchants not only from Gram Cathay but also from China Mansim, the Archipelago, Indostan, and Egypt: as is shown by the fact that these Mouros found in the port of Ferlech came here long before the arrival of Marco Polo in the year 1295. (29)-(31)

This trade and commerce was destroyed later on through the dislocation caused by the wars which supervened; the sea-communication from Java Major to Java Minor was in abeyance for a period of 331 years, and they were not able to communicate with each other till the year 1600. In this year, by the just decision of God, it happened that a boat from Lucaantara in Meridional India, after being carried out of its course by storms and currents, came to land on the beach, having made the port of Balambuam in Java Major (in which Bantan and Sunda are situated); where the voyagers were hospitably received and entertained by the King of the coast district, accompanied by the Portuguese who happened to be there at the time. (32)
(33)

These strangers from Lucaantara in build and cast of countenance, &c., resembled the Jaos of Bantan; but they spoke a different language: thus showing that they were Jaos of another type.

This unusual incident greatly excited the Jaos of Balambuan and their satraps, especially Chiaymasiouro, king of Damuth; his curiosity was whetted, prince

(34) that he was, and he wished to set out on the discovery of Lucaantara.

(35) Taking the necessary supplies, he embarked with some companions in a "*calelus*" or boat provided with oars, and set out from
(36) (37) the port of Balambuan towards the south; after a 12-days' voyage he arrived at the said port of Lucaantara, a peninsula or island having a compass of 600 leagues in circumference. Here Chiaymasiouro, king of Damuth, was well received and entertained by the "*Xabandar*" or governor of the land, for the king was up the river in the interior.

Chiaymasiouro enjoyed the freshness of the land, and noted its richness: he saw a large quantity of gold, cloves, nutmegs, white and red sandal-wood, and other spices and aromatics: and he took samples of all these things. When the southerly monsoon winds set in, he started back for his own country and the port of Balambuan: where, after a favourable voyage, he was received by the King in the presence of the Portuguese and in particular Pedro de Carvalhaes, Alderman of Malaca, who attested his arrival and his voyage from Lucaantara to Balambuan in the year 1601.

According to the itinerary of Chiaymasiouro, Lucaantara should be the general name for the peninsula on which were situated the ports in the Kingdoms of Beach and Maletur: for between Beach lying in 16 degrees of latitude and Balambuan in Java Major lying in 9 degrees of latitude there is a distance equivalent to a difference
(38) of 8 degrees: which gives 140 Spanish leagues for the 18-days' voyage of Chiaymasiouro from Balambuan to Lucaantara.

So Lucaantara should not be the Java Minor of Marco Polo the Venetian, since the latter land lies in a more southerly latitude, on the Tropic of Capricorn, in 23 degrees 30 minutes.

At the same time, with a view to this enterprise, Manuel Godinho de Eredia, wearing the habit of Christ and bearing the title of "*Adelantado of Meridional India*", was despatched under a commission to pass to the south, with an obligation to undertake the discovery of lands in the south and to take possession of them for the Crown of Portugal: this was in the same year, 1601.

(39) (40) ROYAL BOOKS OF THE TIME OF THE VICEROYS.

But the expedition did not eventuate, because while he was at Malaca, ready to make the voyage to Meridional India, the fortress was subjected to attacks by the Malayos and Hollanders: this prevented the discoveries from being made, for all available men were required for the defence of Malaca: the Governor of the fortress at this time was Andre Furtado de Mendoca.

Chapter 2.

CONCERNING THE LETTER OF
CHIAYMASIOURO.

The letter of Chiaymasiouro, King of Damuth, to the King of Pam:—

Having equipped myself for travel and supplied myself with necessary requirements, I embarked with some companions in a "*caletus*" or vessel provided with oars, and set out from the port of Balambuan towards the south. After a voyage lasting 12 days, I reached the port of Lucaantara; there I disembarked and was received by the "*Xabandar*" with demonstrations of pleasure. Being fatigued with the voyage, I was unable to see the King of Lucaantara, who was staying up-river in the Hinterland, eight days' journey away.

The King was advised of my arrival and presented me with some handfulls of gold coins resembling in appearance the gold "*Venetian*" of Venice. (1)

I was hospitably entertained as long as I remained in the country, and enjoyed the splendid freshness of the climate.

I saw a considerable amount of gold, cloves, mace, white sandalwood, and other spices, as well as large quantities of foodstuffs of every kind which are produced in this country.

The island of Lucaantara is as large as Java, in which Balambuan is situated. The people are Jaos, as in our own Java, though their language is somewhat different. They wear their hair hanging as far as the shoulder, while the head is girt with a fillet of hammered gold. The "*cris*" is ornamented with precious stones, like the "*cris*" with the curved scabbard in Bale. (2)

Speaking generally, the Jaós of Lucaantara spend their whole time in sports and pastimes: they are especially addicted to cock-fighting.

When it was time to start on our voyage, I requested the "*Xabandar*" to inform the King that the monsoon was now favourable for my return to my own country. Provided with a stock of necessities, I set out from Lucaantara, and after a few days' voyage arrived at the port of Balambuan, to the great astonishment of the whole of Java.

CHIAYMASIOURO.

Chapter 3.

(1) CONCERNING THE CERTIFICATE OF PEDRO DE CARVALHAES.

- (2) I, Pedro de Carvalhaes, citizen and alderman of Malaca, certify that I met Chiaymasiouro, King of Damuth, at Surabaya, where in the course of conversation he related how "a rowing-boat from Lucaantara, driven out of its course by currents and ill winds or storms, reached the port of Balambuan: actuated by curiosity, I gave orders for a "*calelus*" or boat provided with oars to be equipped with an adequate supply of all necessities, and I set out with some companions from the port of Balambuan towards the south: after a voyage of 12 days, I reached the port of Lucaantara, where I was well received and entertained by the inhabitants, who are Jaós like those of Java Major, similar in build and colour, and for the most part having similar interests, though their language is different. The island of Lucaantara has a compass of more than 600 leagues in circumference.

I saw a considerable amount of gold, cloves, mace, white sandalwood, and other spices, as well as large quantities of foodstuffs of every kind which are produced in this country.

The earth is very fertile and the trees keep the climate cool.

The country is organized into several kingdoms: and contains many populous towns and villages."

The whole of the above account was given to me by Chiaymasiouro and his companions.

This matter of Lucaantara was a subject of public notoriety in Surubaya and in other parts of Java Major.

- (3) Since I have been asked for this information by the "Descobridor" Manuel Godinho de Eredia, in the interests of his voyage and for the advantage of the King's service, I swear by the Holy Gospels that this is the truth, and that it is my signature which appears below. At Malaca, on the 4th day of October in the year 1601.

PEDRO de CARVALHAES.

Chapter 4.

CONCERNING THE PLACES WHICH ARE
"ANTISCIAN" AND "PERIOECIAN" TO
LUCAANTARA.

The meridian of Lucaantara passes through a point in Syam (or Camboja); hence the people of Syam, which lies in 16 degrees of north latitude, are "antiscian" to the people of Lucaantara, which is equidistant from the equator, in 16 degrees of south latitude.

So, too, the meridian of Lucaantara cuts through a point in Chile (in America): hence the people of Chile are "perioecian" to the people of Lucaantara; for the parallel of latitude which passes through points in Lucaantara and Chile, cuts the meridian of both these places at a distance of 180 degrees: these two countries are therefore "opposite" or "antipodean" to each other.

Thus Lucaantara is "antiscian" to Siaó or Camboja, and

APPIAN. "perioecian" to Chile in America, in accordance
Bk. 1 ch. 16. with the doctrine of Appian, Book 1 Chapter 16.

The same thing occurs with the parallel of Monomotapa, which (1)
cuts through a point at Nova Jerusalem in the (2)

ARISTOTLE. district of Nova Guinea: so that the people of

PTOLEMY. Nova Jerusalem are "perioecian" to the Cafres of Monomotapa: (3)
living on the same meridian at a distance of 180 degrees, they are
"opposite" and "antipodean" to each other. These two places are
situated on the same parallel and meridian, and in the same zone, as
Appian notes; therefore the two countries are of a similar nature, and
both alike are the native places of black Cafres, just as Lucaantara
and Chile in America are alike, on the other hand, in being the
native places of brown or honey-coloured people.

This phenomenon proves that the earth is round, as was main-
tained by Aristotle, Plutarch (Book 2 Chapter

PLUT. 1), and the Peripatetic and Stoic philosophers,
De placitis phil. contrary to the opinion of many learned persons,
Bk. 2 ch. 1. such as Lactancio Firmiano and S. Augustino,

LACT. who thought that there were no antipodes.
Bk. 7 divin. inf. ch. 28.

Aug. Bk. 16.

De civit. ch. 9.

Chapter 5.

CONCERNING WHITE, BROWN,
AND BLACK PEOPLES.

In Meridional India we find the same variety of races, white, (1)
brown, and black, as is found in Europe, Asia, and Africa.

The white people resemble the Spaniards in appearance: they (2)
wear red tunics.

That white people live to the east of Lucaantara is known to us only from the account of how a boat containing white women was driven out of its course by the currents and arrived in Banda.

Of the brown people we have more information, for we have first-hand accounts of the Jaos of Lucaantara and Java Minor and the neighbouring islands.

Thus there is the description of Marco Polo the Venetian: then again there is the adventure of Francisco de Rezende; having travelled from Malaca in a junk and taken on a cargo of sandalwood in Tymor, he was carried by a "Tuphon" storm to a land in the south inhabited by Jaos who prevented his men from landing; they recovered some gold, however, in waist-deep water off the shore, and after loading a considerable quantity they returned from that port to Malaca in the junk.

These wild Jaos should belong to the port of Beach.

- (3) As to the black Cafres or Papuas of the south, we find a great number of them to the east of Tymor: for instance, in the islands which lie around the coasts of Nova Guinea. They resemble the
- (4) Cafres of Monomotapa: in some islands Mulatos are to be found.

- (5) It is an extraordinary thing that among the black Cafres children are sometimes born who are as white as Italians or Venetians, with fair hair. In the year 1594, I was shown some of these white children, born of a black Cafre father and mother in a country inhabited by black people.

Chapter 6.

CONCERNING ACCIDENTAL DISCOVERIES.

Some of the islands in Meridional India have been discovered by accident.

For instance, on one occasion some merchants of Macao in China, after loading a cargo of sandalwood in their junk at Tymor, were carried by a storm to an island in the south, which resembled Tymor in appearance.

They disembarked there to replenish their stores of water and fuel: they obtained water from the springs and wood from the thick groves of clove-trees and palms: they saw deer and other animals, but met with no human being nor any trace of people.

From its description, this island ought to be identical with the Petan of Marco Polo the Venetian, situated among the shoals of Maletur.

- (1) On another occasion, a boat from Malaca was carried away by the currents through the strait of Bale, between Java and Bima, and passing to the south discovered the island of Lucatambini inhabited only by women like Amazons with bows and arrows, who defended the beach and allowed not a single person to disembark.

These women ought to have their husbands on another island some distance away: the annals and "*lontares*" of Java contain references to Lucatambini.

Further to the south the same boat discovered another island which they circumnavigated in 8 days without detecting any person on the shore: but they saw in certain harbours elaborate stone and brick buildings in large cities and fortresses which had been abandoned. (2)

This shows that in Meridional India they possessed the appurtenances of civilization, and were acquainted with liberal and mechanical sciences.

Again, the pilot of the ship "S. Paulo" lost his course off Samattra in a storm which took the rowers to 36 degrees south: after running towards the east for several days he encountered, further to the south, the island of Sera, so-called because on the beach they found many lumps of wax marked with characters differing from the characters of Arabia. This wax was going to be loaded in some boat, which, however, had completed its loading at another point of this inhabited island: the wax could not have been piled up on the beach from a shipwreck, for in such case, it must inevitably have been melted and dissolved by the heat of the sun.

Moreover, the wax would appear to be an article of commerce emanating from some continent in the south and handled by civilized merchants.

Another Portuguese ship, carried to 40 degrees of south latitude by a storm, discovered the land of Parrots: where they saw, so to speak, schools of parrots, during their voyage along the coast.

This country would appear to be identical with the continental mainland of Lucach.

In the year 1606, the Hollander ship driven by a storm to 41 degrees of south latitude discovered the southern continent. (3)

They found there a large number of Portuguese, the sons and descendants of other Portuguese who had been shipwrecked on the coast.

These people still possessed the same fire-arms and guns, but went unclad or poorly clad: they lived by tilling the soil and working.

Chapter 7.

CONCERNING THE ISLAND OF LUCA VEACH.

The people of Ende frequently used the sea-route which had been opened from Ende to Luca Veach, 'land of gold', which contained a large quantity of this metal, many "bares" of gold being obtained by barter. Such is the account given by the old men of Ende, who relate the adventure of a ship from Ende which was making a voyage to Luca Veach: when they had got as far as the island of Sabbo, they encountered a storm and violent winds ("Tuphon") which prevented them from putting in at Sabbo, nor were they able to make the islands of Rajoam and Lucachancana which are in sight of each other. (1) (2) (3)

Being compelled by the storm to run before the hurricane, they lost sight of all these islands.

- (4) Then the weather cleared, the winds moderated, and they were becalmed for three days drifting from one place to another: it was during this stage of their voyage that they discovered Luca Veach, where they disembarked at a village to obtain water and provisions, for they had jettisoned everything in the storm, and had kept nothing except some "*sivallas*" fruits as ballast for the boat: now this fruit was valuable in the country of Luca Veach, so in exchange for "*sivallas*", which were merely the fruits of wild palms, the inhabitants gave the voyagers the gold for which they asked: for gold occurred in large quantities there, and even the gravel at the base of the trees contained metallic gold.

The island of Luca Veach has a compass of more than 8 Spanish leagues in circumference: the country, while containing mineral ores, is fresh with abundant wooded groves and bears very prolific crops of rice, grains, and every kind of foodstuff.

It abounds with palms, including the familiar cocos, as well as extensive plantations of sugar-cane; and contains numerous fresh streams with excellent water; from these streams, in which auriferous rocks are found, the mariners replenished their store of water.

Some of the people are white, with fair hair and light-blue eyes: they are short in stature: they go in public unclad or poorly clad: they inhabit cottages which are covered with thatch: they live by tilling the soil and working; this includes the cultivation of vegetable gardens.

- Living amongst the white people are a brown people: all speak the same language, which is that of Rajoaó and Sabbo: they are entirely without iron and for weapons they use slings, darts, and lances with points made of fishes' teeth. He who is richest and most influential governs the country. Along the coast for a distance of 150 geometrical paces the sea is choked with a kind of false coral,
- (5) "*agaragar*" or sea-weed, which obstructs disembarkation in the port of Luca Veach: for the boat to reach the land it was necessary to cut the branches of the sea-weed, in order to make a way for the boat to pass: then one could return without danger for there are no sandbanks or other difficulties there. After the boat had been loaded with the requisite quantity of gold they set out from Luca Veach, and in the course of the sea-voyage met another storm, whereupon
- (6) they jettisoned all the gold except what was necessary for ballast: then with calm weather they made the port of Sabbo where they discharged the gold: even this was so considerable in quantity that it amazed all the people of Sabbo.

Actuated by greed for these riches, they proposed to make a second voyage from Sabbo to Luca Veach: but this did not eventuate owing to the ignorance of the people of Sabbo, for they did not know the latitude or the appearance of the island of Luca Veach.

- (7) The island is so-called because among the natives of Ende and Sabbo and Java, "*Luca*" means "*Island*" and "*Veach*" means "*of Gold*."

Chapter 8.

CONCERNING THE CERTIFICATE REGARDING
LUCA VEACH.

I, Pedro de Carvalhaes, Captain of the fortress of Ende, during my appointment as Captain of the fortress, received from the most honourable and influential natives of the Christian community the following account of what happened in connection with the 'island of gold' or Luca Veach. A small boat from the port of Sabbo with some merchants aboard encountered a storm and violent winds, and being driven out of its course by furious currents lost sight of land.

Continuing their voyage with the bows pointing south for a little less than 30 leagues, they came to the uninhabited Pulo Cambim, 'island of goats'; thence travelling south about as far again they discovered another uninhabited island, Pulonhior, 'island of coconuts'; further on they discovered the island of Pulo Tambini, 'island of women'; then catching sight of Luca Veach they particularly noticed the fortunate mountain of gold. (1)

The men from Sabbo disembarked at the port and found on the island such an immense quantity of gold that they were amazed. (2)

So they loaded as much gold as they wanted until the boat could bear no greater weight; then with south or austral winds the boat returned to their original port of Sabbo, bringing riches to a country which was ill provided with them: for from the cargo of this boat is derived all the gold which is found in Sabbo today. (3)

On Luca Veach rises a lofty mountain or high peak or point, which is inlaid with gold: I mean to say, it is so prolific in the metal that quite thick veins of it shoot through the rock, which, as it becomes bare and smooth with the disintegrating effect of the weather, gleams all the more as it reflects the rays of the sun: from a distance its brightness resembles a glowing coal. After receiving this information, I gave orders for the immediate supply and preparation of 2 boats provided with oars; they were supplied with necessities, with pilots and sailors from Ende, and other ratings, in order to make the voyage to Luca Veach.

Just as the boats were on the point of raising anchor and setting sail, the Dominican Fathers being, as it were, the vicars and administrators of the Christian organization in the south, implored me in most earnest terms to abandon the whole voyage, on the ground that the Christians, as being unacquainted with the sea-route and having no experience of these latitudes, would undoubtedly consider that they were going to certain destruction and death in this Ocean.

Out of respect for the solemn request made by the reverend gentlemen, I abandoned the design, so the rich voyage to Luca Veach or 'island of gold' did not eventuate. The "Descobridor" Manuel Godinho de Eredia asks for this statement in the interests of his voyage and enterprise and for the advantage of the King's service: I swear by the Holy Gospels that this is the whole truth and that it is my signature which appears below.

AT Malaca, on the 4th day of October in the year 1601.

PEDRO de CARVALHAES.

Chapter 9.

CONCERNING THE SCANTY INFORMATION
ABOUT MERIDIONAL INDIA.

- (1) **PLINY.** Pliny in Book 2 Chapter 67 mentions the
Bk. 2 ch. 67. voyage of Hannon, a Carthaginian captain who sailed from the port of Carthage, now Tunes in Barbaria, through the strait of Gibraltar, and followed the coast of Africa round the Cape of Good Hope until he reached the strait of the Red Sea.

CORNELIUS NEPOS. Both Pliny and Cornelius Nepos refer to the voyage of Eudoxo, a servant to the king of the Satyros or of Ethiopia or of the Cafres, who set out from the strait of the Red Sea and followed the coast of Africa round the Cape of Good Hope or of Monomotapa until he reached the strait of Gibraltar.

From which it is clear that in those days men had opened the same sea-routes to Africa and the Oriental Indias as are used today by the Portuguese from Portugal. But they make no mention of the land of the south and of Meridional India, for it was a country with which the ancients had no intercourse and of which they did not even know: their intercourse did not extend beyond the Canary

PLINY. or Fortunate Islands, which Pliny mentions in
Bk. 6 ch. 32. Book 6 Chapter 32.

And Seneca in his anapaestic verses shows that they had no knowledge of any other lands except Europe, Asia, and Africa: he merely prophesies that a time will come when Thile will no longer be the world's end.

Moreover the writings of the mappists and cosmographers mention no other ancient countries nor any other divisions of the globe except Europe, Asia, and Africa: they have no information about any other part of the world.

Hence it is difficult to maintain that Solomon's trading voyages extended to Meridional India.

PTOLEMY. Ptolemy makes written mention of Meridional India only in his Table 12 of Asia. It is from this date that the land of the south was visited by merchants from Egypt and Arabia, and that the Mouros began to pass over to Ferlech in Java Minor, introducing Arabic characters and the wearing of "*Cabayas*", as is noted by Marco Polo the Venetian and

- (2) **MARCO POLO.** other merchants.

- (3) **PLATO.** The Island of Athlantis off the strait of Gib-
Atlantis. raltar or Columns of Hercules in Plato's story would appear to be a mere vision, and not real land as he makes Critias assert in the Timaeus. Nobody regards this land as anything more real than an enchanted island: even today signs of Athlantis are to be seen. within sight of the island called Madeira: Martim Affonço de Mello, Governor of Malaca, assured me that in the year 1590 he caught a glimpse of Athlantis from Madeira, but though he endeavoured to reach the land with two boats he could never touch it although he was within seeing-distance.

Chapter 10.

CONCERNING THE EXPEDITION TO
MERIDIONAL INDIA.

Apart from orders made by the Kings of Portugal in their instructions, discoveries were made by licence of Pope Martinho V granted to the Iffante Dom Anrique the Mathematician, Master of the Order of Christ and Duke of Viseu, in the year 1414: the privilege was confirmed in the year 1441: and later, in the year 1493, other Popes permitted the division of the world between Castile and Portugal. (1)

Now, by an instruction dated at Lisbon on the 14th day of February in the year 1594, Our Lord the King Dom Phelippe III ordered that the discoveries in Meridional India should be made by Manuel Godinho de Eredia, Mathematician: and accordingly the latter, in the year 1600, received a Commission from the Viceroy Dom Francisco de Gama, Count of Vidiguera and Admiral of the Indian Sea, to undertake this enterprise in the name of His Majesty. The Commission was confirmed by the succeeding Viceroy Ayres de Saldanha, and he was despatched with the Habit of Christ, and with the title of "Adelantado of Meridional India," being promised a twentieth part of the revenues from the new state.

So he passed from the court of Goa to the port of Malaca, where he completed his preparations to proceed to the south, in order to accomplish the voyage to Meridional India, the land of gold.

But he was not able to effectuate his happy voyage in the year 1601 above-mentioned.

First, because the fortress of Malaca was subjected to a succession of attacks from the Malaïos, and the military force attached to the expedition was required at Malaca for the defence of the fortress: secondly, because the Hollanders were holding the channels and straits of Bale and Solor.

But, in view of his accounts as to the undoubted existence of Meridional India and Lucaantara, he kept the undertaking in mind, so that when peace and tranquillity prevailed in the South, he might go later to take possession of the country, in order to incorporate it in the Crown of Portugal and to organize intercourse and trade between Lucaantara and Malaca, to the advantage of the customs-revenues.

While detained at the fortress of Malaca, Manuel Godinho de Eredia devoted himself to the service of the Navy: in particular, he founded the fortress of Muar, at the mouth of the River, by order of the Viceroy Ayres de Saldanha and of the General Andre Furtado de Mendoça issued on the 2nd day of February in the year 1604: further, he gave orders for the foundation of other forts for the (2)

- (3) (4) defence of the straits of Sincapura and Sabbaó: in addition he
 (5) captured and enforced his rule in the town of
 CHRONICLES. Cottabatu, ancient court of the Malayos, conquered by the famous captain Dom Paulo de Lima Pereyra in the year 1588: he performed much other diligent service for the King, having at his disposal the whole Southern Squadron of armed rowing-boats, consisting of 6 decked galiots and 60 "*bantis*", which also resemble "*bargantis*" or small ships propelled by oars.

With this fleet they captured prizes, and inflicted much damage upon the villages and cultivated lands and boats, in which they killed many of the Malayos.

While he was actually staying at the fortress, he occupied himself with its fortification and defence, assisting in the necessary duties at the fosses, ramparts, and palisades, and carrying on the system of watch and guard.

Most of the time he devoted to making discoveries in the district of Malaca. The whole of this district was visited and explored by Manuel Godinho de Eredia in the capacity of "*Descobridor*": and he prepared plans and chorographic descriptions of the country.

Besides, he found out all the places with deposits of metals, gold, silver, mercury, tin or "*calem*", iron, and other metals, precious stones, and other minerals, including nitre.

It was during the time when he was making his discoveries of metals in the district that by the grace of God there appeared in the sky a vision of the Cross, in the shape which is shown at the end of this outline, to the greater glory of God.

- (6) On the orders of the General Andre Furtado de Mendoça the "*Descobridor*" returned to the court of Goa to recruit his health, for he had fallen a victim to the malady known as "*berebere*": it was because of this illness that he could not return to Malaca with the Viceroy Dom Martin Affonço de Castro: he held an order in the Viceroy's own hand addressed to the Archbishop, the Governor of the State, authorizing the bearer to make provision for the relief of the fortress of Malaca: this order, however, had no effect owing to the death of this Viceroy in the year 1607.

Chapter 11.

CONCERNING THE COMMISSION.

I, Ayres de Saldanha, a Member of His Majesty's Council, Viceroy of India, &c., make known to all who may see this my commission, that, for just causes which are contained in another commission, I have granted licence to Manuel Godinho de Eredia whereby he is empowered to discover the island or islands said to contain gold in the Southern parts, and off the further coast of Tymor, or in other parts. And I am well pleased, in the name of His Majesty, to grant that, should it transpire that some island or islands of gold or other islands at present unknown are discovered,

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being within the limits of the Crown of the Kingdom of Portugal, the said Manuel Godinho de Eredia shall be Governor-General of such island or islands.

And moreover the said lord will receive the honour of the Habit of Christ.

And further, if he should die after accomplishing the discovery, I will order an honourable marriage for his daughter: bestowing upon her the greater favours and honours which the services of her father, the said Manuel Godinho de Eredia, would have merited.

And further I grant him, in the name of our said Lord the King, that there will be given to him one-twentieth part of what he discovers, or what His Majesty is accustomed to give to discoverers of mines in His Kingdoms.

I accordingly give notice to the Controller of His Majesty's Exchequer, to the Justices, and to other officers and persons to whom it pertains, and I command them to execute and observe this order, and to take all requisite steps for it to be executed and observed in manner herein contained without any difficulty or obstruction whatever. This commission shall have effect as an order passed in the name of His Majesty, notwithstanding Ordinance No. 20 of Book II, which enacts the contrary.

Drawn up by Francisco da Costa, the 5th day of April, 1601.

Written by Antonio de Moraes.

Viceroy.

Seen.

(Signed). MORAES.

Recorded in Book I of the General Transactions, folio 128.

Paid: 100 res.

Antonio de Moraes.

Registered in Book I, folio 245.

100 res paid by Luis Gonçalves.

Pedro da Silva.

Registered in the Chancellery by me,

Duarte de Faria.

Chapter 12.

CONCERNING THE CERTIFICATE REGARDING THE CROSS IN THE DISTRICT.

I, Father Belchior Figueira, Vicar of the Church of S. Lazaro in the district of Malaca, etc., certify that among the natives of the country it is a matter of public notoriety that at 5-30 a.m. on Sunday the 24th of November in the year 1602, the morning prior to the day of S. Catharina Virgin and Martyr, when more than 20

- (1) SUNEPUTAT. Christians were on board a rowing-boat journeying from Suneputat to the landing-stage at the parish church of S. Lazaro, in order to hear the obligatory mass, by the just decision
(2) of God there appeared to them in the sky a most perfect cross, of a blue colour, deeper than the blue of the clear sky: the cross was perfectly symmetrical, as though it was artificially made: judging by its apparent size and proportions, the actual length, including its rounded pedestal at the foot of the cross, would extend to approximately 3 fathoms, more or less: right at the top was the head-piece: from the upper side of the head-piece there sprouted green branches, resembling branches of marjoram. The cross was extended in the sky above the district of Malaca in such a manner that its pedestal lay towards the west and its head-piece towards the east.

This vision lasted for a little more than 2 hours: after 7 a.m., the cross faded before the brightness of the sun, and the figure of the cross disappeared entirely.

This occurrence caused astonishment as well as great devotion among the Christians.

Because this vision appeared in the region of the parish of S. Lazaro at the time of the explorations in the district of Malaca, when the "Descobridor" Manuel Godinho de Eredia was making his discoveries, navigating the river in the service of the King, and because this was a notable incident which took place during the course of his enterprise, and because I have been asked by the "Descobridor," I affirm that this is the truth, for the greater glory of God: and I swear by the sacred gospels that it is my signature which appears below.

At Malaca, on the 6th of December in the year 1602.

FATHER BELCHIOR FIGUEIRA.

PART III.

CONCERNING

CATAY

(ATAY).

[Translator's Note.—Only Chapters 3, 4, and 15 are translated: Chapters 1, 2, 9, 10, 13, 14, and 16 are epitomized: Chapters 5, 6, 7, 8, 11, and 12 are omitted.]

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Chapter 1.

CONCERNING CATHAY.

*[Cathay or Cattâ (the Attay of Pliny), was the empire of the Scythians (Chimscithas) of India Superior or Serica, today Tays or Oram Tays.

The dependent provinces of Tenduc, Tangut, Tebet, Cottam, Sim, and Mansim.

- (1) Cambalo, the capital, the largest trade-centre in the world.
The boundaries of Cathay: North, Tangut and the Desert of Demons or Stygian Lake, and Tenduc also called Jendu: South, Sim and Mansim: East, Corya and the eastern sea, also called the Mangic Sea or the Great Gulf: West, Thebet and Cottam.

The Indoscithas of India Superior (Serica) ruled by Preste Juan of India, a Christian monarch.

- (2) Chinchis, in 1187 A.D. chosen king by the Tartars of the
- (3) Province of Tatar about the city of Coromoran, after defeating his overlord Joan Can or Huncan, successor of Preste Juan, subdues the ancient empire of Jendu or Tenduc, and takes tribute from Cathay and nearly all India Superior.
- (4) His successor Cublay the Great Cam sends his generalissimo
- (5) Abayan Chinsam to conquer the province of China called Mansim or China Major by Ptolemy (today called Nanchim or Nanquim by the natives).

Facfur, king of China, flees to the islands off the coast, abandoning Mansim and its capital, Chinsay, to Cublay in 1268 A.D.

The three provinces of China according to the ancients: first, Sim or Chim: secondly, Mansim or Manchim, called China Major: thirdly, Coc Sim or Cochim, called China Minor.

The nine principalities of Mansim under Cublay: Yanam, Cuicheo, Quansi, Quantum, Unquam, Quianci, Nanquim, Foquien, and Chequan.

- (6) Revolt of the Chinas, who not only recover Mansim, but cross
- (7) the Coromoran River and subdue six principalities, Sienci, Honan, Sancu, Paquin, Xanctun, and Suchuon, in Cathay.

Construction of the Great Wall, 1,200 miles long, encircling Sienci, Sancu, and Paquin.

- (8) Today China is divided into two provinces, Mansim, and Patquin or Taygin: both provinces are governed by a Lord, "*Tutan*," Monarch.

The nine principalities of Tanguc: Sachion, Camul, Chintalas, Succur (with its rhubarb), Ensina, Cergut, Ergimul, Singui, and Campion.

- (9) Christianity established in Jendu or Tenduc, where a sandal of S. Thome is still venerated.

The five principalities of Tenduc: Gog, Magog (the Azure Country), Cindacui, Cranganor, and Jendu with the silver-bearing mountains of Idiffa.

An easy route from Indostan or Mogor by way of Queximir, Alar, Meiro, the river of northern Tebet, and Lassam, to Cambalo.

This route through Tebet to Cottear or Cottam and Sim, by way of Queximir, was used by the Indostanos who travelled from Mogor and Queximir to Cathay and Sim and returned to Cambaya in 1611 A.D. during the governorship of Xech Abdoraen.

The ancient route to Cathay was through Turcastan, the Desert of Lop, and Tangut.

Another route through Turcastan, Cascar or Carcan or Hircande, and Tebet to Cathay.

The easiest route to Cathay is through Indostan or Mogor, Queximir, Tebet, Aranda, and Cottan.

The name Cathay (Cathaio of Appian) derived from A.tay, the name of a people living near the Attay or Altay mountains.

The ancient civilization and silk-manufacture of the Attayos, from whom are descended the Chinas, called by Appian Singi and Taygni, whence the names Mansim and Taysim.]

Chapter 2.

CONCERNING CHRISTIANITY IN CATHAY.

*[Christianity introduced into Cathay by S. Thome or his disciple in 69 A.D. (1)

The archives of the Chaldaean Archbishopric of Serra or Angamale mention Christians in Jendu (Tenduc) and Sim.

The Christian Argones spread throughout Cathay. Marco Polo (2)

(bk. 2 ch. 6) says a great part of Athay and Mansim was inhabited by Christians, that Mansim or China was governed by a Christian governor named Marsarsis or Marsalis, that churches were built in 1268 A.D., that in the following year, on the request of Cublay the Tartar, two priests of Ancona, named Nicolas and Guilhermo, went from Rome to Cathay by order of Pope Gregorio X. (3)

Garibay in his History of the Popes speaks of Friar Anselmo and his brother Dominicans undertaking the journey to Cathay.

S. Antonio speaks of Christianity in Cathay. Christianity flourished at Jendu: the bravery of the Christian Alans is proved by the fact that they were entrusted by Cublay the Tartar Emperor with the conquest of Mansim, as related by Marco Polo (bk. 2 ch. 62). It was probably the Alans of Scythia, rather than the Goths, who entered Spain in 412 A.D.] (4)

Chapter 3.

CONCERNING CHINA IN ATTAY.

PTOLEMY. China was called Mansim or Mangim by (1)
Bk. 12. Ptolemy.

The province appears in his Table 12 of Asia, under the name of "Sinarum regio" or land of the Sinas. Appian in Part 2 of his *Cosmographia* names the Sygni and Taygni of Mangim; indicating 1930] *Royal Asiatic Society*.

that Mangim or Mansim was divided into 2 provinces, Sim (Sygni) and Mansim (Taygni).

MARCO POLO.
Bk. 2 ch. 70.

The same division is made by Marco Polo the Venetian in Book 2 Chapter 70, where he describes the two Courts of Mansim, Asi or Quinsay, called "celestial" and Singui called "terrestrial".

Quinsay, or Sim Tay, also called Tay Sim, the Taygni of Appian, is the city today called Nan Sim or Nanquim: while Singui is the Signi of Appian, or Sim.

Both these Courts of China derive their names from the fact that they are situated in the land of the Chinas, for "*Sim*" means "eye", and the eye is a peculiar feature of this people.

In olden times the principal sea-ports of Mansim were Quinsay, in Nanquim, situated at 26 degrees of north latitude, and Zarten or Zarton, the chief centre of the spice-trade from the Indias, which must probably be identified with Canton, situated at the Tropic of Cancer, for the distance from the port of Zarton to the island of Zipangri or Jappon is 500 leagues, as stated by Marco Polo the Venetian in Book 3 Chapter 3.

The fact that Quinsay and Zarton were the ports from which the fleet of Cublay the Tartar set sail for Jappon indicates that there was no nearer port in the vicinity for the purposes of trade and inter-communication.

Coc Sim or Cochim China, as being a dependency of Mansim (although one might think it was a dependency of Sim), they called Coc Sim or China Minor.

As for the province of Sim with its Chaldaean Christians, its existence was not known until it came to the knowledge of the "Descobridor" in recent years: the only known divisions of China were Mansim and Cochim China, and we knew nothing of Sim, situated on the western border of Mansim, until it was discovered in 1611 A.D. by means of a route through the land of the Indostanos. To recapitulate, China, or rather its people, is descended from the Attayos of the ancient Serica in India Superior of the Scyths: these

PLINY.
Bk. 6 ch. 7.

Attayos are the Thyros and Tocharos spoken of by Pliny in Book 6 Chapter 7; and from them are descended the Chinas who are the Sygni and Taygni of Appian.

That the Chinas are descended from the Attayos is evidenced by the name Laos or Attaos, a people living in Sim or Simlao, on the western border, or at any rate to the westward, of Mansim: Sim is a great province of which we possess no accounts.

In 1580 A.D., a large body of armed men from Sim, seeking to try their luck beyond the confines of their homeland, travelled along the rivers of that region until they arrived in Camboja, where, however, they met with total disaster, losing their goods and riches, including many pieces of gold.

These Laos or Sim Laos were the people who carried on communication with India Intra-Ganges and India Extra-Ganges, and had trading relations with Trapobana, called Ceylan or Simlao from

the establishment of intercourse with the port of Chinlao or Chilao, a great trading-centre in Attay.

The trade-route ran along the rivers of Tangut, Pegû, and Martavan. (2) (3)

Chapter 4.

CONCERNING CATHIGARA.

PTOLEMY. Ptolemy in his Table 12 of Asia mentions the sea-port of Cathigara, one of the great trade-centres of the world, situated on the southern continent in a bay of the China region. Up to the present we have no further knowledge of this place, except that there is a certain white people who wear red tunics living on the continent of Lucach in Meridional India, almost at the latitude of the Tropic of Capricorn. (1)

It may well be that the port of Cathigara inhabited by the Chinas is in fact situated in those parts, for Appian in his Part 2

APPIAN. of Asia shows that there dwelt in that part of Pt. 2 of Asia. the south the Fish-eating Chinas (these were the Athiopes): therefore Cathigara ought to be situated in the south.

On the other hand it would appear that the bay belonging to the Chynas of Cathigara really belongs to the Chinas of Attay, who are "the Chinas Proper" of the world. So it may be that Cathigara is either the port of Quinsay or of Zarton.

Most probably, however, Cathigara is the port in Coria called Cattacoria or Catticara, which means "Cattars of Coria": for these Corios were the principal merchants engaged in the trade with the Indias: it appears from the history of the conquest of Malaca by Affonço de Albuquerque in 1511 A.D. that they came to Malaca in connection with the gold-trade.

That trade was carried on from Malaca with Coria, China, Java, Macaçaes, Gilolo, Banda, and Tymor, is quite clear from

DAMAO DE GOES. the writings of Diego Lopez de Siqueira, Chron. Governor of the State of the Oriental Indias,

JOAO DE BARROS. who made the discoveries of Malaca and Samatra Chron. in 1510 A.D. in the time of the Viceroy Dom

Francisco Dalmeida.

But he had no knowledge of the other trade which went southward, nor of the ancient traffic with Java Minor and with the land of Beach.

The port of Cathigara cannot be placed in the great island of Lucaantara in Meridional India, so prolific in gold and spices: for while the "*lontares*" and annals of the Archipelago of Java Major contain references to this Meridional India and Lucaantara, they do not mention any other trade-centre in the south: moreover, since the trade with the Indias is a matter of universal notoriety among all men both natives and strangers, the conclusion is that the bay of the Chinas and the port of Catigara are situated to the northward in Attay, for from the northern ports came the ships, pilots, and mariners engaged in this trade.

Chapter 5.
CONCERNING TARTAR.

Chapter 6.
CONCERNING BELLOR.

Chapter 7.
CONCERNING THE LAND OF DARKNESS.

Chapter 8.
CONCERNING THE DESERT OF DEMONS.

Chapter 9.
CONCERNING OPHIR AND THARSIS.

- (1) * [The situation of Ophir and Tharsis still unsettled after much discussion.

Robertho Stephano (Francisco Botablo) places Ophir in Christovão Colon's island of Hespanhola, whence, from Cybao, 450 talents of very fine gold were taken to Solomon. Arias Montan places Ophir in Perú: others in various places, such as Sophala in Monomotapa.

More probable is the opinion of Josephus that it was a province of oriental India, founded by Ophir son of Jectan, mentioned in Genesis, Chapter 19.

The Scriptures, too, place Ophir and Tharsis in the far east.

Perhaps they were in the region of gold mentioned by Ptolemy in his Table 12 of Asia near the Ganges, where in his time was one of the great trade-centres of the world; for along the Ganges came the gold-traffic from the very high mountains of Negar Phirin. But I do not know if these were the high mountain called Sephar.

Perhaps the names Ophir and Tharsis are derived from Ophir and Tharsis, the best-known descendants of Sem and Japhet respectively.

Some think that Tharsis comprised Ethiopia, Arabia, and Persia, or Saba, Epha, and Madian (Psalm 44).

In the Second Book of Judges Tharsis is placed in Cilicia, for Holophernes coming from Assyria, reached the high mountains of Ange (perhaps the Taurus), destroyed the famous city of Miletus, and despoiled the sons of Tharsis and also the sons of Ismael, both those who lived on the confines of the desert and those who lived

over against the land of Celon. The conclusion is that Tharsis was situated in Europe, Africa, and part of Asia, while Ophir was situated in the other part of the continent of Asia. Both had a maritime commerce.

It appears from the books of Kings and Chronicles that the fleet collected by Josaphat at Asiongaber was intended for both Ophir and Tharsis.

The gold-mines which were Solomon's chief objective appear to have been in Serica (even today the best gold comes from Paguim): apparently in Solomon's time, 1039 B.C., Serica and Attay were peopled by an effeminate race from Syria and Palestine.

It may well be that the route to Ophir or Serica ran up the Ganges, for in olden times the Indias traded with the hinterland and with the gold-mines in the mountains of Negar Phirin, mentioned by Pliny and Ptolemy as the Region of Gold.

Later there grew up a traffic in the country of Pegû around the trading-centre of Baracura, where the river runs up into Tartaria.

It is probable that in Solomon's time the land-route which took 3 years for the return journey was the old route across the Euphrates through Tharsis or Persia (once Pharsis) as followed by the tribes of Israel on their way to Arsareth, while the sea-route went as far as the Ganges, for Solomon had many products of the Gangetic area.

The ten captive tribes travelled for more than a year and a half after crossing the Euphrates and came to Arsareth, but its site is not certain; they may, however, have gone to Cayra in the country of Belor. The name Serica appears to be derived from Syria, whose people founded it: most of the names, such as Gog, Magog, and Tyri, are Judæan.

In Solomon's time the trade-route ran from Aziongaber in Idumea, along the coasts of Arabia, Persia and Indostan, to Cocho on the Ganges, thence by river to the gold-region, and through there to Serica.

The mariners in their rowing- or sailing-boats appear to have hugged the coast: they did not know of the magnetic needle: they had no astronomical instruments for finding their way across the Ocean.

The boats sailing from Cape Chori to Taprobana were guided by the flight of birds: the boats which passed from the Red Sea to the Straits of Gibraltar were guided by the coast of Africa.

Even in Pliny's time they did not know how to navigate the Ocean: they had discovered nothing beyond Europe, Asia, and Africa: they still thought that Thyle was the farthest limit of the world.

Ptolemy makes it clear that in 163 A.D. the sea-route extended further, *i.e.*, from the Red Sea along the coasts of Arabia, Persia, Indostan, Choromandel, Cocho on the Ganges, Ujontana, and the Golden Chersonese, until it passed to Meridional India.

Serica, the two Scythias, and India Intra- and Extra-Ganges are the Asiatic countries which have been longest known to Europeans]

Chapter 10.

CONCERNING INDOSTAN.

*[In ancient times the provinces of Indostan, Turcastan, Astracan, and India Intra- and Extra-Ganges were tributary to Cathay.

Indostan (derived from "Indos" meaning "idolater" and "Tan" meaning "province") is today called Mogul or, corruptly, Mogor, meaning "shepherd", a surname given to the man who founded the monarchy of the Mogores, Tamerland, who conquered Bazacet the Great Turk. Tamerland married the daughter of Soltan Usem, King of Dely, of the tribe of Chacatta of Samarcand, once Turam (*i.e.*, Turca or Turcastan), and succeeded to the throne on the death of Soltan Usem in 1404 A.D. The province acquired the name of Mogor because Tamerland was the first king of the Mogores.

The name Tamerland means "Tamer the Lame". From Tamerland descended the following kings, Miraxa (succeeded by Xaroc), Sultan Mahameth (succeeded by Oulogoboth), Sultan Abacayd, Amaxeth, Babor, Hamau, Equebar Zaladin Mahameth, and Nuzadin Mahamet Zanguir Paxagazi, who now, 1611 A.D., reigns over the Mogores.

- Indostan or Mogor is separated from Turcastan on the north
- (1) by the mountains of Naugracoth (called by the Latins Imaus or Caucasus): on the south it is separated from the Decan and Oriaes
 - (2) and Orixia by the mountains of Gatte: on the east it is separated
 - (3) from Tebeth, Sim and Mansim and Cocho Pathanes by the mountains of Negar Pherin and the gold-bearing mountains of Prosonay
 - (4) (5) and the river Ganges: on the west it is separated from Persia by
 - (6) Caracone, Candahar, and the river Indo or Indi.

- The seven kingdoms of Indostan, namely, Gozarate, Deli,
- (7) Purab, Cabul, Queximir, Bengala, and Sindi: besides other districts governed by Rajus or Rajas.

All these kingdoms are at present governed by Nabobs under the authority of Patxa the Mogor king.

From Dely, Tamerland's first kingdom, his successors conquered the other kingdoms of Indostan.]

Chapter 11.

CONCERNING TURCASTAN.

Chapter 12.

CONCERNING ASTRACAN.

Chapter 13.

CONCERNING INDIA.

*[India Major (Intra-Ganges) and India Minor (Extra-Ganges) are inhabited by Bragmenes,—Magi, idolaters and astrologers.]

The chief seat of the sect was in the peninsula of Gatte (Bittigo of Ptolemy) in the district of Lae. The Bragmenes' district of Madure was probably in Choromandel. (1)

Twelve families of Baneanes retired to Gozarate and the city of Tanna near Bombayn, where they built splendid pagodas. (2) (3)

The Bragmenes also extend further to the east, for instance, to Indostan, and Cocho near the Ganges, and Pegu (which means Pagou or Pagoda of Brama), whence Perumal sprang: their original sanctuary was in Tropobana or Ceylon. The Iogues and Veztheas wander round the Ganges region without having a fixed abode: these Iogues are probably the Gymnosophists. (4) (5)

Chapter 14.

CONCERNING INTRA-GANGES.

*[India Intra-Ganges (India Major) extends from the Indo to the Ganges: and from the Tropic of Cancer in the north to Cape Chori in Choromandel: further south is the island of Tropobana.]

The peninsula of Gatte is called Balagate, from the mountains known as Gattes: these should be Ptolemy's Bittigo, for names have changed, though the names of Choromandel and Malavar (the districts round Bisnaga and Calicut respectively) still survive: they are mentioned by Pliny and Marco Polo. (1)

Chapter 15.

CONCERNING EXTRA-GANGES.

India Extra-Ganges or India Minor runs eastward from the point where the tropic of Cancer intersects the river Ganges, as far as Camboja and the Mangic Sea or Great Gulf. In this division of India lay the trade-route, (the river-route to the hinterland of Cattay) with its trading-centres, one at the mouth of the river Ganges and another at the mouth of the river of Cosnim in Pegû: for it was along the river of Cosnim that the boats passed up to Cattay: in olden times this latter trade-centre was named Baracura by Ptolemy in his Table 12 of Asia, where the district is designated "region of gold". This division of India also comprises the Golden Chersonese or Samatra, the mainland of Ujontana, and the islands of the Aromatic Archipelago. (1) (2)

Chorographic tables of these islands have been prepared by Alvaro Pinto Coutinho, cosmographer.

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Chapter 16.

CONCERNING THE CAUSE OF THE FIXATION AND VARIATION OF THE MARINER'S NEEDLE.

* * * * *

*[Only in recent times was it discovered in Serica (Attay) that the magnetic needle could be used to denote the direction of the Pole Star.

* * * * *

The compass-needle remains fixed at certain spots such as Cape Agulhas (Cape of Good Hope), at the Assores, at Cape S. Augustinho in Brasil, at Cape Chomorim in Indostan, and at Point Romania in Ujontana.

The compass-needle deviates towards the north-east in certain localities, such as off the coast of Spain and Africa in the Atlantic Sea.

It deviates towards the north-west on the eastern coast of Africa and in the Indian Sea.

* * * * *

Loadstones are found in large quantities in other places than the Pole, and especially in India Intra-Ganges and India Extra-Ganges.

The loadstone can attract the needle not only to the north, but to the east, west, or south: wherever one may be, the loadstone attracts the magnetized point of the needle.

There are many kinds of these stones: they are black, white, blue, grey, and cinnamon-colour: the last-named is the best, the white is the least good.

The practise of magnetizing the needle to serve as a compass cannot be very old; it is not mentioned by Pliny or Ptolemy or the other writers or historians; Marco Polo had no compass when he made his successful voyage to Java Minor in the Austral Land in 1295 A.D. The discovery of the compass was made by the Seres of Serica and the Attayos, Chincheo Chinas, the great navigators of the Mangic Sea.

This nation has always navigated the Ocean of India Intra-Ganges and Extra-Ganges and of Meridional India, for the whole area was tributary to the empire of Attay or Cathay (Serica).

In ancient times the mariners guided themselves by the Pole Star and Ursa Minor: later they used the mariner's compass in a simple form: filling a porcelain or glass bowl with salt water, they placed on the surface of the water a magnetized tailor's-needle, which pointed to the Pole.

I have known the Chincheos use such an instrument for navigating the Mangic Sea.

It seems then that the discovery was made by the Chincheos: it passed into Europe in the year 1304 A.D.]

At Goa, the 24th November, 1613.

Finis. Laus Deo Optimo Maximo.

FINIS. LAUS. DEO.

Journal Malayan Branch [Vol. VIII, pt. I.

NOTES ON PART I CHAPTER 1.

CHAPTER 1. Sir W. George Maxwell's rendering of chapters 1 and 15, based on Janssen's French version, has been published in *JRASSB.* No. 60. (1911). p. 18 *et sqq.* (1)

The present translation, based on the Portuguese transcript, will be found to differ on a number of points, though certain of Sir W. George Maxwell's felicitous phrases have been preserved.

Town of Malaca. In the *Journal Asiatique*. Tome XI. 1918. pp. 393 *et sqq.*, Ferrand collects the principal accounts of Malacca and references thereto in the European, Arabic, and Chinese authorities: some of the accounts are in French, however. (2)

One may also compare the following descriptions:—

Eredia (1597—1600) in the REPORT ON THE GOLDEN CHERSONESE: p. 228 *infra*.

Resende (*c.* 1638): *JRASSB.* No. 60. (1911). p. 3.

Bort (1678): *JRASSB.* Vol. V. Pt. I. (1927). p. 9.

"Malaca". This word, in the form 'Malākā', first occurs, it would seem, in "the 'Kot Monthierabān'—or 'Palatine Law' of Siam, enacted in A. D. 1360"—a source of information "authoritative enough to admit of no question." (Gerini. *Researches on Ptolemy's Geography of Eastern Asia*. (1909). pp. 531. 532). (3)

The date, 1360, is not universally accepted, however. The Chinese form of the name 'Moa-la-ka' (Amoy Hokkien; 滿刺加) dates from about 1403: the Europeans mostly write 'Malaca', with variants, 'Melequa', and 'Melacha' (Yule and Burnell. *Hobson-Jobson*. (1903). p. 544): the old maps have 'Malacca', 'Malaca', 'Mellaca', or 'Mallaqua'.

Modern French adheres to the spelling 'Malaca', and uses the expression 'presqu'île de Malaca' to designate the Malay Peninsula, or, as it is now often called, 'Malaya'. Letters addressed from France to 'Malaya' are liable to be despatched to Malaga in Spain.

The use of the term 'Malaya' as designating the Malay Peninsula dates back, it would seem, to the beginning of the seventeenth century, as the name 'Malleya' appears in a letter of Instructions (*c.* 1614) from the East India Company (*JRASSB.* No. 54. (1909). p. 82): apparently, however, the name was not then in common use, for we are told that the employment of the word 'Maleya' by the Dutch Governor-General, Van Diemen (*c.* 1640) was 'unusual' (*JRASSB.* No. 67. (1914), p. 73), though Manrique (1640) writes 'Malaya': somewhat similar names 'Mo-lo-yu', 'Malayur' etc., referring either to a part of the Peninsula or to a part of Sumatra occur in much earlier writers (Gerini. *Researches etc.* (1909). pp. 535—538).

The territory later called Malacca was at one time known to the Chinese as 'Five Islands' (五嶼 *Wu-hsü*), while the capital city of Malacca was "in former times called *Jakola*" (Gerini. *Researches etc.*, pp. 501.521).

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The Malay name is Mēlaka.

- (4) Means. Four derivations of the word 'Malacca' have been put forward.

First. Barros (1553) and Albuquerque (1557) allege a connection between 'Malacca' and 'Malayo' (Malaio), the point being that "in Javanese the word 'Malāyu' signifies 'to run away', and the proper name has traditionally been derived from this, in reference to the alleged foundation of Malacca by Javanese fugitives."

Yule and Burnell (*Hobson-Jobson*, p. 544) quote Skeat as writing "The suggested connection between *Malayu* and *Malaka* appears impossible to me, and, I think, would do so to any one acquainted with the laws of the language."

Secondly. Albuquerque mentions an alternative derivation, which evidently refers to the Arabic 'Mulākāt' 'a meeting'. The "*Malay Annals*" (1612) allude to this;

"The Arabs gave it the name of Malakat or the mart for collecting all merchants". (*Leyden's Translation*, (1821), p. 108).

This derivation "may be totally rejected." (Yule and Burnell, *Hobson-Jobson*, p. 544).

Thirdly. Crawford is positive that the place was called from the word 'Malaka', the Malay name of the *Phyllanthus emblica*, or emblic Myrobalan; Yule and Burnell (*Hobson-Jobson*, p. 544) quote Skeat as writing "There can be no doubt that Crawford is right, and that the place was named from the tree." "The fact is that the place, as is so often the case among the Malays, must have taken its name from the Sungei *Malaka*, or *Malaka* River".

Fourthly. Gerini cannot credit the derivation from the name for the emblic myrobalan, and prefers to hold "that the name of Malacca is either a modification of *Malayakolam* or *Malayaka* (meaning the 'country of the Malayas'); or that it is identical with *Mālaka*, the name of the Southern Indian tribe mentioned in the Mahābhārata, transplanted, like many others, on the soil of the Malay Peninsula." (*Researches etc.* p. 105).

In connection with the reference to the "*Malay Annals*", 'Sējaraḥ Mēlayu', above, "it may be observed that "the Malay Annals" though dated A.D. 1612, refer to "the late Sultan Aladin Riayat Shah who died in Acheen". This reference shows that the book was revised some years later than 1612". (Wilkinson, *A History of the Peninsular Malays*, (1923), p. 60).

- (5) Myrobalans. 'Myrobalan' is the "name applied to certain dried fruits and kernels of astringent flavour, but of several species which were from an early date exported from India and had a high reputation in the medieval pharmacopoeia". "They are still, to some extent, imported into England, but for use in fanning and dyeing, not in pharmacy". (Yule and Burnell, *Hobson-Jobson*, (1903), p. 607-8.)

- (6) Aelerle: i.e., 'Ayer Leleh' ('trickling water', Malay): cf. the "*Malay Annals*" (1612), "from Ayer Leleh . . . to the entrance

of the bay of Moar was one uninterrupted market place" (p. 323). The stream no longer exists, though the name is perpetuated, it would seem, in the present-day 'Ayer Leleh Road' in Malacca town.

Buquet China: *i.e.*, the modern 'Bukit China' (Malay), (7) 'Chinese Hill', called by the Dutch 'Bouquet China', 'Boukit China', and 'Bouquet China', "name of a hill just NE of Malacca town, connected in Malay history with Chinese settlers of the 15th century and now containing many Chinese graves."

Governor Bort says that the Portuguese called the hill St. Francisco.

The well at the foot of the hill produces water of excellent quality: this may have been the *raison d'être* for the Dutch guard of 13 men. (*JRASSB.* Vol. V. Pt. I. (1927). pp. 20. 31. 209).

The Chinese call the wells 三寶井 'Sampo-cheng' (in Cantonese), "Sampo's wells", in the belief they were dug by the well-known eunuch Cheng Ho (also called Sam Po) of the Ming dynasty (*cf.* *JRASSB.* No. 42. (1904). p. 159). At Kuala Lumpur and other places in the Peninsula there are said to be temples, known as 'Sam Po Kung' dedicated to the same personage, whose exploits now form the subject of a Chinese cinematograph film.

Ujontana. "This is the Malay name (nearly answering to (8) 'Land's End', from *ujung*, 'point or promontory' and *tanah*, 'land') of the extreme end of the Malay Peninsula terminating in what the maps call Pt. Romania. In Godinho de Eredia's *Declaração de Malaca* the term is applied to the whole peninsula [*cf.* Part I chapter 9], but owing to the interchangeable use of *u*, *v*, and of *j*, *i*, it appears there throughout as "VIONTANA".

The present translation employs the form 'Ujontana', following the translation published in *JRASSB.* No. 60. p. 18.

The name is also applied to (1) "the lower part of the Malay Peninsula"; (2) the Kingdom of Johore, as in Marsden's "*History of Sumatra*" (p. 345), where the author refers to "King of Ojong Tana (formerly of Bintang)"; (3) in Barros (IV. xi. 13), the capital city.

Pinto (*c.* 1539) has 'Jantana', Galvano (*c.* 1550) 'Jentana', Barros (1553) 'Ujantana', Botelho (1554) 'Ojantana', Resende (*c.* 1638) 'Juntana', and Andrada (*c.* 1664) 'Viantata'. (Yule and Burnell. *Hobson-Jobson*, p. 950; *JRASSB.* No. 60. pp. 3, 11, and 18; *JRASSB.* Vol. VI. pt. IV. (1928). p. 58).

According to Leyden's translation (1821) of the "*Malay Annals*" (1612), the phrase 'Ujung Tana Besar', 'Great Ujung Tanah', was used to designate the 'Malay continent' *i.e.*, apparently, the Malay Peninsula. (p. 200).

The expression 'Ujong Tanah' would appear to be represented in the 'Ta-na-ki-seu' (答那溪嶼) of the *Wu-pei-pi-shu* chart, and the 'U-tang-ta-lim' (烏丁礁林) of the *History of the Ming dynasty*. (*JRASSB.* No. 53. (1909). p. 155; Groeneveldt in *Essays relating to Indo-China*. Second series. (1887). vol. I. p. 254).

- (9) The Permicuri. The transcript has "aquelle Permicuri". Ferrand notes that this is really a feminine designation: in the REPORT ON THE GOLDEN CHERSONESE, however, Eredia speaks of "Parimicura" (p. 229 *infra*); *Permaisura* was "a pretentious Indian title" meaning 'king'. Wilkinson assigns to him the name of Muhammad Shah. (*A History etc.* pp. 29, 30).
- (10) First King of the Malayos. In the DESCRIPTION OF MALACA (1613) Eredia refers several times to "Permicuri" as being the first King of the Malays: one concludes that he has abandoned the view which he puts forward in the REPORT ON THE GOLDEN CHERSONESE, that from its inception in the year 3 B.C. the Malay "empire" enjoyed an unbroken continuity, the seat being transferred from Patani to Pahang, Malacca, and Johore successively (*cf.* p. 231 *infra*).
- It is noteworthy that he impliedly repudiates the prior existence of any kings at Singapore.
- Valentyn (1726) alleges that the founder of Malacca reigned for three years at Singapore before commencing a further reign of 22 years at Malacca (*JRASSB.* No. 13. (1884). p. 67).
- According to Blagden, Singapore became independent of Palembang, under its own kings, about the year 1295 (*JRASSB.* No. 81. (1920). p. 25).
- (11) Malayos. Eredia usually writes 'Malayos', frequently 'Malaïos', and once 'Malaes'. The name is subject to many variations; Linschoten, for instance, writes 'Malayos', 'Malaïens', 'Malayers' and 'Malayen'.
- (12) So famous. The Portuguese called the city "A Famosa".
- (13) 2 degrees 12 minutes. The position of the Trigonometrical station at Bukit China is $2^{\circ} 11' 55.13''$ N. $102^{\circ} 15' 30.95''$ E.
- (14) In front of the first climate. The Portuguese transcript reads "antes do primeiro clyma". One of the maps, hitherto unpublished, included in Eredia's TREATISE ON OPHIR shows the first climate to commence at 12° (South): presumably Eredia held the first climate north of the equator to commence at 12° likewise.
- In the 1508 Latin edition of Ptolemy (British Museum Map Department, c 1 d 5) a map purporting to be compiled "from recent observation" places the first climate and the second climate in 15° and 22° respectively; it is not clearly indicated, however, at what points they begin and end. Incidentally, this map provides an interesting commentary on the knowledge or lack of knowledge possessed by educated Europe about the configuration of India and Further India prior to the capture of Malacca by the Portuguese: not only does the coast of China run due south in true Ptolemaic fashion but a portion of this coast is marked "part of the island of Seylan", while Sumatra is labelled 'Taprobana alias Zoilon' and the real Ceylon is given the name of 'Prilam'.

Java and Borneo are not indicated. On the Malay Peninsula four names are marked:—

Malaquilcho; whatever that may be: (? Ptolemy's *Maleukolon*):

Malacha; Malacca:

Garsyv; perhaps Grisek in Java, which appears to have been an Arab port of call in the 14th century:

Gapara; apparently Japara in Java, which according to Javanese tradition was visited by Chinese traders in the 10th century.

1411. In the REPORT ON THE GOLDEN CHERSONESE (15) Eredia gives the date as 1398: see p. 229 *infra*.

The date still remains uncertain.

Ferrand discusses the question in *Journal Asiatique*. (1918). p. 459 *et seq.*; he finds a great diversity of dates given by the early writers, the 8th century in Correa, the first half of the 13th century in Barros, 1252 or 1253 in Valentyn, the first half of the 14th century in Couto, 1411 in Eredia, and 1420 in the Commentaries of Albuquerque: he thinks that there is nothing improbable in Correa's statement, though the date cannot be precisely ascertained; and he would identify Malacca with Marco Polo's 'fine and noble' city. Dr. Blagden tells the translator that he thinks Malacca did not rise to be a place of any real significance until after the fall of Singapore (probably about 1377), though it may have been in existence, as a small wayside port, for some period before that time; he doubts whether we can safely follow the "*Malay Annals*" in asserting that Malacca was actually founded after the downfall of Singapore; he distrusts the alleged early references to the place in the Javanese history *Pararaton* and in the Siamese *Kot Monthierabân*.

The earliest contemporary reference to Malacca occurs in the *Ying-Yai-Shêng-lan* of Ma Huan who relates that Malacca was visited by a Chinese mission under Cheng Ho in 1409 (Groeneveldt in *Essays relating to Indo-China*. Second Series. (1887). Vol. I. p. 243), though the History of the Ming dynasty (1368—1643) records a Chinese mission under Yin Ch'ing in 1403. (Groeneveldt. p. 248).

Cf. Blagden's article on Malacca in the *Encyclopaedia of Islam*. No. 39. (1929). p. 186.

Malacca was preceded by Kedah [? Kra] and Pasai as the chief trading port in these seas. (*JRASSB*. No. 77. (1917). p. 171).

See also *JRASSB*. No. 86. (1922). p. 257: Rouffaer on the early history of Singapore, Johore and Malacca.

The translator desires to acknowledge his great indebtedness to Dr. C. Otto Blagden for his invaluable assistance in connection with this paper.

"Saletes." The word occurs in the forms 'Cellates' (Albuquerque (1557) and Barros (1553)), 'Celetes', 'Celezes', 'Seletes', 'Selletes', 'Salettes' (in Floris' "Travels"), and among the Dutch, 'Saletters' and 'Zaletters'. (16)

"The name (in various spellings) was applied very early in the 16th century by the Portuguese to the sea-gypsies (Malay *orang-laut*) who wandered in their boats up and down the Straits of Malacca and only made more or less temporary settlements on shore." (*JRASMB*. Vol. V. Pt. I. (1927). p. 228). From

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Wilkinson's note (*A History etc.* p. 28) "said to mean 'people of the Straits' (Sēlat)", one gathers that he was not convinced about the correctness of the derivation; indeed, he has elsewhere (*Papers on Malay subjects. Aboriginal Tribes.* (1910). p. 25) suggested that the word 'Cellates' may be a corrupted form of the expression 'Besisi laut' (i.e., 'Sea-Besisi'). Moreover, Dalgado in his *Glossario Luso-Asiatico* (1919), written in Portuguese, comments that the Malay language, 'does not admit of such derivations' as 'Celetes' from 'Selat'. This is the usually accepted derivation, however.

Ferrand describes the word as 'a Portuguese neologism formed with the Malay word sēlat, strait'. (*Journal Asiatique.* (1918). p. 434).

Many of the early travellers comment unfavourably on the piratical tendencies of these folk.

Eredia stigmatizes them here as "a wild, cannibal race", and in the REPORT ON THE GOLDEN CHERSONESE refers to "fishermen called 'Saletes', or Pirates, and Sea-robbers"; see p. 229 *infra*. Resende (c. 1638) while denouncing them as "evil-hearted and treacherous", accuses them neither of cannibalism nor piracy: in his eyes their chief crime was that they acted as spies for the Dutch. (*JRASSB.* No. 60. (1911). p. 10).

Governor Bort (1678) speaks of Bencalis in Sumatra being visited by "the Saletters, a Malay tribe of very uncivilised people"; he calls them "The Saletters or pirates" (*JRASMB.* Vol. V. Pt. I. (1927). pp. 177 and 182).

Bowrey (1669—1679) says "The Saleeters are absolute Piratts and are often cruiseinge about Janselone and Pullo Sambelon" (*Countries Round the Bay of Bengal.* (Hakluyt Society. 1905). p. 237).

They were still active in the time of Alexander Hamilton (1727), "Freebooters, called Salleiters, who inhabit Islands along the sea-coast, and they both rob, and take People for Slaves. (*East Indies.* Vol. II. p. 68 f.)

Forrest does not appear to mention them by name in his *Voyage to Mergui* (1784); apparently at this time the name was no longer in use; the last quotation given by Dalgado is dated 1650.

- (17) "Soliques". Resende (c. 1638) speaks of the Malays as fighting, among other weapons, with 'saligas': Teixeira writes 'selihles'. "The word is Malay—*seligi*. Malay boys generally make the head of a *seligi* of bamboo, cut to a razor-edge in the shape of a spear-head, and use it for spearing pelandok and napu." (*JRASSB.* No. 60. (1911). pp. 4 and 13).

Annandale and Robinson say that the tail-stings of rays, reputed to be very poisonous, are used as dagger-blades by the Orang Laut Islam (Samsams) off the coast of Trang: they also speak of fish spears with a single prong as being in common use. (*Fasciculi Malayenses. Anthropology.* (1903). pp. 55 and 56).

Journal Malayan Branch [Vol. VIII, pt. I.

Isthmus. "Biological and geological evidence combined indicate that the Peninsula was in recent times connected to the Archipelago, so that Sumatra, Java, Borneo, and the Peninsula were united to form a continent. The sea level then rose till the Peninsula was a group of islands, and subsequent recession of the sea took place later, which is believed to be still in progress at the present day." (*JRASSB.* No. 86. (1922). p. 256). (18)

Ridley says that Sumatra and the Malay Peninsula were connected by a land area which bore originally one continuous flora. (*JRASMB.* Vol. I. Pt. I. (1923). pp. 49—50).

Whether there ever existed such an isthmus as Eredia describes or whether Sumatra was originally separated from the Peninsula by a narrow river which gradually broadened, cannot be definitely affirmed. The probability is, however, that the separation occurred many thousand years ago, and that no land-connection remained in the time of Ptolemy (about 150 A.D.) as Eredia alleges in Chapters 3 and 12 of Part I (see pages 23 and 34 *supra*), or even in the time of Solomon (c. 1000 B.C.), as Eredia asserts in the TREATISE ON OPHIR (see p. 125 *infra*). The present-day chart does not suggest any obvious land-passage from Cape Rachado to Pulau Rupert: on the contrary a more probable land-connection appears to be indicated from Tanjong Bulus, or again from the islands off Port Swettenham, to the Sumatran coast: in fact, it has been said that "in the Malacca Straits the sea bottom shelves up by Singapore to the South and by Port Swettenham to the north. It may be compared roughly to the lower half of an Allenbury's feeding bottle."

In a region so close to the earthquake area, however, the present-day chart is perhaps a criterion of no great value.

Tanjontuan Caborachado). "This Portuguese name apparently means "cloven (*rachado*) headland", Cape Rachado, a promontory on the coast of Sungai Ujong. . . . on the W. coast of the Malay Peninsula, about lat. 2° 25' N. Its Malay name is Tanjong Tuan, "the master's cape". (*JRASMB.* Vol. V. Pt. I. (1927). p. 210). (19)

In Chapter 4 of Pt. I Eredia says it derives its name from the fact that it constitutes the burial-place of 'Permicuri'; he refers, presumably, to the founder of Malacca.

It is an old animistic holy place going back to very ancient times and owing its origin to a simple natural phenomenon at this cape two strong and opposing currents meet and cause a dangerous eddy or race in which boats are liable to be upset. Hence, "the Dattu Tanjong Tuan, the elder of Cape Rachado, is a saint of no ordinary celebrity among the sea-faring class of natives". (*JRASSB.* No. 53. (1909). p. 151). *cf.* Dr. Winstedt's paper on *Karamat* in *JRASMB.* Vol. II. Pt. III. p. 264.

The Chinese call the headland (in Cantonese) 'Tan-yung-tün' (丹元緞), or 'Tün-t'au (緞頭) *i.e.*, 'Tuan headland', or 'Shang-la-t'ok' (生緯籜) *i.e.* 'living Datoh', meaning a

'stone joss'. These 'stone josses' are commonly found on prominent hills.

Designations such as 'Tanjong Tokong' ('Temple Cape'), 'Tanjong Kramat' ('Wonder-working Cape'), or 'Pulau Berhala' ('Idol Island') are common in Malayan waters: compare an interesting paper on Promontory Temples in the Mediterranean and Red Seas in classical times (*The Geographical Review*. 1927. p. 353).

- (20) Tanjonbalvala: *i.e.*, Tanjong Balvala. The word 'Balvala' cannot be explained: possibly it is a corruption of 'Berhala', ('idol', Malay), which the European travellers corrupted into 'Brallas', 'Barala', 'Varella' or 'Varela'. It was hoped that some clue to the word might be provided by the name 'Tokun Bavala Bangku', "a rock awash at low water, lying $2\frac{1}{2}$ miles, 13° true, from the west extreme of Pulo Bunting, and $1\frac{1}{2}$ miles from the shore."

Local enquiries, however, lead to the conclusion that 'bavala' here is not a corruption of 'berhala' but probably the Malay word 'hala' meaning 'direction'.

The translator is indebted to Mr. T. W. Clayton, British Adviser, Kedah, for making these enquiries.

No such name as Tanjong Balvala can be traced on, or in the immediate vicinity of Pulau Rupert on the east coast of Sumatra opposite Cape Rachado.

While speaking of the word 'berhala' one may mention that according to Barros the Portuguese corrupted the name Pulau Berhala into *Pulvoreira*: hence the name as given in Eredia's map (see p. 215 *infra*) is correct, and not a mislection as one might have imagined: Galvano (*c.* 1550) calls the Island *Poluoreira*. (*The Discoveries of the World*. (Hakluyt Society. 1862). p. 107).

The translator of Albuquerque's *Commentaries* designates it 'Powder Island'. (Hakluyt Society. 1885. III. p. 62).

Linschoten's map has *Apoluoreira*, while other writers have 'Pulo Verela', 'Pulo Verera', 'Pulo Verda', 'Polow Vararah', and 'Pulavearara'.

- (21) Samâtta. Gerini has examined in detail the various forms of the word: the Europeans have 'Samara', 'Samarcha', 'Sumoltra', 'Smohora', 'Sinohora', 'Summoltra', 'Sciamuthera', 'Sumatra', 'Zamatora', 'Camatra', 'Samotra', 'Samatra', 'Zamatri', 'Samotra'; the Malays and Arabs, 'Samadra', 'Sumutra', 'Samatra', 'Shamatrah', 'Samudara'; the Chinese 'Su-mu-tu-la' (速木都刺), 'Hsü-wên-ta-na' (須文達那), 'Su-mên-ta-la' (蘇門答刺).

In all these cases, the word contains the 'r' or a syllable 'la' or 'na' corresponding to the 'r'.

He mentions two exceptions, however: Parker in the *Asiatic Quarterly Review* for January, 1900, pp. 131—2, quoting two forms 'Su-mu-ta' and 'Sü-mên-na': of the latter Gerini remarks "evidently a contraction of *Su-men-ta-na*" (Gerini. *Researches etc.* (1909). pp. 644—655).

It would seem then that Eredia obtained his information as to the correctness of the form 'Samatta' from Chinese who pronounced the name in this manner. In the eleventh century the Chinese appear to have known the island as 'Sumuta'. (*Journal Asiatique*. (1917). p. 335).

The confusion between Taprobane and Sumatra persisted long: Eredia himself in the REPORT ON THE GOLDEN CHERSONESE falls into this error (see p. 237 *infra*): he recants, however, in the DESCRIPTION OF MALACA when he states that by 'TROPOBANA' the classical writers referred to Ceylon (see p. 38 *supra*). Governor Bort (1678) continues the error (*JRASMB*. Vol. V. Pt. I. (1927). p. 9).

Some writers, e.g. Newbold, have surmised that the identity of 'Taprobane' may have been obscured owing to the fact that Sumatra was connected to the mainland and formed the southern extremity of the Golden Chersonese.

It is noteworthy that in the early writings Sumatra alone, or sometimes the area embracing both Sumatra and Java, is referred to as 'Yava'. (*cf. Journal Asiatique*. 1922. p. 243: *Encyclopaedia of Islam*. Fasc. I. p. 551: Gerini. *Researches*, etc. (1909). p. 632 *et seq.*).

"Golden Chersonese". Gerini points out that whereas Eratosthenes, Dionysius Periergetes, and Pomponius Mela (c. 50 A.D.) refer to the Malay Peninsula as *Khrysê* or *Chrysê Insula*, the "Golden Isle", Marinus of Tyre and Ptolemy (c. 150 A.D.) speak of it as the "Golden Chersonese": he thinks "that both designations are probably true, each in its own respective time: that is, that the Malay Peninsula, or rather its southern portion, has been an island before assuming its present highly-pronounced peninsular character"....."the passage across it must have become impracticable soon after the middle of the first century A.D." (22)

Even after this, the trans-peninsular route "was anciently followed by a great part of the trade between India and the Gulf of Siam, in order to avoid the difficulty and dangers of a long sea navigation through the Straits"....."the two harbours which formed the termini of the navigation on both sides, as well as the overland route that connected them, must have in consequence acquired great importance. And they must have retained their prominence for a long period until the advent of the Portuguese, and the introduction of more improved methods of navigation. But, notwithstanding all this, we find trade routes across the Malay Peninsula at the Kra Isthmus, and further north at Mergui, much frequented up to the middle of the eighteenth century." (Gerini. *Researches etc.*, pp. 77, 78, 80, 94).

The existence of the trans-peninsular trade-route probably supplies the clue to the activity in these parts during the 8th to the 12th century of the Sailendra kings of Palembang (*Srî Vijaya*) who, after establishing their thalassocracy in the Straits, assumed also to control the trans-peninsular traffic.

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The *Ko-lo* (*Kala, Kora*, 哥羅) of the Chinese (Groeneveldt. *loc. cit.* p. 241) and the *Kalah* of the Arabs are probably to be identified with *Kra* (Kêrah), and the *Tun Sun* (頓遜) of the Chinese (Groeneveldt. *loc. cit.* p. 239) with *Tennaserim*. (Ferrand. *Journal Asiatique*. 1918. Tome XI. p. 399: Tome XII. p. 89).

The political influence of *Srī Vijaya* over the region of *Ligor* and *Jaiyā* is proved by inscriptions (G. Coedès. "*Recent Archaeological Progress in Siam*" in *Indian Art and Letters*. N. S. Vol. I. No. 1. (1927). p. 64): this Sumatran empire seems to have been in close contact with the old Buddhist centre of *Nalanda* in *India* (W. F. Stutterheim. "*Archaeological Research in Java and Bali*. 1925—6" in *Indian Art and Letters*" N. S. Vol. I. No. 1. (1927). p. 75).

For the Kingdom of *Palembang* generally see G. Coedès, "*Le Royaume de Crivijaya*" in the *Bulletin de l'Ecole Française d'extrême-orient*. Tome XVIII. (1918). No. 6. p. 1—36 (p. 23 "this Hinduised Malay Kingdom whose influence radiated, from *Sumatra*, over both sides of the Peninsula"), and G. Ferrand, "*L'Empire sumatranais de Crivijaya*" in *Journal Asiatique*. Tome XX. (1922). pp. 1—104 and 161—246 (p. 241 "the creation in *Sumatra* of a centre of Indonesian civilization which in the 8th century was ruled by a king *Cakravartin* whose fame extended until the 10th century as far as the locality of *Nepal*").

In connection with the evidence for the view that the Peninsula was once a series of islands which became connected through elevation of the land above sea-level, one may mention that both *Ligor* and *P'hattalung* which were formerly situated on the sea-beach are now many miles distant from it, and that the designation 'Pulau' ('island') is, or was, applied to places now far inland: for instance, *Pulau Sabang* (*Tampin*), and *Pulau Tunggul* (*Bukit Tunggul* in *Perak*).

It has also been suggested that *Gunong Jerai* and *Gunong Perak* in *Kedah* and *Mt. Ophir* in *Johore* were at one time islands detached from the mainland as *Penang* is to this day. (*JRASMB*. Vol. IV. Pt. III. (1926). p. 290).

It may be added that several of the old maps show waterways crossing the Peninsula (see for instance, the map of *Diegus Homem* dated 1558: British Museum Manuscript Department. Add. 5415 a. 9.): with regard to the water-connection by way of the *Muar* and *Pahang* Rivers it is stated in the *China Sea Pilot* (1916) Vol. I. p. 234 that 'Jempole' is separated from *Sungei Seriting* by a strip of swampy land only $2\frac{1}{4}$ cables wide, and that it is easy to drag canoes from one to the other: compare *JRASMB*. No. 15. (1885) p. 27 "by ascending the *Muar* and *Rumpin* rivers, crossing a few hundred yards of land and descending the *Sempang*, *Mentiga* and *Pahang* Rivers, or *vice versa*, the Peninsula can very easily be crossed in a comparatively short time".

Eredia's map of Malacca district (p. 210 *infra*) shows the 'Panarican', the drag-way (Malay 'tarek' 'drag') between the Muar and Pahang Rivers: it was *viâ* 'Panarigan' that the defeated King of Malacca fled to Pahang on the capture of the town by the Portuguese in 1511. ("Malay Annals". Leyden's translation. (1821) p. 358).

One is tempted to hazard the guess that the rise of Malacca may have been due to the fact that this river-way provided easy communication with the opposite coast of the peninsula and easy means of egress for the valuable products—tin, camphor, eagle-wood, etc., of the hinterland.

Ruler of Pam: *i.e.*, ruler of Pahang.

This gentleman, apparently, was a Siamese, as the ruler in about 1470 was a Siamese (Wilkinson. *A History etc.*, p. 33). The name 'Pahang' occurs in the various forms 'Pan', 'Pam', 'Paam', 'Paham', 'Pahan', and 'Pahangh': the Chinese called it 彭亨 (*P'êng-hêng*, *P'ang-hêng*), or 彭坑 (*P'êng-k'êng*, *P'ang-hang*).

(23)

The old Court name was Indrapura.

It might be worth while to enquire whether there is any connection between *Pangan* (corruptly 'Panggang') the name of an aboriginal tribe inhabiting Kelantan and Pahang, *P'ang-hang*, the Chinese name for the country, and *Pahang*, the Khmer word for 'tin': the Chinese used tin in about 1000 B.C. for their bronze coins; the Malay Peninsula was the nearest foreign country from which to get it: as Blagden points out, a parallel may be found on the western coast of the Peninsula where the Arabs obtained their word *Kala'i* ('tin') from *Kalah*, the name of a place (*JRASSB.* No. 38. (1902). p. 20). [Ferrand denies this connection.] See note on "calim", p. 164 *infra*.

In connection with the suggestion that the Chinese might have obtained tin from Pahang in early times, it may be noted that in the newly-discovered Indus civilization copper and tin were alloyed to make razor-edges in about 3000 B.C.: Childe says this tin came from Khorasan and Burma. (*The Most Ancient East.* (1928). pp. 205. 207).

Pahang was conquered, according to Malay records, by the Malacca King Mansur Shah (commenced to reign about 1459) who carried into captivity the ruler Maharaja Dewa Sura. "a relative of the King of Siam", and married his daughter, Puteri Wanang Seri. (Wilkinson. *A History etc.*, p. 33: *JRASMB.* Vol. IV. Pt. II. (1926). p. 192).

Overlord of the countries of Ujontana. The Portuguese transcript has "senhor de Pam superior daquelles terras de Viontana": Jannsen renders "le chef du pays de Pam, dont le territoire s'étendait plus haut que les terres de Viontana": which is translated in *JRASSB.* No. 60. (1911). p. 19. "the ruler of Pam (Pahang), a territory in the interior of Ujontana". The difference between that rendering and the present translation is of some historical importance.

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Ferrand appears to accept Janssen's rendering (*Journal Asiatique*. Tome XI. (1918). p. 449).

The progress of Siamese power to the southward would appear to have proceeded *pari passu* with the decline in the power of the Palembang empire in the 13th and 14th centuries (*JRASSB*. No. 81. (1920). p. 25).

The extent of the Siamese suzerainty has been the subject of much discussion.

On the one hand it is maintained by Gerini (*JRAS*. July, 1905) that Siam conquered the whole Peninsula.

Ferrand supports this view, and quotes from Barros "governors who resided at Singapura on behalf of the King of Siam" (*Journal Asiatique*. Tome XI. (1918). p. 436): again "We know that the first expedition [of the Thai] dates from the end of the 13th century. — . . . — Many expeditions followed and secured a considerable number of prisoners to the victors who had conquered the whole Malay Peninsula. A nautical Arab text of the first half of the 16th century indeed tells us that 'Singapore is the last land of Siam in the South'" (*Encyclopaedia of Islam*. Fasciculus G. (1927). p. 396).

Gerini's view is contested by Blagden: see *JRAS*. Jan. 1906. Dr. Blagden tells the translator that from the earliest Malay inscription in the Arabic character which has so far been found (dating from the 14th century), it is clear that Islam had recently been adopted as the state religion in Trengganu; and that such a thing is unthinkable under a Siamese regime.

For the present purpose, it will perhaps suffice to say that (in the Treaty of 1826) Great Britain recognized the suzerainty of Siam over Kedah, but declined to acknowledge the alleged Siamese suzerainty over Perak. (*JRASSB*. No. 67. (1914). p. 83).

Frequent incidental references are to be found regarding Siamese activity in the south of the Peninsula: for instance, according to a Chinese account Singapore (*Tan-ma-hsi*. 單馬錫) was besieged by the people of Siam (*Sien*, 暹) in the early part of the 14th century.

(Rockhill. *Notes on the Relations and Trade of China with the Eastern Archipelago etc.*, in *T'oung Po*. Vol. XVI. (1915). p. 99—100): cf. *JRASMB*. Vol. VI. Pt. 4. (1928) for traces of Siamese occupation in the Pekan district of Pahang.

- (25) Singapura. The name occurs in the forms 'Cincapura', 'Cingapura', 'Singapura', 'Sincapura', 'Singapoera', 'Sincapure', besides certain monstrosities such as 'Simcalura', 'Cingapolo', or 'Sirapura', which are found in some of the old maps.

The usually accepted derivation is from the Sanskrit 'Sinhapura', 'Lion-city', though Dennys (*Descriptive Dictionary of British Malaya*. (1894).) derives it from 'Singha' 'a place of call' and 'pura' 'a city'; and Barros (II. VI. 1) from Malay 'singah' 'to tarry, halt, or lodge', and 'pora-pora' 'to pretend', probably referring to the temporary occupation of 'Sinhapura' before the chiefs

who founded it passed on to Malacca. (Yule and Burnell. *Hobson-Jobson*. (1903). p. 839).

Little is known regarding the early history of Singapore. Clearly it must have been a salient feature on the ancient sea-route between India and China, opened by the Dravidians of South India before the Christian era; though whether this route ran immediately south of the island or immediately north through the Straits of Tebrau, remains a matter of dispute.

Gerini identifies Singapore with the *Betumah* of the Arab navigators, and if this name should be connected with the *Tamus* or *Tamarus promontorium* (Cape Rumenia) of Strabo (c. 19 A.D.) and others, it can boast a fair antiquity. Further examination, however, is required to elucidate the connection (if any) between the Sanskrit *tamara* meaning 'tin', the *Tamarus promontorium* of the Latin writers, the *Betumah* of the Arabs, and the *Bukit Timah* ('tin hill') of the Malays.

The Malay name *Tēmasek*, Javanese *Tumasik*, and the Chinese transliteration *T'am-ma-siak*, apparently belong to a different series derived from *tasek*, 'the sea'.

The dates when Singapore became a port of call and a trading-station cannot be stated.

In the 7th or 8th century the country fell within the sphere of influence of the Palembang kingdom.

In the 9th century the Arabs called at Betumah for camphor, eaglewood, and sandalwood.

The discovery at Singapore of Chinese coins dating from the 10th century suggests the existence at that period of a trading-station, perhaps a Mon-khmer establishment, which, however, must have been abandoned before the middle of the 13th century.

Regular colonisation of the Peninsula by Sumatran Malays commenced in the latter half of the same century. Blagden thinks that the historical Singapore was founded in about 1280; and with the decline of the Palembang power it enjoyed practical independence as a flourishing port ruled by its own kings, who may have been descendants of the Palembang house.

According to Gerini, a king named *Sri Rama Vikrama* reigned at Singapore in about 1320; while one *Raja Chulan* appears to have ruled the southern part of the Peninsula at about the same period.

In the early part of the 14th century Singapore was unsuccessfully besieged, according to Chinese authorities, by a Siamese naval expedition.

The Javanese empire of Majapahit was now becoming the dominant power in the south: the Javanese poem *Nāgarakrētāgama*, dating from 1365, claims Tumasik as a vassal of Majapahit; and Singapore was attacked and destroyed, under circumstances of great brutality, by the forces of Majapahit in about 1377.

The name 淡馬錫 (*Hakka*, *T'am-ma-siak*) appears in the *Wu-Pei-Pi-Shu* chart (c. 1405 A.D.), but this does not prove the presence of inhabitants at that date.

Superseded by Malacca as a trading-centre, Singapore remained an unimportant port of call, subordinate to the Sultan of Malacca and, after 1511, to the Sultan of Johore.

A certain amount of trade found its way there, however, for it had its *Shahbandar* (port officer): St. Francis Xavier posted letters there in 1551.

[Gerini. *Researches etc.* (1909). pp. 199, 302, 498, 548, 575, 809.

JRASSB. No. 60. (1911). p. 25.

JRASSB. No. 81. (1920). pp. 25—27.

JRASSB. No. 53. (1909). pp. 145, 147, 152, 155, 160—1.

One hundred years of Singapore. (Blagden. 1921). pp. 1—5.

Encyclopaedia of Islam. Fasc. G. (1927). p. 437.

Miscellaneous Papers relating to Indo-China. (1887). p. 258.

JRASSB. No. 82. (1920). p. 129.]

- (26) “*Xabandar*”: i.e. ‘*Shah bandar*’ (Malay), ‘Harbour Master,’ from Persian ‘*Shāh bandar*’, literally ‘King of the Haven’. “This was the title of an officer at native ports all over the Indian seas, who was the chief authority with whom foreign traders and ship-masters had to transact. He was often also head of the customs” (Yule and Burnell. *Hobson-Jobson.* (1903). p. 816).

Forrest calls him “prince’s minister”. *A Voyage from Calcutta to the Mergui Archipelago.* (1792). p. 39).

The person mentioned by Eredia is referred to by Albuquerque (1557) as “Captain of Singapore named Tamagi” (*The Commentaries etc.* (Hakluyt Society. 1885). Vol. III. p. 73).

Both the name and the office survived in Portuguese and Dutch times: Albuquerque in 1511 appointed one ‘Ninachetu’ to be ‘Shahbandar and head of the Moors’ (*JRASSB.* No. 15. (1885). p. 120): Valentyn (v. 313) gives the names of (Dutch) Sjahbandars of Malacca from 1641 to 1717. (*JRASSB.* No. 13. (1884). p. 58).

The tomb-stone of “Sabandaar Pedel” may still be seen in the ruined church on the hill at Malacca (cf. Bland. *Historical Tombstones of Malacca.* (1905). p. 38).

Governor Bort (1678) speaks of there being a Shahbandar at ‘Rombouw’ [Rembau]. *JRASMB.* Vol. V. Pt. I. (1927). p. 63).

For the duties of the Dutch ‘Sabandhaar’ in 1786, cf. *JRASMB.* Vol. II. Pt. I. (1924). pp. 18—19.

- (27) Flight. For variant accounts of this episode as given by Albuquerque, Barros, Valentyn and others, see *JRASSB.* No. 17. (1886). pp. 117—8; No. 86. (1922). p. 257).
- (28) Java Major: i.e. Java, as commonly understood.
- (29) Shad-fishery “*turubos*”. The Portuguese word ‘Savel’, here used, gave rise in India to the name ‘sable-fish’, now obsolete. (Yule and Burnell. *Hobson-Jobson.* p. 414).

By “*turubos*” Eredia means the Malay ‘*Ikan tērubok*’, *Clupea ilisha*, Day.

Incidentally, it may be stated that Eredia is the first European writer to quote the Malay name, *têrubok*: cf. also p. 241 *infra*.

Resende (c. 1646) remarks that "great quantities of ["trubo"] are exported from Malacca to all ports" (*JRASSB.* No. 60. (1911). p. 10): but as in this passage he is describing Bencalis in Sumatra it would appear that in his time the actual capture of the fish was effected near Bencalis: this was certainly the case in the time of Governor Bort (1678), who, although he does not mention the name of the fish, almost certainly refers to *ikan têrubok*: "the roe is used by us [Dutch] and the Portuguese as a good side dish, for instance with wild boar": he describes how he took steps whereby "the extraordinary great traffic to that fishing village [Bencalis] has been greatly reduced and Malacca's revenue much increased." (*JRASMB.* Vol. V. Pt. I. (1927). pp. 177—178). The great shoals of these fish appear to have definitely abandoned the eastern for the western coast of the Straits: "In May and November there is considerable activity around these islands [Pulo Benkalis] for a couple of weeks, when hundreds of craft are engaged in the fishery of "trubok", a species of shad, whose spawn is a valuable commercial article, greatly sought after by the whole Archipelago. The fish come to Benkalis in shoals at various times of the year". (*China Sea Pilot.* (1916). Vol. I. p. 130).

It is stated that at the present day the famous fishing village of Bagan Si Api Api is claimed by the Dutch to be one of the largest fishing centres in the world. For the shad-fishing ceremonies in Brewer Strait, and indeed for all matters connected with Sumatra, one may consult Collet's *Terres et Peuples de Sumatra*, 1925.

Choromandel. "A name which has been long applied by Europeans to the Northern Tamil country, or (more comprehensively) to the eastern coast of the Peninsula of India from Pt. Calimere northward to the mouth of the Kistna, sometimes to Orissa". (Yule and Burnell. *Hobson-Jobson*, p. 256). (30)

Chelis. "The word is applied by some Portuguese writers to the traders of Indian origin who were settled at Malacca. It is not found in the Malay dictionaries and it is just possible that it originated in some confusion of *Quelin* [Kling] and *Chuli* [Choolia] or rather of *Quelin* and *Chetin* [Chetty]". (31)

Resende does not appear to use the word 'Chelis' in his account of Malacca, and Governor Bort speaks of 'Moors' or 'Clings', usually called 'Klingers' in the 'Dagregister'.

Cloths. 'Piece-goods' are and have always been extensively imported: Resende (c. 1646) remarks "all the southern commodities and merchandise from China and cloths from Cambay and the Coromandel coast are imported". (*JRASSB.* No. 60. (1911). p. 7). Governor Bort points out that "as regards the trade in cloth in competition with [the Moors], [the English] like ourselves, have no chance". (*JRASMB.* Vol. V. Pt. I. (1927). p. 132). It has been said that "it was her wonderful achievements in applied chemistry which enabled India to command for more than a thousand (32)

years (from Pliny to Tavernier) the markets of the East as well as of the West"; the three great discoveries in applied chemistry being (1) the preparation of fast dyes for textile fabrics by the treatment of natural dyes like *manjistha* with alum and other chemicals; (2) the extraction of the principle of indigotin from the indigo plant; (3) the tempering of steel. (Mookerji. *Indian Shipping*. (1912). pp. 180—181).

- (33) Many "*bâres*" of gold. The Portuguese transcript has "muytos *bâres* de ouro". This is rendered by Janssen "beaucoup d'or en lingots", and translated "much ingot gold" in *JRASSB*. No. 60. (1911). p. 19.

The present translator cannot find any authority for the suggestion that a "*bâre*" is a *concrete object* such as an ingot. The reference-books and the quotations to which they refer indicate that a "*bâre*" was not a Portuguese word but a contraction of the Arabic '*bahâr*' (or connected words such as the Malay '*bahara*'); i.e., it was the name of a *weight*.

"Bahara is a certain weight differing in different countries and according to the merchandise it is used for. As gold weight a bahara equals 10 katis". (*JRASMB*. Vol. IV. Pt. III. (1926). p. 357).

Dalgado states that it "varies according to the districts and the commodities from 141 to 330 kilograms": and he quotes from *Primor e Honra* (1577) fl. 37 v. "sete bares de ouro, que são vinte e tantos quintaes", "seven bares of gold, which are something more than 20 quintals". (*Glossario Luso-Asiático*. (1919). I. p. 78).

Several of the Portuguese dictionaries do not contain the word '*bare*' at all: the Portuguese word for 'a bar' is '*barra*': Correa (c. 1561) speaks of "ouro em pó e barras" "gold in dust and bars" (*Lendas da Índia*. Tome XI. p. 264). Barbosa (1516) emphasizing the wealth of the great merchants at Malacca says "[they] do not value their estates nor keep their accounts except in *bahares* of gold, which *bahares* are four *quintals* each." (*The Book etc.* (*Hakluyt Society*. 1921.) II. p. 175). Castanheda (c. 1530) also alludes to fortunes being estimated "by *bahares* of gold" "por *bahares* douro".

The fact that "*bare*" does not mean 'ingot' seems to be conclusively proved by the references in Eredia's REPORT ON THE GOLDEN CHERSONESE, where he speaks of tin being cast "into large slabs of five slabs to the "*bar*", or into small slabs which are called 'lock-slabs', of two hundred and fifty slabs to the "*bar*". cf. p. 235 *infra*. See also the note in *JRASMB*. Vol. V. Pt. I. (1927). p. 208.

- (34) Successors. Wilkinson (*A History etc.*, pp. 31—38) gives seven kings of Malacca, viz:—

The Permaisura Muhammad Shah (died c. 1414),
Iskandar Shah (c. 1414—1424),
Ahmad Shah (c. 1424—1444),
Mudzafar Shah (c. 1444—1459),
Mansur Shah (c. 1459—?),
Aladin Riayat Shah (?—?),
Mahmud Shah (?—1511).

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Valentyn (1726) who claims that he "had the opportunity of drawing everything from the personal writings and historical notices made by the kings of Malacca itself" speaks of eight kings, from 1253 to 1511. (*JRASSB.* No. 13. (1884). pp. 66—70: and No. 22. (1890). p. 246.

Valentyn's dates are not usually accepted, however. Eredia, like the other Portuguese writers, mentions six rulers, omitting Ahmad Shah who figures in Chinese records as Sri Mahala. For the Kings as referred to in the History of the Ming dynasty, see Groeneveldt. *loc. cit.* pp. 248—253.

Compare also the account of the Malay Kings in Chapter 26 p. 57 *supra*).

15th August. Wilkinson gives the date as 24th July. (*A History etc.* p.45). (35)

Passed. Wilkinson mentions Pagoh, Pahang, Bentan, as his itinerary. (*A History etc.* p. 50). (36)

According to the *Hai-Yü* (1537) the defeated king went to *P'o-ti-li* (陂 隄 里).

This place has not been identified.

A clue to the identification may be contained in the statement that rice was exported thence to Malacca. (*cf.* Groeneveldt, in *Essays relating to Indo-China*. Second series. (1887). pp. 246. 248).

Ferrand says, read *P'ei-t'i-li*, i.e. Pedir on the north-east coast of Sumatra. (*Journal Asiatique*. Tome XI. (1918). p. 429).

This, however, involves a deviation from the usually accepted route.

Bintam: i.e. Bentan or Bintang, the island about 30 miles south-east of Singapore; identified by Gerini with the *Petam* of Marco Polo (1295). (37)

Attacked. Desperate struggles between the Portuguese and the Malays continued almost until the arrival of the Dutch in 1602. (Wilkinson. *A History etc.* p. 54; Danvers. *The Portuguese in India*. (1904). *passim*; compare pp. 57 *supra* and 183 *infra*). (38)

In particular, "the first attack was delivered by the king of Java in 1514, the second by the Sultan of Bintang in 1518, the third by the powerful king of Acheen in 1538, the fourth and fifth by his successor in 1572 and 1573, the sixth by another king of Java in 1574, and the seventh by the king of Acheen again in 1575". (Ballard. *The Rulers of the Indian Ocean*. (1927). p. 132).

It is interesting to observe that bulletins regarding the course of the struggle were despatched to Count Fugger, the great Austrian banker: thus, the "King of Gior [Johore] laid siege to the town [Malacca]" in 1588: and "the Governor with 300 Portuguese again tore down the fortress re-built by the people in Malacca" in 1590. (*The Fugger Newsletters*. (1924). pp. 130 and 145).

In 1580 or thereabouts, Portugal kept garrisons only at Malacca, Amboyna and Tidore. (*JRASSB.* No. 67. (1914). p. 60).

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- (39) Victorious. It has been said that the Dutch would never have taken Malacca in 1641 without help from Johore (*JRASSB.* No. 67. (1914). p. 61): "the Manicabers of Naning and Rom-bouw" also assisted the Dutch. (*JRASMB.* Vol. V. Pt. I. (1927). p. 14).

- (40) Fortress. Eredia's large-scale plan is here reproduced: cf. p. 221 *infra*. Compare the descriptions given by Albuquerque (*The Commentaries etc.* (Hakluyt Society. 1885). Vol. III. p. 136), by Resende and Governor Bort (*JRASSB.* No. 60. (1911). pp. 3, 4; *JRASMB.* Vol. V. Pt. I. (1927). pp. 10, 16—26), and the incidental references made by Valentyn when describing Malacca and when relating the capture of Malacca by the Dutch in 1641. (*JRASSB.* No. 13. (1884). pp. 49, 50; No. 22. (1890). pp. 226—232).

It will be noticed that Bort (p. 16) gives names to certain points which are not specifically named in the maps of Eredia (p. 221 *infra*) or Resende (British Museum MS Department. Sloane MS 197 fol. 382): Bort's 'Hospitaal del Rey' was probably situated near Eredia's 'Hospital real'; 'Courassa' seems to be the 'Bastion of S. Pedro'; 'Hospital del Povne' must have been situated not far from the Custom House; 'St. Domingo re-named Amsterdam' 'an angle or breastwork along the river', would appear to be a particular point of the Portuguese 'Bastion of San Domingos'.

- (41) 40 fathoms. This makes the fortress-tower 240 feet high; which has raised suspicions of exaggeration.

Governor Bort says that the "strong square tower" built by the Portuguese was 120 feet in height (*JRASMB.* Vol. V. Pt. I. (1927). p. 39).

- (42) Possibly Eredia mistakenly wrote "fathom" for "yard".
Santiago. *Fuit Ilium*. The only relic of the mighty fortress is the curious old gateway (near the Malacca Club); "this is probably what is left of the bastion called "Baluarte Santiago" as marked in the old plates of the fortress". (*JRASSB.* No. 13. (1884). p. 50; No. 15. (1885). p. 138).

The translator is inclined to think that the old gateway is not part of the bastion itself, but represents the gate of Santiago which lay between the bastions of Santiago and the Virgins.

This gate was rebuilt by Governor Bort in 1669: and appears not to have been renovated since: it bears the date 1670 (apparently the date of completion), and Dutch arms, that is, the Batavian lion.

In Eredia's time, as he explains lower down, the two service gates were the Gate of St. Antonio and the gate near the Bridge: the Dutch abandoned the former (in the map denoted as F.M.S. Surveys No. 871/1924 there is no bridge over the moat at this point) and instead used the Gate of Santiago, which in fact became the main gate of the fortress, the gate by the Bridge being used in connection with shipping but otherwise only for the prosaic purpose of putting out the matutinal dustbin. (*JRASMB.* Vol. V. Pt. I. (1927). p. 17).

Custom House. The 'Alfandega' was situated near the present bridge, on the south-eastern side of the river: it is marked in Eredia's map of the fortress: p. 204 *infra*. (43)

Cathedral. It will be seen from Eredia's p'an (page 221 *infra*) that the cathedral was situated next to the fortress, that is, somewhere near the present position of the Hongkong and Shanghai Bank, and not on the top of the hill as is stated in some modern accounts of mediaeval Malacca. (44)

The Church of Our Lady of the Annunciation. Apparently this was the church of which the ruins adjoin the Signal Station on St. Paul's hill at Malacca. The earliest decipherable date on the tombstones seems to be 1562: cf. Bland. *Historical Tombstones of Malacca*. (1905). p. 18: *JRASSB*. No. 34. (1900). p. 1. (45)

The name would appear to have been changed between 1613 and 1646: for Resende marks it 'São Paulo' in his map (British Museum. MS. Department. Sloane MS. No. 197): this map is reproduced in Ballard's *Rulers of the Indian Ocean*. (1927) p. 107.

Upe: *i.e.* Upeh. This suburb to-day bears the Portuguese name of Tranqueira, 'the rampart'. (46)

Yler: *i.e.* Hilir: now Banda Hilir, the 'Bandailhera' of the Dutch. (*JRASSB*. No. 22. (1890). p. 195). (47)

Tanjonpacer: *i.e.* Tanjong Pasir, 'sand promontory'; the expression survives in 'Ujong Pasir' ('sand end'), the name of a *mukim* a mile or so distant from Malacca towards the south-east. (48)

Sabba. This name is obsolete: Bort says the northern suburb was called Banda Malacca. (*JRASMB*. Vol. V. Pt. I. (1927). p. 20). At the present day, the locality north of the town is known as Bunga Raya, and, further westward, Kampong Jawa. Bort's *Taypa*, it would seem, was not a suburb but a wall: 'Taipa' is a Portuguese word meaning 'mud-wall', which is exactly what Bort describes, "it is beaten earth mixed with small hard stones." (*JRASMB*. Vol. V. Pt. I. pp. 20 and 231). Valentyn speaks of a wall called *Tipah*. (*JRASSB*. No. 13. (1884). p. 49). (49)

Earth gun-platform. The Portuguese transcript reads "cavaleiro de mätte": Janssen translates "cavalier de bois", which is rendered "wooden cavalier" in *JRASSB*. No. 60. (1911). p. 21: *i.e.* the word 'matte' is taken as 'matto', 'wood'. (50)

The Reverend Father Coroado of the Portuguese Mission at Malacca informs the translator that 'matte' is a Portuguese word, obsolete in Portugal but still current in Malacca, meaning 'earth' or 'mud'.

The translator desires to express his deep indebtedness to Father Coroado for his invaluable assistance (so charmingly rendered) in the preparation of this paper.

The persistence of the Portuguese language after the cessation of Portuguese rule constitutes a phenomenon of no little interest. Early immigrants from Malacca brought the "Malacca Portuguese" dialect to Singapore, where in the Church of St. Joseph the preaching is conducted in Portuguese at the Low Mass on Sundays. (*One Hundred Years of Singapore*. (1921). Vol. II. p. 258). Forbes

(1885) notes that at Dilly in Timor—though this was under Portuguese rule—all business was conducted, not in Malay as in the Dutch possessions, but in Portuguese. (*A Naturalist's Wanderings in the Eastern Archipelago*. p. 417).

- (51) Campon China: *i.e.* Kampong China, the Chinese quarter. The Malay word 'Kampong', "an enclosure, a place surrounded with a paling; a fenced or fortified village; a quarter, district, or suburb of a city; a collection of buildings", is probably the derivation of the Anglo-Indian word 'compound' which has spread both to China and to West Africa. (Yule and Burnell. *Hobson-Jobson*. (1903). p. 240—3).

In Eredia's plans, different parts of the town are marked as 'Campon China', 'Campon Chelim', 'Campon Bendara' *etc.*

- (52) Campon Chelim: *i.e.* Kampong Kling, the quarter of the Klings.

- (53) Bazar. The word, derived from Persian 'bāzār' "has spread westwards into Arabic, Turkish, and, in special senses, into European languages, and eastward into India, where it has generally been adopted into the vernaculars".

"The word is adopted into Malay as *pāsār*, or in the poems *pāsāra*".

- (54) Jaos: *i.e.* Javanese, the people of Jawa (Java). Linschoten (1598) refers to these people as 'Javens', 'Iaua', and 'Iavers': Lancaster (*c.* 1600) writes 'Jauians': Bowrey (1669) has 'Javas'. Some modern writers call them 'Javans'.

- (55) "Nypeiras" or Wild Palms. These are the Malay '*nipah*' (*Nipa fruticans*, Thunb.)

"The Portuguese, appropriating the word *Nipa* to this spirit [made from the palm], called the tree itself *nipeira*". (Yule and Burnell. *Hobson-Jobson*. p. 626).

Eredia speaks of nipah-wine in Chapter 8, p. 29 *supra*.

(It may be observed that the Portuguese also applied the designation 'wild-palm', 'palmeira brava', whence the English corruption 'brab', to the Palmyra Tree, or *Borassus flabelliformis*).

- (56) Paret China: *i.e.* Parit China, Chinese drain: "a small river about 2 miles E. of Malacca Town". (*JRASMB*. Vol. V. Pt. I. (1927). p. 224).

- (57) Chincheos: *i.e.* "people of Fuhkien" (Yule and Burnell. *Hobson-Jobson*. p. 200).

- (58) Bridge. The bridge near the mouth of the River has remained in approximately the same position since the days of the Malay sultanate.

- (59) "*Champenas*". The authorities regard this word as a form of 'sampan', 'a kind of small boat or skiff'. It occurs as 'chiampana', 'champana', 'champane', 'champan', 'champaigne', 'chapan', 'sampang', 'champoës', 'shampanas'. Dalgado (*Glossario etc.* II. p. 570) says that apparently the term was known in India, coming through the Malays, and was given to a certain kind of indigenous

boat before the arrival of the Portuguese and the conquest of Malacca, as appears from the authority of Duarte Barbosa.

He quotes P. E. Pieris for the statement that in 'Singalese' 'sampan' turned into 'hampan' and gave its name to a port 'Hampan-tota', "port of Champanas".

"The word [sampan] appears to be Javanese and Malay. It must have been adopted on the Indian shores, for it was picked up there at an early date by the Portuguese: and it is now current all through the further east. The word is often said to be originally Chinese 'sampan' 'three boards', and this is possible. It is certainly one of the most ordinary words for a boat in China. Moreover, we learn, on the authority of Mr. E. C. Baber, that there is another kind of boat on the Yangtse which is called 'wu-pan', 'five boards'". (Yule and Burnell. *Hobson-Jobson*. p. 789).

It has been stated that "sampan" (champan) which is neither Malay nor Chinese, exists in the language of the Indians of Colombia (*Bulletin de l'Ecole Francaise d'Extrême-Orient*. Tome XIX. pp. 13-19).

Blagden regards the Chinese origin as improbable and the American origin as still more unlikely. (*JRASMB*. Vol. V. Pt. I. (1927). p. 212).

"Bateys." This word apparently represents the Malay 'banting', "a two-masted cargo boat". (Dalgado. *Glossario etc.* I. p. 97). Resende speaks of "bantims, very much smaller than jaleas": cf. also p. 36 *supra*.

"Bangacal": i.e. Malay 'bangsal', defined by Crawford as "A shed; a store house; a workshop; a porch; a covered passage." (60)
The Malay word is probably a corruption of either (a) Bengali *bankasāla*, from Sanskrit *banik* or *vanik*, 'trade', and *sala*, 'a hall'; or (b) Sanskrit *bhāndasāla*, Tamil *pandasālai* or *ṇandasālai*, 'a store house or magazine'.

"Bankshall is in fact one of the oldest of the words taken up by foreign traders in India. And its use not only by Correa (c. 1561) but by King John (1524) with the regularly-formed Portuguese plural of words in *-al*, shows how early it was adopted by the Portuguese". (Yule and Burnell. *Hobson-Jobson*. (1903). p. 61).

Buquetpiatto. The modern *mukim* of Bukit Piatu is some 2 miles north-east of Malacca town: Eredia's map (p. 206 *infra*) indicates a hill called 'Buquet Piatu' quite close to Bukit China: there are at the present day three hills in this locality, called Bukit Tinggi, Bukit Tengah and Bukit Gëdong. (62)

Buquetpipi. It would appear from his plan (see p. 206 *infra*) that Eredia refers to St. John's Hill: now called 'Bukit Sain Jon' by the Malays. (63)

The name 'Bukit Pipi' is obsolete.

S. Lazaro. Eredia's map see p. 208 *infra*) shows a church of S. Lazaro situated about 3 miles, as the crow flies, from the mouth of the Malacca River: at intervals of about 1 mile, he marks what (64)

appear to be other churches, 'Our Lady of Good Tidings' and 'S. Jero'. The first two churches have disappeared: there is a ruined church of San Jeronimo; this however, is only about three quarters of a mile from the mouth of the river.

The Church of Our Lady of Guadalupe is shown (p. 210 *infra*) as being situated on the Malacca River some 10 miles, as the crow flies, in a north-easterly direction from the town.

This is obviously Bort's "Agua de Loupa": "a point on the Malacca River, seemingly about half way between Malacca town and Alor Gajah. There was a chapel there. The name looks like a corruption of Guadalupe, the name of a mountain range in Spain". (*JRASMB*. Vol. V. Pt. I. (1927). pp. 53, 77, 205).

This church must have been very well known, for in his map of the Peninsula (British Museum. MS. Department. Sloane MS. No. 197: folio 380) Resende (c. 1646) marks "nosa sen^a dag^a delupa" as situated up the Malacca River. The ruins may still be seen near the Tampoi Road.

'Our Lady of Hope' is marked near RIO BATAN on Eredia's plan (p. 208 *infra*): the translator ventures to locate this church near Kampong Tengah (Bukit Beringin) close to the 18th milestone on the road from Malacca to Lubok China.

This church has disappeared.

- (65) Christian population. Resende merely says that "a number of married native Christians live outside Malacca" without giving any number. (*JRASSB*. No. 60. (1911). p. 4).

- (66) Administration. Compare the account given by Albuquerque (1557) in *The Commentaries etc.* (*Hakluyt Society*. 1885) Vol. III. Chapter XVIII.

A detailed account of the Dutch administration is given by Governor Bort (1678), (*JRASMB*. Vol. V. Pt. I. (1927). *passim*): the Dutch do not appear to have included any form of Municipal administration, however; (*cf.* the list of public servants on p. 36 thereof).

- (67) "Bendara". "The title of a very exalted Malay State official, usually ranking next to the heir-apparent". The original sense of the word was "store-house", "treasury", "the use of *bēndahara* as a title is due to its having been preceded by *dato*' (like our "Lord of the Treasury"). (*JRASMB*. Vol. II. Pt. III. (1924). p. 263).

- (68) Married Portuguese. In the time of Resende (c. 1646) there were "two hundred and fifty married whites" "whose duty—like that of the colonists of early Greece, it was to populate" the settlement. (*JRASSB*. No. 60. (1911). pp. 4. 12).

The translator uses the modern English word 'Portuguese' to represent Eredia's 'Portugezes', 'Portugueses' and 'Portuguezes'.

NOTES ON PART I CHAPTER 2.

District. In Governor Bort's time (1678), the "jurisdiction" (1)
of Malacca extended "about 18 miles on the north side beyond the
river Pannagie [*i.e.* Linggi] and Cabo Rochado to Callang [Klang],
on the south side as far as Moar [Muar] about 6 miles and inland
up to the village of Rombouw [Rembau]". (*JRASMB.* Vol. V.
Pt. I. (1927. p. 49). Apparently, however, *jurisdiction* must be
distinguished from *territory*, for Valentyn (1726) says "the territory
belonging to Malakka extends over a length of 30 miles and over a
breadth of 10 miles". (*JRASSB.* No. 13. (1884). p. 50).

Panagim: "another name for the Linggi River which forms part (2)
of the boundary of Malacca territory to the N. W. and is about 21
miles N. W. of Malacca town". (*JRASMB.* Vol. V. Pt. I. (1927).
p. 223).

Newbold gives the old "Benua" name for the river as
'Samawa' (*Political and Statistical Account etc.* (1839). II.
p. 376).

Both the name and its application have changed during the last
300 years. The "*Malay Annals*" (1612) call it 'Penajar': Eredia
(1613) and Resende (*c.* 1638) say 'Panagim': Governor Bort
(1678) writes 'Panagie', 'Pannage' and 'Pannagie': Newbold
(1836) has 'Penagie': the modern name is 'Pēnajeh' or 'Pēnajis'.

The variation of the final consonant is curious: final syllables,
however, are notoriously erratic: Pedas and Gemas are known res-
pectively in the immediate locality as 'Pedoi' and 'Gemeh'
(wrongly printed 'Gemen' in one map of Johore).

The name 'Panagim' has in course of time retired higher and
higher up the river: down to the time of Governor Bort, it was
applied to the lower reaches: apparently in Valentyn's time (1726)
(*JRASSB.* No. 22. (1890). p. 246), and certainly in Newbold's
time (1836), (*Moor. Notices of the Indian Archipelago.* (1837).
p. 61) the name 'Linggi' was applied to the reaches below, and the
name 'Penagie' to the reaches above, Simpang (some 5 miles from
the mouth): at the present day 'Pēnajeh' or 'Pēnajis' refers
merely to a small tributary which runs into the Sungei Rembau in
Negri Sembilan.

Regarding the name 'Liassa' which appears in Valentyn's map
(*JRASSB.* No. 22. (1890). p. 246), the letters *ass* must, the
translator thinks, represent an erroneous transcription of the letters
ngg.

Both the Dutch and the British bound the people of Naning to
bring their merchandise down the Malacca river only, instead of
down the 'Pannagie'.

(*JRASMB.* Vol. V. Pt. I. (1927). p. 59: Maxwell and Gibson.
Treaties and Engagements affecting the Malay States and Borneo.
(1924). p. 59).

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- (3) 12 leagues. The measure of accuracy achieved in Eredia's calculations can be estimated from the following table:—

	Eredia's measurement	Actual distance	Error
Mouth of River Panagim to mouth of River Muar.	12 leagues	52 miles	— 10 miles
Mouth of River Malacca to mouth of River Batang Tiga.	1½ leagues	4¾ miles	+ ½ mile
Tanjong Kling to mouth of River Sungei Baru.	2½ leagues	13 miles	— 4 miles
Mouth of River Sungei Baru to mouth of River Panagim.	2 leagues	6¼ miles	+ ¾ mile
Mouth of River Malacca to mouth of River Duyong.	1½ leagues	3¼ miles	+ 1½ miles
Tanjong Palas to mouth of River Kesang.	2 leagues	8½ miles	— 1½ miles
Mouth of River Kesang to Mouth of River Muar.	2¾ leagues	7 miles	+ 2½ miles
Mouth of River Malacca to Mouth of River Panagim.	6 leagues	26 miles	— 5 miles
Mouth of River Malacca to Mouth of River Muar.	6 leagues	26 miles	— 5 miles

In calculating the error, a league is taken according to the dictionary as 3755.7 geometrical paces of 5 feet, *i.e.* 3½ miles. Distances are measured along the coast line.

- (4) It will be noted that Eredia underestimates the longer distances and usually overestimates the shorter distances.
Muar: "a river and territory bordering on Malacca territory to the Eastward and at its nearest point about 17 miles E. of Malacca town." (*JRASMB*. Vol. V. Pt. I. p. 220).

Eredia and Resende call it 'Muar': Governor Bort has 'Moor' and 'Moar'.

It goes without saying that the old maps have a variety of curious adaptations such as 'Muhar' and 'Mua'—even 'Mubar' though this is probably due to a *lapsus calami*.

- (5) Batan Malaca: *i.e.* modern Batang Malaka.
The so-called mountains are shown on the map of Malacca

District (facing p. 207 *infra*) as extending almost in a straight line from 'Jol' to 'Gamur', a range of hills dividing the Malacca River system from the Muar River system, *i.e.*, such hills as Bukit Cham-paral (1158 ft.), Tunkai (664 ft.), Bukit Ayer Kuning (524 ft.), and Bukit Senyun (1900 ft.).

Eredia places 'Gunoledam' (Mt. Ophir) much too far to the north (in fact, Johol, Batang Malaka and Mt. Ophir are almost in a straight line) and on the wrong side of the Muar River: this latter error may be due to the fact that he fails to differentiate between the Muar River and its tributary the Sungei Gemas: between Gemas and Asahan these two rivers run almost parallel and are only from 10 to 15 miles apart.

Sunecopon: *i.e.* Sungei Kepong.

(6)

Eredia's map places 'Sunecopon' and 'Lubot copon' (Lubok Kepong) some 5 miles apart: at the present day, both names are applied to the same locality, namely, an area of *kampung* and *sawah* at 20½ mile on the south side of the Simpang Ampat—Brisu road.

The name 'Lubok Kepong' is in common use in the locality: it is also applied to a sub-division of the tribe (*Suku*) *Tiga Batu* centred round the neighbourhood.

Begbie in his list of 'Nanning' villages calls it 'Looboo Kepoong' (p. 149): Newbold writes 'Lubu Koppong' (I. p. 245).

The names are not marked on the 1927 map.

The translator is indebted to Mr. C. W. Dawson, Malayan Civil Service, for valuable assistance in connection with the identification of Eredia's place-names.

Nany: *i.e.* Naning, called by Governor Bort 'Naning', (7)
'Nanning' and 'Nanningh', is the name of a territory lying to the N. of Malacca which under the Portuguese, Dutch and British was a vassal state until 1832 when it was conquered and brought under direct British administration. The name is derived from Malay 'naning', a large species of wasp.

"Alone of all the states of the Peninsula, Naning was definitely a vassal state of the Dutch, just as it had been under their predecessors the Portuguese. At the back of Naning lay its close connexions, the other little Menangkabau States, which were nominally under the suzerainty of Johor..... The Dutch had their "Naning War" just as we had one about 150 years later, in fact they had several, and they managed them just about as badly as we did ours".

(*JRASMB.* Vol. V. Pt. I. (1927). pp. 4 and 221).

An account of the British operations against Naning is given by Begbie in *The Malayan Peninsula*. (1834).

Jol: *i.e.* Johol, about 28 miles due North of Malacca; now (8)
one of the Negri Sembilan, 'nine states'.

"Johol would appear to be a perfect instance of the Malays of the old Johor (or Malacca) penetrating the fastnesses of Negri Sembilan by ascending the rivers and marrying perforce Biduanda, that is, aboriginal Malay women".

The old name for Johol was *Enjelai*.

The territory covered by Johol and Inas was before the 18th century the ancient state of Jelai: in the 18th century Jelai vanished, and Inas took its place, getting recognition from Johor in 1760 A.D.: later Johol began to forge ahead of Inas, and eventually eclipsed it, probably usurping the title and insignia of its chief. (Nathan and Winstedt. *Johol, Inas, Ulu Muar, Jempul, Gunong Pasir and Terachi*. (1920). p. 9 *et seq.*)

The rise of Johol is perhaps connected with the growing importance of the trade-route to the hinterland.

It will be noticed that Eredia makes no mention of Tampin: but about 2 miles South of 'Rapath' ('Repah', spelled RUPA in the 1878 map of Malacca) his map shows three tracks converging at or near the present site of Tampin, which is mentioned by name in Governor Bort's (1678) account of Malacca. (*JRASMB*. Vol. V. Pt. I. (1927). p. 60).

- (9) Tanjon Upé: *i.e.* Tanjong Upeh. Eredia's map (facing p. 207 *infra*) shows a pronounced headland opposite the island of Upeh: at the present day there is nothing more than a slight curve in the coast-line at the second mile, Limbongan. The designation 'Tanjong' is not now used: though the old inhabitants in this locality say that their lands formerly stretched seawards a long way towards Pulau Upeh.

See also the discussion on this point in the paper on Malacca Harbour in *JRASMB*. No. 52. (1908). p. 111, and the note in *JRASMB*. No. 9. (1882). p. 169.

- (10) Batantiga: *i.e.* Batang Tiga, (Malay) "three trunks (or streams)": a stream and hamlet on the sea-shore, about 5 miles W. N. W. from Malacca town.

- (11) Brettão: *i.e.* Bertam.

Ferrand says Bértan or Bértam was the ancient name for the country and for the river, corrupted into Bintão and Beitam by Albuquerque and Barros (*Journal Asiatique*. Tome XI. (1918). p. 435).

The "*Malay Annals*" (1612) refer to the "river named Bartam" (p. 89).

- (12) Tanjon Chelim: *i.e.* Tanjong Kling, about 7 miles from Malacca, following the coast.

- (13) Tanjon Bidara: *i.e.* Tanjong Bedara, about 15 miles from Malacca, following the coast.

- (14) Sunebaru: *i.e.* Sungei Baru, called by Governor Bort 'Songoe Baroe'; from Malay *sungei* "river" and *baru*, the name of certain plants (*e.g.* *Hibiscus tiliaceus*), a river debouching about 20 miles from Malacca following the coast.

The river rises near the village of Sungei Baru (at the 17th mile on the road from Malacca to Lubok China) in the *mukim* of Sungei Baru Ulu, and passes through the *mukims* of Sungei Baru Tengah, Sungei Baru Ilir, and Kuala Sungei Baru.

Ferrand says, read 'Sūney Bahāru, the new river'; but this is not considered to be the correct name.

Sarvarāttos: spelt 'Sarvarrallos' in Part I Chapter 4 (see p. 25 *supra*). (15)

Father Coroado tells the translator that it is derived from an obsolete Portuguese word, used by Pinto, Barros, and Couto, meaning 'a royal harem'.

Eredia's map appears to locate this place in the modern *mukim* of Sungei Baru Ilir (see p. 208 *infra*): the translator has ventured to place the Church of Our Lady of Hope at the 18th mile on the Malacca—Lubok China road (p. 106 *supra*). The agrees quite well with the present context, since the 1927 map of Malacca represents the river as rising near the 16th mile.

Doyon: the Dutch 'Doedjong' or 'Doejong' (*JRASSB.* No. 22. (1890). p. 204): from "Malay *duyong*, "dugong". The name of a river and *mukim* about 3 miles E. of Malacca town". (16)

Pungor: Governor Bort's 'Pangoor', 'Pongoor': from Malay *punggor*, 'a dead tree trunk'; a small river and hamlet about 4 or 5 miles E. S. E. of Malacca town". (*JRASMB.* Vol. V. Pt. I. (1927). p. 223). (17)

Tollotmās: *i.e.* Telok Mas, the name of a village $6\frac{1}{4}$ miles from Malacca along the coast. (18)

Mr. B. S. Walton, Malayan Civil Service, kindly points out to the translator that to-day the village of Telok Mas is not on the left bank of the Umbei River as stated by Dennys (1894).

Ferrand comments "the text has *Tollot Mās* and the map *Tolot-Mas*. Godinho sometimes replaces the final *k* of Malay words by *t*, compare folio 24 verso, the modern map of Sumatra (*Taboa de Samatra moderna*) where *Perlak* is written *Perlat*, and folio 25 verso where *Perak* is written *Perat*. One can, then, for *Tolot Mas* read *Tolok Mas*—Tēlok Mas, "the bay of gold". (*Journal Asiatique.* Tome XI. (1918). p. 451).

It might be worth while to enquire how far the spelling of Malay words and names by Eredia and other early writers really represents 'corruption' or how far it represents the actual pronunciation employed by Malays of the period: one notices that in the modern Kelantan pronunciation it is impossible to distinguish between final *-t* and *-p* (*cf.* Eredia's 'Machat', modern 'Machap') or between final *-ng* and *-m* (*cf.* Eredia's 'Padam', modern 'Padang'). (Brown. *Kelantan Malay.* (1927.) pp. 8, 9).

Tanjon Palas: *i.e.* Tanjong Palas. Apparently Eredia refers to what is at the present day little more than an outward curve in the coast-line at the 10th mile from Malacca at the place called Pulau: the village of Pasal is at the 8th mile-stone, about half a mile from the sea: Bort calls it 'Passaal' and 'Passael' (Malay *pasal*, *Aräisia odontophylla*). (*JRASMB.* Vol. V. Pt. I. (1927). p. 224). (19)

It seems clear, however, that 'Palas' was the former name of this place: *cf.* *JRASSB.* No. 22. (1890). p. 219, "Raja Haji 1930] *Royal Asiatic Society.*

.....established himself near Telok Katapang and built a stockade at Tanjong Palas": (Katapang is the modern name for the village at the 7th mile-stone, quite close to the sea). Newbold (1839) refers to the "Pallas-tree".

Dennys in 1894 calls the village 'Palei'. (*A Descriptive Dictionary etc.* p. 268).

Many of the local names mentioned by Eredia will be found in the above account of the operations carried out against Malacca by the Bugis in 1784.

- (20) Cassam: Governor Bort's 'Cassan', 'Cassang', 'Cassangh': "Kēsang, a river about 20 miles E. of Malacca Town and now forming the E. boundary of Malacca Territory: also the region alongside the same and a *mukim* or village higher up the river, N E of Malacca Town." (*JRASMB.* Vol. V. Pt. I. (1927). p. 211).

- (21) Crocodiles. The alligator, inhabiting only fresh water, is not found in Malaya: the crocodile, inhabiting both fresh and salt water, occurs in large numbers: the common species is the *Crocodilus porosus* or Indian crocodile. (Dennys. *A Descriptive Dictionary etc.* (1894). pp. 3 and 96).

- (22) "Descobridor". Eredia here refers to himself.

In Part II Chapter 10 (see p. 71 *supra*) he gives further details of his work in connection with the construction of fortifications.

In his map on folio 61 v. Eredia places the fortress of Muar near the river-mouth, on the south bank of the river and immediately to the west of the stream now called Sungei Bentayan.

- (23) Upe: *i.e.* "Pulau Upeh (meaning in Malay "palm flower-sheath island"), which is 3 miles W. of Malacca town". Governor Bort calls it "fishers' island". (*JRASMB.* Vol. V. Pt. I. (1927). p. 216).

Valentyn (1726) says "There are two islets in its vicinity. *Ilha das Naos* within a gun-shot from the Town, and *Ilha das Pedras* from where they got the stones to build houses, etc. with, beyond the range of gun-shot. The Portuguese carracks and galleons used to anchor between these two islets in 4 or 5 fathoms of water."

(*JRASSB.* No. 13. (1884). p. 50).

Ilha das Pedras is the modern Pulau Upeh. *Ilha das Naos* is Eredia's 'Pulo Malaca' which in his map (see p. 205 *infra*) he describes as "now Ships' Island": it is the modern Pulau Iawa.

- (24) "Big Island". Apparently Pulau Besar, 'big island' (Malay). The "4 islets on the south" are P. Hanyut, P. Dodol, P. Nangka and P. Undan: the "islet on the east" is P. Lalang: at the present day there are two other islands in the proximity, P. Serimbun on the west and P. Burong (near the coast) on the north-east. There is now a granite-quarry on Pulau Besar.

- (25) Flowers. Wallace has pointed out in his *Malay Archipelago* that flowers are not a conspicuous feature of tropical scenery. There are exceptions, however: witness the experience of Swettenham in Pahang "All the trees that do flower seem to have come out in this

dry weather, and we passed many covered all over with a splendid purple bloom, others bright scarlet and yellow, and the *Mémplas*, . . . in full flower, a delicate pale yellow blossom with the sweetest scent". (*JRASSB.* No. 15. (1885). p. 13).

"*Aguila*" "*calamba*". The name "*aguila*" appears to be derived from Sanskrit '*aguru*', through Malayalam '*agil*': the Portuguese form '*pao* (wood) *d'aguila*' was translated into the French '*bois d'aigle*', and the English '*eagle-wood*'. (26)

The Malays call it '*Gaharu*' or '*Gagahru*'. This is the well-known incense-wood lign-aloes. The best quality is the result of disease in the *Aloexylon Agallochum* Loureiro, growing in Camboja and South Cochin-China.

An inferior kind, of like aromatic qualities, is produced from the *Aquilaria Agallocha*. The variety occurring in the Malay Peninsula is known as *Aquilaria Malaccensis* Lam. It was first described by Garcia da Orta from Malacca in 1534.

Milburn speaks of "*Lignum aloes. Agallochum* or *calambac*". He distinguishes, I, Eagle-wood: that immediately under the bark called by the Portuguese *pao d'aguila*: II, a light veiny wood: III, Calambac, the heart or centre of the tree, the wood so much esteemed in all parts of India. (*Oriental Commerce.* (1813). II. p. 312).

As to "*calamba*": Crawford gives the word as Javanese '*Kalambak*': the Malay is '*Kēlambak*'.

According to Foxworthy, the name is given to the best form of aromatic wood (*Aquilaria Malaccensis*), which has a distinctly brownish red colour, often with darker streaks.

(Foxworthy. *Minor Forest Products of the Malay Peninsula.* (1922). pp. 172—3).

Ridley. *The Flora of the Malay Peninsula.* (1922). III. p. 148.

Yule and Burnell. *Hobson-Jobson.* (1903). p. 335).

See also *JRASSB.* No. 35. (1901). p. 73 and *JRASSB.* No. 18. (1887). p. 359.

"*Bejoim*" "*caminham*". The word '*bejuim*' is derived from the Arab name '*luban-Jawi*' i.e. '*Jawi frankincense*': this became corrupted into such forms as '*Bengioi*', '*Benjamin*', and '*Benzoin*'; from this last form the modern '*benzine*' is derived. (27)

Garcia da Orta writes "All these species of benjuy the inhabitants of the country call *cominham*" (apparently a corruption of the Malay '*Keminiyan*').

"This gum is produced by *Styrax Benzoin* L., a common tree in Malaya, known by the name of *Kemenyan* or *Kemayan*. When the bark is cut into, an aromatic odour is given out and the gum exuded: [it is] used in medicine and as an incense in religious ceremonies."

(Foxworthy. *Minor Forest Products etc.* p. 166.

Ridley. *The Flora etc.* II. p. 297.

Yule and Burnell. *Hobson-Jobson.* p. 86).

- (28) Camphor. Eredia here refers to *Dryobalanops aromatica* Gaertn., which grows in the Peninsula, Sumatra, and Borneo.

The English name seems to have come from the Spanish *alcanfor* and *canfora* through the French *camphre*.

The Malay name is '*Kapur Barus*' i.e. from Barus (in Sumatra).

Marco Polo (1295) says the camphor of Fansur [i.e. Barus] was the best in the world: but both Forrest (*A Voyage to New Guinea*. (1780). p. 382) and Milburn (*Oriental Commerce*. (1813). II. p. 308) report that the Bornean camphor was held in superior estimation by the Chinese.

"This is the original source of camphor: the Formosa Laurel-camphor being a discovery of a much later date."

(Ridley. *The Flora etc.* I. pp. 210-1: Foxworthy. *Minor Forest Products etc.* p. 168: Yule and Burnell. *Hobson-Jobson*. p. 151).

For the Camphor Tree and the Camphor Language of Johore, see *JRASSB.* No. 26. (1894). p. 25.

- (29) Dragon's Blood: a name given to a red resin used for dyeing purposes; one of the chief sources being the *Calamus Draco* Griff. (*Daemonorops Propinquus*, Becc. in Hook. fil.): the fruits are shaken in a swinging basket with cockle-shells; the resultant resinous powder falls through interstices in the basket and is formed into cakes by hot water. (Ridley. *The Flora etc.* V. p. 42: Foxworthy. *Minor Forest Products etc.* p. 157).

- (30) Trees yielding gums and oils. These include gutta percha, wild rubber, and other gums; resins, such as copal and damar; oleo-resins and wood oils, such as *minyak keruing*; fruit and seed oils, such as pongam oil: and essential oils, such as cajeput oil.

(Foxworthy. *Minor Forest Products etc.* pp. 162—172).

See also Ridley's paper on Dammar and wood oil in *JRASSB.* No. 34. (1900). p. 89: and the paper on gum-producing trees in *JRASSB.* No. 12. (1882). p. 207.

- (31) Fruits. A very large number of forest plants are used for food by the wild people living in the jungle: cf. the list given by Foxworthy. *Minor Forest Products etc.* pp. 205—214.

- (32) "*Durioes*": i.e. Malay '*durian*', *Durio Zibethinus* L. (Ridley. *The Flora etc.* I. p. 261): first mentioned by Conti (15th century).

The French translation inserts a gloss 'a species of artichoke': this is apparently derived from Castanheda (1552) "durions, which are fashioned like artichokes."

The "*Doryaô Tambaga*", i.e., '*durian tembaga*', 'bronze durian' is still held in the highest esteem: Eredia considered it the finest fruit in the world (p. 26 *supra*).

- (33) "*Mangostans*": i.e. Malay '*manngustan*' (usually called '*manggis*'), *Garcinia mangostana* L. (Ridley. *The Flora etc.* I. p. 172).

Hamilton in 1727 (ii. p. 89) describes it in much the same language as Eredia, "The kernels (if I may so call them) are like cloves of garlick and of a very agreeable taste, but very cold."

"*Tampoes*": i.e. Malay '*tampoi*', *Baccaurea Malayana*, (34)
Hook. fil., occurring in forests, and in cultivation. (Ridley. *The Flora etc.* III. p. 247).

At the present day it does not appear to be used for the manufacture of wine, cf. p. 30.

"*Rambês*": i.e. Malay '*rambai*', '*rambeh*', *Baccaurea* (35)
motleyana, Müll. (Ridley. *The Flora etc.* III. p. 250: Foxworthy. *Minor Forest Products etc.* p. 210).

"*Rambotans*": i.e. Malay '*rambutan*' *Nephelium lappa-* (36)
ceum Hiern.

Valentyn (1726) says the Portuguese called it "froeta dos Caffaros", 'Caffers' fruit'.

(Ridley. *The Flora etc.* I. p. 499: Yule and Burnell. *Hobson-Jobson*. p. 756).

"*Bachôês*": i.e. Malay '*bachang*' or '*M'bachang*', *Mangi-* (37)
jera joetida, Lour.; the 'horse-mango'. (Ridley. *The Flora etc.* I. p. 524).

"*Champadas*": i.e. Malay '*chempedak*', *Artocarpus poly-* (38)
phema, Pers. (Ridley. *The Flora etc.* III. p. 354: Foxworthy. *Minor Forest Products etc.* p. 208).

"*Chintes*". Dalgado (*Glossario etc.* I. p. 275) suggests (39)
Sentul (*Sentol*), *Sandoricum indicum*, Cav., also called *Setui* in Langkawi. (Ridley. *The Flora etc.* I. p. 385: Foxworthy. *Minor Forest Products etc.* p. 209). Eredia is the only writer to quote the word before recent times.

"*Buasdûços*": apparently Malay '*buah duku*', i.e. '*duku* (40)
fruit', *Lansium domesticum*, Jack., also called '*langsat*' or '*lansat*'. (Ridley. *The Flora etc.* I. p. 411: Foxworthy. *Minor Forest Products etc.* p. 209: Watson. (1928). *Malayan Plant Names*. p. 206).

Large timber trees. Cf. Foxworthy. *Commercial Woods of* (41)
the Malay Peninsula. (1921); and Foxworthy. *Commercial Timber Trees of the Malay Peninsula*. (1927).

Elephants. *Elephas maximus*, Linn. is found throughout the (42)
Peninsula.

Governor Bort (1678) records unsuccessful attempts to capture wild elephants.

The name 'Sabrang Gajah' which occurs in Malacca territory, indicates the existence, formerly, of a ford used by elephants (Malay *gajah*). (*JRASSB*. No. 53. (1909). p. 35: *JRASMB*. Vol. V. Pt. I. (1927). pp. 52. 228).

"*Badas*": i.e. rhinoceroses. "*Bada*" is "a word used by old (43)
Spanish and Portuguese writers for a 'rhinoceros', and adopted by some of the older English narrators. The origin is a little doubtful. If it were certain that the word did not occur earlier than c. 1530-40, it would most probably be an adoption from the Malay *badak*, 1930] *Royal Asiatic Society*.

'a rhinoceros'.....[Otherwise] we should have to seek an Arabic origin in such a word as *abadat*, *ābid*, fem. *ābida*, of which one meaning is 'a wild animal'. [Professor Skeat believes that the *a* in *abada* and similar Malay words represents the Arabic article, which was commonly used in Spanish and Portuguese prefixed to Arabic and other native words]". (Yule and Burnell. *Hobson-Jobson*. (1903). p. 1). The Englishman Barker (1592) uses the form "abath".

Both the smaller One-horned Rhinoceros, *Rhinoceros Sondaicus*, Cuv., and the Two-horned Rhinoceros, *Rhinoceros Sumatrensis*, Cuv., are found in the Peninsula. (*JRASSB*. No. 53. (1909). p. 35).

- (44) Tigers ("arymos"). *Felis Tigris*, Linn., Malay 'harimau', is found throughout the Peninsula and Singapore. (*JRASSB*. No. 53. (1909). p. 14).

The French rendering omits to mention the word "arymos".

In the unpublished TREATISE ON OPHIR Eredia alludes to "a variety of monsters of *Aharimou*".

- (45) Tapirs. *Tapirus Indicus*, Cuv., Malay 'tenok' or 'badak himpit', is found throughout the Peninsula. (*JRASSB*. No. 53. (1909). p. 36).

The *Ying-yai Sheng-lan* (1416) refers to the tapir, somewhat inappropriately one may think, as the 'divine stag' (神鹿) (Groeneveldt. *loc cit.* p. 199), unless these Chinese characters represent, in the Hylam dialect, a transliteration (*tin lok*) of the Malay name, as suggested in *JRASSB*. No. 52. (1908). p. 98.

- (46) Large snakes. Ridley in 1899 records 110 kinds of snakes as occurring in the Peninsula; the largest is the python, specimens of 26 feet being occasionally met with. (*JRASSB*. No. 32. (1899). pp. 195-6).

- (47) Monkeys. For the monkeys of the Peninsula see *JRASSB*. No. 53. (1909). pp. 3-11: the list includes Macaques, Leaf-monkeys, and Gibbons, with one man-like ape, the 'siamang', *Symphalangus continentis*, Thomas.

- (48) Bezoar-stone. Dalgado quotes from Trigault (1610) a curious etymology from two Hebrew words 'Baal', 'lord', and 'sor', 'poison'.

The usually accepted derivation is from the Persian *pāzahr* meaning an antidote for poison, and coming down to us through the Arabic form *bāzahr*, Arabic having no *p*.

The word occurs in the forms 'Pajar', 'bazar', 'bezahar', 'bezar', 'beasar', 'pazahar', 'bezas', 'pahzer' (*Hobson-Jobson*. p. 90).

According to a note by Von Klarwill in *The Fugger News Letters*. (1924). p. 257, there were 4 kinds of bezoar-stones; (1) Lapis Bezoar Orientalis, found in the stomach of the Bezoar goat in Persia and East India; used as an antidote for poison and for plague and other ailments. (2) Lapis Bezoar Occidentalis, brought from the West Indies and Peru. (3) Bezoar Porci, found in the stomach

of the Indian pig, and brought to Europe especially by the Portuguese. (4) Bezoar Simiarum, monkey-stones, coming principally from Macassar, found in the stomach of baboons and regarded as possessing infallible curing properties. "They are agglomerates, consisting mostly of phosphoric acid salts: their worthlessness as medicine has long been recognized."

According to Gimlette, *Malay Poisons and Charm Cures* (1923), the Bezoar-stone called *Batu Guliga* is endowed by Malays with magic properties; the various kinds are well-differentiated, and are derived both from the animal and vegetable kingdoms; from the rhinoceros, snake, sea-slug, and dragon, as well as from coco-nut, jack-fruit, bamboo, and petrified dew.

"A genuine Oriental bezoar is formed like a calculus in concentric layers, it is generally hard and brittle, smooth, round or ovate, and olive-green in colour, but occasionally light like the rare concretions found in the joints of bamboos, inside coco-nuts and in fruit-trees. "The bezoar of organic origin . . . was first discovered in the stomach of the . . . Persian wild goat: . . . similar stones are found in the stomach, intestines, and bladder of ruminants, such as the ox, and in the horse and gazelle, but in the East the bezoar is generally found in the intestines and gall-bladder of smaller animals, such as the long-tailed monkey (*Semnopithecus*), especially in the chestnut-red langur of Borneo (*S. rubicundus*). A soft brown variety is found in porcupines." "The stones are highly esteemed by Chinese as an antidote to poison and as a medicine." "Bezoar-stones are worn as amulets against disease and evil spirits, and are considered to possess wonderful medicinal virtues, but their principal value is founded on reputation." "The bezoar-stone is also called *buntat* in Malay, and when deemed to possess talismanic properties, it is known as *buntat gêmala*."

Resende (c. 1638) mentions bezoar-stones as one of the three chief products of the country. (*JRASSB.* No. 60. (1911). p. 7): Bort (1678) says that sometimes bezoar-stones are found in the possession of the 'Banuas', "they get them from onkas and apes." (*JRASMB.* Vol. V. Pt. I. (1927). p. 54): Newbold (1835) speaks of "guligas", "stones extracted generally from the heads of porcupines" (Moor. *Notices of the Indian Archipelago.* p. 73): "Pahang is still famous for its porcupines' bezoar-stones" (*JRASSB.* No. 60. (1911). p. 15). See also *JRASSB.* No. 4. (1880). p. 56: On the Guliga of Borneo.

Linschoten (1598) has a chapter on the "Bezar stone". (*The Voyage, etc.* (*Hakluyt Society*: 1885). II. p. 142).

Birds. cf. Robinson. *The Birds of the Malay Peninsula*, (49) 1928.

Fertile. The alluvium in Malacca "provides the most fertile ground for cultivation and is mostly utilized for rice-fields." (*JRASMB.* Vol. V. Pt. II. (1927). p. 281). (50)

This natural fertility was not always utilized, however: Valentyn (1726) remarks "The productiveness of this place is very 1930] *Royal Asiatic Society.*

poor, compared to that of the Coast [of Coromandel], Bengal, Ceylon etc.; and the surrounding country bears a barren aspect." (*JRASSB.* No. 13. (1884). p. 51).

Fortunately the barrenness of aspect has departed: the scenery of Malacca is delightful, though no doubt the advent of the ubiquitous rubber-tree has impaired the beauty of the picture as seen by Swettenham when he wrote "On either hand there will be rice fields—emerald green when newly planted, golden with ripe grain, or brown when fallow. These are studded by topes of lofty palms shading a few brown huts. The distance is always shut in by hills of a marvellous blue." (*British Malaya.* (1907). p. 6).

- (51) Negligent. For several hundred years unsuccessful attempts have been made to render the country self-sufficient in essential foodstuffs.

The Dutch company lent money without interest to encourage agriculture "so that some day we may be able by this means to subsist on our own products", but Governor Bort found that in a year "all the rice plantations did not provide more than 38,010 gantangs."

At that time, rice was imported from Bengal, Siam, Java, and the East coast of Sumatra.

Governor Bort wrote to his successor "This country must have a larger population, especially of industrious Chinese, so that the necessary cultivation of the soil may be continued."

(*JRASMB.* Vol. V. Pt. I. (1927). pp. 51, 52, 74, 133, 179).

The Dutch Commissioner Schouten in 1641 attempted to obtain from Batavia "what was most important, some Chinese to cultivate the fields and gardens." (*JRASSB.* No. 22. (1890). p. 239).

Valentyn (1726) said of Malacca "The p'ace is not very productive in provisions; everything must be imported from other places, with the exception of fish and some other kinds of fruits."

- (52) Monancabos: *i.e.* "natives of Menangkabau in the W. part of Central Sumatra and their descendants in the part of the Malay Peninsula that lies to the N. of Malacca, where many of them had effected settlements long before the end of the 16th century".

Resende (*c.* 1638) calls them 'Monamcabos' (*JRASSB.* No. 60. (1911). p. 5): Governor Bort has 'Manicabers.' (*JRASMB.* Vol. V. Pt. I. p. 220).

In 1586, the 'Manencabos' co-operated with the King of Johore by devastating the country-side and cutting off supplies from Malacca. A Portuguese force captured Naning 'with much slaughter.' (Danvers. *The Portuguese in India.* (1904). pp. 69, 70).

- (53) "Betre": "the leaf of the *Piper betel*, L. chewed with the dried areca-nut (which is thence improperly called *betel-nut*....), *chunam* [lime], etc., by the natives of India and the Indo-Chinese countries. The word is Malayalam *vettilla*, *i.e.*, *veru* + *ila* = 'simple or mere leaf,' and comes to us through the Portuguese *betre* and *betle*."

The word occurs in the forms 'vettele,' 'betelle,' 'betele,' 'vitele,' 'bittle,' 'beetle,' 'bettle.' (Yule and Burnell. *Hobson-Jobson*. (1903). p. 89).

The Malay name for this vine is 'sireh.'

According to Barbosa (1516) the Portuguese called it 'Indian leaf,' 'Folio Indio.' (*The Book of Duarte Barbosa*. (Hakluyt Society: 1918). I. p. 168).

Areca: "the seed (in common parlance the nut) of the palm (*Areca Catechu*, L., commonly, though somewhat improperly called, 'betel-nut'; the term *betel* belonging in reality to the leaf which is chewed along with the *areca*. . . . The word is Malayalam *adukka* according to Bishop Caldwell, from *adai* 'close arrangement of the cluster,' *kay* 'nut,' . . . and comes to us through the Portuguese." (Yule and Burnell. *Hobson-Jobson*. p. 35). (54)

While a few writers use the Malay word '*Pinang*,' the majority refer to 'areca' or such variant forms as 'arecha,' 'arecca,' 'arequa,' 'archa,' 'arreaes,' 'arequies.'

"*Pancalan*": i.e., Malay *pangkalan* "starting point, quay," (55)
etc.

Governor Bort writes '*Pancalan*,' '*Panckelan*,' and '*Pankelan*.'

The reference is to *Pangkalan Naning* "a point on the Malacca river within Naning territory and about 12 miles N. by W. of Malacca town, near the Alor Gajah railway station." (*JRASMB*. Vol. V. Pt. I. (1927). p. 223),

Mr. C. W. Dawson, Malayan Civil Service, writes to the translator "Near Alor Gajah Railway Station is a level grassy place on the bank of the Malacca River known to all as *Pengkalan*. This is certainly the place referred to. It is probably the nearest navigable point on the river at which people coming down from Naning would arrive to embark to Malacca or elsewhere."

Pulo: this may be Governor Bort's '*Poelo*' and '*Poulou*': (56)

"Malay *pulau* "island," a hamlet about 6—7 miles due N. from Malacca town." (*JRASMB*. Vol. V. Pt. I. (1927). p. 225).

On the other hand Eredia appears to place his '*Pulo*' further to the north-east: it should probably be identified with the '*Pulau*' which lies about $\frac{1}{4}$ mile beyond Sempang Gading.

In Begbie's list of 'Nanning' villages, '*Pooloo*' appears between '*Sebang*' and '*Gadi*.' (*The Malayan Peninsula*. (1834). p. 149).

Machat: Governor Bort's '*Matchap*': modern Machap; the name of a *mukim* and of a village in Malacca territory about 14 miles NNE. of Malacca town: there is a very famous shrine here; Skeat describes it as the most celebrated of the Malacca *kramats*. (*Malay Magic*. p. 64). (57)

With regard to the neighbouring '*Buquet dolon*' (*cf.* the map, p. 211 *infra*), Mr. C. W. Dawson writes to the translator, "This is certainly Bukit Dalong, a small steep hill perhaps 100 feet high, situated about one mile from the main Malacca-Tampin road on the right-hand side at the $17\frac{3}{4}$ mile, across the river. There is a grave with a small building erected over it on the top

of the hill. It is sacred to Chinese and Malays alike and is a favourite place for an ordeal by oath. It is the place where the final meeting and feast is held after a "*berpuah*" ceremony (the driving of the evil spirits from the rice-fields), which is usually performed once in three years."

- (58) Cottot: perhaps the Malay word 'Kota', 'fort': the place cannot be identified.

Eredia seems to place it somewhere near Bukit Batu Tiga, in the middle of the Bukit Senggeh Forest Reserve: he may refer to Bukit *Katong*, which is close to Bukit Batu Tiga.

The translator is indebted to Mr. C. R. Howitt, Malayan Civil Service, for this and other suggestions.

- (59) Ganur: elsewhere called 'Gamur': apparently Gemeh (Gemas): the name 'Gemas' is found over a large area extending from Kampong Kuala Gemas, north of Gemas Railway Station in Negri Sembilan, to the neighbourhood of Mt. Ophir in Johore, a distance of some 20 miles.

Mr. Howitt writes that Eredia places 'Gamur' in approximately the correct position, at the end of the road from Nyalas to Asahan.

- (60) Rombo: Governor Bort's 'Rombouw,' *i.e.*, "Rembau, a small State to the N. of Naning, founded by Menangkabau settlers from Sumatra and for a considerable period under the nominal suzerainty of Johor. Now a part of the Nēgēri Sembilan." (*JRASMB*. Vol. V. Pt. I. (1927). p. 227).

(Danvers glorifies it with the name of 'Bombo').

"[Rembau] and the other States were no doubt at the time of the taking of Malacca by the Portuguese inhabited by aborigines only. These latter assisted in the defence of Malacca with their primitive weapons." (*JRASSB*. No. 13. (1884). pp. 241, 252).

Rembau, protesting innocence, submitted without resistance to the Portuguese forces in 1586. (Danvers. *The Portuguese in India*. p. 70).

Governor Bort (1678) says "the jurisdiction of Malacca..... extends..... inland up to the village of Rombouw [which]..... used to be under Johor, and [is]....still to some extent subject to it." (*JRASMB*. Vol. V. Pt. I. (1927). p. 49).

Johore, however, ceded Rembau, with Linggi and Klang, to the Dutch in 1757. (*JRASSB*. No. 67. (1914). p. 74): and after 1773 Johore "had nothing more to do with the Negri Sembilan." (*JRASSB*. No. 13. (1884). p. 246).

For the history of Rembau see *JRASSB*. No. 56. (1910). pp. 1—157.

- (61) Banuas. 'Banua' is common Indonesian for "district or inhabited place." In Malay *orang bēnua*, "people of the country," is "one of the numerous Malay appellations for the so-called aborigines or uncivilized tribes of the Malay Peninsula, particularly applied to those of the South." (*JRASMB*. Vol. V. Pt. I. (1927). p. 209).

Eredia and the other early writers probably did not make any distinction between the Negrito Semang, the lighter-coloured Sakai, and the Proto-Malayan Jakun.

Governor Bort gives an interesting account of a visit to the 'Bonuaes,' whom he describes as "whitish yellow in colour." (*JRASMB*. Vol. V. Pt. I. (1927). pp. 51-55).

Cf. the note on the 'native inhabitants of Ujontana', p. 125 *infra*.

Regarding Queen Purty and 'Gunoledam' see the note on p. 165 *infra*.

Regarding the Indo-Chinese affinities in the dialects of the Semang and Sakai cf. *JRASMB*. No. 27. (1894). p. 21).

NOTES ON PART I CHAPTER 3.

2 leagues. At the present day the distance is 23 miles from (1)
Cape Rachado to Tanjong Medang situated on Pulau Medang
(adjoining Pulau Rupa) off the Sumatran coast.

Sabbara. If Gerini's identifications are correct, Eredia makes (2)
the fundamental error of imagining that Ptolemy's isthmus, which in
fact represents the Isthmus of Kra, is an isthmus running from Cape
Rachado to Pulau Rupa: with the result that he locates in Sumatra
certain places (such as Tacola) which should be located on the Malay
Peninsula.

The position of Sabara, a city, is given by Ptolemy as $159^{\circ} 30'$
E. $8^{\circ} 30'$ N: Gerini corrects this to $95^{\circ} 55'$ East of Greenwich and
 $16^{\circ} 18'$ N. ("the local correction here consisted in shifting these
stations westward of a quantity equal to the displacement of Cape
Tēmala [Negrais] eastwards, i.e., about 3° longitude"): and
identifies it with the site of the present Twantē (96° East of Green-
wich and $16^{\circ} 41'$ N.), not far from Rangoon. (*Researches etc.*
(1909). p. 72 and Table III).

On folio 25 recto of the MS. Eredia purports to reproduce
'Ptolemy's XIth Table of Asia': this plan, however, does not
correctly represent the relative situations of Sabara and Tacola; for
it shows Tacola as lying south-west of Sabara, whereas Ptolemy
imagined it to be east of south; for he gives the longitude of
Sabara and "Takola (the mart)" as $159^{\circ} 30'$ and 160° respectively.

It is unfortunate, too, that Eredia mis-writes 'Sabara' for
'Sabana': the former is somewhere in Burmah, the latter some-
where in the Malay Peninsula: Ptolemy gives its position as 160° E
and 3° N; Gerini corrects this to $99^{\circ} 17'$ East of Greenwich and
 $3^{\circ} 13'$ N, and takes it to be either "the Selangor district or its
chief town. The corrected latitude resulting for Ptolemy's mart
would show it to be placed near Kwāla Selangor, [$101^{\circ} 14'$ E, 3°
 $21'$ N] that is, the mouth of the Selangor River where there is a
small harbour. But it may be Kwāla Sembah further east, up the
same stream. A place called *Sābah* exists at some forty miles
further to the north near the mouth of the Bernam River." (Gerini.
Researches etc. (1909). p. 100).

The reason for the existence of Sabak Bernam, nearly 20 miles from the mouth of the river and on the way to nowhere, has always seemed somewhat of a mystery. If it really was an ancient mart, this might be the solution, that it was a place of export for the tin and perhaps gold and jungle-products of Ulu Selangor and the interior: even so, we might well expect the port to be nearer the mouth of the river, say at Hutan Melintang.

Rouffaer, again, thinks Sabana "will correspond with the XVIth century Straits of Sabang and with the Karimuns, Hasin, or Galoh." (*JRASSB.* No. 86. (1922). p. 259).

- (3) Parcelar. Through the kindness of Dr. R. O. Windstedt, Director of Education, to whom the translator is greatly indebted for his assistance in connection with this paper, the translator has been supplied with an anonymous note, dated 1909, which is worth quoting in full:—

"'Bukit Parcelar' occurs in the *Mohit* (translated by Bittner and published by the Geographical Society of Vienna in 1897). This was a set of sailing directions drawn up by a Turkish Admiral in 1554 from non-Portuguese sources: in fact, the Portuguese borrowed largely from the same sources.

One passage is as follows:—

Page 60. "from Fulo Sambilan to the Fulo Jumar islands Southwards: to the South-east-easterly (or as some say East-South-east) of Fulo Jumar lies the mountain of Fulo Pasalar: from Fulo Pasalar to Malacca one goes South-easterly....."

Pulau Jumar must be Pulau Jemur (marked on the chart) one of the Aru Islands. Dampier gives the best route from Acheen to Malacca as bringing the Aru Islands bearing South-east at 3 or 4 leagues distance and then steering away East by South for the Malacca shore about 20 leagues off till Pulo Parcelore is picked up. He adds that if the weather is thick, pilots lay-to till they see the Hill.

It is noticeable that he calls it *Pulo Parcelore*.

As to the name which is obviously pre-Portuguese, I can only offer a guess. On the Malabar Coast at about 13° 50' is a Barsilur Peak; Barcelore was a place of some importance in the old days, and if the peak is a well-known landmark and if it resembles Bukit Parcelar, it is very probable that the early sailors, who are certain to have known the Malabar Coast well, transferred the name to a notable landmark on the Malacca Coast.

The word is not Malay and the name is a seaman's name, unknown on shore. The Malay name of the hill is Bukit Jugra."

So much for the note.

The translator has not been at pains to ascertain if the peak is a well-known landmark or if it resembles Bukit Parcelar, for even if both these enquiries were answered in the negative, the answer would not be conclusive; there are other instances of place-names in

Further India which have been imported from India Proper, "the nomenclature of the valley of the Indus and its affluents..... was at an evidently very early date transferred to the valley of the Irāvātī and surrounding territory in Further India" (Gerini. *Researches etc.* (1909). p. 41).

It is doubtful whether the derivation from 'Barcelore' can be maintained; for 'Barcelore' itself is believed to be a Portuguese corruption of *Basrur* [the Canarese *Basarūru*, 'the town of the waved-leaf fig-tree.'] (Yule and Burnell. *Hobson-Jobson.* (1903). p. 45).

Moreover, the mere fact of the name occurring in the '*Mohit*' is not convincing, for when this book was written, in 1554, the Portuguese had been nearly 50 years in Malayan waters, and a Portuguese name might easily have slipped in.

That the name was pre-Portuguese, however, seems conclusively established by its occurrence in a work by the Arab writer Ibn Majid, dating from 1462. (*Journal Asiatique.* Tome XII. (1918). p. 399).

Ibn Majid calls the hill 'Pulaw Pasalar,' and the Portuguese

The forthcoming series of Arabic geographical works, of which M. Gabriel Ferrand is general editor, may throw important light on mediaeval Malayan geography.

- (4) Tacola. Ptolemy gives the position as 160° E, $4^{\circ} 15'$ N: Gerini corrects it to $99^{\circ} 17'$ East of Greenwich, $9^{\circ} 52'$ N, and places this mart "in the neighbourhood of the present Ranōng, and at the mouth, or inside, of the Pāk-Chān inlet," in the district of "*Takūa-pā*, called by Europeans and Malays *Takōpa* or simply *Kopa*; generally noted in maps as *Kopah*," in $98^{\circ} 22'$ E, $8^{\circ} 48'$ N. He connects the word with *Kāla* and *Kola*, used to designate tin and appearing in the Arab *al-kali* and the Portuguese *calim* or *calin*.

He considers that the place was well-known from over a century before Ptolemy's time, as evidenced by a reference to *Takkola* in the Pāli work *Milinda Pāñhā*.

He identifies it with *Kalah-bar* of Abu-Zaid (9th Century).

Its importance he ascribes to the local tin mines and to the trans-peninsular trade-route. (*Researches etc.* (1909). pp. 85-94).

- (5) Arū or Auro. Eredia, with his usual fancy for derivations, connects the name of the place with the traffic in gold ('aurum').

He places it rather less than half way between 'Aracan' (Rokan) and Diamond Point, *i.e.*, somewhere between the Asahan and Deli Rivers: see p. 213 *infra*.

The reference is to a place on the mainland, not to the Aru (Aroa) Islands.

Gerini's map marks 'Haru' further north, between the Basitan and Tamiang Rivers, approximately in the latitude of the modern Aru Bay, about $4^{\circ} 13'$ N.

Ferrand places the ancient state of Haru or Aru (the 哈魯 *Ya-lou* or 阿魯 *A-lou* of the Chinese) near the mouth of the Rokan River. (*Journal Asiatique*. Tom. XII. (1918). p. 65).

Groeneveldt (*op. cit.* p. 218) connects the State with the Aru Islands and locates the former on that part of the coast which is nearest to them, about the mouth of the Burumon River.

- (6) Tico: that is, modern Tiku, on the west coast of Sumatra, situated in about $0^{\circ} 25'$ S.

- (7) Not very ancient. Modern research, exploring sources other than the authors mentioned by Eredia, inclines to the opinion that it was very ancient.

We are told that "Indians had from time immemorial been active along their own coasts, and had traded with Malay, East Africa, and the Persian Gulf." (Warmington. *The Commerce between the Roman Empire and India*. (1928). p. 64): that "the combination in the Burmese rice boats of both laddered A-shaped mast and ribless hull indicates clearly and definitely that Egyptian methods of construction were carried East at a remote period, perhaps between the Third and Fifth Dynasties (2900 to 2600 B.C.) (Forde. *Ancient Mariners*. (1927). p. 32): that "Phoenician sailor-merchants brought timber from Mediterranean countries; silver from Burmah, Mashonaland and Ophir (Malaya); gold from Ophir;

woods, fabrics, incense, peacocks, etc. from India and pearls from the Red Sea and Ceylon" in 1000 B.C. when Solomon was building his great temple"; and again "This assumes that the Phoenicians in the period between the Pyramid Age in Egypt and the last few centuries B. C. had traversed the whole coasts of Africa and the Indian Ocean and had even crossed the Pacific Ocean after passing the Straits of Malacca." (Johnstone. *A Study of the Oceans*. (1926). p. 197).

Finally, Eredia himself soon changed his opinion on this subject, for in the unpublished TREATISE IN OPHIR dated 1616, he writes (in Part II Chapter I., "Concerning the voyages of Solomon"):—" [Solomon's fleet] coasted along the Asiatic mainland past the emporium of Baracura, then past Syriam in Pegu and Martavan, as far as the isthmus of the Golden Chersonese or Perimula, Samata (corruptly Samatra) and the western coast of the Chersonese; then the fleet entered the channel between the Chersonese and Java (wherein Bantan is situated) and continued along the eastern coast of the Chersonese as far as the isthmus and passed along the Straits to-day called the Straits of Sabbaõ and Sincapura and the coast of Ujontana, till it came to the port of Ophir to-day called the port of Siam; from there it went to the port of Tharsis called Canton in the country of the Chynas of Attai or Cattay, anciently Tharsis (corruptly Thays) ".

Native inhabitants of Ujontana. cf. *Pagan Races of the Malay Peninsula* (1906) by Messrs. Skeat and Blagden, also Pater P. Schebesta's *Among the Forest Dwarfs of Malaya* (1929) which deals with the Semang, and his *Orang-Utan* (1929), written in German, which deals with the Sakai and Jakun of the Peninsula and the Kubu of Sumatra. (8)

There are three stocks of 'Orang Utan' (to which the Malays apply the generic name of 'Pangan'), namely:—

1. The woolly-haired Semang, about 2,000 in number,
2. The wavy-haired Sakai, about 10,000 in number,
3. The lank-haired Jakud'n (Jakun), about 10,000 in number.

"The Semang are rightly numbered among the pygmy races. . . .

[They] have never reached the stone age. . . . they never emerged from the bamboo age." (Schebesta).

"The first inhabitants [of the Peninsula and Archipelago] were probably a black woolly-haired race, of which pygmy representatives (Negritos) are the Andamanese, the Semang of the Malay Peninsula, the Aeta of the Philippines and the pygmies of New Guinea".

"We may regard the next great migration as that of a Pre-Dravidian stock, relics of which are found in the Sakai of the Malay Peninsula, and in a few tribes in the Archipelago." (Haddon).

"[They] represent the second element among the aboriginal tribes". "It has been said that they should be connected linguistically with the Mon-Khmer peoples, and physically with the Veddas" [of Ceylon]. (Buxton).

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Risley associates with the Sakai, a Scytho-Dravidian type "who live in a belt of country in the West of India extending from Gujerat to Coorg," and suggests that the latter came possibly from China.

"In physique, culture, and partly also in speech the Jakud'n are plainly Malay. . . . I call them Proto-Malays." (Schebesta).

"Haddon has invented the convenient term "Proto-Malays to mean the branch of Pareoean man (Yellow man) from whom the various specialised modern "Malay" peoples are sprung".

"Haddon is very careful to define the Proto-Malays as Mongoloid brachycephals. Most authorities agree with him on this point." "The characters show that the Proto-Malay type is closely connected with the Pareoean from which indeed it is sometimes difficult to distinguish it".

(Buxton finds that "intermediate between these peoples [Sakai] and the Proto-Malays, but more closely allied to the latter, are the Besisi. They have Proto-Malay chiefs and physically seem to be closely allied to this stock").

So much for the peoples of the Peninsula: in the Archipelago there is a fourth stock, the "Indonesian", "probably most of the Dravidian tribes can claim kinship with this same race" (Buxton).

"This wave of migration followed—perhaps at a considerable interval—that of the Pre-Dravidian; it probably originated from the lower valley of the Ganges". (Haddon).

"Speaking broadly, there has been a continual movement of peoples from South China, mainly in a southerly direction, which has also affected the East Indian archipelago". (Haddon).

To sum up, the migrations as they have affected the region of the Malay Peninsula appear to have taken place, according to the ethnologists, as follows:—

1. Negritos (Semang), moving down the Peninsula either by land or sea,
2. Pre-Dravidians (Sakai), apparently descending the Peninsula by land.
3. Indonesians, (not found in the Peninsula), migrating to the islands by sea,
4. Proto-Malays, overrunning the Islands by sea either from their settlement in Indo-China (Champa) or else after descending the Peninsula, and as a rule dominating the Indonesians eventually.
5. True Malays, 'Orang Malayu', crossing from Sumatra and permanently occupying the Peninsula in the twelfth century A.D.

It may be added that an admixture of Malay blood has been thought to exist among the Japanese: Buxton, however, tentatively suggests that the third element (in addition to 'yellow' man and a strain distantly akin to 'Alpine' man) is a type which is akin to Proto-Malayan, but which is probably best represented to-day among such people as the inhabitants of the hills of South Fukien.

"It is more than possible that we should say that the Japanese are not the direct descendants of the Southern Chinese, but rather are the descendants of the peoples who are racially akin to them".

[*Bulletin of the School of Oriental Studies*. Vol. II. Pt. II. (1926). pp. 270—276): Haddon. *The Wanderings of Peoples*. (1927). pp. 17, 18, 33, 34): Buxton. *The Peoples of Asia*. (1925). pp. 44, 52, 218-219, 236-238): *JRASSB*. No. 81. (1920), p. 27.]

Battas. Gerini argues "an original connection, if not exactly (9) racial, at least social as regards intercourse, customs etc., between the Battas, the Kachins and the Wah people of the Yunnan-Indo-Chinese borders". "For as we have seen, this very form of cannibalism can be traced almost uninterruptedly, and through fully twenty-four centuries, all the way from the Archipelago to Upper Burma...and thence to the original Kachin country, and to the Central Asian homes of the old Kallatians or Kallantians and Massagetes, or *Ta-Yüeh-chih* of Herodotean and Sinological fame. The line along which we have traced the custom in question very probably marks also the track followed, in the inverse direction, by the parent stream of emigration from which most of the above-named tribes of the Indo-Chinese mainland and Archipelago are descended, or, at any rate, with which they have become blended." (*Researches, etc.* (1909). p. 661).

For a recent account of the 'Batak' see Collet, *Terres et Peuples de Sumatra*. 1925.

Civilization. Eredia grasps the essential fact that 'the Malay Peninsula and Archipelago is indebted for its ancient development to adventurers and colonists from the Coromandel and Malabar coasts', or, as Blagden puts it, "unquestionably Indian influence was by far the most potent of the forces which led the Javanese and Malays to such civilization as they attained" (*JRASSB*. No. 39. (1903). p. 206); so Havell (*Indian Sculpture and Painting*) "From the sea-ports of her eastern and western coasts India sent streams of colonists, missionaries, and craftsmen all over Southern Asia, Ceylon, Siam, and far-distant Cambodia". (10)

The extension of Indian influence in the Peninsula and Archipelago constitutes a subject of its own: one may, however, quote from two recent writers. "We know now that the Bengali and Southern Indian Rāmāyanas came to Indo-China and settled thereafter having passed through Java and the Malay Peninsula" "In comparing the bas-reliefs of Angkor with those of the temples of Prambanan and of Pantaran, in Java, one is struck by the analogies between the choice of the episodes and by the similarity of method in representing them. Thus one comes to realize the close connection which existed between the two countries who shared the same traditions and the same beliefs (Karpeless in *Indian Art and Letters*. New Series. Vol. I. No. I. (1927). pp. 31, 32.); and "The archaeology of Siam embraces the most diverse styles, each of which is characteristic of one of the epochs of Indian culture in the countries lying to the East of India". "[The Wat Keo at

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Jaiya] is exactly the plan of the Tjandi Kalasan of Java, which we know was built in A. D. 778 by a king of the Sailendra dynasty which was reigning at the same time at Srivijaya" [Palembang]. (Coedès in *Indian Art and Letters*. New Series. Vol. I. No. I. (1927). pp. 58. 65).

The Journal of this Branch contains a number of papers which deal with various aspects of Indian influence in Malaya:—

<i>JRASSB.</i>	No. 83.	(1920).	p. 88.	(beliefs)
	No. 82.	(1920).	p. 119.	(folk-tales)
	No. 81.	(1920).	p. 37.	(literature and popular mysticism)
	"		p. 9.	(magical lore)
	"		p. 6.	(alphabet; pantheism)
	"		p. 5.	(tomb: missionaries)
	No. 80.	(1919).	p. 29.	(loan-words)
	No. 79.	(1918).	p. 105.	(marriage ceremony)
	No. 76.	(1917).	p. 67.	(loan-words)
	No. 38.	(1901).	p. 67.	(Southern India and the Straits Settlements)

See also *Essays relating to Indo-China*. First Series. Vol. I. (1886). p. 50; (language): Winstedt's *Shaman Saiva and Sufi*. (1925); (magic): and Mookerji's *Indian Shipping*. (1912); (maritime intercourse).

"Evidence points to the possibility of a connection between India and Java as early as 700 B.C., a regular commerce being maintained between the two countries." (Perry. *The Megalithic Culture of Indonesia*. (1918). p. 3).

(11) Intercourse between Egypt.

"Navigation in the Red Sea dates from very early times, and a definite but mostly indirect trade with India was established by the Ptolemies" [4th century B.C.]

"[Alexander] wrote an account of his voyage which was used by Marinus of Tyre (fl. 2nd century A.D.) in his description of voyages taken round Cape Comorin into seas round the mouths of the Ganges and to the Malay Peninsula, of which the western part was now visited with some frequency."

(Warmington. *The Commerce etc.* (1928). pp. 6. 126).

(12) Tropobana; i.e. Ceylon; *Taprobane* of the Greeks and Romans; in Pali *Tambapanni*. In the unpublished TREATISE ON OPHIR Eredia gives a more than usually fanciful derivation for the name: 'Tropos or the island Tropobana', he says, 'is derived from the Greek $\tau\rho\omega\pi\omicron\sigma$ ' meaning 'turn'; but in consequence of the 'bramanas' (brahmins) there, it was called 'Tropobramana' corruptly 'Tropobana'.

(13) S. Thome. "Even if we cast aside as unhistorical every allegation of fact in the stories about St. Thomas, we must at least admit that they reflect voyages habitually taken to India during the most prosperous period of the Roman Empire."

(Warmington. *The Commerce etc.* (1928). p. 83).

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Solomon. "The Phoenicians who voyaged for Solomon came (14) to Southern India at least, and their commercial intercourse with India [dates] from the seventeenth century B.C. . . . it must have ceased, in a direct way, full five hundred years B.C., if not more." (Gerini. *Researches etc.* (1909). p. 598).

"Hiram, King of Tyre, had navies in the Mediterranean and Red Seas. His ships brought . . . gold and silver from East Africa; fabrics, precious stones, rare woods, peacocks, incense, pearls, etc., from the Far East . . . Even a thousand years before the time of Solomon and Hiram, sailor-traders sailed between the Red Sea and the Gulf of Persia, whence they brought commodities carried in Arab ships from India, or even further."

(Johstone. *A Study of the Oceans.* (1926). p. 27).

NOTES ON PART I CHAPTER 4.

ANTIQUITIES. *cf.* Evans. *Ethnology and Archaeology of the* (1)
Malay Peninsula, 1927.

Cf. also *JRASMB.* Vol. II. Pt. III. (1924). p. 289. (likely localities),

- | | |
|---------------------------------------|---|
| <i>JRASMB.</i> No. 86. (1922). p. 386 | } (gravestone of Sultan Mansur Shah) |
| No. 85. (1922). p. 1 | |
| No. 78. (1918). p. 47 | |
| No. 60. (1911). p. 37 | (gravestone of Raja Fatimah. 1496 A.D.) |
| No. 60. (1911). p. 35 | (royal cemetery at Pekan) |
| No. 49. (1907). p. 95 | (old Sanskrit inscriptions) |
| No. 48. (1907). p. 97 | (graveyards of the Sultans of Perak) |
| No. 44. (1905). p. 213 | (coins from Malacca) |
| No. 39. (1903). p. 205 | (clay tablets from Kedah) |
| No. 39. (1903). p. 183 | (coins from Malacca) |
| No. 23. (1891). p. 141 | (stone implement from Singapore) |

No. 18. (1887). p. 356 (Siamese work in Perak)
and *Essays Relating to Indo-China.* Series I. Vol. I. (1886). pp. 219, 222, 223, 227, 232: regarding inscriptions in Kedah, Province Wellesley and Singapore.

Panchor: Governor Bort's 'Pantjoor': "Malay *panchor*, (2)
flowing of water through a conduit." The name appears in the 1916 map of Malacca but not in the 1927 map: it is situated on the promontory near the name 'Batu Blah' about 11 miles N. E. of Malacca town: there is a granite quarry on the foreshore.

See Eredia's map of the Malacca district: p. 208 *infra*.

Governor Bort (1678) mentions two places of this name (*JRASMB.* Vol. V. Pt. I. (1927). p. 50): one is described by 1930] *Royal Asiatic Society*.

Blagden as being a hill "about 14 miles N. of Malacca town" (p. 224); this is Bukit Panchor in the Bukit Panchor Forest Reserve: the other is situated "on the North side, along the sea-shore", and is associated with 'Tanna Merah' and 'Aijer Itam' in Bort's account (p. 50): this is clearly the 'Panchor' of Eredia.

The translator is indebted to Mr. F. T. Tree, Malayan Civil Service, for the following account:—

At Panchor I was shown a sea-cliff from which there is a constant trickle of clear fresh water, called locally "*anak ayer pētri*" ["Princess' Streamlet"]. The freshlet falls into a pool which is referred to as "*pētri mandi*" ["Princess' Bath"]. A few feet distant, at a small projection of the cliff, there is a large pile of granite boulders. Many of the boulders are rough in shape, but a large proportion of them have obviously been carefully hewn into rectangular blocks. The carved blocks carry small recesses which were probably used for the purpose of bolting the granite into fixed positions. It is quite possible that these blocks had been used for the construction of a bathing pavilion, for at this place it would have been possible to fill adjoining tanks with both fresh water and sea-water. The sea has encroached in this locality, and many of the blocks have fallen into the sea. It must be many years since the building was abandoned, for not even the "oldest inhabitants" know anything about it. There is an ancient "*kramat*" ["sacred place"] on the cliff-summit, about 200 yards distant."

- (3) "*Palandos*" i.e. Malay '*pēlandok*', the Small Mouse-deer or Plandok, *Tragulus (Kanchil) Ravus* Miller, occurring in the Peninsula and Singapore. (*JRASSB.* No. 53. (1909). p. 44). Newbold (1839) remarks that the flesh tastes a little like that of the hare. The '*pēlandok*' is the 'Brer Rabbit' of Malay folk-lore. (*Skeat. Malay Magic.* p. 179).
- (4) Aer Raya Aer Patry. The name 'Ayer Raya' (Malay, 'Raja's stream'), is understood but is not commonly used. The name 'Aer Patry', that is 'Ayer Putri', ('Princess' stream') is in current use; the stream is close to Tanjong Putri, marked on the 1927 map.

The word 'Ayer' takes the form 'Air' on several of the British Admiralty Charts (e.g. No. 709, West Coast of Sumatra).

- (5) Batugaja: i.e. Malay '*batu gajah*' 'elephant stone': the name is in current use and appears about 1 mile NE. of Tanjong Putri in the 1927 map.

With regard to the neighbouring 'Batu manambuan' (cf. the map, p. 207 *infra*), Mr. C. W. Dawson writes to the translator, "I am informed by the Penghulu of the neighbouring mukim of Sungei Baru Tengah that the name Batu Miniabong is well known in the vicinity and until 5 or 6 years ago there was a famous granite stone on the beach here. The stone was 10 feet high at one end and 2 feet at the other end, and in the middle of the sloping top

was a level smooth area some 6 feet wide. The story is that the celebrated mediaeval warrior Hang Tuah used this as his cock-fighting arena, whence the name arose—Malay, *mēnyabong*, to fight (of a cock). At the lower end of the rock, says the Penghulu, was the imprint of a foot, human in shape but superhuman in size, being no less than $2\frac{1}{2}$ feet long. It was a right foot and all the toes were clearly visible. Hang Tuah is said to have made this print while stamping with glee at the victory of some famous gamecock.

The stone was blasted to pieces (incredible vandalism) by the granite-quarry contractor some 5 or 6 years ago, in spite of the protests of the Penghulu and others."

Sarvarrallos. Cf. Part I Chapter 2, page 21 *supra*.

(6)

The translator is indebted to Mr. F. T. Tree, Malayan Civil Service, for visiting the probable site of the 'Royal Orchard' and writing the following account:—

"The Penghulu of S. Udang and two Penghulus of the Alor Gajah District, conducted me to the site of an old orchard at Sungei Baru. It is an interesting place. There is a low hill, almost surrounded by a big sweep of the S. Baru. The S. Baru is now but a stream, but a local "*orang tua*" ["elder"] told me that in his young days it was a fine river. At this place tradition is more fruitful, and the *kampung* folk have definite stories which were handed down from their "*datok nenek*" ["ancestors"]. They were able to point out to me a spot, on the hill-slope, where the Malay king had built his "*Kubu*" ["stockade"]. From the "*Kubu*" his followers commanded the river-approach, and stopped all vessels which came up from the sea. After "*chukai*" ["dues"] had been paid, the traders were allowed to barter their goods in the surrounding country, which was well cultivated with rice-fields and orchards. The king's "*istana*" ["palace"] used to stand on the crest of the hill. After the Malay king had been driven out, the "*kubu*" and "*istana*" were occupied for very many years by "*baba adriang*": (I am told that "*baba*" was applied generally to foreigners, and that "*adriang*" is the Portuguese pronunciation of the name "Adrian"). The hill is now chiefly a Chinese rubber estate, but there are still several wonderfully fine durian trees which, according to the Malays, must be some hundreds of years old."

Andaro. Eredia does not mark this place in any of his maps, and the situation is unascertained: Gerini speaks of "Aindra, the designation for the region to the East of the Ganges" (*Researches etc.* p. 29).

(7)

Dona Helena Vessiva; *i.e.* Eredia's mother, daughter of Dom Juan Tubinaga, King of Supa in the Celebes: see Chapter 25 of Part I (p. 54 *supra*).

(8)

NOTES ON PART I CHAPTER 5.

- (1) Compartments. The transcript has "peitacas." Garcia da Orta (f. 223 v) says that at Malacca the spaces in the interior of the durian were called *peitacas*. Dom Vieira's *Dicc. Port.* explains the word as meaning the room in a junk. It is Javanese *petak*, which has various meanings, one being "a compartment or subdivision in the hold of a ship." (*The Travels of Pedro Teixeira*. (*Hakluyt Society*: 1892). p. 178 n.) The corresponding Malay word is *petak* فَيْتَقْ

- (2) "*Romanyâs*": i.e. Malay 'rumeniya', *Bouea microphylla* Griff., the plum mango.
(Ridley. *The Flora of the Malay Peninsula*. (1922). I. p. 519: Foxworthy. *Minor Forest Products of the Malay Peninsula*. (1922). p. 210).

- (3) Chory or Cape Comoryn. Cape Comorin is "the extreme southern point of the Peninsula of India; a name of great antiquity."

It is the Κομαρ of the *Periplus* (c. 80-90), the Κομαρεια ἄκρον καὶ πόλις of Ptolemy (c. 150), the *Comari* of Marco Polo (1298), and the *Kumhari* of Abdulfeda (c. 1330).

The Portuguese poet Camoens (1572) "identifies the ancient Κωρυ or Κωλις with Comorin."

These are in Ptolemy distinct, and his *Kory* appears to be the point of the Island of Rāmesvaram from which the passage to Ceylon was shortest." (Yule and Burnell. *Hobson-Jobson*. (1903). p. 238).

Eredia's map on folio 28 R which purports to be a reproduction of Ptolemy's map of Indostan in Asia marks only 'Chori' and not Komaria: the distinction between the two points is clearly shown in the reproduction of Ptolemy's map of Taprobane in Codrington's *A Short History of Ceylon*, (1926), p. 4.

- (4) Cinnamon. The Malay name is "*Kayu Manis*" from which Garcia derives the word 'Cassia'.

The cinnamon of commerce is the bark of the tree *Cinnamomum Zeylanicum* Bl., a native of Ceylon. Ridley thinks that the true cinnamon is probably a very aromatic form of *Cinnamomum iners* Bl., which is one of the commonest low-country trees in the Malay Peninsula.

The bark is mainly used as a spice: it is also used in medicine as a cordial and stimulant, and in the manufacture of incense.

Ridley says that *Cinnamomum Zeylanicum* was introduced probably from Ceylon about 1806 and sparingly cultivated.

(Ridley. *The Flora of the Malay Peninsula*. (1922). III. p. 97: Foxworthy. *Minor Forest Products of the Malay Peninsula*. (1922). pp. 195. 208).

For cinnamon and other spices cf. Ridley's book *Spices* (1912) s. v.

- (5) "*Canafistola*". This would appear to be the 'Cana fistula' recorded from Malacca by Linschoten (1583).

Garcia da Orta has a colloquy on this tree and its uses. The name *Cana* was no doubt derived from the resemblance of the long stiff pod (sometimes two feet in length) to a stick. (*The Book of Duarte Barbosa*. (*Hakluyt Society*: 1921). II. p. 92 n.)

Ridley identifies it with *Cassia fistula* Linn. or Indian laburnum. (*The Flora of the Malay Peninsula*. I. p. 620).

Regarding the local name 'Bireksa' (Beraksa), Ridley writes "Evidently not a Malay word: the tree is only cultivated here and that not often." (*JRASSB*. No. 30. (1899). p. 60).

Other local names are 'Tengguli', 'Raja Kayu' and 'Dulang'. (Watson. *Malayan Plant Names*. p. 169).

Watt (*Dict. of Economic Products of India*. II. p. 218) says.

"The name *Cassia Fistula* . . was first applied to a form of cinnamon very similar to the *Cassia Lignea* of the present day, the name *Fistula* having been given because of the bark being rolled up."

"*Tamarindi*": *Tamarindus indica* L., the *Asam Jawa* of the Malays: the fruit is used in curries: it is probably a native of Africa. The origin of the name is supposed to be Arabic *Tamar-u' l-Hind*, 'date of India'." (6)

(Ridley. *The Flora etc.* I. p. 636: Yule and Burnell. *Hobson-Jobson*. p. 894).

Cobra wood. Mr. Ridley (amongst other kindnesses) writes to the translator "Pao de Cobra in India or Ceylon at least means *Strychnos Nux Vomica*, but Garcia adds two more which are evidently not *Strychnos*, and alludes to one in Malacca of which he gives no description. The only connecting link between these was that the wood was bitter." (7)

According to Dalgado, the name '*pau de cobra*' was given to various plants, such as *Rauwolfia Serpentina*. Benth., *Strychnos Colubrina* Linn., and *Aristolochia indica*. Linn. (*Glossario etc.* II. p. 196).

The superstition mentioned by Eredia is still current in Malacca.

Big tall tree. Mr. Ridley tells the translator that this is most probably dipterocarp wood-oil, "minyak keruwing." (8)

The *Dipterocarpaceae* are among the biggest trees of Malayan forests. (Ridley. *The Flora etc.* I. 209 et seq: Foxworthy. *Minor Forest Products etc.* p. 166).

Begbie (1834) speaks of the "*Kruing*" or oil-tree from which the wood-oil is principally extracted." (*The Malayan Peninsula*. p. 346).

Brasil-wood trees. "This name is now applied in trade to the dye-wood imported from Pernambuco, which is derived from certain species of *Caesalpinia* indigenous there. But it originally applied to a dye-wood of the same genus which was imported from India and which is now known in trade as Sappan. . . . The history of the wood is very curious. For when the name was applied to the newly discovered region in South America, probably, as Barros alleges, because it produced a dye-wood similar in character to the Brazil of the East, the trade-name gradually became appropriated" (9)

to the South American product, and was taken away from that of the East Indies." (Yule and Burnell. *Hobson-Jobson*. (1903). p. 113).

According to Dalgado, Brasil was known in Portugal before the discovery of India and of Brasil, where the name of "Santa Cruz" supplanted it. Presumably it is derived from 'brasa' [*i.e.*, 'red-hot coals', *cf.* French 'braise'] with reference to its colour. (*Glossario etc.* (1919). I. p. 149).

The wood, now known as 'Sappan', Malay 'Sepang', constitutes the most valuable dye-wood of the Peninsula. (Ridley. *The Flora etc.* I. p. 649: Foxworthy. *Minor Forest Products etc.* p. 174.)

- (10) Cotton trees. The text has "arvores de panha".

The modern form is 'paina' which, according to the dictionary, is a botanical word meaning 'a sort of very fine Brazilian cotton.'

Father Coroado tells the translator that the word 'panha' is still in use at Malacca, meaning 'cotton fresh from the tree'.

The Peninsula contains several varieties of *Malvaceae*, especially *Eriodendron anfractuosum* DC., called by the Malays 'kapok' or 'kabu'; besides various cultivated types, chiefly *Gossypium herbaceum* L. known as 'kapas' (from Sanskrit *karpasa*). (Ridley. *The Flora etc.* I. p. 253).

- (11) Round Pepper. *Piper Nigrum* L., Malay 'Lada hitam': used by the Malays as a medicine in cases of cholera. (Foxworthy. *Minor Forest Products etc.* p. 193: Watson. *Malayan Plant Names*. (1928). p. 226).

- (12) Long Pepper. Two distinct kinds of long pepper are sold in the native markets; namely, the dried fruit spikes of *Piper Longum*, a native of India, and *Piper officinarum*, C.D.C., a native of Java.

The Malay names are 'Bakek', 'Chabai', 'Kadok', or 'Sireh Kadok'.

Pepper is used in medicine for indigestion, colic and flatulency, and as an unguent in paralysis.

(Watson. *Malayan Plant Names*. p. 226: Foxworthy. *Minor Forest Products etc.* p. 193: Ridley. *The Flora etc.* II. p. 470).

- (13) "Renriure". No such Malay name is known at the present day. If the reading is right, the name is obsolete and the plant cannot be identified. The translator is indebted to the Reverend Father Hosten, S.J., of Bombay, for the suggestion that the correct reading should be "zenzivre", "ginger".

- (14) "Lancoas". *i.e.* Malay 'Lengkuas', *Alpinia Galanga* L.

The aromatic fruit is used in making curries. It is also used in native medicine as a wash. (Ridley. *The Flora etc.* IV. p. 279: Foxworthy. *Minor Forest Products etc.* p.192).

- (15) "Choncor": probably Malay 'Chengkor', 'Chekor'; *Kaempferia galanga* L., cultivated as a spice; the root is used as a

carminative stomachic. Eredia is the first writer to quote the name. (Ridley. *The Flora etc.* IV. p. 245: Foxworthy. *Minor Forest Products etc.* p. 192: Watson. *Malayan Plant Names.* p. 205: Dalgado. *Glossario etc.* I. p. 279).

Country saffron. The transcript has "açafrão da terra", a (16)
name which the Portuguese applied to *turmeric*: Garcia da Orta identifies 'country saffron' with *curcuma* and gives the Malay name as 'cunhet'. (Dalgado. *Glossario etc.* I. p. 8: Yule and Burnell. *Hobson-Jobson.* p. 780).

Hence Eredia would seem to refer to *Curcuma domestica* Val., the local turmeric, 'Kunyit' of the Malay Peninsula. It supplies the Turmeric used in curries and is also used as a dye. (Ridley. *The Flora etc.* IV. p. 254). Foxworthy says the rhizomes of *curcuma longa* L. are used as a medicine for dysentery. (*Minor Forest Products etc.* p. 192).

"Casumba". The Malay name 'kesumba' usually denotes (17)
Bixa orellana L., also known as 'Kunyit Jawa', *Anatto*, producing a red dye. (Watson. *Malayan Plant Names.* pp. 72. 75: Ridley. *The Flora etc.* I. p. 252).

In medicine the seeds are regarded as astringent and febrifuge. (Watt. *The Commercial Products of India.* p. 143).

Milburn speaks of "cosumba" "a red dye much used among the Malays" (*Oriental Commerce.* (1813). II. p. 310).

Possibly, however, Eredia refers to the Indian 'Kusumbha' (Malay 'Kesumba'), i.e. The Cultivated Safflower, Bastard Saffron, *Carthamus tinctoricus* Linn., which was introduced into China about the 2nd century B.C. It appears that among almost all nations there has been a certain confusion between Saffron and Safflower.

(Watson. *Malayan Plant Names.* p. 168: Yule and Burnell. *Hobson-Jobson.* pp. 779-780).

Foxworthy says the flowers of *Bunga Kasumba* are used for a wash after confinement. (*Minor Forest Products etc.* p. 204).

It is somewhat confusing to find that the Malays while denoting *Bixa orellana* by the name 'Kunyit-Jawa', called it also 'Kusumba-Kling' to distinguish it from 'kusumba-jawa', the name which they applied to *Carthamus tinctoricus*. (Crawford. *A Descriptive Dictionary of the Indian Islands.* (1856). p. 135).

"Betre": i.e. *Piper Betle* L., Malay 'sireh'. There are two (18)
cultivated varieties, 'sireh Malayu' and 'sireh China': commonly used for chewing with betel-nut.

The juice of the leaves is used in medicine for wounds in the ears.

(Ridley. *The Flora etc.* III. p. 40: Foxworthy. *Minor Forest Products etc.* p. 193).

Wine. See notes on Chapter 8 of Part I. p. 138 *infra.* (19)

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NOTES ON PART I CHAPTER 6.

- (1) Wolves and jackals. In fact wolves are absent from South Eastern Asia; jackals range down into the Malay Peninsula to about 12° North.

The translator is indebted to Mr. C. Boden Kloss, Director of Museums, Straits Settlements and Federated Malay States, for this and other information, as well as for valuable advice on miscellaneous points.

- (2) "Lynta". The text has a marginal note 'Linta digo Tambolim' and at the end of the chapter there is a picture of the animal in question with the superscription 'Tambolyn como Armadillo'.

Eredia here refers to the scaly ant-eater, *Manis javanica*; modern Malay 'tenggiling'.

In modern Malay 'lintah' means 'a horse-leech'.

Dalgado remarks (*Glossario etc.* (1919). II. p. 503), "Senhor Cabaton takes 'linta' as the Malay 'lanta' 'porcupine', used for 'pangolin', and explains that the confusion probably arose from the fact that both animals curl when frightened".

(In Wilkinson's Dictionary, the word is spelled 'landak').

Yule and Burnell (*Hobson-Jobson*. (1903). p. 668) write of 'Pangolin', "this book-name for the *Manis* is Malay *Pangūlang*, 'the creature that rolls itself up'. Scott says "The Malay word is *peng-goling*, transcribed also *peng-guling*; Katingan *pengiling*. It means 'roller', or, more literally 'roll up'.

The word is formed from *goling*, 'roll, wrap', with the denominative prefix *pe*, which takes before *g* the form *peng*."

Mr. Skeat remarks that the modern Malay form is *teng-giling* or *senggiling*, but the latter seems to be used, not for the *Manis*, but for a kind of centipede which rolls itself up.

"The word *pangolin*, to judge by its form, should be derived from *guling*, which means 'roll over and over'. The word *pangguling* or *pengguling* in the required sense of *Manis* does not exist in standard Malay. The word was either derived from some out-of-the-way dialect or was due to some misunderstanding on the part of the Europeans who first adopted it."

Marsden's *The History of Sumatra* (1811) contains a representation of this animal with the description "Tanggiling or Penggiling-sisek" (Plate XVIII).

It will be noticed that Eredia is careful to avoid responsibility for the accuracy of the story: he adds "this is what the natives relate."

Mr. Boden Kloss tells the translator that the story is well known and entirely without foundation. For this and other stories of the Pangolin, see Skeat, *Malay Magic*, p. 154.

- (3) Carbuncle. Gimlette in his *Malay Poisons and Charm Cures* (1923) writing of the bezoar stone, says "A stone of this sort, the *gêmala naga*, is said to have luminous properties, and to be used by dragons to light their way in the dark at night. Another, the

a powerful kingdom, while its abundance in natural resources and mineral wealth places it in a prominent position among the Malay States. Hence it must have been from a very ancient period one of the principal resorts of trade on this coast". (*Researches etc.* pp. 105-6).

(Gerini's estimate of Kelantan is far from correct at the present day, when Kelantan cannot claim anything higher than seventh place in the list of the nine Malay States.)

Eredia states that the Malay empire was founded at 'Pattane' in B. C. 3 (p. 231 *infra*) and that its seat was later moved to Pahang (p. 233 *infra*) where, he imagines, was produced the gold which found its way to Alexandria.

General commerce and trade. Information regarding the early trade of the Peninsula is scanty; but it seems most unlikely that its potentialities would not have been recognized by the Arabs, who systemized the trade between China and the West in the third century B. C. (Johnstone. *A Study of the Oceans*. p. 201): "In the 2nd century B. C. the trade with Ceylon seems to have been wholly in their hands: in the 8th century Arab traders were to be found in great numbers in China". (Van Ronkel in *Encyclopaedia of Islam*. Fasc. I. (1927). p. 551). Ptolemy (1st century A.D.) refers to 'Palanda', a city, 'Tharra', a town, 'Sabana', a mart, and 'Koli', a town, on the Peninsula. (Gerini. *Researches etc.* (1909). pp. 97. 99. 100. 105). 'Bêtumah', the Arab rendezvous of the 9th century, is located by Gerini in or near the island of Singapore (*op. cit.* p. 200). It seems probable, too, that in view of the gold, eagle-wood, camphor etc., which the Peninsula was known to produce, the foundation of the Malay settlement of Singapore in the thirteenth century was connected with this trade. Eredia's phrase "general commerce and trade" lacks precision: if he means that the Malacca of the historic Malay Sultanate was the first Malayan "world-port", he may be correct.

Founded. "Chinese culture, in the sense we now understand the word, arose in the valley of the Yellow River about 2,500 years ago, or possibly 500 years earlier" (*China Journal of Science and Arts*. Vol. III. No. 6. (1925). p. 346).

Lorded it. The history of Chinese suzerainty in the Indian Ocean has yet to be written: a brief note on this subject, therefore, will perhaps not be out of place. On land the Chinese armies did not descend below Champa; and when the Chinese first came to the Archipelago by sea in about the fifth century A.D. they adopted a policy of non-interference dictated by their traditional attitude of Olympian superiority, "the civilized rule of China is not fit for these benighted barbarians, therefore they are suffered to arrange their government as they like best, and even if they fail to recognize the superiority of China, and abstain from doing homage to the Emperor, it is not necessary to compel them"; but many Chinese emperors were not

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wholly indifferent to these tokens of respect from distant countries, and gradually it became the custom, on the accession of a new dynasty, to send envoys to the different countries which were in the habit of presenting tribute, informing them of the change that had taken place and inviting them to continue their allegiance.

When the Mongol prince Kublai Khan had made himself undisputed master of China in 1280, he at once adopted the Chinese tradition of universal dominion, and accordingly sent envoys all over the world, so far as he was aware of its existence, informing the various princes that a new family had ascended the throne of the world, and asking them to renew their allegiance.

But the prince of Tumapel in Java seems not to have recognized these claims: he cut or tattooed the face of the imperial envoy and sent him away in this ignominious state.

Kublai Khan was furious, and in 1293 despatched a fleet of 1000 ships with 30,000 soldiers to avenge the insult. After some preliminary successes, the Chinese generals realized the difficulty of carrying on guerilla warfare in these parts, and some 4 months later returned with a loss of 3,000 men.

After the unsuccessful expedition against Java the Mongol dynasty did not further occupy itself with the southern countries: and it was only after its expulsion from China that the former official intercourse was resumed.

Ch'êng-tsu (1403-1424), the Ming emperor, reversed the former policy of splendid isolation, and inaugurated a display of military force "in order to show that China was rich and strong".

From this time until the arrival of the Portuguese, China interfered continually in the affairs of the countries in the south seas, and issued orders to everybody; obedience in some cases being compelled by force of arms.

Thus in about 1404 the emperor of China appointed the king of 'Sumatra' (*i.e.*, the north coast of the island).

The principal display of Chinese imperialism begins with the expeditions of Cheng Ho (Sam Po) in 1405.

In 1405, according to a Chinese authority, the emperor appointed the king of Malacca; and we are led to suppose that the emperor's intervention put a stop to molestation by the Siamese.

In 1407 the emperor instituted the office of Pacificator of Ku-Kang (Palembang), and made an appointment thereto. In 1408 he ordered Java not to demand its annual tribute from Pu-ni (on the west coast of Borneo).

In 1412 and 1415 Cheng Ho's troops were engaged in north Sumatra.

But these activities were not limited to the Malay Archipelago: Cheng Ho visited 30 countries, proceeding as far as Magadoxu in East Africa.

In 1411 the king of Ceylon had the misfortune to deal unfairly with a Chinese mission, whereupon Cheng Ho retaliated by carrying off the king with his wives and children to China.

Ceylon paid tribute in 1436, 1445, and, for the last time, in 1459.

Yule says that one of the Chinese expeditions "seems actually to have brought Ceylon under a partial subjection to China which endured half a century."

In 1416, Calicut in India, among eighteen other countries, paid tribute to China.

Mendoza (1585) remarks that many of the trees and fruits in the kingdom of Calicut were "brought thither by the Chinos, when that they were lords and governours of that country".

On one occasion the Chinese, taking umbrage, "inflicted no small slaughter on the inhabitants" of Calicut, and thereafter ceased to visit the place.

Perhaps, however, on the whole the countries in the southern seas were fortunate to suffer as lightly as they did: for there seems little doubt that the emperor of China, if he had wished to undertake the labour and expense, could have conquered these countries in the same way in which he conquered central Asia from Turkestan to Pesia; we hear of a Chinese expedition, bound for Ormuz, calling at Sumatra in 1432 and again, on the return journey, in 1433.

The circumstances attending the emperor's last order are in the nature of an anti-climax, "the emperor Shih-tsung. . . issued a decree upbraiding the Franks, told them to go back to their own country, and ordered the kings of Siam and other countries to assist their neighbour in his need; none of these obeyed, however, and so the kingdom of Malacca was destroyed".

[Groeneveldt in *Miscellaneous Papers relating to Indo-China*. (1887). pp. 127. 129-30. 156-7. 167. 169. 170. 192. 195. 209. 211. 233. 243. 249. 253.

Howorth. *History of the Mongols*. I. p. 250.

Codrington. *A Short History of Ceylon*. pp. 85-6. 91.

Yule. *The Book of Ser Marco Polo*. (1926). p. 392.

Mendoza. *The History. . . of China*. (*Hakluyt Society*: 1853). p. 95.

Gerini. *Researches etc*. p. 651.]

Extended. "The first mention we find of a Chinese vessel in history is B.C. 331, when Berenice is said to have traded with Musiris, exchanging goods there which were probably brought by native vessels from China to Ceylon". "In 622 A.D. the Chinese became much more enterprising as navigators. They. . . traded with the Persian Gulf". "The vessels of China, however, had ceased to repair to the Persian Gulf long before the Portuguese made their appearance in Calicut, but from the time of Cosmas to that of Marco Polo, they appear to have shared with the Arabians and Persians the carrying trade of the East, and to have extended their voyages even to the remote island of Madagascar". (*China Journal of Science and Arts*. Vol. III. No. 4. (1925). pp. 191-2). Hirth mentions two sea-routes between China and the West; the one direct 1930] *Royal Asiatic Society*. (20)

from the Red Sea to Annam and China, the other to the coast of Pegu and thence by the Salwin and Irawaddy to Yunnan. (*China and the Roman Orient*. (1885). pp. 173. 179).

- (21) Traces of China influence. Cf. Gerini. *Researches etc.*; Yule. *The Book of Ser Marco Polo*; Ballard. *Rulers of the Indian Ocean* (chapter 1); Groeneveldt in *Miscellaneous Papers relating to Indo-China*. (2nd series). Vol. I. Traces of Chinese influence have been found at Lamu off the East African coast.

NOTES ON PART I CHAPTER 13.

- (1) Boats. As to the part played by the Malays in the history of boat-building, one learns from a recent writer that the Malays introduced the dug-out canoe into North Australia; that the Malays of Singora Lake still build boats with a curious double-prow, having affinity with that used in boats on Victoria Nyanza and in boats depicted in ancient Swedish rock carvings; and that the idea of fixing the double outrigger was developed in the Malay Archipelago soon after the Malays moved into the region; the double outrigger was carried back to the West by the Malays and survives at the present time in Madagascar and the neighbouring coast of Africa. (Forde. *Ancient Mariners*. (1927). pp. 3. 4. 87).

- (2) "*Bâlos*". Eredia here describes the Malay '*balok*', 'a small sailing craft'.

It is clear from the REPORT ON THE GOLDEN CHERSONESE (p. 232 *infra*) that the '*balloon*' was a smaller type of craft, "for ordinary service in navigating the rivers, they employ other, small, boats, which they call "*ballôes*" or "*nabangues*".

- (3) "*Rôttas*". "The long stem of various species of Asiatic climbing palms, belonging to the genus *Calamus* and its allies, of which canes are made. . . and which, when split, are used to form the seats of cane-bottomed chairs and the like. From Malay *rotan*, which Crawfurd derives from *rawat*, 'to pare or trim', applied to various species of *Calamus* and *Daemonorops*". (Yule and Burnell. *Hobson-Jobson*. p. 757).

The incorrect form '*rattan*' is to be found as early as 1673.

Nearly 300 species of '*rattan*' have been described. The chief use is for walking-sticks and in the weaving of furniture. (Foxworthy. *Minor Forest Products etc.* p. 153; Ridley. *The Flora etc.* V. p. 34).

- (4) "*Pongo*". The translator has been unable to obtain an explanation of this curious word, and can only suggest that Eredia may have intended to write *Bongô*, for Malay *Bengkung* (the *Bungkung* of Dennys), the name given to screw pines, *Pandanus* spp., of which more than 20 are found in the Peninsula: the leaf is cut into strips which are woven into mats. (Ridley. *The Flora etc.* V. p. 73; Foxworthy. *Minor Forest Products etc.* p. 175). The Polynesians recently used enormous triangular sails made of *Pandanus* mat. (Forde. *Ancient Mariners*. (1927). p. 74).

Mundy (1637) speaks of Cantonese junks with "sails of 'cajanes' and Bambooes, made like Mattes." (*The Travels of Peter Mundy etc.* (Hakluyt Society: 1919). p. 203).

"*Lancharas*". "A kind of vessel often mentioned in the Portuguese histories of the 16th and 17th centuries. The derivation is probably Malay *lanchar*, 'quick, nimble'. Mr. Skeat writes: "The real Malay form is *Lanchar-an*, which is regularly formed from Malay *lanchār*, 'swift', and *lanchara* I believe to be a Portuguese form of *lanchar-an*, as *lanchara* could not possibly, in Malay, be formed from *lanchār*, as has hitherto been implied or suggested". (Yule and Burnell. *Hobson-Jobson*. (1909). p. 502). (5)

The form *lancharas* also occurs.

Eredia gives a sketch of a *lanchara* on folio 30 V.

"*Bantis*". Dalgado (*Glossario etc.* (1919). I. p. 97) describes '*bantim*' as a two-masted cargo-boat. Forrest (1784) uses the correct Malay form '*banting*'. Resende (c. 1646) describes '*bantims*' as "very swift vessels with oars and masts". (*JRASSB*. No. 60. (1911). p. 8.) (6)

"*Ballões*". Yule and Burnell describe a '*baloon*' as "a rowing-vessel formerly used in various parts of the Indies, the basis of which was a large canoe dug-out. There is a Marathi word *balyānw*, a kind of barge, which is probably the original". (*Hobson-Jobson*. p. 53). Dalgado on the other hand considers the derivation is from the Tamul-Malayalam '*Vallam*', 'a canoe made from the trunk of a tree', and thinks that the Malays got the word '*balang*', 'to paddle quickly', as they got the words '*parau*', 'a boat or ship', and '*kapal*', 'a ship', from the people of India, before the arrival of the Portuguese. (*Glossario etc.* (1919). I. p. 85). (7)

Resende (c. 1646) says of "baloons", that "they resemble ships of war being wider but not so long, having oars, two masts and two helms called *camudes*". (*JRASSB*. No. 60. (1911). p. 8).

Father Coroado tells the translator that the name '*ballão*' is still applied to a kind of small fishing-boat at Malacca.

"*Nambangues*". The translator has been unable to discover any explanation of this word. The Malay '*tambang*' means simply 'a ferry-boat'. (8)

The "*Malay Annals*" (p. 52) speak of vessels called "*malang-bang*", which may be the same word; according to Wilkinson's Dictionary the better spelling is '*mēlambang*' and the meaning 'a broad flat-bottomed boat'.

Mere arm power. Eredia appears to mean that the method of propulsion was similar to that now employed in a Canadian canoe. (9)

Pulo Catay: unidentified; unless the reading should be 'Caray'; in which case the island might be the 'Pulo Cara' placed in the (10)

maps of Linschoten (1598) and Speilbergen (1616) at about $7^{\circ} 30'$ N, and in the map of Valentyn (1726) at about $8^{\circ} 30'$ N: this would appear to be the island now called Koh Krah, about 30 miles E of Lakon (Ligor), situated at about $8^{\circ} 25'$ N: see British Admiralty chart No. 998.

- (11) Taranda: probably modern Trang, called 'Tarangan' by Resende, and apparently the 'Tarnova', 'Tarrano', 'Tarrana', 'Toram', and 'Toran' of the old maps.

- (12) "Juncós". Yule and Burnell describe a 'junk' as "a large Eastern ship; especially (and in later use) exclusively a Chinese ship. This indeed is the earliest application also; any more general application belongs to an intermediate period. This is one of the oldest words in the Europeo-Indian vocabulary. It occurs in the travels of Friar Odorico, written in 1331. The French translators of Ibn Batuta derive the word from the Chinese tchouen (chwen)" [apparently 船]. "It is possible that the word may be eventually traced to a Chinese original, but not very probable. The old Arab traders must have learnt the word from Malay pilots, for it is certainly the Javanese and Malay *jong* and *ajong*, 'a ship or large vessel'. Fryer (1673) also speaks of "Portugal junks". The word had thus come to mean any large vessel in the Indian seas." Garcia (1563) describes 'Juncos' as 'certain long ships that have stern and prow fashioned in the same way'. Friar Odorico (1331) speaks of a 'Zuncum' which had 'good 700 souls' on board. (Hobson-Jobson. (1903). p. 472). In Part II chapter 1 (page 60 *supra*) Eredia refers to a 'junk or lorchá'.

According to Dennys, the Malays call the largest Chinese trading-vessels *wangkang* and the smaller ones *top*. (*A Descriptive Dictionary etc.* (1894). p. 173).

- (13) "Sômas". Dalgado derives the word from the Malay 'som', explained by Wilkinson as 'a ship of an obsolete type', and describes it as "an old-time boat for commerce and war in China and Malasia, resembling the junk." He gives a number of quotations ranging from 1552 to 1782 in which the word appears as 'soma', 'sominha', 'sormos', 'sommas', and 'sommès'. (*Glossario etc.* (1919). p. 67).

The "Malay Annals" (1612) speak of the King of Siam as ordering the preparation of "eight hundred vessels of the kind called sum". (p. 133).

Peter Mundy (1637) refers to foreign-going vessels called "somars". Temple says the word appears to be a Portuguese form taken from one of the names for coasting vessels on the West Coast of India; he mentions *Shuvāl*. (*The Travels of Peter Mundy. (Hakluyt Society: 1919).* p. 206). Smyth's *Sailor's Word Book* explains 'some' as 'a Japanese junk of burden', and Fennell's *Dictionary of Anglicized Words and Phrases* as 'Jap. a small trading junk'.

Father Coroado tells the translator that the word 'soma' is still used at Malacca by the Portuguese and Malays as equivalent to 'junk'.

Carracks. The transcript has "urcas".

(14)

According to Pieris, the 'urca' and the 'carraca' originated in Northern Europe. They were chiefly used as cargo-boats. Twenty-five *urcas* carrying from 300 to 900 tons accompanied the 'Invincible Armada' in 1588. "The *nau* in Spain was a *carraca* in Italy and an *urca* in Germany." (*Ceylon and Portugal*. (1927). p. 355).

"It is in the fifteenth century that the carrack was in her prime, and we see her then as a three-masted ship developed by the Southern nations from the Northern one-master and then taken up all over Europe. Genoa was the chief port from which carracks came to England." (Anderson. *The Sailing Ship*. (1926). p. 117).

"*Lorchas*". Yule and Burnell describe a 'lorcha' as "a small kind of vessel used in the China coasting trade. Giles explains it as having a hull of European build, but the masts and sails Chinese fashion, generally with a European skipper and Chinese crew. The word is said to have been introduced by the Portuguese from S. America (Giles, 81). But Pinto's passage shows how early the word was used in the China seas, a fact which throws doubt on that view. Other suggestions are that it is Chinese *low-chuen*, a sort of fighting ship, or Portuguese *lancha*, or *launch*." (*Hobson-Jobson*. (1903). p. 521). Dalgado (*Glossario* etc. I. p. 533) writes "I imagine that 'lorcha' might be a corruption of the Chinese 'long-chuen' of which the Padre Halde [1735] says, "They prepare for that day [the feast] small boats, long and narrow, all decorated, which bear, on one of the ends, the figure of a dragon, and that is why they are called Long tchuen" [*i.e.* 龍船, 'Dragon boats'.]

(15)

As there is a place named Lorch in the Iberian Peninsula (38° 51' N: 0° 11' W), one might have imagined that the word 'lorcha' was of Spanish or Portuguese origin, but the authorities are apparently not prepared to consider such a possibility.

A chapter describing the Lorch, with a coloured representation, will be found in Donnelly's *Chinese Junks*. (1924).

"*Lyolyo*". Dalgado writes of 'lio-liu', "Chinese oar, very large, apparently derived from 'yi-liu', 'rowing'. The term is used at Macau". He quotes instances of its use from 1569 to 1899. (*Glossario* etc. I. p. 529). Wilkinson's Dictionary (*s.v.* liyu 流) gives the expression 'liyu-liyu', 'the stern paddle in a Malay boat'. Favre in his Malay Dictionary writes the Chinese character as 流 but no such meaning as 'sweep' is given in Giles' Chinese-English Dictionary.

(16)

(Yule and Burnell. *Hobson-Jobson*, p. 521, query the term 'lyolyo' as used by Eredia, but in view of the above references there seems no reason to doubt its accuracy).

Obviously the English word 'yuloh', 'to scull a boat from the stern', is a transliteration of two Chinese words, viz.

搖 (Giles, No. 12, 916)

Mandarin *Yao*

Amoy Hokkien *Io*

'to sway'.

櫓 (Giles, No. 7,839)

Mandarin *Lu*

Amoy Hokkien *Lo*

'a long oar, a sweep'.

"Nowadays... the Yuloh on each side is not generally used in the ocean-going junks, except to assist in bringing the vessel around in a light wind and for propelling purposes in a calm, or when coming to an anchorage." (*The China Journal of Science and Arts*. Vol. III. No. 4. (1925). p. 198). Eredia here uses the term 'lyolyo' for the kind of vessel in which the sweep was employed: the Malays speak of a 'kotak liyu'.

- (17) Mangic Sea: *i.e.* the sea of Mangim, the south China sea. The Sung empire was usually known by its Mongol conquerors as 'Mantzi' (written 'Mangi' by some of the old travellers), a word which western Asiatics identified with 'Machin' (from the Sanskrit 'Mahachin'), one of the names applied to China by Persian and Arab traders.

Eredia has the form 'Mangico'.

- (18) Invented. This view has other supporters: for instance Donnelly writes that the Duke of Chow first made the compass in A.D. 1112. "There are no records in Europe to disprove this fact, and it is merely conjecture on which the historians of the west pin their faith". (*Chinese Junks*. (1924). p. 5).

The opposite view is maintained in the *Encyclopaedia Britannica* (11th edition. Vol. 6. p. 806). "There is now little doubt that the claim formerly advanced in favour of the Chinese is ill-founded". "There is no genuine record of a Chinese marine compass before A.D. 1297."

- (19) Pole. Eredia does not say which Pole. In fact, the Chinese supposed the needle to point to the South.

- (20) Simdi. Eredia refers to the territory on the Indus below the Punjab, modern 'Sindh'. Thevenot (1666) and Grose (1760) mention 'Tatta' as an alternative name.

- (21) Cochim: *i.e.* modern Cochin.

- (22) Simlao or Chimlao: apparently Chilaw, "a place on the west coast of Ceylon, an old seat of the pearl-fishery". (Yule and Burnell. *Hobson Jobson*. p. 195).

- (23) Jaos. In view of the migration of a 'Javanese' people from Western Indonesia to Madagascar, it is interesting to hear of the presence of 'Javanese' in Ceylon.

- (24) "Lagueys": *i.e.* the plural of 'laguel', derived apparently from Persian *lāghar*, meaning 'thin'. Dalgado says a 'laguel' is

similar to a 'taurim'. (*Glossario etc.* (1919). I. p. 505). It would seem that Eredia is the only European writer to quote this word.

Polybotra: *i.e.* Patna, "the chief city of Bahar; and the representative of the *Palibothra* (*Pātaliputra*) of the Greeks. Hindustani *Pattana*, "the city". (Yule and Burnell. *Hobson-Jobson*. p. 686). (25)

NOTES ON PART I CHAPTER 14.

"*Orancayas*": *i.e.* the pluralized form of the Malay '*Orang Kaya*' literally 'a rich man', "in the Archipelago, a person of distinction, a chief or noble.....Mr. Skeat notes that the terminal *o* in *arangkaio* represents a dialectical form used in Sumatra and Java". (Yule and Burnell. *Hobson-Jobson*. p. 644). (1)

Cock-fighting. Cf. Newbold (*Political and Statistical Account etc.* (1839). II. p. 179); Wilkinson (*Papers on Malay Subjects. Life and Customs*. Part III. p. 62); Skeat (*Malay Magic*. (1900). p. 475). (2)

"*Rajavas*". Eredia writes:— (3)

"*Vajanas*" on folio 31 V of the "*DECLARACAM*" (the present context):

"*Rajavas*" on folio 32 R of the "*DECLARACAM*";

"*Raiauas*" on p. 78 of the "*INFORMACAO*" (p. 232 *infra*).

Dalgado treats "*rajavas*" ("*raiauas*") and "*vajanas*" as different words.

"*Rajava*" he explains as "dancing-girl of Malacca who evokes evil spirits. From Malay *rachau* 'delirium'."

He also quotes from Manucci (1665), *Storia do Mogor* (III. p. 203). "The reader should know that these Rajava people are for the most part magicians, and have a compact with the devil." (Dalgado. *Glossario etc.* (1919). II. pp. 246. 514).

"*Vajana*" Dalgado explains as "dancing-girl of Malacca. Apparently connected with the Malay *bajan* which Wilkinson defines as 'evil spirit, familiar spirit' in the sense of a woman who holds communication with the spirits, spiritist." (*Glossario etc.* II. p. 401).

Wilkinson translates *rachau* as 'delirious, raving of persons in high fever'; and *bajang* as 'an evil spirit; a familiar spirit'.

The word "*Vajanas*" is not found elsewhere than in the present passage; and should be read as "*rajavas*", according to the 'Errata in the Portuguese text' printed after page 100 in Janssen's book. It may be added that the list of errata does not appear in some copies of Janssen's work; it will not be found in the copy belonging to the Raffles Library at Singapore; and it would seem that Dalgado was unaware of the error.

"*Rabanas*"; *i.e.* the pluralized form of Malay *rĕbana*, a tambourine: the *rĕbana* has one face, the *gĕndang* either one or two. According to Wilkinson's *Dictionary* the word is of Indian origin. (4)

- (5) Highly appreciated. "To music, Malays are passionately devoted, particularly to that of the violin". (Newbold. *Political and Statistical Account etc.* (1839). II. p. 184).
- (6) Pulo. He refers, it would seem, to the place of this name which is marked on the map (see p. 211 *infra*) and apparently to be located in the vicinity of the modern Gading.
- (7) Bima: apparently Bima in the island of Sumbawa; from which in 1913 some 4,000 horses were exported: the largest and strongest horses in the Dutch East Indies come, however, not from Sumbawa, but from Sumba (Sandalwood Island).
- (8) "*Calim*". The connection, if there be any, between 'Kalah' (the place so-called by the Arabs), 'Klang' (the modern town in Selangor, Eredia's 'Calan'), 'Këlian' (a surface mine), 'Kalang' (said to mean 'tin' in Malay) and other similar words, has not been adequately explained. It seems certain, however, that the 'Kalah' of the Arabs was situated somewhere on the western coast of the Malay Peninsula, south of Kra and north of Klang (probably Ferrand is right in identifying it with Kra): it is probable too, that Kalah contained a mine of what the Arabs called *Kala'i*, a word which became the Portuguese *calain*.
- According to Gerini "the terms *Kāla* and *Kola* were employed to designate either lead or tin, but more especially the latter metal; and.....they were spread all over the East under the form of *Kālin*, out of which the Arabs made *al-kali*". (*Researches etc.* (1909). p. 88).
- The same writer appears to indicate that the term *Kala*, *Kola*, was the origin of the name *Kalah*, *Kalah-bar*, *Kolah-bar* (p. 89).
- The first quotation in which *al-kala'i* is mentioned dates from c. 920. (Yule and Burnell. *Hobson-Jobson*. (1903). p. 145).
- The Portuguese called it 'Calem', 'Calaim', 'Calayn', 'Calin', 'Callaym', 'Calain' or 'Kalin'.
- The exact nature of the substance is not free from doubt: most writers speak of it as tin, but Pyrard de Laval (1610) refers to "*Calin* which is white like tin, but harder, purer, and finer" (*The Voyage of Francois Pyrard*. I. p. 234), and Cardim (1646) speaks of "*calain*, qui est un metal metoyen, entre le plomb et l'estain" (*Relation de la Province de Japon etc.* p. 163).
- (9) Bencales. The transcript has 'Beneales'; apparently an error for 'Bencales' i.e. Bengkalis "an island lying about lat. 1° 30' N. due South of Malacca and close to Sumatra; from which it is separated by Brouwer (otherwise Brewer) Strait. The chief place on it bears the same name as the island".
- (10) Possessed. Compare Winstedt's paper on *The Shaman's Possession* in *JRASMB*. Vol. V. Pt. II. (1927). pp. 342—45; "The Patani female magician,.....whirls her long black tresses as one whirls a mop". "The pious Muslim Malay dismisses the trance of the modern shaman as make-believe and declares that to-day it is no more genuine than the trance of the Malay nautch-girl who is sup-

posed to be possessed by the spirit of dancing and to eat nothing but flowers for months".

Cf. also Winstedt. *Shaman Saiva and Sufi*. (1925). Chapter VII. (The Malay Shaman's Seance): and Skeat. *Malay Magic*. p. 457 *et seqq.*

First Bishop. In the next Chapter (p. 41 *supra*) Eredia (11) describes how the first Bishop excommunicated the wild Banuas who changed themselves into man-eating tigers.

"*Vilca*". The translator has been unable to identify this word; (12) Eredia clearly refers to some intoxicating plant which in the next chapter he says is found growing on Gunong Ledang as well as in America.

See note on p. 166 *infra*.

Immodest. Valentyn, the phlegmatic northman, is more (13) gallant, "these women too are generally of a more exalted mind than other women of India, and they excel also in loveliness and wit far above others". (*JRASSB*. No. 13. (1884). p. 54).

Banuas. "The wild tribes of Malaya are credited with mar- (14) vellous powers of harming a person from a distance": cf. the examples given in *JRASSB*. Vol. III. Part III. (1925). p. 17.

Herbalists. Newbold (1836) says that the Malays have a high (15) estimation of their skill in medicine and knowledge of the virtues of herbs, roots, plants etc., investing their sages, Puyongs, even with supernatural powers. (Moor. *Notices of the Indian Archipelago*. (1837). p. 62).

NOTES ON PART I CHAPTER 15.

Chapter 15. A translation of this Chapter will be found in (1) *JRASSB*. No. 60. (1911). p. 23 *et seqq.*

Gunoledam. Numerous references to Gunong Ledang and (2) Queen Putry will be found in writings on Malay folk-lore.

Cf. Skeat. *Malay Magic*. (1900). pp. 71. 82. 158. 163-166.

Winstedt. *Shaman Saiva and Sufi*. (1925). p. 24.

JRASSB. No. 83. (1921). p. 92: (a parallel in Persian literature).

" No. 62. (1912). p. 24: (another version).

" No. 32. (1899). p. 213: (another version).

" No. 24. (1891). p. 165: (another version).

It may be added that in his map of the Malacca district Eredia places Gunong Ledang on the wrong side of the Muar river (unless, of course, the river has since changed its course: a few years ago the Selangor River near Kuala Kubu in a single night cut out a new channel for itself over a space of about 1 mile).

Lob. The transcript has 'Job', which the translator amends. (3)

Tigers. Annandale and Robinson have a curious reference to (4) "*Main Putry*", a play to which the two tigers attached to the family would come and listen. (*Fasciculi Malayenses. Anthropology*. (1903). p. 79).

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Cf. *JRASMB*. Vol. III. Pt. I. p. 72: the war between the tiger-clans of Gunong Ledang and Paroï.

JRASSB. No. 86. (1922). p. 378: the *Akuan* or spirit-friends.

JRASSB. No. 85. (1922). p. 36: the tiger-breed families.

Also Skeat. *Malay Magic*, *passim*.

- (5) "*Vilca*": unidentified: this word is not in the dictionary.

Father Joseph De Acosta (1590) says of the Peruvian sorcerers "they make a thousand ceremonies and sacrifices to this effect, with the which they mocke the Divell and grow exceeding drunke, for the doing whereof, they particularly use an herbe called Villca, the juyce whereof they mingle with their chicha....." (*The Natural and Moral History of the Indies*. (*Hakluyt Society*: 1880). II. p. 368).

The annotator says of 'Villca', "A tree, the fruit of which is a purgative".

Possibly there is a connection between the word 'vilca' ('bilca') and ('benk') 'bhang'.

At any rate the substance appears to have been similar to bhang, obtained from Indian hemp, *Cannabis Indica*.

- (6) Tages. According to the story told by the Etruscans and after them by the Romans, Tages, a minor Etruscan deity, grandson of Jupiter, was the founder of the art of divination in Etruria. When Tarchon was ploughing a field near Tarquinii, the wondrous child Tages was cast out of a clod by the plough.

The ploughman's cries attracted a crowd, whom Tages proceeded to instruct in the art of divination. Having done this, he suddenly disappeared.

His instructions were for a time handed down orally, but were subsequently recorded in writing and the twelve books of Tages ('*libri Tagetici*') containing the complete system of Etruscan lore ('*Etrusca disciplina*') were studied in the divination schools of Etruria.

(*Encyclopaedia of Religion and Ethics*. (1912). Vol. V. p. 537: *La Grande Encyclopédie*. Vol. XXX. p. 868: quoting Cicero. *De Divinatione*. II. 23; Ovid. *Metamorphoses*. XV. 553 and other writers).

- (7) Banuas. "The Malay were-tiger that results from a man turning himself into a tiger by magic agencies (lycanthropy) is in a class by itself, and is probably an example of impulsive insanity."

(Gimlette. *Malay Poisons and Charm Cures*. (1923). p. 26).

For the same belief among the Negritos, see Evans, *Ethnology and Archaeology of the Malay Peninsula*. (1927). pp. 25, 26, 27.

Dennys gives the Malay name for a were-tiger as *Blian* or *Chenaku*.

The first reference to this valuable attribute appears in the Chinese writer Ma Huan (c. 1425-32) "Some tigers are able to assume human shape and in broad daylight enter the market place. Those who detect one lay hold of it and kill it".

Blagden comments "The superstition that men are able to turn themselves by magic into tigers, if they know how it's done, is firmly held by Peninsular Malays. This is the earliest mention of it that I can remember to have seen". (*T'oung Po.* Vol. 16. (1915). p. 115).

"From such *séances* [to rid a house of a ghost] cats and dogs are generally excluded, in case the medicine-man should eat them while he is in his trance. Were he to do so, he would become a tiger or some other wild beast". (*JRASMB.* Vol. V. Pt. II. (1927). p. 343).

It need scarcely be said that the attribute is valuable because it enables its possessor to earn an adequate and comfortable income from the periodic contributions of those who do not wish to fall foul of the were-tiger: a particularly impudent attempt is recorded from Kelantan during the last year or so. Nor are the Malays the only victims of superstition: in the year of grace 1923 an Indian, Karapan, reported to the Police at Kuala Lumpur "I heard that Sinniah was going to murder my wife and myself. My wife became ill. She grew worse and I brought her to the Police Station. Sinniah has not been near our house. I am sure my wife's food has not been tampered with and that nothing has been administered to her: but I suspect that Sinniah has worked some evil by means of witch-craft from afar".

An earlier reference to the were-tiger belief in India will be found in Ibn Batuta (c. 1342) who speaks of Jugi (Yogi) seizing people in the guise of a tiger. (Gibb. *Ibn Batuta.* (1929). p. 224).

First Bishop. This incident is referred to by Resende (*JRASSB.* (8) No. 60. (1911). p. 5).

Dennys remarks that tigers in the early days of Portuguese occupation were so plentiful that the want of inhabitants was seriously attributed to this cause. (*A Descriptive Dictionary etc.* (1894). p. 211).

Mouros. Yule and Burnell write of 'Moor, Moorman', "A (9) Mahommedan: and so from the habitual use of the term (*Mouro*), by the Portuguese in India, particularly a Mahommedan inhabitant of India.....the Mahommedans whom the Portuguese met with on their voyages to India, on what coast soever, were alike styled *Mouros*; and from the Portuguese the use of this term, as synonymous with Mahommedan, passed to Hollanders and Englishmen. The word then, as used by the Portuguese discoverers, referred to religion, and implied no nationality." (*Hobson-Jobson.* (1903). p. 581-2).

Chelias. Apparently the word is merely a variant form of 'Chelis': (See note to Part I Chapter 1: p. 99 *supra*): for in this context one would expect the word 'Moors' to cover all Muham- (10) madans, among whom were reckoned the 'Choolias'.

"*Chūliā* is a name given in Ceylon and in Malabar to a particular class of Mahommedans and sometimes to Mahommedans generally." (Yule and Burnell. *Hobson-Jobson.* p. 207).

NOTES ON PART I CHAPTER 16.

- (1) Ecnephia: ἑκνεφέλας, 'a hurricane caused by clouds meeting and bursting'. (Liddell and Scott).
- (2) Tiphon: τυφῶν, 'a furious whirlwind, typhoon, that rushes upwards from the earth whirling clouds of dust'. (Liddell and Scott).
upwards from the earth whirling clouds of dust'. (Liddell and Scott).

The etymology of the word 'typhoon' has been much disputed.

It has been derived from the Chinese *tái fung* (大風) and Formosan *t'ai fung* (太風).

Yule and Burnell think "the probability is that Vasco and his followers got the *tufão*, which our sailors made into *touffon* and then into *typhoon*, as they got the *moncão* which our sailors made into *monsoon*, direct from the Arab pilots".

"The Arabic word is *tūfān*, which is used habitually in India for a sudden and violent storm. And there can be little doubt of its identity with the Greek τυφῶν or τυφών".

(Hobson-Jobson. (1903). p. 947).

Dalgado shares the same view. "The Portuguese did not derive the word from the Greek *typhōn*, which normally should give *typhão* or *tifao*, nor, in all probability, from the Chinese *ta-fung*, or *t'ai fung*, "great wind", but from the Arabic *tufān*, of which it is an exact transcription". (*Glossario etc.* II. p. 389).

- (3) Nitrous. The translator cannot explain this physical theory or even the exact meaning of 'salytroso'. The dictionary translates 'salitre' as 'saltpetre, nitre'. But nitrates of sodium and potassium do not appear to occur in Malaya: indeed Castanheda records that junks from China brought iron and 'salitre' to the country, though saltpetre (Malay *sāndawa*) is obtained, according to Dennys, from the decomposed dung of birds and bats in caves: this is probably what Willbourn refers to when he records of Gunong Labuah in Kedah "It is said that natives extract saltpetre from earth on cave floors, and use it to make their gunpowder" (*JRASMB.* Vol. IV. Pt. III. (1926). p. 307).

In this Chapter the sea, and in Chapter 18 (p. 46 *supra*) the land, is said to be 'nitrous and windy'.

- (4) Dorados. The dorado, "gilt-head" of Indian waters has been identified with the sea-bream (often called "dolphin"), *Coryphaena hippurus* Day. (*The Voyage of Francois Pyrard.* (Hakluyt Society: 1887). I. p. 189.

Presumably by the Malayan dorado, Eredia refers to the *Sparidae* (sea-brems); including *Gērētak lantei*, *Anjang-anjang*, *Kērisi*, *Dēlah*, *Bēras-beras*, and *Asoh-asoh*.

(Maxwell. *Malayan Fishes.* (1921). pp. 35. 94).

The 'Kerisi' is called by the Chinese 紅姑鯉魚 (Cantonese, *Hung Kwu Lei Yü*), 'red "Kwu-lei" fish'.

- (5) Red-fish. The translator is indebted to Mr. W. Birtwistle, Officer in charge of the Fisheries Department, Straits Settlements and Federated Malay States, for the suggestion that Eredia hereby

intends not any particular species of fish, but 'red fish' in general, just as the Malays speak of '*ikan merah*'. Most prominent would be *Lutianus roseus* Day, the sea-perch, called by the Malays *ikan merah* (or in Penang *jěnehak*) and by the Chinese 紅魚 (Cantonese, *Hung Yü*), 'red fish'. (Cf. Maxwell. *Malayan Fishes*. pp. 31-3. 92). (6)

Tagus-fish. The transcript has "taynhas".

According to the Dictionary, "tainha" is a contraction of "Tagana" i.e. "fish of the Tagus".

The translator has been unable to identify this fish from the dictionary meaning of "quab, miller's thumb".

In the unpublished TREATISE ON OPHIR, folio 46 R, Eredia speaks of "the fishing-lake of Sumatra in the district of Gori, where occur splendid "tainhas", and a great number of "dourados" and other fish".

Seer-fish. According to Dalgado (*Glossario etc.* II. p. 204) (7) the name 'peixe-serra' was applied in India and Oriental Africa to a species of fish of the genus 'cybium'.

The name was derived from the dorsal and anal fins which resemble a saw.

Tennent in his *Ceylon* (1860) identifies the 'seir-fish' with *Cybium guttatum* Bl. Schn., called by the Malays *Těnggiri papan*, and by the Chinese 馬加魚 (Cantonese, *ma ka yü*), 'ma-ka fish'.

The Těnggiri is the well-known sporting fish, the Spanish Mackerel of the Philippines and Australia.

When salted, the fish lasts a long time: it is highly esteemed: in the Portuguese fleets in India it was customary to give the crews this fish as an accompaniment with rice: Maxwell regards it as the best fish in Malayan waters.

Pomfrets. According to Dalgado (*Glossario etc.* II. p. 151), (8) this fish, 'pampano', derives its name from 'pampano', 'a vine-leaf', which it resembles: he identifies it with various species of *Stromateus*, which according to Day are all reducible to *Stromateus sinensis*, 'the white pomfret', *Stromateus cinereus*, which is, when immature, 'the silver pomfret', and when mature 'the gray pomfret', and *Stromateus niger*, 'the black pomfret'.

Maxwell describes the 'bawal' as one of our most popular edible fish, taking a high place among our very best food fishes.

He gives the local names as *Bawal chermin* (*Stromateus atous* C.V.), *Bawal puteh*, *Bawal itam*, *Bawal kědewas* (*Stromateus cinereus*), *Bawal niger* (*Stromateus tambak*). (*Malayan Fishes*. (1921) pp. 28. 91).

The Chinese names are:—

Bawal chermin, 鏡昌魚 (Cantonese, *keng ch'eong yü*) "mirror 'ch'eong' fish".

Bawal itam, 烏昌魚 (Cantonese, *wu ch'eong yü*) "black 'ch'eong' fish".

Bawal puteh, 白昌魚 (Cantonese, *pák ch'eong yü*) "white 'ch'eong' fish".

- (9) Rays. For the Beaked, Eagle, Electric, and Sting Rays see Maxwell. *Malayan Fishes*. (1921). pp. 52. 53. 101.

The generic name for the ray among the Malays is *pari* and among the Chinese 方魚 (Cantonese, *fong yü*), 'square fish'.

- (10) Dog-fish. The transcript has "cassoes".

Apparently Eredia intends to refer to sharks and dog-fish in general.

According to Carus (*Prodromus Faunae Mediterraneae*. 1885), "casso" is the vulgar name applied around the Spanish coast to certain selachoid fishes.

The generic name among the Malays is *yu* and among the Chinese 沙魚 (Cantonese, *sha yü*), 'sand fish'.

- (11) "Laramparam". Apparently Eredia refers to either the 'lampam' or the 'parang-parang'.

The 'lampam' is identified by Maxwell with a species of carp, *Puntius schwanefeldi* Blkr. (*Malayan Fishes*. p. 89).

The 'parang-parang' is the dorab, *Chirocentrus dorab*, the different sizes of which are called by the Malays *Pachal*, *Têgap*, *Chabok*, and *Sudip*: the first being the largest. (*Malayan Fishes*. p. 74); the Chinese name is 西刀魚 (Cantonese, *sái tó yü*), 'western knife fish'.

Eredia is the only early writer to mention the name.

- (12) "Balancâs": i.e. Malay 'bêlangkas', the Indo-Malayan King-Crab, *Tachypleus Gigas* (Mull.). Eredia is wrong in saying that it is peculiar to Malayan waters.

The male King-crab (*kêroncho*) being invariably found with the female, the Malays use the expression "*bagai kêroncho dêngan bêlangkas*" as a simile for 'inseparable' of lovers or husband and wife.

(*JRASMB*. Vol. I. pt. 2. (1923). p. 358).

Eredia is the only European writer to quote this Malay word until recent days.

- (13) Turtles. "The hawk's bill turtle (*Caretta imbricata*) which yields the finest shell, is known: to inhabit only the seas round the southern part of the Malay Peninsula, Nikobârs, Celebes and Moluccas. As regards the west coast of the Malay Peninsula, the chief supply comes according to Dennys. from the Dindings. With respect to the east coast, I know it from my own personal experience to be peculiarly plentiful all the way from C'hump'hôn down to C'haiyâ and the neighbouring islands" "Singapore being the present-day emporium for the article there, while Batavia and Manilla are the actual marts for it in the eastern part of the Archipelago". (Gerini. *Researches etc.* (1909). p. 671).

- (14) Coral. The History of the Sui Dynasty (518-617 A.D.) records that coral is obtained from the sea in P'o-li (婆利) which Gerini places on the Malay Peninsula. (Groeneveldt. *Notes etc.* (1879). p. 206).

Wang Ta-yüan (1349) speaks of coral near Lambri in Sumatra (*T'oung Po.* Vol. 16. (1915). p. 150).

Many beautiful varieties of coral are to be found in Malayan waters.

Amber: *i.e.* ambergris, the product of the spermaceti whale, (15)
called by the Chinese 'dragon-spittle perfume' (龍涎香),
or "ang-ha-erh" perfume' (俺兒兒香) from the Arabic *anbar*.

In A.D. 220-30 ambergris was sent by Tonkin to China; Sulaiman (A.D. 851) mentions it in the Nicobārs; Barbosa (1516) says it was conveyed from the Nicobārs to Malacca and other places: Fei Hsin (A.D. 1436) states that much ambergris found on the north-west coast of Sumatra was brought for sale to Sumatra city: in the History of the Ming dynasty (1368-1643) it is recorded that Sumatra sent tribute of ambergris: Lancaster (1592) mentions ambergris among the chief exports of Junk Ceylon Island.

The north coast of Sumatra was the centre of the ambergris trade in mediaeval times, Malacca also sharing it later on.

(Groeneveldt. *Notes etc.* (1879). pp. 214. 262: Gerini. *Researches etc.* (1909). pp. 581. 823: *T'oung Po.* Vol. 16. (1915). p. 159).

Begbie (1834) says that a considerable quantity of ambergris is thrown up on the island on Junk Ceylon during the prevalence of the N.E. monsoon. (*The Malayan Peninsula.* p. 430).

Belor: *i.e.* the eastern Pamir country described by Eredia in Part III Chapter 6. (16)

Ganges. Several of the old maps erroneously represent a continuous river-connection between the streams of India and of the Malay Peninsula. (17)

NOTE ON PART I CHAPTER 17.

"Minhat Tana": *i.e.* Malay 'minyak tanah' 'earth-oil', the name usually applied to kerosene-oil by the Malays. Though oil has been found in considerable quantities in Burma and Sumatra, none has yet been discovered in the southern part of the Malay Peninsula, despite considerable expenditure of money: and an authoritative opinion has been expressed that oil never will be discovered there. (1)

NOTES ON PART I CHAPTER 18.

Fresh and healthy. In 1786 the Dutch 'Sabandhaar' who had suffered from severe illness in Batavia said Malacca was "as salubrious as the best place in Europe". (*JRASMB.* Vol. II. Pt. I. (1924). p. 18).

On the other hand the English public is told in 1615, almost the year in which Eredia wrote, that "the ayre is so troublesome, 1930] *Royal Asiatic Society.*

as not only strangers, but even they that are borne there are many times troubled with divers infirmities" (*JRASSB.* No. 82. (1920). p. 129).

- (2) "Amphicians": 'amphiscios', explained by the dictionary as 'amphiscii, the inhabitants of the torrid zone'.
- (3) Antipodes. See Part II Chapter 4, (p. 65 *supra*) for Eredia's ideas regarding places which are 'antiscian', and 'antipodean' or 'perioecian' to each other.

It will be noted that by 'antipodean' he does not mean what is now meant by 'antipodal': by 'antipodal' places modern writers mean places on the opposite sides of the globe and on opposite sides of the equator, e.g., the north Atlantic Ocean is 'antipodal' to the Australian Continent (Johnstone. *A Study etc.* p. 15): by 'antipodean' places Eredia meant places on the opposite side of the globe but on the same side of the equator, and he explains that 'Luca Antara' (Australia or some locality near Australia) and Chile in South America are 'antipodean' or 'perioecian' to each other.

NOTES ON PART I CHAPTER 19.

- (1) Medicines. Cf. Skeat. *Malay Magic.* (1900). p. 408.
- (2) "Dayas". Yule and Burnell explain the word 'Daye, dhye', as "A wet-nurse; used in Bengal and Northern India, where this is the sense now attached to the word. Hindustani *dāī*, Sanskrit *dātrikā*; *conj.* Persian *dāyah*, a nurse, a mid-wife". (*Hobson-Jobson*). (1903) p. 300). Dalgado (*s.v.* Daia) states that the word *daia* is current in 'Asio-Portuguese'.

It occurs in the forms 'dy', 'daee', 'dyah', 'dhai'.

- (3) Clove. The cloves of commerce are the unopened flowerbuds of the Clove tree, *Eugenia caryophyllata* Thunb., which appears to be indigenous only to a small number of islands in the Moluccas.

They were exported to Malacca, as were other Eastern spices, for shipment to Europe, but, according to Ridley, comparatively few cloves were produced till after the occupation of the islands by the Dutch in 1605 A.D.

The common Malay name for clove nowadays is *Chingkeh*: it is also known as *bunga lawang* (from Sanskrit *laoanga*). According to Ridley, the Malays use it only to flavour gambier for chewing and in certain medicines. Cloves are aromatic, carminative and stimulant, and are used in cases of dyspepsia, gastric irritation etc. Cf. Ridley. *Spices.* (1912). *s.v.*

- (4) Nutmegs. The nutmeg tree, *Myristica moschata* Linn., is a native of the eastern islands of the Moluccas. The Malay names for nutmeg and mace are "*Pala*" and "*Bunga Pala*" respectively (Sanskrit *Jatiphala*). The nutmeg was not cultivated in the Malay Peninsula until after the foundation of Penang (1786 A.D.). There are, however, more than fifty kinds of wild nutmeg in the Malay

Peninsula: only one, *Myristica cinnamomea* King, is at all aromatic. (Ridley. *The Flora etc.* III. p. 65).

The main use of nutmegs and mace is as a spice: nutmeg has a reputation as a cure for dyspepsia.

Cf. Ridley. *Spices.* (1912). s.v.

Ginger. The ginger plant, Malay 'haliya', *Zingiber officinale* L., is commonly cultivated in fields. (Ridley. *The Flora etc.* IV. p. 258). Foxworthy gives a list of 22 varieties of *Zingiberaceae* used for medicinal purposes. (*Minor Forest Products etc.* p. 192-3). (5)

"Conchor": probably Malay 'kunchur'. According to Ridley this is *Kaempferia Rotunda* Linn., valued as a spice. (*The Flora etc.*, IV. p. 246). According to Foxworthy it is *Curcuma Zerumbet* Roxb., used in medicine as a stomachic. (*Minor Forest Products etc.* p. 192). According to Dalgado it is *Kaempferia galanga* L. (*Glossario etc.* I. p. 302). According to Watson, it may also be *Curcuma zedoaria* Rox. (*Malayan Plant Names.* p. 75). (6)

All belong to the *Zingiberaceae*.

"Bancalê": probably Malay 'bunglai' (*bonglei*), *Zingiber Cassumunaar* Roxb., a ginger often to be seen near villages: the rhizomes are used in medicine for rheumatism, and also as a spice: the leaves are used in medicine for fever. (Ridley. *The Flora etc.* IV. p. 259: Foxworthy. *Minor Forest Products etc.* p. 192: Watson. *Malayan Plant Names.* p. 33). (7)

"Dringo": probably Malay 'Deringu' (*Jeringu*, *Jeringau*, *Jerangau*), *Acorus calamus* Linn., apparently introduced from China: the rhizomes are used in native medicine as a stimulant etc.: also in native magic. (Ridley. *The Flora etc.* V. p. 131: Foxworthy. *Minor Forest Products etc.* p. 191: Watson. *Malayan Plant Names.* p. 151). (8)

Crawfurd's *Malay Dictionary* has "darringu (Javanese dringo) name of a plant, *Acorus terrestris*."

Linschoten (1598) speaks of "The Calamo Aromatico called in Malacca Daringoo."

Bowrey (1669) gives "Dirringo, Calamus aromaticus, or a Sweet smelling reed in India", and mentions "Ringo roots" as products of Bengal: these apparently are to be identified with the "Rangoes" and "Arrangoes" of Stevens (*Guide to East India Trade.* (1766). pp. 144. 146.).

Valentyn (1726) says that "The *Deringo* or *Acorus* called *Calamus*, but by no means the same as *Calamus Aromaticus*" is found in Amboyna (iii. p. 246). Rumphius (1741) has a chapter on "Acorum. Deryngo" (*Herbarium Amboinense.* Vol. V. pp. 178-80).

Eredia is the earliest writer to quote the word. The translator is indebted to Mr. F. de la Mare Norris, Principal Agricultural

Officer, Johore, and to Mr. S. W. Jones, Malayan Civil Service, for assistance in identifying this and other plants.

- (9) "Pulacary": apparently Malay 'pulasari', 'pelasari', 'memplas hari', *Alyxia lucida* Wall.: the bark and leaves are used in native medicine for infantile disease etc. (Ridley. *The Flora etc.* II. p. 332: Foxworthy. *Minor Forest Products etc.* p. 200. Watson. *Malayan Plant Names.* p. 155).
- (10) "Cayoular": perhaps Malay 'kayu ulas', *Helicteres Isora* Linn., a shrub, the fruits of which are sold in the shops as a drug under the name of 'Chabai Pintal' or 'Chabai Tali': the fruits and pods are used in native medicine.
- Mr. Ridley suggests to the translator that Eredia may be referring to *Scindapsus hederaceus* Sch., called 'Akar ular' ('Snake root') by the Malays: the stem is used in rheumatism.
- (11) "Cayotay": i.e. 'kayu tahi' ('excrement wood'), a name applied to many woods containing scatol, highly valued as a drug. Mr. Ridley writes to the translator "probably a Meliaceous tree. This was always being sought for by my Malays, but we never found it. Some of the species of *Celtis* contain scatol, but I never found the tree that the Malays would pass as *kayu tahi*".
- (12) "Pinga": that is, a 'carrying-pole'. Manrique (1640) writing of India refers to "a pinga which is an instrument used by two men in carrying heavy weights": Luard comments that in the Philippines the word *pinga* is used for the bamboo shoulder-yoke known in India as *bahangī* (bangy), and suggests *bangy* as the derivation of *pinga*. (*The Travels of Fray Sebastien Manrique.* (*Hakluyt Society*: 1927). II. p. 129). Dalgado thinks the most probable derivation of the word is from the Malay 'punggah', 'to remove goods from one place to another'. He quotes a note by Rodrigo Felner on Bocarro, describing the 'pinga' as an apparatus much like that used by the itinerant fish-sellers of Portugal, and stating that on these 'pingas', usually made from a variety of areca-palm, the Chingalas [Sinhalese] carried their freights in baskets suspended in equilibrium at each end. After commenting that both the Portuguese and English writers used the word particularly in connection with Ceylon, he notes, "But it is not the vernacular: the corresponding thing in Singales is 'at' or 'ad.'" He adds that the term is current in Macau, where it also denotes the shaft of a sedan chair. He quotes Emerson Tennent (1860) "The *pingo* formed of a lath cut from the stem of the areca or of the coco-nut palm, and still used as a yoke in carrying burdens" (*Ceylon*. I. p. 497). Newbold (1839) may be referring to the same word when he speaks of "a stout elastic bamboo or penaga, which passes across the shoulders". (*Political and Statistical Account etc.* II. p. 99).

The forms 'pinga', 'pingas', 'pingos' are found. Eredia is the first European writer to quote the word. (Dalgado. *Glossario etc.* II. p. 213).

NOTES ON PART I CHAPTER 20.

- Tāgos: *i.e.* Tages; see note on p. 166 *supra*. (1)
- Harm. See Winstedt. *Shaman Saiva and Sufi*. (1925). p. 116 *et seq.*, "As soon as a Malay woman is with child, she and her husband have to observe certain rules and abstentions, so that no vampire may injure the expectant mother, no prenatal influence affect the unborn, and nothing impede or mar a safe delivery". (2)
- Feast. This custom is said to be still in force in Malacca: it is not mentioned in Skeat's *Malay Magic*, however. (3)
- Sorceresses. Cf. Skeat. *Malay Magic*, *passim*. (4)
- Chim: apparently Cheng, the name of a mukim about 5 miles NNW of Malacca town: a branch of the Malacca River forms the eastern boundary of the mukim. (5)
- Bishop of Malacca. cf. p. 41 *supra*. (6)
- "Ponteanas": *i.e.* Malay 'pontianak'. "Throughout Malaysia terror is felt at the plaintive cry of a banshee (*Pontianak*), which is supposed generally to appear in the form of a bird and drive her long claws into the belly of the expectant mother, killing her and the unborn child". (Winstedt. *Shaman Saiva and Sufi*. (1925). p. 18). Cf. Newbold (*Political and Statistical Account etc.* (1839). II. p. 191), and Skeat (*Malay Magic*. (1900). p. 327). (7)
- "Budes": the transcript has "brides", which being unintelligible the translator has emended to "budes", suggesting that it may be the pluralized form of Malay *budi*, the peepul-tree (*ficus religiosa*). Eredia draws a sketch of a 'bude' tree outside the 'Tranqueyra' gate close to the sea-shore at Malacca (see p. 206 *infra*). (8)
- "Divāly": *i.e.* "Hindustani *diwālī*, from Sanskrit *dīpālikā*, 'a row of lamps', *i.e.*, an illumination. An autumnal feast attributed to the celebration of various divinities . . . It is held . . . usually some time in October". (Yule and Burnell. *Hobson-Jobson*. (1903). p. 308). Eredia is the first European writer to quote the word. The festival is the occasion for a general 'down-tools' at all places where Tamil labourers are employed in Malaya: nor can work be resumed until the labour force has had adequate opportunity to carouse and to recover from the after-effects of carousing. The festival-day has now (1929) been declared a public holiday in the Straits Settlements. (9)

NOTES ON PART I CHAPTER 21.

604. "Muhammad was born in the year A.D. 570 and assumed office as the Founder of Islam A.D. 613-4. The year of the Flight from Mecca to Medina was A.D. 622, and marks the commencement of the Muhammadan Era". (Wilson. *The Persian Gulf*. (1928). p. 60). (1)
- Spread. "After the fall of Pasai, Malacca, and after the conquest of Malacca, Acheen became the centre of Muhammadan religion and learning." (*JRASSB*. No. 81. (1920). p. 39). (2)
- 1930] *Royal Asiatic Society*.

Winstedt points out that 'the bulk of Muhammadan missionaries came from India, and were natives of Gujerat and Malabar'.

As regards the Peninsula, the religion was introduced into Malacca during the reign of Sultan Muhammad Shah (1403-1414); into Kedah in 1474; into Pahang, on its conquest by Malacca, in 1475; and into Johore by the first Sultan [c. 1530]. (*JRASSB.* No. 77. (1917). pp. 171-4).

- (3) Alcoram: *i.e.* "Alcorān, the Korān, or sacred book of the Mohammedans".

- (4) "Mula": *i.e.* "Moollah . . Hindustani *mūlla* . . the word comes to mean eventually 'a learned man, a teacher, a doctor of the Law'". (Yule and Burnell. *Hobson-Jobson*. (1903). p. 579).

In the Portuguese writers the words *mula* and *maulana* are used indifferently: but *mula* is the more common. (Dalgado. *Glossario etc.* (1919). II. p. 77).

- (5) "Casis": *i.e.* Caze, Kajee, etc. "Arabic *kādi*, 'a judge', the letter *z* with which it is spelt being always pronounced in India like a *z*. The form *Cadi*, familiar from its use in the old version of the Arabian Nights, comes to us from the Levant." (Yule and Burnell. *Hobson-Jobson*. p. 177). In Wilkinson's Dictionary the word appears as *Kali*; "the peculiar Arabic sound inadequately represented by *dz* and really a velarized variety of the *th* in the English "the", becomes *l* in several Indonesian languages". (*JRASMB.* Vol. V. Pt. I. (1927). p. 210).

- (6) Bragmenes: *i.e.*, the plural of Brahmin, Brahman, Bramin. "This word now means a member of the priestly caste; but the original meaning and use were different . . The older English form is Brachman, which comes to us through the Greek and Latin authors". (Yule and Burnell. *Hobson-Jobson*. p. 111).

"The Brahmins are the first and most distinguished race of the Hindus, mythologically described to have sprung from the head of Brahma; as the *Kettries*, *Vaisyas*, and *Sudras* did from his arms, thighs, and feet". The Kettries were the warrior tribe, the Vaisyas the merchant tribe, and the Sudras the tribe of husbandmen. (Coleman. *The Mythology of the Hindus*. (1832). pp. 140. 387. 399). In the island of Bali where the Hindu religion persists, the first three castes, Brahmins, Ksatua, and Wesja comprise the nobility, and the Sudra the common people: but the last caste is not despised and the nobility can marry into it.

- (7) Perumal: *i.e.* Brahma.

- (8) "Sabbia": the dictionary somewhat inadequately explains 'sabia, a bird so called in the Brazils': apparently the 'saban' of Brazilian popular songs. This and other passages in Eredia's book suggest a borrowing from Father Joseph De Acosta (1590), who writes "and Athenes the wise woman, the Cocke, and the Raven, and such other like vanities and mockeries". (*The Natural and Moral History of the Indies*. (*Hakluyt Society*: 1880). II. p. 308). The translator of that passage appears to consider (perhaps rightly) that 'sabia' means 'wise woman' and not the bird of that name.

NOTES ON PART I CHAPTER 22.

Gold. Gold has been worked in several parts of the Peninsula (1) from the earliest days. It remains a mystery what race was responsible for the old workings such as those of Selinsing in Pahang, where some of the pits are over 160 feet deep: that they were originally opened at a very remote age is clear from the fact that Neolithic implements are associated with the workings, which are situated in what appears to be virgin jungle.

Gerini suggests that the workers may have been Sakai working under Hindu direction, or possibly Phoenicians: the identification of Solomon's Ophir with the Malay Peninsula goes back to Josephus but is now considered improbable. Gold was worked on Gunong Ledang till comparatively recent times.

Jourdain (1608-1617) remarks "it is very necessarie for to furnish our ships outwards bound with rice and Jore gold in quoine." (*The Journal of John Jourdain. (Hakluyt Society: 1895). p. 294*).

Governor Bort records that gold used to be found on the shore at Malacca. (*JRASMB*). Vol. V. Pt. I. p. 128).

Gold is being worked at the present day, for instance, at Raub in Pahang, and Batang Padang in Perak.

(Cf. Gerini. *Researches etc.* (1909). p. 477; *JRASMB*. Vol. V. Pt. I. (1927). p. 222).

Gold and silver are found in the metallic state, but not mercury or tin: though for what appears to have been an accidental spill of mercury at Malacca cf. *JRASMB*. No. 24. (1891). p. 79.

Silver. "Veins of silver have been discovered in various (2) portions of the Malay Peninsula.....and in Larut (Pêrak district) it was found associated with the rich tin ores of that territory." (Gerini. *Researches etc.* p. 477).

"In composition, native gold ordinarily consists of gold with varying amounts of silver."

Silver also occurs in Cerussite, lead carbonate; and in Galena, lead sulphide. (*JRASMB*. Vol. III. Pt. III. (1925). pp. 68. 76. 77).

Mercury. Mercury has been found in the form of Cinnabar, (3) mercuric sulphide, in Negri Sembilan and Pahang. It does not appear to be extracted for commercial purposes. (*JRASMB*. Vol. III. Pt. III. (1925). p. 70).

Tin. There is reason to suspect that tin may have been exported (4) from Malaya to China as early as 1000 B.C.: see p. 95 *supra*.

Throughout recorded history Malaya has been celebrated for its tin: and at the present day produces some 40% of the world's supply. The metal occurs in the form of cassiterite, so-called tin stone or black tin, tin dioxide; which is the only common ore of tin.

Even at the present day, tin-ore can be concentrated in pans on the beach near Malacca. (*JRASMB*. Vol. III. Pt. III. (1925). p. 66; Vol. V. Pt. II. (1927). p. 282).

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- (5) Iron. Iron ores occur in large quantities; but do not appear to have been worked until recently; indeed Castanheda speaks of the Chinese junks bringing iron to Malaya.

A large deposit of haematite, ferric oxide, is being worked at Bukit Medan near Batu Pahat in Johore by a Japanese company who in 1928 exported 660,000 tons of iron-ore; the ore is much richer than that usually smelted in Europe and America.

Deposits of haematite are also known to exist near Tambun (close to Ipoh), at the foot of Gunong Jerai in Kedah, and at different places in Johore.

Magnetite (magnetic iron ore, lodestone) is reported as being present in large quantities in an accessible part of Trengganu.

Pyrite (iron pyrites), iron disulphide, occurs in a large deposit at Bundi near Kemaman in Trengganu.

A Japanese company has lately commenced mining operations at two places in Trengganu.

(*JRASMB*. Vol. III. Pt. III. (1925). pp. 77. 82. 88; Vol. VI. Pt. 4. (1928). pp. 33. 34).

The opinion has recently been expressed that in the near future iron will prove to be of prime economic importance in Malaya.

- (6) Precious stones. Towards the end of the Chapter Eredia specifies 'topazes, with traces of diamonds and emeralds'.

Scrivenor refers to a quotation from Garcia da Orta stating that diamonds "of the class called old-rock diamonds" occurred at "the Strait of Tanjam in the Territory of Malacca". Scrivenor suspects that the so-called diamonds at the Strait of Tanjam (wherever that may be) were really quartz-crystals. (*JRASMB*. Vol. V. Pt. II. (1927). p. 283).

"Tanjam" is probably "Tanjapura" i.e. Tanjong Pura in Borneo, placed by Tavernier in "Malacca".

For the rest, all that can be said is that at the present day no one has succeeded in discovering stones which are large enough to be used as gem-stones, though minute stones are to be found; for instance, sapphire has been found in small specimens at Chenderiang in Perak; garnet, though not of sufficient clearness, in Pahang and at Pulau Ubin near Singapore; ruby spinel, in association with tourmaline, garnet, and other minerals, in the sand beach on the east coast of Tubah, Langkawi Islands, and in a range of hills between Kedah and Siam; topaz, in the alluvial deposits worked for tin in the Chenderiang Valley; quartz-crystals and tourmaline, in many mining districts. (*JRASMB*. Vol. III. Pt. III. (1925). pp. 76. 94. 90-91. 96-7).

- (7) Semi-minerals. The transcript has "medio mineral"; it is not certain whether Eredia refers to "mineral-ores" of which there are a large number, such as Kaolin (China clay) or Talc (soap stone), or to non-metallic substances capable of being mined, for instance, graphite, or lignite (brown coal).

Nitre. If Eredia means sodium or potassium nitrate, these do not occur at the present day: but see note on p. 168 *supra*. (8)

Colours. Towards the end of the Chapter Eredia mentions red lead, 'minio': this is not now to be found; but sufficient variety remains with andalusite, whitish or rose-red; axinite, clove-brown and blue-violet; azurite, intense azure-blue; chlorite, dark green; fluorite, purple; galena, lead-gray; limonite, yellowish-brown; monazite, golden-yellow. (9)

Like plants. This disquisition bears a striking resemblance to a passage in Father Joseph De Acosta: see *The Natural and Moral History of the Indies*. (*Hakluyt Society*: 1880). I. p. 183. (10)

Increase. The Chinese have a belief that tin will grow if left to itself: the belief is probably due to the fact that stanniferous earth, washed down from higher land, has lodged behind boulders in pockets from which the tin-ore had previously been removed. (11)

Campar and Priamon: *cf.* the places named on Eredia's map, p. 213-4 *infra*. (12)

Bazarmacem: *i.e.* Banjarmasin, situated on the Banjer or Barito River, in the south-east of Borneo. (13)

River of Sucadana: apparently the Sempang River flowing into Sukadana Bay on the West Coast, about 1° 12' S. (14)

"Tombaga". The transcript has "ouro e Tombaga em Timor"; which the French translator wrongly renders "gold at Tombaja in the island of Timor", making "Tombaja" the name of a place. (15)

No such place name as "Tombaga" appears in Eredia's map of Timor on folio 48 V or occurs on the island at the present day.

By "tombaga" Eredia probably means the Malay word *tēm-baga*, 'copper, bronze, brass'.

Copper is found in Timor. (*Crawford. Dictionary of the Indian Archipelago*. (1856). p. 433).

Dalgado derives the Malay word from Sanskrit 'tāmmraka': and explains it as meaning a mixture of copper and zinc, and also copper or brass.

The Portuguese turned it into 'tambaca', 'tambac', and 'tombac'.

Fariar y Sousa (1675) refers to 'a piece of artillery made from Tambaca' "metal virtuoso". (*Dalgado. Glossario etc.* (1919). II. p. 346).

Possibly Eredia meant to write "*tombaga suaca*" for when describing Timor in the REPORT ON THE GOLDEN CHER-SONESE, he does not mention copper but lays stress on the "many mines of gold, "*tambaga suaca*": (see p. 254 *infra*).

The Malay expression *tēm-baga suasa* denotes an alloy of gold and copper.

- (16) Grains. Governor Bort (1678) writes "Here in Malacca, on the sea-shore.....gold was formerly sought and found in small nuggets and in dust of high alloy". (*JRASMB*. Vol. V. Pt. I. (1927). p. 128).

At the present day "it occurs both *in situ* in hard rock, and also as small grains in alluvial beds.....Sometimes the Malays return to [abandoned alluvial workings] when the rice crops have been poor, but the amount of gold they win is not enough to induce them to do steady work". (*JRASMB*. Vol. III. Pt. III. (1925). p. 77).

- (17) Earth-quarries. The transcript has "minas de mâtte", literally "mines of earth".

In Part I Chapter 1, when describing the walls of Tranqueira, the French translator renders "mâtte", "earth", as though it were "matto", "wood". In the present Chapter "mines of wood" will not quite do, so the word "mâtte" is left untranslated.

One suspects that these "mines of earth" were the well-known laterite quarries of Malacca, and that this was the substance employed for constructing the walls of Tranqueira.

According to Scrivenor, it was used by the Portuguese to build St. Paul's Church (*JRASMB*. Vol. V. Pt. II. (1927), p. 285), then called, it would appear from Eredia and others, The Church of Our Lady of the Annunciation.

- (18) Gelê: *i.e.* Jelai.

Eredia marks this place in his map of the Malacca district, see p. 209 *infra*.

Dennys (1894) names it Jelli or Jelliye.

Mr. W. A. Gordon-Hall, Malayan Civil Service, kindly informs the translator that there is no village of this name at the present day: the 'ulu' of the Jelai River, however, is situated hereabout.

The ancient State of Jelai was one of the original Negri Sembilan, Nine States, and occupied the territory now covered by Inas and Johol, the latter being at one time called Enjelai. In the 18th century Jelai vanished, and its place was taken by Inas (c. 1760), which in turn was later eclipsed by Johol.

(Nathan and Winstedt. *Johol, Inas, Ulu Muar, Jempul, Gunong Pasir and Terachi*. (1920), pp. 8, 9).

- (19) Sylata. In his map on folio 24 V (see p. 214 *infra*) Eredia places SYLATA immediately north of Priaman on the west coast of Sumatra, with the explanation "mines de oro de Arcas" "gold mines of Arcas" (whatever "Arcas" may mean): the place is apparently identical with Governor Bort's 'Sillida' which is described as "Salida, a place on the west coast of Sumatra, somewhat to the south of Padang (which last is about lat. 1° S.)". (*JRASMB*. Vol. V. Pt. I. (1927). pp. 139. 229). "The mines of Salida [were] previously exploited by the Hindous". (*Collet. Terres et Peuples de Sumatra*. (1925). p. 178).

NOTE ON PART I CHAPTER 23.

Waterspout. "That interesting and wonderful phenomenon, (1)
called a water-spout is often to be seen in the seas and straits
adjacent. They ought more properly to be called whirlwinds
charged with vapour. They occur, generally, in the morning
between the hours of eight and twelve, and rise to the height of
half a mile, appearing in the distance like large columns supporting
the heavy masses of cumuli above them." (Dennys. *A Descrip-
tive Dictionary etc.* (1894). p. 351).

NOTES ON PART I CHAPTER 24.

Bore. "We have the curious observation in the great Periplus (1)
of the Erythraean Sea [c. 60 A.D.] of the existence of "tidal
bores", that is, very high tides that rapidly advance as high-crested
undulations in the estuaries of great rivers, increasing in height as
the estuary narrows. Such tidal bores exist in many parts of the
world (even in Great Britain, in the Solway Firth and the River
Severn) and the ancient mariners noted their occurrences in the Gulf
of Cambay, on the west coast of India." (Johnstone. *A Study of
the Oceans.* (1926). p. 60).

Eredia appears to have seen a bore in mid-ocean.

"*Caffillas*": the pluralized form of Arabic *kāfila*, properly a (2)
body or caravan of travellers; also commonly used for a fleet of
merchantmen under convoy.

Paradise. Bowrey (1669) relates that the Ganges "is sup- (3)
posed to runne up Paradise or the garden of Eden" (*A Geographical
Account etc.* p. 166).

NOTES ON PART I CHAPTER 25.

Xavier. St. Francis Xavier, "the Apostle of the Indies" sailed (1)
from Lisbon on the 7th April, 1541.

Maluco. "The Moluccas" (Spice Islands) was a name given (2)
originally to the volcanic islands which fringe the western shore of
Halmaheira; it is now generally applied to the two groups of im-
portant islands to the north-west of the Dutch possessions in New
Guinea: Halmaheira, Morotai, Bachian and Obi to the north;
Ceram, Buru, Amboina, and the Bandas to the south. The islands
are divided politically into the residencies of Ternate and Amboina".

Machoquique in Macazar. By 'Macazar' Eredia means the (3)
whole island of Celebes.

In the map on folio 47 V, he shows Machoquique on the
northern shore of the gulf of Mandar, and SUPA, Linta, and
Mandar (reading from south to north) near the western coast of
the island.

Of these names only Mandar now survives, though SUPA will be found on the old maps, and the approximate position of Linta and Machochique is easily ascertainable. The situation of LUBO, however, is uncertain.

For the cartography of the Celebes see Abendanon. *Voyages Géologiques et Géographiques à travers la Célèbes Centrale*. (1918). III. p. 1391 *et sqq.*

- (4) Domingos: Eredia's brother.
- (5) Dona Elena Vesiva: Eredia's mother, who was 15 years old at the time of this escapade.
- (6) Juan de Eredia: Eredia's father.
- (7) Manuel: Eredia himself.
- (8) Escutcheon: the allusion is to the coat-of-arms and family-tree represented by Eredia on folio 44 R: see p. 218 *infra*.

NOTES ON PART I CHAPTER 26.

- (1) Permicuri: *i.e.* the founder of Malacca.
- (2) Alaudin: *i.e.* Sultan Aladin Riayat Shah III (*c.* 1597—1615), also known as Raja Raden. (Wilkinson. *A History etc.* (1923). p. 54).
- (3) Bintão: *i.e.* Bintang (Bentan), the island to the south-east of Singapore.
- (4) Raya Ale. Eredia enumerates 4 rulers from the fall of Malacca to the date (1613) when he wrote, namely,
 - (1) Soltan Mahamet, overthrown by Albuquerque in 1511.
 - (2) His son, not named, who founded 'Cottabatu'.
 - (3) Raya Ale, who became reconciled with the Portuguese.
 - (4) King Alaudin, who quarrelled with the Portuguese and befriended the Dutch.

Wilkinson records 6 rulers, namely,

- (1) Sultan Mahmud: died about 1529.
- (2) Sultan Aladin II, the founder of Johore: ruled 1529—1564.
- (3) Sultan Mudzafar.
- (4) Sultan Abdul-jalil, an infant.
- (5) Raja Omar (Sultan Abdul Jalil II): died 1597.
- (6) Raja Raden (Sultan Aladin Riayat Shah III): ruled from 1597 to about 1615.

It would seem that Eredia omits Sultan Mudzafar and Sultan Abdul-jalil, the infant, who, according to Wilkinson, did not long survive Sultan Aladin II. (Wilkinson. *A History etc.* p. 54).

Eredia's Raya Ale is Wilkinson's Raja Omar; and it would appear that Raya Ale's reconciliation with the Portuguese (which Wilkinson does not mention) occurred after 1588, the year of his

defeat by De Lima; for until that date Raya Ale (Rajale) had been a thorn in the side of the Portuguese and his blockade of Malacca in 1587 had reduced that town to a state of serious distress (e.g. cf. *The Travels of Pedro Teixeira*. (*Hakluyt Society*: 1892). p. vii).

Raja Raden (Alaudin) lived unmolested by the Portuguese till 1602 when the first Dutch factor arrived in Johore: this led the Portuguese to blockade the river, and Eredia relates how he himself with a squadron of 66 ships harassed the Malays, and actually captured Raja Raden's capital of Kota Batu; see Part II Chapter 10 (page 72 *supra*), and the Summary of his life (page 266 *infra*).

Raja Benco. The transcript has 'Beneo': the reference is (5) to Raja Bongsu ('younger born'), also known as Raja Sabrang ('on the other side of the river'): "The prince who was commonly known by this title was a brother of the Sultan of Johor reigning in 1606 [Raja Raden] and subsequently inspired the composition of the well-known classic, the *Sejarah Melayu*" (*JRASMB*. Vol. V. Pt. I. (1927), p. 226).

Raja Abdullah, to give him his real name, came to the throne soon after 1614 under the title of Sultan Abdullah Maayat (or Hammat) Shah. (Wilkinson. *A History etc.* p. 60).

According to Valentyn, "he was reputed for being attached to us more than any other Indian Prince, for which reason he and his country had to suffer very much from our mutual enemy". (*JRASMB*. No. 16. (1885). p. 300).

He is described [in 1606 by the Dutch] as a man of about 35 years of age, fairly intelligent, far-sighted, quiet in disposition and a great hand at driving hard bargains (Wilkinson. *A History etc.* p. 56): but naturally he is not in Eredia's good books.

He took a prominent part in the political history of his time; being entrusted with the conduct of state affairs by the indolent Raja Raden: see Wilkinson, *op. cit.* pp. 54—60: and Valentyn in *JRASMB*. No. 15. pp. 128—138 and No. 16. pp. 289—300.

Johore at this time was in the unfortunate position of being compelled not only to temporize between the Portuguese and the Dutch, but, in addition, to face the attacks of the powerful Sultan of Acheen the well-known Iskandar Muda or Mahkota Alam: when the Dutch went away, Johore was attacked by the Portuguese, and if the Portuguese did not attack, the Achehnese did.

On the 6th June 1613, the Achehnese, who were at war with Malacca, made a raid on Johore, captured the capital and carried into captivity the Sultan, his brother Abdullah, the chief Malay court dignitaries and the Dutch residents in the factory. (Wilkinson. *A History etc.* p. 59).

Bocarro writing under date July, 1613, relates how the Portuguese in the Straits met the king of 'Achem' at the head of a great fleet with which he had taken the city of Johore and conquered the Kingdom of 'Malaio' capturing the 'Reta bonço'

[Raja Bongsu] brother to the King of Johore and the principal warlike personage among the 'Malaios'.

(*Decada 13 da History da India*. (1876). p. 165).

- (6) Hollanders. Eredia calls them 'Olandeses' and 'Olandezes'.

The Dutch gained the command of the sea by their victory over the Portuguese fleet off Malacca in 1606: and before Eredia wrote (1613) they had displaced the Portuguese from Amboyna, Ternate, and Tidore. They captured Malacca in 1641.

It will be observed that Eredia says nothing in this book about the English, though he mentions them in the REPORT ON THE GOLDEN CHERSONESE (p. 253 *infra*): but the writing was on the wall, and the victory of Captain Thomas Best over the Portuguese squadron in 1612 may justly be claimed to fix a definite date for the foundation of the British Empire in India.

But the British hastened slowly; although it is apparent from Linschoten that British naval activity became increasingly more energetic after 1588, yet by 1662 they had still only 28 ships in the Far East, compared with the 83 ships of the Dutch, who in 1619 had founded Batavia. The settlement at Penang, established in 1786, constituted the first serious competitor of the Dutch; and the capture of Ceylon by the British in 1795 sounded the death-knell of Dutch monopoly.

Of the foundation of Singapore in 1819 perhaps the less said the better; it is "to be justified.....only, if at all, on wider grounds of public policy, and retrospectively by its results".

(Wilkinson. *A History etc.* pp. 58. 61: *The Asiatic Review*. October, 1927, p. 608: *The Voyage of John Huyghen Van Linschoten*. (*Hakluyt Society*. II. pp. 270 *sqq*: JRASSB. No. 67. (1914). pp. 69. 76. 77: *One Hundred Years of Singapore*. I. p. 11).

NOTES ON PART II CHAPTER 1.

- (1) Meridional India: *i.e.* 'southern India'; in the map of the world between folio 51 and 53 Eredia represents 'Luca Antara' as a northerly projection of the great antarctic continent surrounding the south pole (see p. 223 *infra*); so too in the map found by Major at the British Museum (see p. 269 *infra*); but in the map on folio 58 of the unpublished TREATISE ON OPHIR, 'LUCA-ANTARA' is shown as a part of an island called 'JAVA MAJOR' placed off the coast of the southern continent, while the modern Java is designated 'JAVA de Mataron'.

On folio 16 of the TREATISE ON OPHIR, Eredia writes "The name Meridional India is given by Ptolemy to the continental land of Beach or Veach, land of gold, including various neighbouring islands and in particular the island of Javadi or Javadiva, abounding in gold and silver and every variety of aromatic spice, as he notes in his Table 12; it is mentioned by Marco Polo the Venetian in his

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allusion to its commerce in the year 1296; during our own time it was discovered for the crown of Portugal in the year 1601".

Beach: really Marco Polo's *Locac* in the Malay Peninsula. "In the Basle edition of 1532, the printer blunderingly altered 'L' into 'B' and the first 'c' into 'e', so Locach became Boeach." This was afterwards shortened into Beach, and "the blunder was repeated in books and maps with so much confidence that we find it even recurring on a semi-globe, which adorns the monument of Sir Henry Savile in Merton College Chapel, Oxford. As however some editions of Marco Polo retained the word Locach and others Beach, both names came to be copied on to maps". (Major in *Archaeologia*. Vol. XLIV. (1873). p. 254). (2)

Yule placed Locac in Lower Siam (*The Book of Ser Marco Polo*. (1926). II. p. 278), Gerini "in Pahang or thereabouts" (*Researches etc.* (1909). p. 497), Ferrand, reading Lōsak and connecting it with Lankāçoka (Lēnkasuka), in the region of Ligor. (*Journal Asiatique*. Tome XII. (1918). p. 91)

Maletur. The 'Malaiur' described in Book III Chapter VIII of Marco Polo is written 'Maletur' in the Basle edition. Yule's edition, however, says nothing about Marco Polo leaving the shoals of Maletur to the west; in fact, it does not mention any shoals. (3)

This and other points which occur in Eredia's book cause one to suspect that Eredia consulted a manuscript of Marco Polo which was not known to Yule. It occurred to the translator that this manuscript might still be in existence at Goa; and Father Coroado kindly caused enquiries to be made; the result, however, was negative.

Lucach: Marco Polo's *Locac* in another form: see note (4)

(2) *supra*. Java Minor: i.e. Sumatra, with its kingdoms as mentioned later in the chapter. (5)

For the identification of the places mentioned in Marco Polo's itinerary, see Yule, *The Book of Ser Marco Polo* (1926), notes on Book III Chapters VII to XIII and Cordier's *Ser Marco Polo* (1926), p. 104 *et seq.*

Petan: Marco Polo's 'Pentam', identified by Yule with Bintang (Bentan) and by Gerini with Singapore: see p. 223 *infra*. (6)

Necuran and Agania: the Nicobar and Andaman Islands: see p. 223 *infra*. (7)

Nutmegs: literally "mace-nuts", "maça nos". (8)

"Birco". Dalgado remarks that it is not quite clear what Eredia refers to, and suggests a derivation from Malay 'birah' 'a name given to a number of aroids (chiefly wild)', among which may be mentioned 'birah kēladi' (*colocasia antiquorum*). (*Glossario etc.* (1919). I. p. 129). (9)

Eredia is the only European writer to use the word.

By comparing this passage with the allusions in Chapters XI and XII of Marco Polo's Third Book (Yule. *The Book etc.* II. pp. 299, 306) one might feel reasonably sure that Eredia refers to

Marco Polo's *Brasil*, i.e., sappan wood (the red dyewood); in which case 'birco' might be some form of the Portuguese 'brasa', 'red hot coal' (from which the name 'Brazil' was derived; see p. 134 *supra*), or else corrupted in some way from Malay 'bara', which has the same meaning: the old Italian 'verzino' is said to be a form of the word 'bresil'.

What renders this identification doubtful is the fact that in Part I Chapter 5 Eredia specifically mentions 'pão do Brasil', 'Brasil-wood' (page 27 *supra*): perhaps, however, apart from its name, Eredia did not know what 'birco' was: just as, apart from its name, he did not know what 'Bruang' (a bear) was; see p. 236 *infra*.

- (10) Vartomano: i.e. Ludovico di Varthema, a native of Rome, who visited India before the end of the fifteenth century: cf. *The Travels of L. Varthema* (Hakluyt Society: 1863).

- (11) Chinsay: called 'Quinsay' by Eredia in Part III Chapter 3, p. 78 *supra*; apparently Marco Polo's 'Kinsay' identified by Yule with Hang-chau.

According to Yule, Marco Polo sailed, not from 'Kinsay' but from T'swan-chau-fu (Zayton) in the Fukien province.

- (12) Java Major: i.e. Java as now understood.

- (13) Bantan: i.e. so-called Bantam, which should properly be Bantan, as spelt by Eredia.

"The province which forms the western extremity of Java... It formed an independent kingdom at the beginning of the 17th century". (Yule and Burnell. *Hobson-Jobson*. (1903). p. 62).

- (14) Sinda: i.e. Sunda, "the western and most mountainous part of the island of Java, in which a language different from the proper Javanese is spoken, and the people have many differences of manners, indicating distinction of race. In the 16th century, Java and Sunda being often distinguished, a common impression grew up that they were separate islands; and they are so represented in some maps of the 16th century... The Sunda country is considered to extend from the extreme western point of the island to Cheribon, i.e. embracing about one-third of the whole island of Java." (Yule and Burnell. *Hobson-Jobson*. p. 868).

- (15) Bale: i.e. Bali. Marco Polo does not mention any such place; the unfortunate words "when you leave Java" in all the manuscripts of Marco Polo are the cause of this confusion; (cf. p. 223 *infra*).

Eredia, it would seem, says Marco Polo passed through the Straits of 'Bale', because he thinks that, to go south, he must have done so.

- (16) Sondur and Condor. These are usually considered to be the Pulau Condore group of islands: but see Cordier's *Ser Marco Polo*. (1926). p. 104.

- (17) Ferlech: Marco Polo's 'Ferlec': i.e. Perlak (Peureula) near the north-east horn of Sumatra, the 'Perlak' of the 'Malay Annals' and of the 'Chronicles of the Kings of Pasai'.

Basman: Marco Polo's 'Basma': the 'Pasai' of the Malays, (18)
called by the Portuguese "Paçem": situated on the north coast, to
the west of 'Ferlech'.

Samara: the 'Samudra' of the 'Malay Annals', which even- (19)
tually gave its name to the entire island of Sumatra; situated on the
north coast, to the west of 'Basman'.

Dragoian: Marco Polo's 'Dagroian', placed by Gerini in the (20)
Gayu country, west of Samara (*Researches etc.* p. 695); Yule
agrees with this, while Ferrand suggests Indragiri (*Journal Asiatique*.
Tome XII. (1912). p. 93).

Fanfur: Marco Polo's 'Fansur': placed by Yule in the Barus (21)
territory of Sumatra, about 2° N.

Lambri: placed by Yule in the locality of Daya, in the north- (22)
west corner of the island.

Mouros. "Marco Polo has not a word about Islamism having (23)
as yet acquired a foothold in Lambri, although he mentions this
faith as well established among the townspeople (and those only)
in Perlec (Perlak) whither it was introduced by the Saracen
merchants". (Gerini. *Researches etc.* p. 695).

"It is most probable that Arab traders carried Islam to Sumatra
in the early centuries of the Hidjra". (Van Ronkel in *Encyclo-*
paedia of Islam. Fasc. I. (1927). p. 551).

Inhabitants. Compare Marco Polo, Book III Chapter IX, and (24)
Yule's commentary (*The Book of Ser Marco Polo*. 1926).

Angaman: *i.e.* the Andaman islands once more. (25)

In an attempt to harmonize Marco Polo's itinerary with infor-
mation obtained locally, Eredia identifies the Andaman Islands with
Marco Polo's 'islands of women' (500 miles south of Mekran);
and then identifies these latter with the local 'island of women',
wrongly ascribing this meaning to the 'Nusa Tambini' of Javanese
legend (see note on p. 197 *infra*); the local 'island of women' he
places south of Timor.

Lucatambini. *Vide* note on Pulo Tambini, p. 197 *infra*. (26)

Lucapiatto: *i.e.* 'Nusa', 'island' (Javanese) and 'piatu', (27)
'desolate' (Malay).

According to Ferrand, the word 'nusa' is only used in Java,
Madura, and Madagascar (*nūsi*); elsewhere, 'island' is generally
represented by the name 'pularo', 'pulo' or some dialectical variant
thereof. (*Journal Asiatique*. Tome XX. (1920). p. 190).

'Nusa' may be connected, through Sanskrit, with the Greek

νῆσος

The human tongue has a tendency, it would appear, to corrupt
an 'n' into an 'l': thus 'Nakhon' has become 'Lakhon' (Ligor)
and the Malay word 'nuri' has become 'lory'.

Linschoten's map of the Eastern Seas contains the forms 'Lusa',
('Luca') and 'Nusa'.

"Lontâres". "The palm-leaves used in the Archipelago (as (28)
in S. India) for writing on are called *lontar*-leaves.

Filet (No. 5179. p. 209) gives *lontar* as the Malay name of two
palms, viz. *Borassus flabelliformis*... and *Livistona tundifolia*
...."

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It has been said that *lontar* is formed by metathesis from *ron-tal*, leaf of the 'tal' tree.

"*Ron* is then probably equivalent to the Malay *daun* or in some dialects *don* 'leaf'. The tree itself is called *p'hun* (*pohun*) *tar* in the East coast of the Malay Peninsula, *tar* and *tal* being only variants of the same word". (Yule and Burnell. *Hobson-Jobson*. p. 519) "The name of the tree is evidently derived from the leaf which was the writing material of all the nations of the Archipelago before the introduction of paper, and still continues to be so of some of them" (Crawfurd. *A Descriptive Dictionary etc.* (1856). p. 221).

(29) Gram: *i.e.* 'great', 'grand'.

(30) Cathay: *i.e.* Northern China. The word is derived from Khitai or Khitat, the name applied to the northern provinces of China, which between 907 and 1125 A.D. were governed by the Khitan, foreign conquerors from the Sungari basin. The name survived after their disappearance from China: in Russia, China is still known as 'Kitai'.

(31) Mansim: *i.e.* Southern China: see note on p. 162 *supra*.

(32) Luca antara: *i.e.* Nusa antara, the southern land which Eredia claims to have discovered: *cf.* the map referred to on p. 269 *infra*, also p. 223 *infra*.

The name 'Nusa antara' occurs in the *Pararaton*, a Javanese historical work of about the 16th century.

Blagden adopts Brandes' explanation that the expression *Nusantara* refers to the Archipelago in general. (*JRASSB.* No. 53. (1909). p. 144).

Crawfurd says that the expression 'Nusa antara' denoted Madura.

Janssen thinks that Eredia's *Luca antara* was Australia or one of the islands off the north Australian coast: Hamy considers it to be Sumba. (Janssen. *Malaca, l'Inde Méridionale et le Cathay*. (1882). pp. xi. xii). Major thinks it was Madura.

To discuss the identity of Eredia's *Luca antara* does not lie within the scope of this paper: as, however, Eredia's *bona fides* has been attacked by Major, it is desirable to consider whether there is any substance in the accusation. Major discusses this question in *ARCHAEOLOGIA*. (1873). p. 243 *et sqq.* His arguments appear to be as follows:

1. The voyage of 600 miles from Java to Australia is too far to be covered in 12 days.

Major assumes that the "*calelus*" was propelled solely by oars. But in the REPORT ON MERIDIONAL INDIA Eredia says that the boat had sails as well as oars; vide p. 261 *infra*.

A speed of 50 miles a day for a fast boat is below, not above, the average: a thousand years before this, I-tsing had sailed the 1700 miles from Canton to Palembang in 20 days. (Gerini. *Researches, etc.* p. 527-8).

2. Madura tallies with Eredia's description of *Luca antara*. That may be so. But there are arguments against this identification.
 - (i) In order to reach Madura from the south-eastern extremity of Java, Chiaymasiouro would have to travel against the prevailing monsoon—an unlikely proceeding.
 - (ii) Chiaymasiouro, prince of Damuth (Demak) would almost certainly be recognised in Madura: it is unlikely that in purporting to make a voyage of discovery to an unknown land, he should travel to a place where he would be known.
 - (iii) Pedro de Carvalhaes points out that the matter was a subject of notoriety among the people of 'Surubaya': but these people above all would be aware of any fraud, for Madura is only a mile from 'Surubaya' at the nearest point.
Incidentally, it may be mentioned that whereas *Luca antara* is stated to be as large as Java, *Madura* is about one-thirtieth the size of Java.
3. Major is unable to find the name *Damuth* on either old or modern maps of Java; the suggestion being that the name was coined by Eredia.
The translator thinks it reasonably certain that *Damuth* should be identified with *Demak* (p. 190 *infra*).
4. "The purposelessness and transparent delusiveness of such a letter [as that from Chiaymasiouro to the King of Pahang] suggest to us the high probability of its being an entirely spurious production".
There is little cogency in the argument that because we do not know why a certain letter was written, therefore it was not written: nor is it easy to see why the letter is transparently delusive.
There would be nothing extra-ordinary about communication between East Java and the Peninsula: the "Malay Annals" (1612) record how the 'Pengeran of Surabaya' paid a visit to Malacca and was entertained by Sultan Mahmud (Leyden's translation. (1821) p. 272). Manrique (1640) says people were constantly travelling between 'Dema' and Malaya.
5. *Luca antara* is provided with an elaborate and complex outline, even with rocks and shoals minutely laid down. It seems unreasonable, however, to take these details any more seriously than the monsters which appear on many of the old maps.

6. The *Luca antara* of Eredia will in no way agree with what we know of Australia. However powerful this argument may be to contradict the identity of *Luca antara* with Australia, the responsibility for the description of *Luca antara* rests, not with Eredia, but with Chiaymasiouro: just as the faithful servant must be responsible for the later journey made in 1610 (p. 261 *infra*).

On the whole the translator thinks that Major is not justified in his conclusion that Eredia and Pedro de Carvalhaes between them "invented a voyage to the said place, of which they supplied the circumstantial details": nor does such a fabrication accord with the character of the man who braved the storms to bury Christians, who surrendered his mineral rights to his general, whose devoutness led to his admission into the Arch-Company of the Most Holy Sacred Conception: (p. 268 *infra*).

Above all, it seems almost inconceivable that a man of Eredia's intelligence should concoct a story, the falsity of which must, if his plans eventuated, inevitably be disclosed by himself.

Ferrand while accepting the *bona fides* of Pedro de Carvalhaes speaks disparagingly of Eredia. (*Journal Asiatique*. (1922) p. 190).

Differing with great respect from Ferrand, the translator imagines Eredia as thoroughly honest, intensely devoted to exploration, genuinely attempting to harmonize the discord between known geographical facts, the accounts of voyagers such as Marco Polo, and locally-derived information, but, it must be admitted, all too prone to believe the "tall" stories related to him by his friends, as, for instance, the story of the loquacious bamboos (p. 237 *infra*).

- (33) Balambuan: *i.e.* modern Balambangan, in the extreme south-east of Java: it appears as 'Balambuan' in several old maps, *e.g.* D'Anville's map of 1786 (of which the Raffles Museum at Singapore possesses a copy). Crawford (1856) calls it 'Balambuag'.

- (34) Damuth. Major, though in a position of peculiar felicity as an expert geographer, expressed his inability to identify this place: it is with extreme hesitation, therefore, that the translator essays a suggestion.

The translator has ventured to identify Eredia's 'Rapath' in the map of Malacca district (see p. 211 *infra*) with the modern name 'Repah': working on this analogy, one seeks for a name approximating to 'Demuh': the guess is fortunate, for situated in about 110° 31' E 6° 50' S and some 15 miles NE of Semarang in Java, lies the ancient town of Demak (Damak), in a district which the map of Lavanha (1615) calls 'Damo'. Demak was the capital of a State which bore the same name, and it was the ruler of this State who led the confederation of Muslim States against their Hindu over-lord of Majapahit: Demak was victorious and Majapahit ceased to exist.

After this event, placed by Rouffaer during the period 1515—1525, Bantam and Cheribon, as well as the more eastern principalities of the north coast, acknowledged the supremacy of Demak, which lasted until about the middle of the 16th century, when the hegemony passed to Pajang, until the latter in 1568 had to bow to Mataram. (Scheltema. *Monumental Java*. (1912). pp. 26. 114: *Twentieth Century Impressions of Netherlands India*. (1909). p. 21: Campbell. *Java*. (1915). p. 489).

In 1600, then, Chiaymasiouro was the ruler of a kingdom which, 50 years previously, had been supreme among the States of Java.

"*Calelus*". "A kind of swift rowing-vessel often mentioned (35) by the Portuguese writers as used in the Indian Archipelago. We do not know the etymology, nor the exact character of the craft.

[According to Mr. Skeat, the word is Javanese *Kelulus*, *Kalulus*, spelt *keloeles* by Klinkert, and explained by him as a kind of vessel. The word seems to be derived from *loeloes*, 'to go right through anything', and thus the literal translation would be 'the threader', the reference being, as in the case of most Malay boat names, to the special figure-head from which the boat was supposed to derive its whole character.] " (Yule and Burnell. *Hobson-Jobson*. (1903. p. 143.).

In the REPORT ON MERIDIONAL INDIA Eredia says the "*calelus*" had a sail as well as oars: cf. p. 261 *infra*.

Towards the south. The sea to the south of Java was called by (36) the Javanese *Sagara kidul* or *Laut Kidul*, "the south sea": from the latter expression is derived the *Mare Lantchidol* or *Lanchidol* of mediaeval European writers: Eredia uses the expression on p. 228 *infra*.

12 days. Further down in this same chapter the duration of the (37) voyage is given as 18 days: an "8" is not unlike a "2" in Eredia's manuscript.

140 Spanish leagues: i.e. 490 miles, if a league be taken as 3½ (38) miles.

The nearest distance from Java to the Australian coast is some 600 miles: see p. 188 *supra*.

Habit of Christ. Eredia refers to the 'Order of Christ' founded (39) in conjunction with the Pope in 1318 and formed as a distinct Portuguese order in 1522, with the grand mastership vested in the Crown of Portugal.

"Adelantado": a Spanish title corresponding to 'Governor' (40) or 'Governor-General': "Anciently military and political governor of a frontier province" (Bolufer. *Diccionario de la lengua Española*, 1917). Markham (*The Voyages of P. F. de Quiros*. (*Hakluyt Society*: 1904). Vol. I. p. 3) explains the word, "An office corresponding to the President or Governor of a province. *Praefectus*. "Adelante", in front; more advanced than others".

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NOTES ON PART II CHAPTER 2.

- (1) "Venetian": apparently "the Venetian *Zecchino*, *cecchino*, or *sequin*, a gold coin long current on the shore of India, and which still frequently turns up in treasure-trove, and in hoards. In the early part of the 15th century Nicolo Conti mentions that in some parts of India, Venetian ducats, *i.e.* sequins, were current". (Yule and Burnell. *Hobson-Jobson*. (1903). p. 193).
- (2) As large as Java. If the accuracy of Chiaymasiouro be assumed, this disposes of the theory that he really visited some island of the Archipelago; Timor, the largest of them, is one fourth the size of Java; the islands off the north-west coast of Australia are comparatively insignificant in size: *cf.* note on p. 189 *supra*.

NOTES ON PART II CHAPTER 3.

- (1) Certificate. At first sight, one is apt to be suspicious of these certificates, but it is clear from the Fugger Letters (written contemporaneously with Eredia) that immediate efforts were made to record reliable evidence of all extra-ordinary events; *cf.* note on p. 199 *infra*.
- (2) Surubaya: *i.e.* Soerabaya, a town in the north-east of Java, separated from the island of Madura by a narrow strait.
- (3) This is the truth. Major translates the expression "passar na verdade" as "these events actually happened", and in consequence he accuses Pedro de Carvalhaes of deliberate perjury in swearing to the truth of matters which Major disbelieves. But a similar expression is used in Part I chapter 25 (p. 55 *supra*) by Father Francisco Luis, who does nothing more than relate the circumstances under which he found and copied an old document. It would appear, then, that the expression "passar na verdade" was a general formula of certification having some such meaning as "this is the truth".

NOTES ON PART II CHAPTER 4.

- (1) Monomotapa: a territory on the south-east coast of Africa in the Mozambique region.
- (2) Nova Jerusalem. Though described by Eredia as "in the district of Nova Guinea", the new Jerusalem 'founded' by Quiros in 1606 was situated in the New Hebrides, some distance to the eastward. (Markham. *The Voyages of P. F. de Quiros*. (*Hakluyt Society*: 1904). Vol. II. p. 448).
- (3) Cafres. "The word is properly the Arabic *Kāfir*, plural *Kofra*, 'an infidel, an unbeliever in Islam'. As the Arabs applied this to Pagan Negroes, among others, the Portuguese at an early date took it up in this sense, and our countrymen from them. . . . It was also applied in the Philippine Islands to the Papuas of New Guinea, and the Alfuras of the Moluccas, brought into the slave-market". (Yule and Burnell. *Hobson-Jobson*. (1903). p. 140).

NOTES ON PART II CHAPTER 5.

Races. Regarding the races of the Archipelago in general, (1) Buxton finds four classes of racial stocks, (1) Negritos, (2) Pre-Dravidians, the jungle peoples of South India, probably widely scattered but found only sporadically, (3) Nesiots, related to the races found along the south-western sea-board of Asia, (4) Proto-Malays, akin to the Pareoean stock, the dominant element in the population. (*The Peoples of Asia*. (1925). p. 243).

White people. The white women who were carried to Banda (2) would seem to be the survivors of a shipwreck. Accounts of white people occur from time to time, however. Thus Quiros (1595) relates how in the Marquesas the ships were visited by "more than four hundred natives, white, and of very agreeable appearance..." (Markham. *The Voyages of P. F. de Quiros*. (*Hakluyt Society*: 1904). Vol. I. p. 150).

Compare also Eredia's accounts on pp. 263 and 264 *infra*. Perhaps, however, the word 'white' is used in merely a comparative sense: for instance, Barbosa (1516) speaks of the Chinese as being 'white' (*The Book etc.* (*Hakluyt Society*: 1921). II. p. 213).

On the island of Kissa in the Moluccas live the so-called 300 "Dutch heathen": they are the descendants of 8 Dutch soldiers who were sent there in 1665, accompanied by their wives, to form a garrison, and were afterwards forgotten.

Papuas. "This name which is now applied generally to the (3) chief race of the island of New Guinea and resembling tribes, and sometimes (improperly) to the great island itself, is a Malay word *papuwah* or sometimes *puwah-puwah*, meaning 'frizzle-haired', and was applied by the Malays to the people in question." (Yule and Burnell. *Hobson-Jobson*. (1903). p. 671).

Mulatos. Dalgado explains the word as meaning the descen- (4) dant of a European father and a black mother, or *vice versâ*. He adds "Mulato, derived from '*mulo*' means originally, according to Viterbo, "a mule, offspring of a horse and a she-ass". (*Glossario etc.* (1919). II. 78).

White. "Persons born without the colouring matter of the (5) skin, eyes, and hair...are occasionally to be seen in every race and tribe of the Malayan Peninsula, as they are of those of Europe, Asia, Africa and America" (Dennys. *A Descriptive Dictionary of British Malaya*. (1894). p. 3). Newbold (1839) gives a description of a Malay Albino. (*Political and Statistical Account etc.* II. p. 160).

NOTES ON PART II CHAPTER 6.

Amazons. The Amazon is not unknown in Malayan waters. (1) Collet speaks of the inhabitants of Enggano as "indefatigable fighters, whose women, veritable Amazons, take part in the combats." (*Terres et Peuples de Sumatra*. (1925). p. 533).

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- (2) Buildings. This is one of Eredia's statements which excites Major to his most vitriolic mood. Had Major lived today, however, he might perhaps have written less dogmatically. Eredia's island must be sought in the neighbourhood of the Savu-Roti groups of islands; and it is precisely in this region where a large number of megalithic remains have been found. "It has long been known that dolmens exist in Sumba, . . . and that in other islands near by, such as Roti, Savu, and Timor, monuments of large stones have been found, together with other signs of the former existence of a highly developed civilization". Megalithic monuments have been found in Sumba, stone graves, stone offering-places and stone seats in Sumba, Savu and Roti, stone walls in Sumba and Roti, and stone houses in Roti. Of the stones in Savu it has been said "Some of these stones are so large that it is difficult to imagine how they could have been brought to their present position". Terraced irrigation has been found in Sumba and Roti. (Perry. *The Children of the Sun*. (1923). p. 40; Perry. *The Megalithic Culture of Indonesia*. (1918). pp. 28, 138, 192).

For readers of German, *Anthropos*, Vol. XXIII (1928), contains a paper on the megaliths of Assam, Western Burma, and the island of Nias, and the stone buildings of the Nagas and Polynesians.

- (3) 1606. This is the year in which the Dutch ship "Duyfken" is generally believed to have discovered the Australian continent when she coasted along the Cape York peninsula. The 'Duyfken' however did not sail further south than $13^{\circ} 45'$. The 'southern continent' here referred to by Eredia is probably the land in the southern Indian ocean where Eredia in the map between folio 33 and 35, writes the note "Portuguezes. com Artilharia. Ano 1606" see p. 216 *infra*.

But the northern coasts of the Antarctic Continent are considerably further south than 41° degrees as shown in Eredia's map: they lie approximately along the Antarctic circle, that is, near $66\frac{1}{2}^{\circ}$ degrees. In the present chapter Eredia gives some additional examples of "sailors . . . continually finding land which they supposed to be the southern continent, this identification being quite a reasonable one in those days when the longitudes of the new landfalls were only estimated with considerable trouble and inaccuracy" (Johnstone. *A Study of the Oceans*. (1926). p. 119). The hypothesis that the unknown South Pacific contained "a continent as rich as Peru and as large as the whole of Asia from Turkey to China" persisted until the eighteenth century, when Cook in 1769 disproved its existence by sailing through the area which it was supposed to occupy (Wood. *The Discovery of Australia*. (1922). p. 400).

NOTES ON PART II CHAPTER 7.

Ende: *i.e.* the island of Flores. Horsburgh describes the port of Ende as the only safe harbour on the south side of the islands between the coast of Java and Ombay. (*Indian Directory*. (1843). p. 668). (1)

Luca Veach: an island placed by Eredia to the southward of Timor and near the coast of the continent to which 'Luca Antara' belongs. (2)

Major damns the whole matter as a fabrication: see p. 196 *infra*.

Ferrand regards it as 'imaginary': he deals with this chapter in some detail in his paper *L'Empire sumatranais de Crivijaya*, in the *Journal Asiatique*, 11th series, Tome 20, (1922), p. 190 *et seq.*

Sabbo. Rajoam. Lucachancana. Horsburgh names the islands off the south-west coast of Timor as Sema, Rotti, Savu, Banjoan and Dana. (*Indian Directory*. pp. 682-3). According to Ferrand, Sabbo (spelled Sabo in the map on folio 52) "is the island called Savu, Sawu, or Rai Hawu, the Savoe of our maps, between Sumba and Timor": Rajoam (spelled Rajoan in the map on folio 52) "is the island of Ranjuwa or Rai Jua in the Savu group of islands". (3)

Luca for Luca represents the Javanese 'nusa', 'island'. Ferrand says Chancana apparently should be corrected to *Canchana =Kancana. "On the map on folio 52 these three islands with a fourth island not named are placed by Godinho on the north of and a little distance from the island of Petan, and on the north-north-west of the point of Beach".

"Sivall's". Dalgado describes this as a "wild palm (*Borassus flabellifer*) of Solor. From the Javanese *sivalan*". (*Glossario etc.* (1919). II. p. 304). (4)

Of Palmeira Brava (*i.e.* 'wild palm') he writes "The English call it brab-tree (from Portuguese 'bravo')" (II. p. 149): and he quotes from Manucci, (1680), *Storia do Mogor* (III. 187) "There is another class of palm-tree which is called Palmeira Brava, which takes many years to grow. Inside each fruit there are ordinarily three lumps of soft pith which are very refreshing. Eating them is useful in clearing the sight of those unable to see at night". (II. p. 510).

Yule and Burnell identify the brab with the Palmyra Tree or *Borassus flabelliformis*, which supplied the so-called lontar-leaves used for writing: cf. note on p. 187 *supra*. (*Hobson-Jobson*. (1903). pp. 111. 519).

"Agaragar". "The Malay name of a kind of sea-weed (*Spherooccus lichenoides*)... It grows on the shores of the Malay Islands and is much exported to China". (Yule and Burnell. *Hobson-Jobson*. p. 8). (5)

Jettisoned. Ferrand has a very interesting note on this subject: "The object of casting the gold into the sea is to calm the storm. This is a well-known theme of 'Folk-lore', which usually has three

motifs; the first motif, arrival in an unknown island or country; the second motif, removal by the strangers of the characteristic product of the island; the third motif, compulsory jettisoning of the product in question to allay the storm caused by the removal of this product. In the present instance which is concerned with a voyage made by gold-seekers, Godinho relates that a certain amount of it was preserved by way of ballast, in order to show the inhabitants of Sabo that Luca Veach was the island of gold for which they searched." (*Journal Asiatique*. Tome 20. (1922). pp. 190 *et seq.*)

- (7) "Veach". Ferrand makes a careful examination of the Indonesian languages in order to identify the word for "gold" which Eredia represents as "Veach". But the search is unsuccessful; "Veach" has no known connection with the name for "gold" in Indonesian.

With great trepidation the translator ventures a suggestion: 'Veach' would be pronounced by Eredia somewhat as 'Vay-ark', with variant 'Bay-ark'. This differs inconsiderably from the Javanese 'beya', Malay 'beya', 'biya', 'bea' and 'bia', meaning, first, 'tolls, duties', secondly, 'expenses', thirdly, 'the cowrie shell', and fourthly, a kind of plant. The translator suggests that this word may have had a further meaning of 'gold': in the gold-producing countries, the Peninsula, Sumatra, Borneo, Celebes and the Philippines, customs-duties would naturally be paid in gold-dust; and we are told that gold-dust was used as a medium of exchange and "occasionally is so still" in 1856. (Crawford. *A Descriptive Dictionary etc. s. v. Gold*).

Even if 'bea' did not in fact have any such meaning as 'gold', it still remains possible that the word may represent the origin of Eredia's 'Veach' and that he misunderstood its meaning, just as he was wrong in interpreting 'Tambini' as 'woman', p. 197 *infra*: according to the Dictionary of Clifford and Swettenham (1894) the word 'bea', though used by the natives of Sumatra was not used or understood by the Malays of the Peninsula.

One may hope that further research will yet lead to the elucidation of Eredia's 'Veach'. But for Major nothing will suffice except that Eredia has maliciously coined the word as he maliciously perverted 'Nusa' into 'Luca', in order to ensure the complete deception of King Philip; cf. p. 188 *supra*. Besides alleging that Eredia invented the island and concocted its name, Major states that confusion between initial 'b' and 'v' is not admissible in the case of proper names; this contention is quite erroneous; indeed it might be more accurate to say that such confusion has occurred everywhere in Europe and Asia; for instance, in India *Vangala* and *Bengal* (Mendoza), in Indo-China *Vrah Vismuloka* and *Brah Bisnulok* the colloquial name for Angkor Vat before the 19th century, in Malaya *Varella* and *Bêrhala* (Linschoten), in Portugal *Vidigueira* and *Bidigueira* (Della Valle), and in Greece the Gulf of *Volo*, *Bolo*.

NOTES ON PART II CHAPTER 8.

Pulo Cambim. Ferrand says this "is the Portuguese transcription of Pulaw Kambin which in fact means "island of goats". This island appears in Godinho's map on folio 48 verso; it is situated to the North of the most eastern point of Timor. There is in fact an island of this name in the Residency of Timor and its dependencies. It is also called Hoogeiland". (*Journal Asiatique*. Tome 20. (1922). pp. 190 *et seqq.*) (1)

Pulonhior: *i.e.* Pulau Nyiur, 'island of coconuts'. (2)

Pulo Tambini. The map between folio 51 and 53 marks *Luca-tambini*. *I. de Molheres, i.e.* 'Nusa Tambini, Island of Women'. (3)
 "It is the legendary island of Women" says Ferrand "of which Eredia wishes to speak. The Javanese *bini* accurately represents "female, woman" but *tambini* has not got this meaning. The legendary geography of the Javanese to which Eredia refers in this unfortunate allusion, did know a Nusa Tambini. It is the Nusa Tambini where Aji Caka, the Hindu who civilized the Javanese, established himself in the tenth year of the era which bears his name [year 88 of our era] (cf. Raffles. *History of Java*. London. 1817. t. II. p. 231), the Nusa Tambina of the legendary cycle of Panji where the Brahman Kanda (also called Sakendo and Satirti), protector of the Raja of Nusa Kancana, "the island of gold", went to make penance in the IXth century (*ibid.* p. 90). In a modern Javanese manuscript containing a fragment of the cycle of Panji, there is a reference to the subject of Wando, princess of Těmbini (apud MS. CMLIX [cod. 3,172], in H. H. JUYNBOLL, *Supplement op den catalogus van de Javaansche en Madoereesche Handschriften der Leidsche Universiteits-Bibliotheek*, t. II. Leyden, 1911, in 8°, p. 78).

And it is evidently this Nusa Tambini or Těmbini which through a misconception has become Eredia's "island of Women". For Ferrand the "island of gold" and the voyage to Luca Veach are purely imaginary; "the final result is conclusive in this sense, Godinho de Eredia never returned to the island in question". (*Journal Asiatique. loc. cit.*). For Major the whole episode is a vile fabrication; cf. p. 196 *supra*.

NOTES ON PART II CHAPTER 9.

Hannon. For the early attempts to circumnavigate Africa, see (1)
 Johnstone. *A Study of the Oceans*. (1926). pp. 200—1.

"Cabayas". The word 'cabaya' (from Arabic *kabā*, 'a (2)
 vesture') was used by the early Portuguese writers to denote the surcoat or long tunic worn by the better classes in India. (Yule and Burnell. *Hobson-Jobson*. p. 137).

Athlantis. To quote some recent writers, the location of the (3)
 lost Atlantis is surmised to have been in the North Atlantic (Johnstone. *op. cit.* pp. 166—8), in the locality of Gades in Spain (Björkman. *The Search for Atlantis*, 1927), in the neighbourhood of the 1930] *Royal Asiatic Society*.

Black Sea (Fessenden. *The Deluged Civilization of the Caucasus Isthmus*, 1927).

NOTES ON PART II CHAPTER 10.

- (1) Division. Eredia gives an account of the famous Papal Bulls in the REPORT ON THE GOLDEN CHERSONESE, see p. 248 *infra*.

- (2) Service. Compare the account given by Eredia in the Summary of his life, p. 266 *infra*.

Valentyn's account of the fighting between the Portuguese, Dutch and Malays in 1603 and the following years will be found in *JRASSB*. No. 15. (1885). p. 128 *et seq*: there is no mention of Eredia, however; unless he is disguised under the name of "Estevan Texeira De Made, a man of great fame", whom the Portuguese sent to Johore in 1603; nor is he referred to in Danvers' *The Portuguese in India*.

- (3) Straits of Sincapura. *cf.* *JRASSB*. No. 60. (1911). p. 25, regarding Singapore Old Straits and New Harbour.

- (4) Sabbaó. Eredia elsewhere calls the island 'Sabbam' or 'Sabam' (p. 225 *infra*): it is the 'Saban' of Galvano (*c.* 1550) and the 'Sabam' of Teixeira (1600) and Resende (*c.* 1646): in the unpublished log of the "Hooghly" (Colonial Secretary's Library, Singapore, No FF 7) dated 1854, it is written 'Sebom'. The name designates the island or group of islands south of Great Kerimun and separated therefrom by the Straits of Gelam. The form 'Sabon' occurs constantly in early 19th century writers, *cf.* Moor's *Notices of the Indian Archipelago* (1837), pp. 272 and 275. Both the island and the Straits of Sabon are clearly indicated in the chart of the Strait of Malacca in Milburn's *Oriental Commerce* (1813), Vol. II, facing p. 295: and it is obvious from Horsburgh's *India Directory* (1843) that the name was then in common use as applied to the island of Sabon, the group of islands of which Sabon was the largest, and the Straits of Sabon on the eastern side of the group. The name survived till at least 1887; Sabong and Salat Sabong are marked in the British Admiralty Chart No. 1263 first published in that year.

During the next thirty years, however, the name became obsolete. The islands are now known as the Kundur group, from Pulau Kundur the largest of them: the other chief islands of the group are named Parit, Tulang, Lumut, Buru, Papan and Ungur. Though Johnston's *Royal Atlas of Modern Geography* (1914) marks 'Pappan or Sabon', the name Sabon appears to have become obsolete by then: it is not to be found in the map published by the Straits Branch of the Society in 1911, or in the 1915 edition of the China Sea Pilot, or in the more recent charts *e.g.* British Admiralty Chart No. 1355, dated 1922, or Dutch Ministry of Marine Chart No. 105, a

large-scale chart of 'Koendoer' first published in 1910 but corrected to 1922. Possibly the old designation survives in the name 'Sawang' which appears on the West Coast of Pulau Kundur in Chart No. 1355 and in Dutch Ministry of Marine Chart No. 40.

Captured. Valentyn states that shortly before 1606 "Don Andrea Furtado...had besieged Djohor with an army of 8,000 men". (*JRASSB.* No. 15. (1885). p. 131). Eredia gives more details regarding the fighting than either Valentyn or Wilkinson. (5)

Returned. Eredia does not say when he returned to Goa; it was after 1604 when he founded the fortress of Muar, and before 1607, the year which witnessed the death of the Viceroy who gave him the order here mentioned. (6)

One imagines that he returned before 1606, as he makes no particular mention of the short but vigorous attack which the Dutch launched against Malacca in that year. (*JRASSB.* No. 15. (1885). p. 132 *et seq.*: Wilkinson. *A History etc.* (1923). pp. 57-8).

NOTES ON PART II CHAPTER 12.

SUNEPUTAT: The transcript has 'Nuneputat' which the translator amends. (1)

Cross. This was an age of supernatural manifestations; the Fugger Newsletters recount in 1590 "a most alarming wonder in the skies" at Vienna (p. 155), and a number of other marvels including the antics of a cloud of spirits at Madrid (p. 57). (2)

Moreover, if one is inclined to suspect that Father Belchior Figueira doth protest overmuch, the Newsletters emphasize that individual marvels have been witnessed by reliable persons; of a marvel at Piadena in 1601 it is stated "all this has been set down and described by notaries" (p. 242). (*The Fugger Newsletters.* (1568-1605). ed. Von. Klarwill, 1924).

While hesitating to believe that the heavens intended to signalize the Descobridor's explorations around Malacca, one may perhaps exclaim with Count Fugger's correspondent "the significance thereof is known but to God Almighty".

One suspects that the vision related by Eredia may have been due to volcanic dust in the sky, though after the astounding electric manifestations which were observed in Scandinavia a few years ago, one is inclined to believe that anything may be possible, even celestial marjoram.

The great Albuquerque saw a somewhat similar cross "over against the land of the Preste João," *i.e.* Abyssinia: a reproduction appears in the Hakluyt Society's translation, Vol. IV facing p. 44.

NOTES ON PART III CHAPTER 1.

- (1) Cambalo. This city is usually identified with Peking: but in Eredia's map on folio 69 R. it appears as a different place situated some 230 miles NE of 'Paquin'.
- (2) Chinchis. Jenghiz Khan (1162-1227) having reduced the neighbouring Mongol tribes, in 1206 commenced his invasion of China: he eventually made himself master of practically the whole of China north of the Yangtze.
- (3) Coromoran: *i.e.* Karakorum.
- (4) Cublay. Kublai Khan (1216-1294) captured the Sung capital of Lingan or Kinsai (*King-sz*, 'capital') in 1276 and made himself master of all China.
- (5) Abayan Chinsam. For Kublai's general Bayan Chingsiang (*i.e.* Bayan, the Minister of State) see Yule. *The Book of Ser Marco Polo*. (1926). II. pp. 148-9.
- (6) Revolt. Chu Yuen-chang, founder of the Ming dynasty, took Nanking in 1335: he recaptured the whole of China, and broke the Mongol power.
- (7) Coromoran: *i.e.* 'Kara muren' (Mongol), 'Black Water', here applied to the Yangtze.
- (8) "Tutan". Dalgado (*Glossario etc.* (1919). II. p. 395) explains 'Tutão' as "Viceroy or Military Governor, in China:" from the Chinese 'tu-tung' (都統), 'commanding general'.
- (9) Christianity. It is usually considered that the Nestorians introduced Christianity into Mongolia in the tenth century. The presence of St. Thomas in southern India is now doubted. *Vide* Cordier. *Ser Marco Polo*. (1926). pp. 116-8.

NOTES ON PART III CHAPTER 2.

- (1) Christianity. The Si-ngan-fu inscription, which dates from about 781 A.D., describes the course of a Syrian mission in China, beginning with the favourable reception of Olopan, who came from Judaea in 636 A.D. The inscription is said to prove a surprisingly widespread extension of the Christian faith in China.
See also Cordier. *Ser Marco Polo*. pp. 76-7.
- (2) Argones. As to the Argons and Mar Sarghis see Yule. *The Book of Ser Marco Polo*. I. p. 284 and II. p. 177.
- (3) Ancona. This unusual spelling makes one wonder what MS. or edition of Marco Polo was used by Eredia; (see p. 185 *supra*): the priests came not from Ancona in Italy, but from Acre (Acona) in Syria; *cf.* Yule. *The Book etc.* I. p. 22.
- (4) Alans. See Yule. *The Book etc.* II. pp. 178-9, and Cordier. *Ser Marco Polo*. pp. 95-6.

NOTES ON PART III CHAPTER 3.

China. According to one theory the word 'China' has a Malay origin, having been at first applied to what is now called Indo-China. (1)

Giles thinks that the name may possibly be derived from *Ch'in* (秦), the name of a feudal State and dynasty from 897 to 221 B.C., when there emerged the Ch'in dynasty under the First Emperor of a united China; the name of the dynasty being used as a name for China down to the second century A.D.

The final -a (also found in Malay) appears in the Sanskrit form of the word, *Cina*, before the arrival of the Portuguese.

[Giles. *A Chinese Dictionary*. (1912). s.v. 秦, No. 2093: Yule and Burnell. *Hobson-Jobson*. (1903). p. 196: Pelliot in *Bulletin de l'Ecole Francaise d'Extrême-Orient*. Tome III. (1903). p. 477].

Tangut. By Tangut Eredia here means a district in southern Burma, apparently Pinto's Tangu and modern Toungoo or Taungu. (2)

In a note to his map on folio 73 V (see p. 226 *infra*), he explains that Tangut or Tangou means 'a province of pagodas.'

Pegû. For the river routes cf. Hirth (*China and the Roman Orient*. p. 179) "Perhaps the south-eastern bend of the [Irawaddy]... saw lively traffic in those days [c. 429 A.D.], as it must have connected a considerable portion of the interior of China with the ports of the Gulf of Bengal," and Hall (*Early English Intercourse with Burma*. p. 121) "For many centuries [before 1684] the bulk of Burma's trade with China had passed along the Taping River, in earlier days, through Kaungsin, until the importance of that place was overshadowed by Bhamo from the fifteenth century onwards." (3)

NOTES ON PART III CHAPTER 4.

Cathigara. The identification of Ptolemy's *Kattigara* did not puzzle Eredia more than it has puzzled modern writers, by whom it has been located, amongst other places, at Martaban, Singapore, the mouth of the Mekong River, Hanoi, and Canton. (1)

Gerini locates it at Hang-chau. (*Researches etc.* p. 302). Ptolemy, unable to break from contemporary tradition which represented the coast of China as running from north to south, places *Kattigara*, according to Eredia's representation of Ptolemy's map, due east of Java in about 10° south. "Cosmas of the sixth century is the writer who first knew that men had to sail round the Malay Peninsula, and then turn northwards if they were bound for China". (Warmington. *The Commerce between the Roman Empire and India*. (1928). p. 129).

In his map on folio 46 R. (see p. 220 *infra*), Eredia notes that Ptolemy's north-and-south coast-line is "impossible"; hence he turns the coast round from the island of Hainan till it runs approximately north-east; and in so doing he anticipates Gerini by 300 years.

NOTES ON PART III CHAPTER 9.

- (1) Ophir and Tharsis. The situation of these places still remains undetermined: *cf.*, for instance, *The Jewish Encyclopedia*. (1925). Vol. IX. p. 406; Vol. XII. p. 65. In the unpublished TREATISE ON OPHIR Eredia identifies Ophir with Siam, and the port of Tharsis with Canton.
- (2) Sophala: *i.e.* Sofala, about 40 miles south of Beira.

NOTES ON PART III CHAPTER 10.

- (1) Naugracothe: *i.e.* Nagarkot, 'the fortress town'. The name Nagarkot is sometimes used by older European writers to designate the Himalayan mountains, called by the ancients Imaus, Emodus, etc.
Eredia in the map on folio 78 R. represents '*Naugracothe olim Imaus vel Caucasus*' as being one uninterrupted range of mountains running in an approximately north-easterly direction. In fact, the general direction of the Himalayas is approximately north-west to south-east. The Hindu-Koosh, however, runs north-east; and that part of it which forms the NW boundary of Cabul is the Indian Caucasus of Alexander.
- (2) Gatte. The word 'ghats' properly means 'passes'. Eredia here refers presumably to the confused ranges, running with a general direction of east to west, and known in the aggregate as the Vindhya mountains: formerly they formed a barrier between northern and southern India.
- (3) Cocho Pathanes. In the map on folio 73 V. Eredia represents *Cocho* as a 'region of gold' on the east of the Ganges.
- (4) Negar Pherin. In the maps on folio 69 V. and folio 78 R. Eredia shows these mountains as running in a north-east direction on the eastern shore of the Ganges: *i.e.* in the general line of the Naga Hills and Patkoi mountains.
- (5) Prosonay. In the map on folio 78 R. Eredia represents these mountains as being on the borders of 'Tebet' immediately north of 'Negar Phirin': he seems to refer, therefore, to the eastern slopes of the Himalayas.
- (6) Caracone. In the map on folio 78 V. Eredia shows '*Caraconi olim Hiran*' as lying on the west bank of the Indus; the name '*Caracone*' is apparently a form of 'Khorasan.'
- (7) Purab. In the map on folio 78 R. Eredia places Purab between *Deli* and *Bengala*. In Upper India the term 'Poorab' usually means Oudh, the Benares division and Behar.

NOTES ON PART III CHAPTER 13.

Lae. Perhaps the reading should be 'Lar', a name given to (1)
(a) "the region which we now call Guzerat," and (b) the Delta region of the Indus.

Baneanes: *i.e.* Hindu traders. (2)

Tanna: a town on the island of Salsette, about 20 miles NE (3)
of Bombay.

Pegu. The modern name appears to come through Malay (4)
'Paigu' from Talaing 'Bago' meaning 'conquered by strategem';
a phrase which is explained by a legend. (5)

Iogues: *i.e.* Yogis (or properly Jogis).

The name 'Gymnosophists' was given by the Greeks to certain Hindu philosophers who pursued asceticism to the point of regarding food and clothing as detrimental to purity of thought.

NOTE ON PART III CHAPTER 14.

Balagate: from Persian 'bala', 'above', and Hindustani (1)
'ghat', 'a pass', means 'the country above the passes' *i.e.* above the passes over the range of mountains which are called the 'Western Ghats'. Several writers have wrongly stated that 'ghat' means 'mountains'.

NOTES ON PART III CHAPTER 15.

Cancer. The transcript has 'Capricorno': clearly the Tropic (1)
of Cancer, not Capricorn, is meant.

River Ganges. Apparently Eredia means that the traffic went (2)
round by sea from Pegu to the trade-centre, which he does not name, at the mouth of the Ganges.

The river of Cosmim is the Irawaddy, and Cosmim was a port on or near the site of Bassein.

Appendices.

APPENDIX I.

EREDIA'S MAPS AND ILLUSTRATIONS.

1. Folio 7 R.

"PLAN OF THE FORTRESS OF MALACA".

"AFONCO DE ALBOQUERQUE arranged the foundations of this fortress in this form. 1511 A.D."

Compare the description of the fortress in Part I Chapter 1 (page 17 *supra*).

Using a scale of 2.2 fathoms (*braca*) to the inch, Eredia represents a rectangular area, 150 feet long by 95 feet wide, with another rectangular area specifically marked "FORTRESS", approximately 60 feet square, at one corner. In the larger area, he marks "GATE", "BASTION", "STORE", "WELL" and "PRISON".

2. Folio 7 V.

This page contains on the left-hand side a head-and-shoulders sketch of "AFONCO DE ALBOQUERQUE". The 'invincible captain' ties his long beard in a knot near the end.

Beneath the sketch is a coat-of-arms.

On the right-hand side is a Tower with a scale showing its height to be 40 units (unspecified): apparently this represents the fortress-tower 40 fathoms high, at Malacca: see Part I Chapter 1 (page 17 *supra*).

3. Folio 8 R.

"PLAN OF THE FORTIFICATIONS AT THE TOWN OF MALACA".

Compare the description in Part I Chapter 1 (page 18 *supra*). The plan is much the same as that on folio 46 V (page 221 *infra*); the scale, 324 feet to an inch, is slightly smaller, and the buildings are not sketched.

A few additional names and notes are given, however:—

'TRANQUEYRA' on the north-west side of the river; 'TEREYRO' (the 'terrace') at the river-mouth on the south-east side; '*aljandega*' (the 'Custom House') to the north-east of the Terrace, (this is the rectangular building shown outside the wall near the bridge in the map on folio 46 V); the road running north-east from the Custom House gate is marked '*straight road*'; a road is shown running through the gate of St. Antonio and is marked "*road to Madre de Dios*" (near the modern Koon Cheng road); a road is shown running through the gate near Santiago and is marked "*road to Yler*" (near the modern Banda Hilir Road); the northern branch of the 'AERLELE' is continued by a dotted line, with a note "*continuing to the river and making an island.*"

4. Folio 8 V.

"ANCIENT MALACA".

Compare the text in Part I Chapter 1 (page 16 *supra*). Eredia

marks (reading downwards from the top of the page):—

YLER

Streamlet Aerlele

Trees BUA MALACA ISTHMUS PULO MALACA

Where Permicuri First

now Ships' Island

King of the Malaio

disembarked: in

the year 1411.

SABAC PERMICURI

fortified himself

on this hill: buquet

Malaca.

MALACA RIVER

UPE.

BY 'BUA MALACA' (*Buah Melaka*) Eredia refers to the Myrobalans described in Part I Chapter 1: see p. 16 *supra*. He shows an Isthmus joining 'PULO MALACA' (now Pulau Jawa) with the mainland.

5. Folio 9 R.

"PLAN OF THE TOWN AND
SUBURBS OF MALACA".

Compare the text in Part I Chapter 1 (page 18 *supra*).

The Scale is about 666 feet to 1 inch.

Eredia marks (reading from the top of the page):—

Madre Dios.

Swamp.

Fields.

BUQUET China. Well.

Prigue Vaja.

SUBURB OF YLER.

Our Lady of Mercy.

Palms.

Buquet China Road. Road of Mercies.

*Streamlet
Aerlele.*

SUBURB

OF SABAC.

S. LOURENCO.

NEW TRACE.

BASTION SANTIAGO.

BASTION

S. PEDRO.

FORT.

Campon Jaio.

MALACA RIVER.

S. Estevao.

PARET CHINA. *Campon China.*

Bendara's

Channel.

Campon

CAMPON CHELIN.

Bendara.

BENDARA.

S. THOME.

SUBURB

OF UPE.

TRANQUEYRA.

Senhor Durando's Channel.

Paret

Jawa.

Gate of

Tranqueira.

The expression '*Prigue Vaja*' apparently represents the Malay words '*Përigi Raja*', '*Rajah's Well*'.

'*Campon Jaio*' appears to mean '*Kampong of the Javanese*'; 1930] *Royal Asiatic Society*.

it is placed in the situation of the modern Kampong Pantai: at the present day Kampong Jawa lies on the other, north, side of the river at this point. Eredia places '*Campon China*' and '*CAMPON CHELIN*' in the locality of the modern Kampong Kling and Kampong Blanda respectively.

The readings '*Turucan da bendara*' rendered '*Bendara's Channel*' and '*Turucan de Sr. Durando*' rendered '*Senhor Durando's Channel*' are doubtful.

The Church of Our Lady of Mercy has disappeared.

This plan is reproduced in Bland's *Historical Tombstones of Malacca*.

6. Folio 9 V.

The page contains another map of the town and suburbs, on a slightly smaller scale than the map on folio 9 R. Some additional names and notes are given:—

On the south-east (beyond the suburb of '*YLER*'), '*Buquet Pipi*' apparently St. John's Hill, '*Ujan Pacer*' corresponding to the modern mukim of Ujong Pasir, with '*senry*' marked near the coast:

On the north-east of '*BUQUET CHINA*', '*BUQUET PIATO*', modern Bukit Piatu:

On the north beyond '*PARET JAVA*', '*Garden belonging to the Master of the Episcopal School*' (this would be near the present railway-station):

On the north-west beyond the gate of '*TRANQU-EYRA*', '*The Bishop's Bamboo-Groves*', '*food-stuffs*' ('*mainntos*' for '*mantimentos*'), and a solitary tree marked '*bude*' (apparently Malay '*budi*', the peepul-tree, *ficus religiosa*).

Compare the description in Part I Chapter 1 (page 18—19 *supra*).

7. Folio 11 V.

A Map of the Malacca Territory.

Compare the description in Part I Chapter 2 (page 21 *supra*). The scale is approximately 10 inches to 1 mile (giving 4.3 miles to a league), but it is not consistently applied: thus, in fact, the distance from Malacca to Repah ('*Rapat*') is roughly the same as the distance from Malacca to the mouth of the Linggi River, but in this map Eredia represents the former distance to be nearly twice the latter. Fewer names occur than on the larger-scale map which immediately follows: but there are some additional entries:—

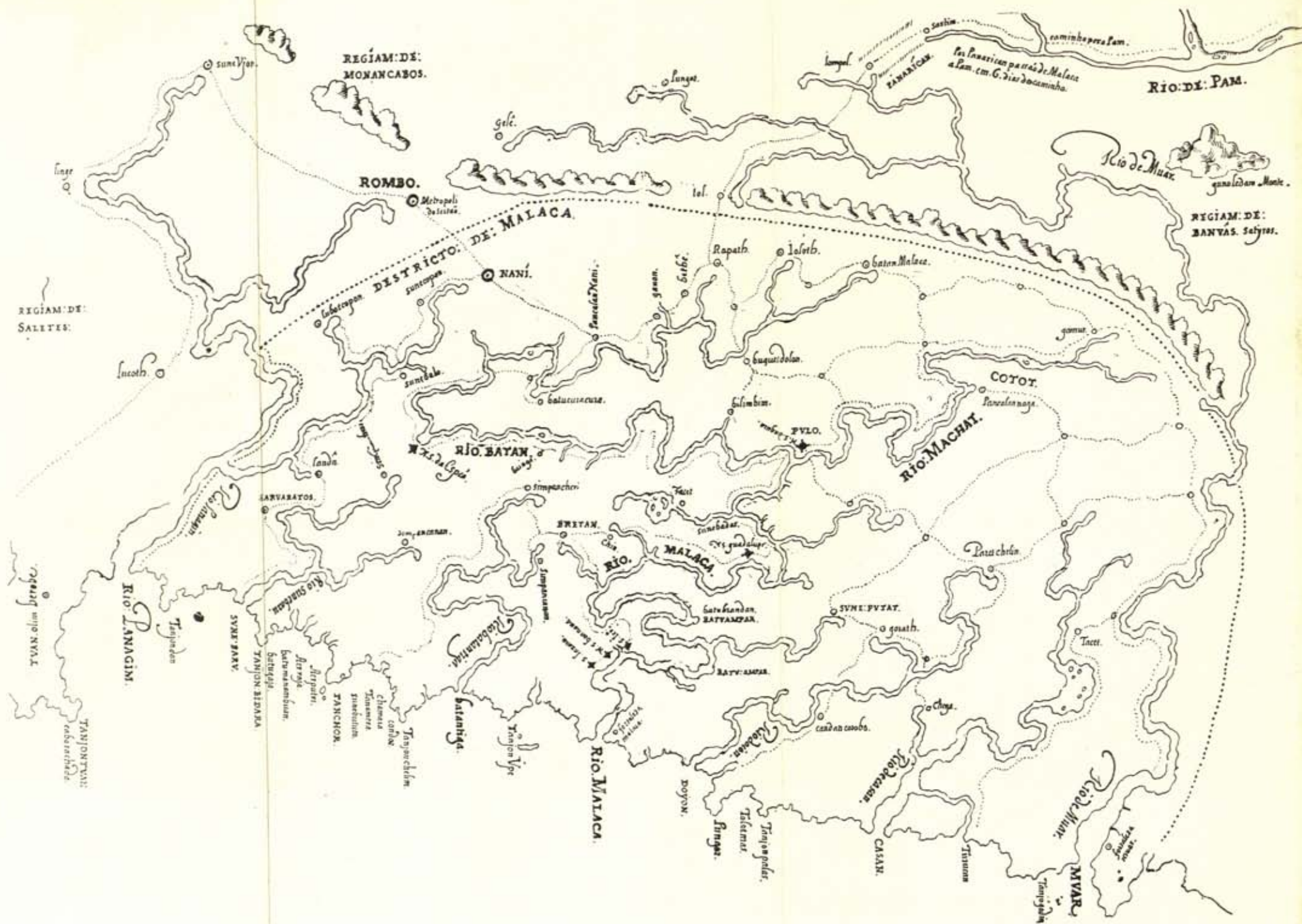
In the north near the Pahang River, '*Triam*' apparently representing Triang:

ROMBO (Rembau) is described as '*head of the hinterland of the Malayos*':

Near NANY (Naning) there is a note "*Traffic in betre with Malaca*":

East of '*N. S. Espia*' there occurs the word '*dringuet*', perhaps to be identified with Beringin ('*bringe*' of the following map):

Off the coast, between the Kesang and Duyong Rivers, is shown '*I. Grande*', apparently modern Pulau Besar ('big island').



8. Between folio 11 and folio 13. (*See photographic reproduction: Plate I.*)

This may perhaps claim to be the oldest extant map of Malacca territory.

Speaking generally, it gives an accurate representation of the district.

If the distance between the mouths of the Malacca and Linggi Rivers be taken as the standard, the scale is 1 inch to 4.23 miles, say $4\frac{1}{4}$ miles.

In some respects the accuracy is remarkable; for instance, the distance from the mouth of the Malacca River to Repah ('*Rapath*') is correct within half a mile; and this may justify the belief that the relative positions of intermediate places, which do not occupy the same situations to-day, are due, not solely to Eredia's inaccuracy but to the fact that the place-names have shifted somewhat: for instance, one would think that Eredia must have known where Lendu was, yet his 'Landû' is placed some 10 miles from its present position. On the other hand, unless geographical changes have taken place since 1613, some considerable errors are disclosed: for instance, '*Gunotedam*' (Mount Ophir) is placed on the wrong side of the Muar River; and at the present day the Malacca River does not run to a point east of Batang Malaka.

The names mentioned by Eredia are in common use at the present day, unless otherwise stated below.

For the purpose of explanation, the map may be divided into 6 sections.

Section 1. Western half: places off the sea-coast.

Caborachado.
TANJON TUAN.
RIO PANAGIM.

Cape Rachado.
Tanjong Tuan.
Linggi River.
The name 'Panagim' is now obsolete:
but see note on p. 107 *supra*.

Tanjon dan.
SUNE BARU.
TANJON BIDARA.
Batu gaja.
Batu manambuan.

Tanjong Dahan.
Sungei Baru.
Tanjong Bedara.
Batu Gajah.
Batu Miniabong.

See note on p. 130 *supra*.

Aer raja.

Ayer Raja.
The name is understood but not in common use.

Aer putri.

Ayer Putri.
Not in the 1927 map.
The 1916 map shows 'Anak Ayer Putri' very close to Tanjong Putri.

PANCHOR.

Panchor.

Not in the 1927 map.

The 1916 map shows 'PUNCHOR' very close to Tanjong Putri, and 'Bukit Panchor' on Bukit Blah point.

Sune bututo.

Sungei Bertutu.

Not in the 1927 map, but marked in the 1916 map.

Tanamera.

Tanah Merah.

Chamara.

Word not understood.

Condor.

Kundor.

Tanjon chelim.

Tanjong Kling.

Batantiga.

Batang Tiga.

Tanjon Upe.

Tanjong Upeh.

See note on p. 110 *supra*.

RIO MALACA.

Malacca River.

Section 2. Western half: places south of RIO BATAN.

TUAN olim Berobe.

'Tuan, once Berobe'.

At present there is no such place as 'Tuan'.

Ptolemy's *Berobe* is identified by Gerini with Mergui.

Rio Panagin.

Now the Linggi River.

SARVARATOS.

'The Royal Harem'.

See note on p. 111 *supra*.

Landû.

Lendu.

Rio Sunebaru.

(River) Sungei Baru.

Simpan cheri.

'Left branch': Malay, 'Simpang Kiri'.

Simpan canan.

'Right branch': Malay, 'Simpang Kanan'.

The expressions 'Simpang Kiri' and 'Simpang Kanan' are only used in the immediate neighbourhood of a particular river.

*N.S. da Espca.*Our Lady of Hope (*Esperanca*).

RIO BATAN.

River Batang'.

Rio batantiga.

The name is obsolete.

Batang Tiga River.

Marked in the 1916 map but not in the 1927 map.

Simpan cheri.

'Left branch'.

Simpan kanan.

'Right branch'.

Bringe.

Perhaps representing the modern name Beringin.

BRETAN.

Bertam.

Fortaleza malaca.

Fortress of Malacca.

S. Lazaro.

St. Lazaro.

N. s. boa nova.

Our Lady of Good Tidings.

<i>S. Jero.</i>	St. Jeronimo.
<i>Chin.</i>	See note on p. 105 <i>supra</i> . Cheng.

Section 3. Western half: places north of RIO BATAN.

REGIAM DE SALETES.	Region of the 'Saletes' (' <i>orang selat</i> ').
	See note on p. 89 <i>supra</i> .

<i>Linge.</i>	Linggi.
<i>Lucoth.</i>	Lukut.
	No such village of this name is now situated here.
<i>Sune Ujon.</i>	Sungei Ujong (Seremban).

REGIAM DE MONANCABOS.	Region of the 'Menangkabaus'.
ROMBO.	Rembau.
<i>Metropoli de sertao.</i>	Metropolis of the district.
<i>Gelê.</i>	Jelai.

DESTRICTO DE MALACA.	District of Malacca.
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<i>Lubot copon.</i>	Lubok Kepong.
	See note on p. 109 <i>supra</i> .

<i>Sune copon.</i>	Sungei Kepong.
NANI.	Naning.
<i>Sune bulo.</i>	Sungei Buloh.
<i>Batu curacura.</i>	Apparently 'Batu Kura-Kura', 'Tor- toise stone'. Not identified.
<i>Pancalan Nani.</i>	Pengkalan Naning: 'Naning landing- place'.

Section 4. Eastern half: places off the sea-coast.

MUAR.	Muar.
<i>Tanjó gadin.</i>	Tanjong Gading.
<i>Turucan.</i>	'Channel': Malay, ' <i>têrusan</i> '.
CASAN.	Kesang (River).
<i>Tanjon palas.</i>	Tanjong Palas: now called Pasal or Pulai: the 1878 map has Palei.
<i>Tolot mas.</i>	Telok Mas.
<i>Pungor.</i>	Punggor.
DOYON.	Duyong (River).

Section 5. Eastern half: places south of RIO MACHAT.

<i>Fortaleza muar.</i>	Fortress of Muar.
<i>Rio de Muar.</i>	Muar River.
<i>Tacet.</i>	Tasek.
<i>Chega.</i>	Probably 'Chegar': unidentified: apparently near Paya Jenuang.
<i>Paret chelin.</i>	'Parit Kling': <i>i.e.</i> 'the Kling drain': unidentified: apparently near Te- bong.

Gorath.

Perhaps 'Grik (Grit)': unidentified: apparently about 2 miles east of Bemban.

SUNE PUTAT.

'Sungei Putat': unidentified: apparently at or near Bemban: the name now occurs near Batu Berendam.

Candan Corobo.

'Kandang Kerbau': obsolete: apparently near Anak Ayer Kandang, marked in the 1927 map: the name 'Kandang' appears to survive in the modern mukim of 'Kandang', and in the village of 'Kandang' 3 miles E. of Malacca.

Rio doion.

Duyong River.

BATU AMPAR.

'Batu Hampar': obsolete: apparently near Padang Jambu.

BATU AMPAR.

'Batu Hampar': obsolete: immediately south of Batu Berendam: apparently Governor Bort's 'Battoeampar', not identified by Blagden. (*JRASMB*. Vol. V. Pt. I. pp 51, 207).*Batu brandan.*

Batu Berendam.

RIO MALACA.

Malacca River.

N. s. guadalupe.

Our Lady of Guadalupe: near Pengkalan Tampoi.

See note on p. 106 *supra*.*Sunc badar.*

Sungei Badak.

Tacet.

'Tasek': unidentified: apparently near Paya Rumpit.

Section 6. Eastern half: places north of RIO MACHAT.

REGIAM DE BANUAS,

Satyros.

'Region of Banuâs, Satyrs'.

Gunoledam Monte.

(Mount) Gunong Ledang, Mount Ophir.

Rio de Muar.

Muar River.

RIO DE PAM.

Pahang River.

Caminho pera Pam.

'Route to Pahang'.

*Por Panarican passao de
Malaca a Pam en 6
dias de caminho.*

'By the 'Panarican' they travel from Malacca to Pahang in 6 days' journeying'.

Sartim.

Serting.

PANARICAN.

'Drag-way' (Malay, '*penyarekan*', from '*tarek*', 'drag'): i.e. for dragging boats from one river to the other. See note on p. 95 *supra*.*Jompol.*

Jempol.

Pungor.

'Punggor': a kampong about 3 miles NNE. of Johol village.

Jol.

Johol.

<i>Ganon.</i>	Ganun.
<i>Bethê.</i>	Perhaps 'Petai': unidentified.
<i>Rapath.</i>	Repah.
<i>Joloth.</i>	Also spelled 'Jolot': the modern name is Jorak: near Pondoi.
<i>Batan Malaca.</i>	Batang Malaka.
<i>Buquet dolon.</i>	Bukit Dalong: near Gadek. See note on p. 119 <i>supra</i> .
<i>Bilimbim.</i>	Belimbing.
PULO.	Pulau: about $\frac{1}{4}$ mile beyond Sempang Gading.
<i>N. s. daguia.</i>	Our Lady of Guidance. The old church has disappeared. The 1916 map marks a Roman Catholic Chapel at the 14th mile: but this is new.
RIO MACHAT.	Machap River.
<i>Pancalan naga.</i>	Pengkalan Naga: understood but not commonly used.
COTOT.	Perhaps (Bukit) Katong, a hill near Bukit Batu Tiga in the Bukit Senggeh Forest Reserve. See note on p. 120 <i>supra</i> .
<i>Gamur.</i>	Gemas (Gemeh): in approximately the correct position, at the end of the road from Nyalas to Asahan. See note on p. 120 <i>supra</i> .

9. Folio 14 R.

"ANCIENT MAP." Compare the text in Part I Chapter 3, (page 23 *supra*).

This map shows 'SAMATA *now Samatra*', the northern part of which is marked 'AUREO CHERSONESO', joined to the Peninsula by an Isthmus running from 'TANJON BALVALA' to 'TANJON TUAN, *now Cabo rachado*'.

On the west coast of Sumatra, close to the Equator, is marked 'TICO, *once Tacola, emporium*'; on the east coast 'Aracan' and 'ARU *once AURO*'; with 'Achem' on the north coast.

The gulf north of the isthmus is called 'SEA OF TRAFFIC *or Sea of the North-west*', and the gulf south of the isthmus 'SEA OF THE SALETES, *or Sea of the South-east*'. North of 'Parcelar' appears 'Sabac, *once Sabara*' and south of 'TANJON TUAN', 'Malaca' and 'River Muar'. 'JAVA MAYOR' is shown south of Sumatra.

10. Folio 14 V.

This map shows the south-western portion of the Peninsula and a part of the Sumatra coast.

In 'SAMATA' only 'Tanjon balvala' is marked.

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The isthmus has disappeared, allowing the 'SEA OF THE NORTH-WEST' to unite with the 'SEA OF THE SOUTH-EAST'. North of 'Tanjon Tuan' are shown 'Sabara', 'Parcelar' and 'CALAN, *emporium*'.

South of 'Tanjon Tuan' are marked 'Rio Panagin', 'MALACA' (with a dotted line representing the boundary of the territory), 'River Muar', 'River Casan', 'Tanjon burus' (modern Tanjong Bulus), 'River of Jor', 'UJON TANA', and 'Point of Ujontana' also marked '*romaniya*' (modern Romania or Rumenia Point), with the islands of 'Sincapura' and 'Bintam'.

Eredia adds three explanatory notes:—

"The point of Tanjon Tuan in Ujontana was united by an isthmus of land with the point of Tanjon Balvala in Samatta or Samatra in the time of Ptolemy, 163 A.D."

"Ptolemy named Sabbara, a port of the Isthmus of Tanjon Tuan: this port ought to be Sabbac, in the swamp-land of Parcelar; whence they passed by land along the Isthmus to the port of Tacola in Sumatra".

"CALAN in ancient times should have been a great emporium or metropolis on this western coast of Ujontana: as appears from the fact that its territory extended to the point of Ujon calan, a point of land which might be 'the *gonang* of Calan', whence the designation of Ujon Calan as 'Juncalan'".

(The word '*gonang*' above is apparently the Malay word '*gunong*', 'mountain').

For the Isthmus see Part I Chapters 1, 3 and 12, (pages 16, 23, and 34 *supra*).

For Sabbara see Part I Chapters 3 and 12, (pages 24, and 34 *supra*).

For Calan see Part I Chapters 12 and 22, (pages 34, and 52 *supra*).

11. Folio 15 V.

Drawing of a Cross.

See Part I Chapter 4, (page 25 *supra*).

12. Folio 17 R.

"Compartment of DORYAM".

Drawing of a section of durian-fruit.

See Part I Chapter 5, (page 26 *supra*).

13. Folio 17 V.

"MANGOSTAN".

Drawings of an uncut mangosteen and of a mangosteen with one half of the rind removed.

See Part I Chapter 5, (page 26 *supra*).

14. Folio 18 V.

"TAMBOLYN, resembling an Armadillo".

Drawing of a scaly ant-eater.

See Part I Chapter 6, (page 27 *supra*).

15. Folio 21 R.

Drawing of a Malay wearing a narrow head-band, tight-fitting vest with sleeves to the wrists, and sarong tucked up to the waist on one side and falling to the knee on the other. He holds a long spear, and has a 'Keris' stuck in the waist.

See Part I Chapter 9, (page 31 *supra*).

16. Folio 24 R.

"ANCIENT MAP OF THE CHERSONESE".

This closely resembles the map on folio 14 R: but fewer names appear; the main differences are:—

'Tico' is stated to be 'once Tycola':

'Ponta Jamboer', that is, Jambu Ayer (Diamond Point), is marked:

there is an entry 'AURO once Aru' (perhaps represented by ARU Bay about half way between the Belawan and Tamiang Rivers):

the seas north and south of the Isthmus are called 'MAR SABARICO' and 'Mar Perimulco' respectively:

'SABARA' is identified with 'CALAN':

'Tanjon Tuan' is stated to be 'once Berobe, now Caborachado'.

See the text in Part I Chapter 12 (page 34 *supra*).

17. Folio 24 V.

"MAP OF MODERN SAMATRA".

Compare page 237 *infra*.

A map of the Island of Sumatra, with a short stretch of the Peninsula, on which a few names appear, and of JAVA MAJOR.

The Island is designed 'SAMATRA, once SAMATA': the following names are marked:—

On the East coast:

Palimban (Palembang)

Jambe (Jambi)

Andriguir (Indragiri)

CAMPAR (Kampar)

Syach (Siak)

Bencales (Benkalis)

Aracan (Rokan)

ARU (perhaps Aru Bay in about 4° 3' N)

Gory (unidentified: perhaps connected with the name of the Kuru River, an affluent of the Tamiang River)

Perlat, source of oils (Perlak, Peureula)

Ponta de Jamboer (Jambu Ayer, Diamond Point)

On the North coast:

Simaui (Semawi)

PACEM (Pasai)

Pedir (Pedir)

ACHEM (Acheen)

On the West coast:

P. Daya (apparently 'Ponta Daya,' connected with modern Daya, situated in about 5° 5' North)

Baros (Barus)

Ouro (i.e. 'gold': apparently Pulau Simalur, Hog Island, is indicated)

Tico (Tiku)

Pulo mäs (apparently the Island of Pulau Nias is indicated)

Barreras bracas ('barreiras brancas', 'white cliffs')

Ilheos brancos (that is, 'White Islets')

SYLATA, *gold-mines of Arcas* (Salida)

Priamon (Priaman)

GOLD-MINES of *Monancabo*

Village of Javanese—water.

(For the East and North and West coasts of Sumatra see British Admiralty Charts 1353, 794; and 219; and 2760, 2761, 709 respectively.)

18. Folio 25 R.

"PTOLEMY. TABLE XI OF ASIA"

This purports to be a map of the Indo-Chinese Peninsula south of the Tropic of Cancer.

Eredia marks some only of the places appearing in Ptolemy's Table.

The following places (with probable identifications) are shown in the 'Malayan' region:—

Sabara (Twante, near Rangoon)

River Sodan (Soma River in Siam)

Isthmus (in fact the Isthmus of Kra, but erroneously identified by Eredia with an Isthmus running from Cape Rachado to the Sumatran coast)

SINUS SABARICUS (Gulf of Martaban)

SINUS PERIMULICUS (Gulf of Siam)

Perimula (Ligor)

Tacola (Kopah)

Coly (Kelantan)

Sabana (Sabak Bernam)

Satyrorum (i.e. 'Island of Satyrs', the Anambas)

Jabadij (Sumatra)

Sabadihe (Siberut Group)

Baruse (Pulau Nias Group)

Sinde (Sipurah and Pagai Islands).

See Part I Chapter 12, page 34 *supra*.

19. Folio 25 V. (*See photographic reproduction: Plate II.*)

A map of the Malay Peninsula and part of Sumatra. This constitutes Eredia's fullest map of the Peninsula in general: the scale is about 104 miles to 1 inch.

PATANE. Patani.

Sea Rio. The River Telubin or Telupin flowing through the Siah district of Patani.

Calantan Rio. The Kelantan River.

UJONTANA. Ujong Tanah; that is, 'Land's end': the Malay Peninsula.

PAM. Pahang.

Rio de Pam. The Pahang River.

P. Tymam. Pulau Tioman.

P. Tingui. Pulau Tinggi.

Ponta da Romania. Romania or Rumenia Point.

Bintam. The Island of Bintang.

AEQUINOCIAL. The Equator.

JOR. Johore.

Tanjon buros. Tanjong Bulus.

R. de Muar. The Muar River.

R. Malaca. The Malacca River.

R. Panagin. The Linggi River.

Caborachado. Cape Rachado.

Parcellar. Parcellar, Jugra Hill.

Calam. Klang.

PERAT. Perak.

Barruas. Bruas.

QUEDA. Kedah.

Ponta de Ujon calan. 'Point of Ujon Calan', apparently the south-western point of Salang Island is meant.

Juncalan. 'Junkceylon', Salang Island.

SAMATRA. Sumatra.

P. Carimon. Pulau Carimon or Kerimun.

P. Picam. Pulau Pisang.

Tanjon baluala. Unidentified: apparently a promontory of Pulau Rupert or Pulau Medang.

I. de Aru. Aru Islands.

Poluorera. Pulau (Varela) Berhala.

P. Jarra. Pulau Jarak.

P. Sambilam. Sembilan Islands.

P. Pinam. Pulau Pinang (Penang)

P. Butum. Butang Islands.

P. Perat. Pulau Perak.

This map follows Part I Chapter 12, page 36 *supra*.

20. Folio 27 V.

A small-scale map of Asia from Egypt to the Ganges.

21. Folio 28 R.

A similar map of Asia from the Ganges to Japan.

22. Folio 28 V and 29 R.

"INDOSTAN IN ASIA ACCORDING TO PTOLEMY".

A double-page map of India from the Indus to the Ganges. On folio 29 R appears a drawing of an "ANCIENT GELUE of the Red Sea".

23. Folio 29 V.

"PTOLEMY'S LAST TABLE, No. 12, OF ASIA".

A map of "TAPROBANA" (Ceylon).

24. Folio 30 R.

"MODERN MAP OF TROPOBANA".

A map of "CEYLAM, once *Tropobana*".

25. Folio 30 V.

Two drawings of ships: a "LANCHARA OF THE MALAYOS" and a "JUNCO OR SOMA OF CHINA"; the former is shown with a sail set on the fore mast.

26. Folio 31 R.

A map of Egypt, to illustrate the trade-route via 'Cossair' (Kosseir) and 'Cana' (Kenah) on the Nile to *Alexandria*. See page 35 *supra*.

27. After folio 33.

"TYPUS ORBIS TERRARUM".

A map of the world represented as a single elongated spheroid, with the prime meridian running through or near the Cape Verde Islands: with the exception of "Luca antara" no place names are marked.

The main feature of interest is a great antarctic continent almost enclosing the globe: commencing near Cape Horn the coast-line runs nearly due east as far as the longitude of Madagascar where it bends away to the south-east and the line is broken: at the bend there is an entry "PORTUGUEZES, with artillery, 1606 A.D.": after a short distance the coast-line is resumed in a north-easterly direction: here, below the area Java-Timor, is marked "INDIA MERIDIONAL discovered in the year 1601"; the general configuration of the country is similar to that shown on a larger scale in the map on folio 52: "Luca antara" appears as a promontory running up towards Java: the coast-line is broken in the longitude of New Guinea where the map ends: the eastern corner of New Guinea can be seen, however, on the extreme left of the map: some miles south-east of this is an island with its south coast left blank, and south of this again appears a large area of land, the coast line of which runs south-east for three-quarters of the distance across the Pacific and then turns south-west: at the north-west corner of this area appears the note, "Discovered by the CASTELHANOS, 1609 A.D."

The reference in the note "PORTUGUEZES *with artillery*, 1606 A.D." is not immediately obvious, and the locality is outside the scope of the present paper: possibly Eredia refers to the Portuguese possessing "fire-arms and guns" who were found in 1606 by a Dutch ship driven to 41° South: see Part II Chapter 6 (page 67 *supra*).

The remark "INDIA MERIDIONAL *discovered in the year* 1601" presumably has reference to Eredia's own 'discovery'.

The note "*Discovered by the* CASTELHANOS, 1609 A.D." apparently refers either to the voyage of Quiros, or to that of Torres in 1606.

In one of Quiros' Memorials translated into Dutch and published in 1612, there is a map showing "Terra per Petrum Fernandez de Quir recens detecta, olim vero sub nomine TERRAE AUSTRALIS INCOGNITAE celebrata": the land in question is represented as a large area stretching almost the whole distance from New Guinea to Cape Horn. (Wood. *The Discovery of Australia*. (1922). pp. 189, 198).

According to Dr. Arias, when Quiros had sailed south-east from the New Hebrides as far as 26° S. "they saw to the South very extensive and thick banks of clouds in the horizon, and other well-known signs of mainland". Markham. *The Voyages of P. F. de Quiros*. (Hakluyt Society. 1904.) Vol. II. p. 529).

Now Captain Don Diego de Prado y Tobar, who succeeded Quiros in command of the expedition, wrote from Goa in 1613 to the King of Spain, enclosing a map of the route taken by Torres: (Stevens and Barwick. *New Light on the Discovery of Australia*, (Hakluyt Society: 1930). pp. 34, 38): it is quite possible that Eredia met this man at Goa.

It will be observed that Eredia makes no reference to what is usually regarded as the first authentic 'discovery' of Australia by a European, namely, the voyage on which the Dutch in their pinnace the *Duyfken* sailed down the west coast of Cape York peninsula about March 1606 "some six months before Torres sailed through his strait, perhaps saw Cape York, and crossed the track of the Dutch pinnace". (Wood. *The Discovery of Australia*. (1922). page 225).

In postulating the existence of an 'antarctic continent' Eredia is probably correct: such a continent is now believed to exist but it is situated considerably further south than Eredia represents; "the Antarctic Circle very nearly bounds a continental region: Graham Land, Enderby Land, Termination Land and Adelie Land all lie on the Antarctic Circle". (Johnstone. *A Study of the Oceans*. (1926). page 128).

28. Folio 41 R.

"WATER-SPOUT".

A drawing of a water-spout in the 'salt sea of Nicobar'.

See Part I Chapter 23, page 52 *supra*.

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29. Folio 41 V.

"BORE".

A drawing of a 'bore' in the 'salt sea of Nicobar'; the tops of the wavelets resemble the heads of 13 dogs swimming in triple line.

See Part I Chapter 24, page 53 *supra*.

30. Folio 44 R.

A representation of a genealogical tree and two escutcheons. In the tree, the central person is "*Dom Juan Tubinanga, King of Supa*"; above him, two branches are denoted "*Dona Elina Vesiva*" and "*Tamalina*" respectively; a third branch is blank: below him, a single branch is marked "*Pasapio, King of Machoquique*".

Each escutcheon is surmounted by a crown: one bears a representation of a sun (with a face in it), a half-moon, and five stars: the other contains a circle in which are written what appear to be four words in Jawi character.

Unfortunately the characters, the words, and the meaning are anything but obvious.

The characters appear to represent.

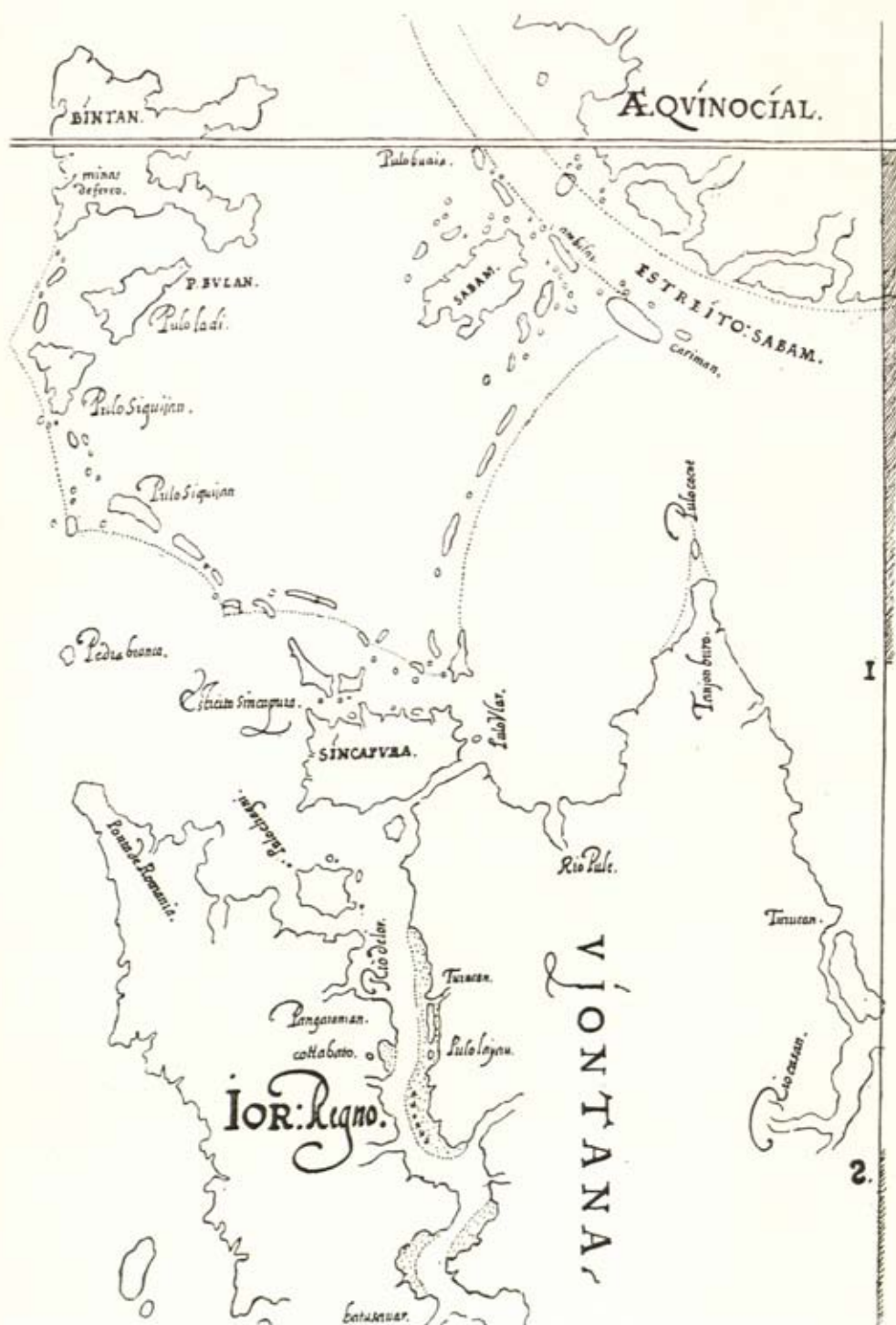
ملينكن	nknilm
سيسق ليم	mil ksis
كست	tsk

which perhaps denotes

mēlainkan	except
sisek	scale
lima	five
kusta	caste

that is, 'an extract showing five genealogical units'.

This is an early specimen of Malay writing, dating as it does from 1613: the earliest extant Malay MS appears to be one at Oxford, which dates from 1602. (*JRASSB.* No. 36. (1901). p. 76).



31. Folio 45 R. (*See photographic reproduction: Plate III.*)

A map of south Johore, including a small part of the Sumatran coast and the islands as far as Bintang: the map is out of proportion and the scale varies from about 12 miles to 1 inch (Romania Point to Tanjong Bulus) to about $7\frac{1}{2}$ miles to 1 inch (Singapore Town to Kota Tinggi, 'Batu Sauar').

On the East side of the Johore River:—

JOR *Regno.* The Kingdom of Johore.

Batu Sauar. Kota Tinggi, formerly Batu Sawar.

Cotta bato. Johore Lama, formerly Kota Batu.

Pangarani. Unexplained: apparently intended to represent a Malay word, in the same way as 'Turucan' 'têrusan', 'a channel' and 'Panarican', 'penyarekan', 'a drag-way.' It may, however, refer to Panchor, though this should be further north, or to Penggerang, though this should be much further south.

Rio de Jor. The Johore River.

Pulo Chagni. Apparently Pulau Tekong Besar.

Ponta de Romania. Romania or Rumenia Point.

On the West side of the Johore River:—

UJON TANA. 'Ujong Tanah', 'Land's End'.

Rio Casan. The Kesang River.

Turucan. "Channel" (têrusan).

Tanjon buro. Tanjong Bulus.

Pulo Cocot. Pulau Kukub, Kokob or Kukob.

Rio Pule. The Pulai River.

Turucan. 'Channel' (têrusan).

This is apparently the 'Trusan Gemmell' between Pulau Juling and the western shore of the Johore River: see British Admiralty Chart No. 2585.

Pulo layan. Pulau Layang.

The Islands:—

BINTAN. Bintang.

Minas de ferro. 'Iron-mines'.

P. BULAN. Pulau Bulang.

Pulo Ladi. Identity not certain: on modern maps Pulau Ladi is shown as a small island at the extreme south of the Bulang Archipelago.

There is a river Ladi on the north coast of Batam. The largest island between St. John's Island and Batam is to-day called Pulau Belakang Padang.

(British Admiralty Chart No. 1994).

Pulo Siquijan. Sikijang, later corrupted to Sijang and eventually to St. John's.

Pedra Branca. Pedra Branca (White Rock), Horsburgh Light.

Estreito Sincapura. Strait of Singapore.

SINCAPURA. Singapore.

Pulo Ular. Pulau Ular, apparently Pulau Merambong.

ESTREITO SABAM. The Strait between Sumatra and Kundur.

Cariman. Kerimun.

Ambilas. Apparently Pulau Temblas.

SABAM. Kundur.

Pulo Buaia. Apparently Pulau Buaia, but this is much further south.

(For the locality of Pulau Kundur see British Admiralty Chart No. 2757 and Dutch Ministry of Marine Chart No. 40).

32. Folio 45 V.

A map of the Malay Peninsula showing the central mountain range and the river system; few names are marked.

33. Folio 46 R.

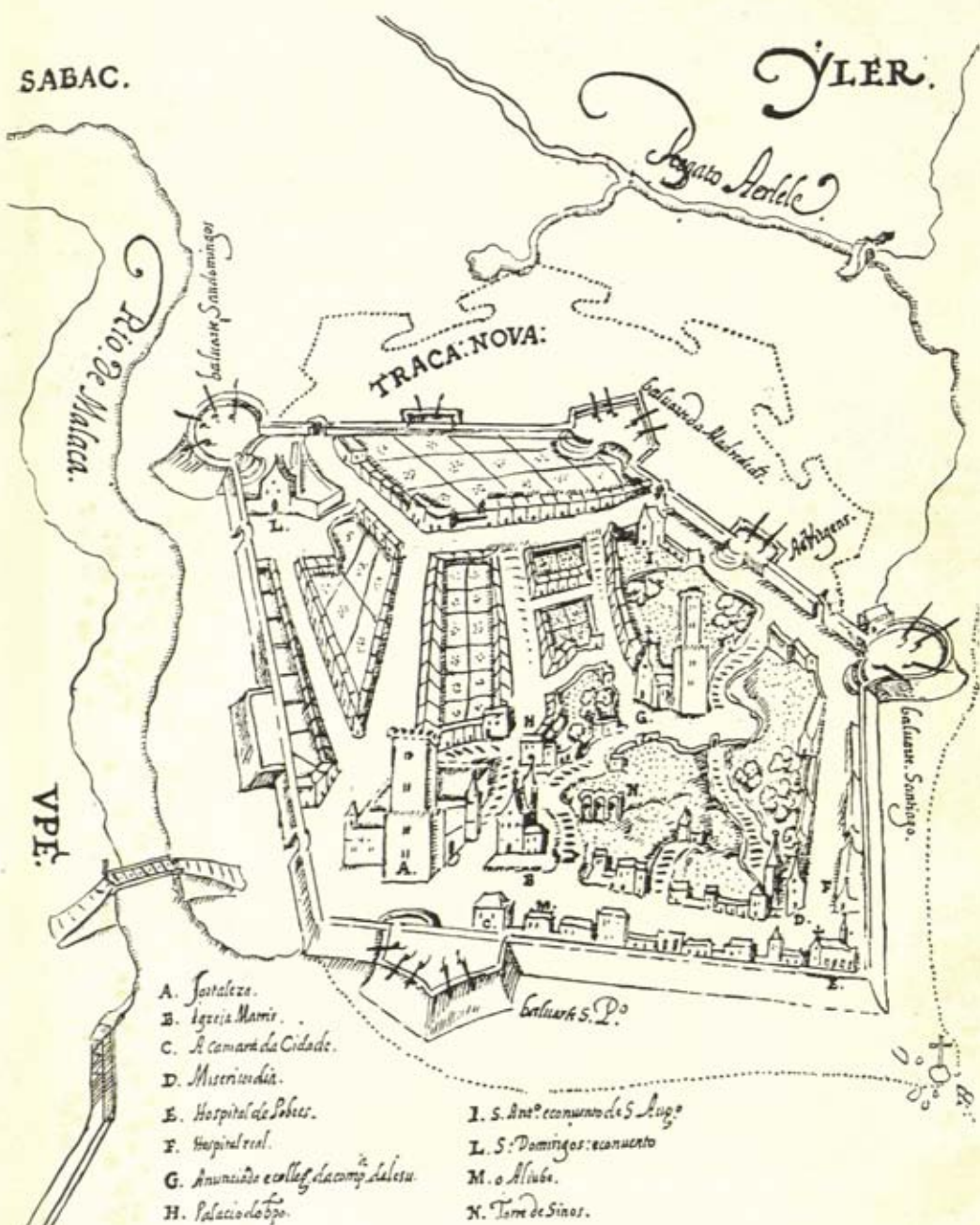
"PTOLEMY'S TABLE XI OF ASIA CORRECTED".

The most interesting feature of Eredia's 'correction' consists in the manner in which he bends the coast of China round to the north whereas Ptolemy is represented as making it turn east for a short distance in about 35° North and then run due south. Of the turn to the east, Eredia comments "impossible coast-line": just below the Tropic of Cancer he notes "The natives allege that there is no continental mainland of this Great Gulf and the Archipelago, because in ancient times there was traffic with Morotai in Gilolo": he places *Notium Promontory* in about 8° North and *Cathigara* in about 8° South: immediately above Cathigara is the remark, "It is impossible, China in the South".

See Part I Chapter 3 (page 23 *supra*), Part I Chapter 12 (page 33), and Part III Chapter 4 page 79).

SABAC.

YLER.



FABRICA DA CÍDADE DE MALACA.
INTRA MVROS. Anno. 1604.

34. Folio 46 V. (*See photographic reproduction: Plate IV.*)

"CONSTRUCTION OF THE TOWN OF MALACA
WITHIN THE WALLS, 1604 A.D."

UPE. Now Tranquerah.

Rio de Malaca. The Malacca River.

SABAC. The name is obsolete: the areas north of the Town
being known as Kampong Jawa and Bunga Raya.

YLER. Now Banda Hilir.

Regato Aerlele. 'The streamlet Ayer Leleh'.

Baluarte San domingos. Bastion of San Domingos.

TRACA NOVA. The new trace.

Baluarte da Madre Deos. Bastion of the Madre de Deos
(Mother of God).

As Virgens. Bastion of the Virgins.

Baluarte Santiago. Bastion of Santiago.

Baluarte S. Pedro. Bastion of San Pedro.

A—Fortress.

B—Cathedral.

C—State Council Chamber.

D—Church of Mercy.

E—Pauper Hospital.

F—Royal Hospital.

G—Church of the Annunciation and the College of the
Company of Jesus.

H—Bishop's Palace.

I—Church of St. Antonio and the Convent of St. Augustino.

L—Church of San Domingos and the Convent.

M—The Prison ('*aljube*').

N—Bell-tower.

See Part I Chapter 1, page 18 *supra*.

35. Folio 47 R.

"PORTRAIT OF MASTER FRANCISCO XAVIER OF THE
ORDER OF THE COMPANY OF JESUS. 1542 A.D."

See Part I Chapter 25, page 53 *supra*.

36. Folio 47 V.

"*Chorographic description of Macazar*".

An inaccurate map of the Celebes: the characteristic features
being entirely missed.

Lubo, Linta, Supa and Machochique are shown near the middle
of the island: but only one of Eredia's names, Mandar, appears in
present day maps.

Compare Part I Chapter 25, page 54 *supra*.

1930] *Royal Asiatic Society*.

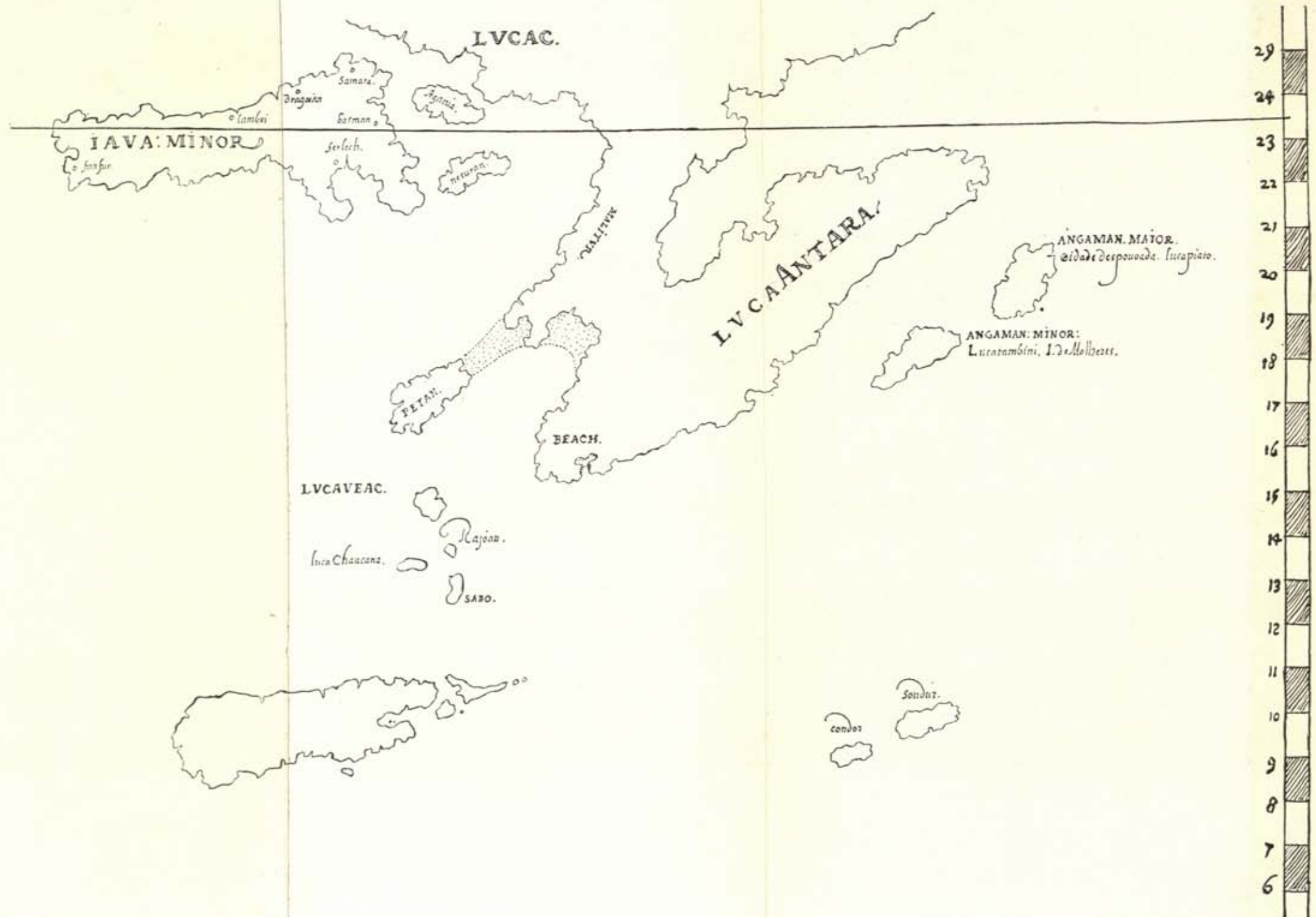
37. Folio 48 R.

"Chorographic Description of Maluco".

An inaccurate map of the Moluccas.

38. Folio 48 V.

A map showing Timor, Ende (Flores), Solor and adjacent islands.



39. Between folio 51 and folio 53. (*See photographic reproduction: Plate V.*)

A map of 'Meridional India'; bearing a general resemblance to Mercator's map of 1569. Eredia has taken a typical map of the period, based on Mercator or Ortelius, and has incorporated his own surmises based on local information: the result is a cartographical nightmare.

The location of Java Minor and these other lands in the South Seas is due to the erroneous reading 'Java' for 'Champa' in Marco Polo's narrative: as the result of the error Java Minor (Sumatra) was placed at least 1,200 miles south of its proper position; the situation of Marco Polo's other places being similarly affected.

See Wood. *The Discovery of Australia*. (1922). pages 42-46, for the explanation of the error.

It will be noticed that Eredia's map has the south at the top and the north at the bottom. The following identifications seem probable, but are by no means universally accepted. *Condor* and *Sondur* are the Pulo Condore group of islands: *BEACH* represents Marco Polo's *Locac*, in or near Lower Siam: *PETAN* is Marco Polo's *Pentam*, either Singapore or Bintang: *MALITUR* is Marco Polo's *Malauir*, a kingdom situated at or near the southern extremity of the Malay Peninsula: *LUCAC* is Marco Polo's *Locac*, reduplicated owing to a printer's error: *JAVA MINOR* is Sumatra with its kingdoms of *Ferlech* (Perlak), *Basman* (Pasai), *Samara* (Samudra, near Pasai), *Dragoian* (at or near modern Pedir), *Lambri* (Lambarih, near Acheen), *Fanjur* (Barus): *Agania* and *Necuran* are the Andaman and Nicobar Islands.

So much for Marco Polo's itinerary (Book III Chapter 9): with this Eredia attempts to combine his own notions.

The unnamed Island in the left-hand bottom corner of the map is Timor: *SABO*, *Rajoan*, and *Luca Chancana* are islands of the Sawu group, south-west of Timor.

LUCA VEAC is the 'island of gold' (see page 67 *supra*). *ANGAMAN MAJOR* and *MINOR* appear to derive their names from the Andaman islands; while, so far as their position is concerned, 'Luca Tambini', *Island of Women*, and 'abandoned town', 'Luca Piato', were encountered by a boat carried southwards through the strait of Bali (see page 66 *supra*): *LUCA ANTARA* is the 'Terra Australis' which Eredia claims to have 'discovered'.

40. Folio 58 V.

Drawing of a small cross in a dotted circle about 2½ inches in diameter.

41. Folio 59 R.

"THIS CROSS APPEARED IN THE SKY: 24th November, 1602". A full-page drawing of the apparition described in Part II Chapter 12 (page 74 *supra*).

1930] *Royal Asiatic Society*.

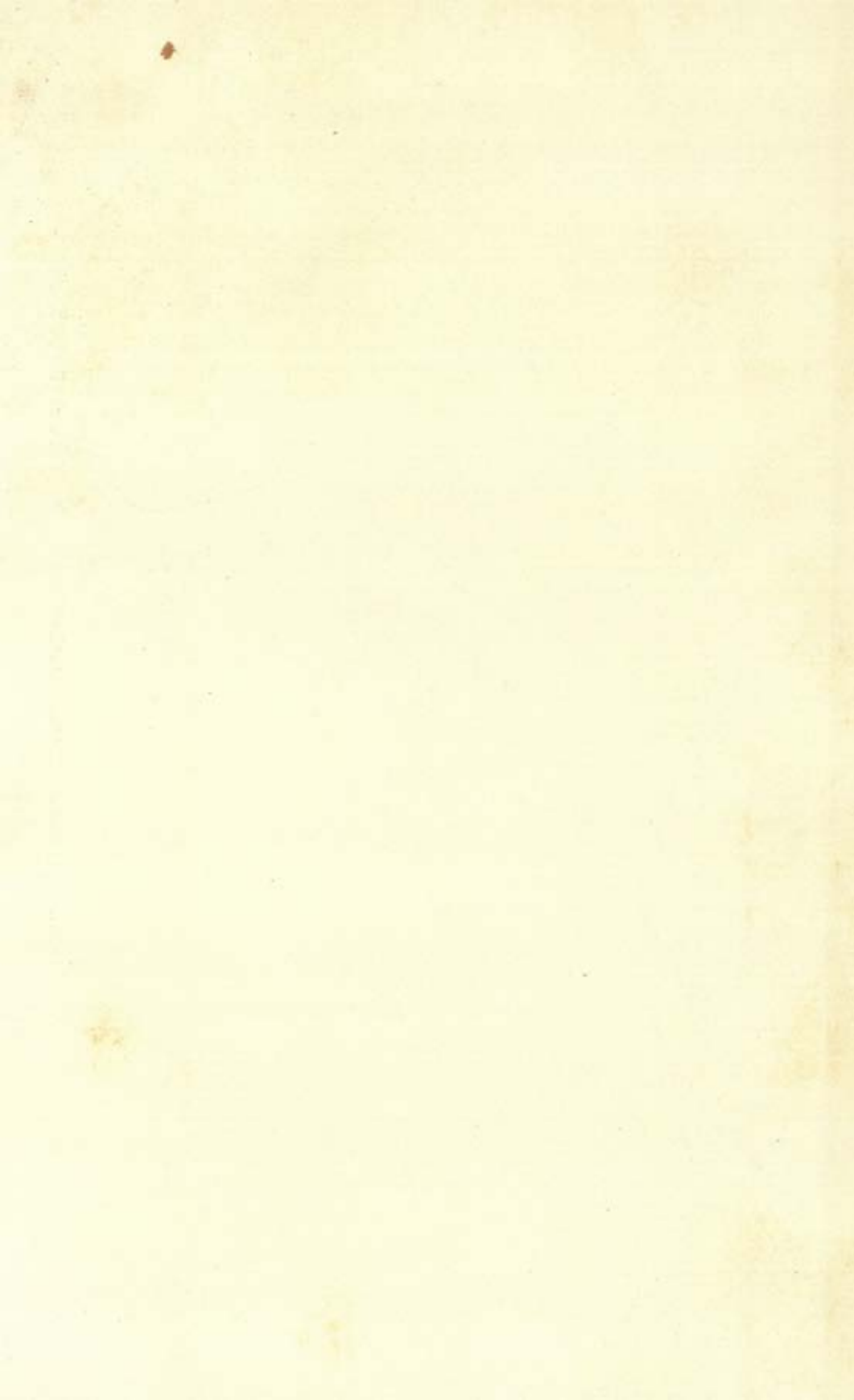
42. Folio 60 R.

"*Chorographic description of the district of Malaca: 1602 A.D.*" A map on roughly the same scale as that on Folio 11 V, but with fewer names: the only noteworthy addition is an entry "DISTRICT OF JOR" above 'Sune Ujon'.

43. Folio 60 V.

"*Chorographic description of the Promontory of Ujontana.*"

A map showing the southern portion of the Peninsula, with the islands and part of the Sumatran coast, on a somewhat smaller scale than the map on Folio 45 R: only two points are worth mentioning; the more southern island marked 'Pulo Siquijan' in the other map is here called 'LADI', and the unidentified place 'Chega' in the map between Folio 11 and 13, is shown near the Kesang River.



44. Folio 61 R. (See photographic reproduction: Plate VI.).
"Chorographic description of the Straits of Sincapura and Sabbam, 1604 A.D."

This is a very interesting map showing the extremity of the Peninsula and part of the Sumatran coast.

SAMATRA. Sumatra.

AEQUINOC. Equator.

SIACH. Siak.

ESTREITO DE SABAM. 'Strait of Sabam' *i.e.*, the strait between Sumatra and Kundur.

Pulo Cariman. Pulau Carimon, or Kerimun.

Pulo ambilas. Apparently Pulau Temblas.

SABAM. Kundur.

Alan Alan. Apparently Pulau Lalang.

Pulo duri. Pulau Durei.

Pulo buaia. Apparently Pulau Buaia, though this is further south.

Pulo buron. Apparently Pulau Burung.

ESTREITOS. Straits.

Pulo Cutot. Pulau Kukub.

Tanjon buro. Tanjong Bulus.

UJONTANA. Ujong Tanah.

Rio pule. River Pulau.

Salat Tubro. Selat Tebrau, the Johore Strait.

Pulo Ular. Pulau Ular, apparently Pulau Merambong.

Turucan. That is, *Têrusan* (Malay), 'Channel'.

Tanjon Ruca. That is, 'Tanjong Rusa', the name is obsolete:

Tanion Rusa. The shoals off this coast are known as Beting *Kusah*.

Tana mera. Tanah Merah.

SINCAPURA. Singapore.

Sune bodo. Sungei Bedok.

Tanjon Rú. Tanjong Rhu.

Xabandaria. Harbour Master's Office.

Estreito Velho. Old Strait.

Estreito Nouo. New Strait.

Blacan mati. Blakang Mati.

45. Folio 61 V.

"Chorographic description of the locality of the fortress of Muar, founded by the "Descobridor" Manuel Godinho de Eredia, 1604 A.D."

A large-scale map (about $\frac{1}{4}$ mile to 1 inch) showing the mouth of the Muar River.

On the north bank near the mouth Eredia marks '*os mattos*', 'the woods', and further to the north '*Tanjon Gadin*', Tanjong Gading.

Reading downwards from the top of the map, Eredia shows, on the east bank, '*ORTA DO XABANDAR*' ('Harbour Master's 1930] *Royal Asiatic Society*).

Garden'), 'CASAS' ('houses'), 'XABANDARIA' ('Harbour Master's Office'), 'Janejane' (an unexplained tree, perhaps *Jane-jane*, i.e. *jawi-jawi*, *ficus benjamina*), with 'FORTALEZA DE MUAR' ('Fortress of Muar') and 'N. S. de Esperanca' (The Church of 'Our Lady of Hope') situated on the promontory at the mouth of the river.

On the south coast are marked 'Tanjon Crobo' ('Tanjong Kerbau') and 'Padam' (Padang).

46. Folio 62 R.

"THE VICEROY, *Dom Francisco de Gama, Count of Vidu-guera, and Admiral*".

"THE FIRST EXPEDITION *of discovery*".

A half-length drawing of the Viceroy, with his coat of arms.

47. Folio 62 V.

"THE VICEROY *Ayres de Saldanha*".

"THE SECOND EXPEDITION *of discovery*".

A half-length drawing of the Viceroy, with his coat of arms.

48. Folio 69 R.

A small-scale map of Asia, from Java to 60° North, and from the River Ganges to Japan.

49. Folio 69 V.

A small-scale map of Asia, from Ceylon to 70° North, and from the Caspian Sea to Thibet.

50. Folio 73 R.

"*The world: anciently divided into 2 parts, Tharsis and Ophir*".

A map of Europe, Asia, and Africa on a very small scale, showing the River Indus as the dividing line between Tharsis and Ophir.

51. Folio 73 V.

A map showing the countries on the north-east coast of the Bay of Bengal.

Eredia marks INDOSTAN (Hindustan), RIO GANGES (River Ganges), COCHO (unexplained: shown north-east from the mouth of the Ganges), AUREA REGIO ('golden region'), RIO DE TARTARIA ('River of Tartary', apparently the Irawaddy), PEGOU (the country of Pegu), TANGUT (apparently Taungu near Rangoon), PEGU (the town, apparently Rangoon), Rio Cosmin (the Irawaddy), SYRIAN (Syriam), LAOS (Laos), SYAM (Siam), CAMBOJA (Camboja). In addition, he gives three notes:—

"PEGU, once BARACURA, *emporium of the country of Attay*".

"SYRIAN means '*Province of Syria*'".

"TANGUT or TANGOU means '*Province of Pagodas*'".

52. Folio 77 V.

A map of Asia, from Sumatra to 60° North, and from the River Ganges to Japan.

53. Folio 78 R.

A map of Asia, from Ceylon to 50° North, and from the Caspian Sea to Thibet.

54. Folio 78 V.

A map of Asia having Nova Zembla in the north-west corner, and extending eastwards as far as the Desert of Lob, and southwards as far as Ceylon.

55. Folio 81 V.

“THE EXPEDITION IN MERIDIONAL INDIA”.

Beneath these words is a coat of arms, with a representation of an effete-looking bird and the (Latin) motto ‘A DOVE CAME CARRYING A BRANCH’.

56. Folio 82 R.

“PORTRAIT OF EMANUEL GODINHO DE EREDIA”.

A three-quarter length drawing of the ‘Discoverer’, with his coat of arms: his right hand rests on a globe, on which are represented certain lands and islands, with three names, JAVA, JAVA, and LUCA ANTARA; the shape and situation of these lands approximates to that shown on the ‘TYPUS ORBIS TERRARUM’ (between folio 33 and 35).

APPENDIX II.

EREDIA'S OTHER WORKS.

1. REPORT ON THE GOLDEN CHERSONESE: 1597-1600.
2. A letter: 1599.
3. History of the Martyrdom of Luiz Monteiro Coutinho: 1615.
4. TREATISE ON OPHIR: 1616.
5. Mappemonde: c. 1618.

1. REPORT ON THE GOLDEN CHERSONESE: 1597-1600.

A Portuguese transcript of Eredia's MS is published in a small book, “Indian Ordinances of The Lord King Dom Manoel of Eternal Memory.

An accurate report on the Golden Chersonese written by the ancient Indian Cosmographer Manoel Godinho de Eredia, and other papers by Antonio Lourenço Caminha, Regius Professor of Rhetoric and Poetic. Lisbon. At the Royal Press, 1807 A.D.”

The British Museum has a copy of this book: No. 9056 a 9 (General Catalogue). Caminha says he possessed the MS of this work, which he describes as “one of the most valuable records in our literature”. The Report is entitled INFORMACAO Da Aurea Chersoneso, ou Peninsula, e das Ilhas Auríferas, Carbunculas, e Aromaticas.

1930] *Royal Asiatic Society.*

Eredia must have written his MS between 1597 and the end of 1600: he twice mentions the former date (pp. 229 and 244 *infra*), while the *finale* (p. 255 *infra*) contains a reference to the Viceroy Francisco da Gama, who was succeeded by Ayres de Saldanha in December, 1600.

So far as is known, this REPORT has not been translated into any other European language.

An English rendering follows.

REPORT ON THE GOLDEN CHERSONESE OR PENINSULA,
AND ON THE AURIFEROUS, CARBUNCULAR
AND AROMATIC ISLANDS,

DRAWN UP BY
MANOEL GODINHO DE EREDIA
COSMOGRAPHER.

Faithfully translated from an old Manuscript in our possession.

The Golden Chersonese, or Golden Peninsula, is a part of the continental mainland of India extra-Ganges; it commences at the narrow Isthmus of Tanaçarin in eleven or twelve degrees of North latitude, and thence extends towards the Equator till it comes to an end, terminating in the Promontory called formerly Maleucolone, and now Sincapura, or Ujontana, which is situated in exactly one degree of North latitude.

As this part of the continent is surrounded by different seas, it is called 'Peninsula' or 'Chersonese', which amounts to saying that it is almost an Island, as explained by Appian in the first Part of his Book on Cosmography in Chapter XVII.

For on the western coast it is washed by the Gangetic Gulf or Gulf of Bengala; on the eastern coast it has the Sea of China, called the Eastern Ocean, or Seric Ocean, and the Great Gulf; and on the southern coast it abuts on the Southern Sea, or Sea of Lantchidol, and the unknown Ocean; hence it is only on the north that this land, called 'Peninsula' or 'Chersonese', is joined to the rest of the mainland of India extra-Ganges by the aforesaid narrow isthmus of land.

This Peninsula was so celebrated among all the ancient writers, especially Curtius, Strabo, Pliny, Pomponius Mela and others on account of the many large gold-mines which existed therein, that they all commonly called it 'Land of Gold'.

So Ptolemy in his Geography, in his eleventh Table of Asia, calls it by the name of 'Golden Chersonese' or 'Golden Peninsula', which is the same thing as 'quasi-island of Gold'; and if in those days the gold of this country was known in such far-distant places as Egypt, Italy, and Greece, one might with greater reason to-day search for all the minerals of the golden land, and investigate its secrets, for the Peninsula in question is within the territory and

under the jurisdiction of the most fortunate Crown of Portugal, having been acquired by the invincible Captain Affonso de Albuquerque, when with his veteran army he conquered the very important town of Malaca with its celebrated port in the year 1502.

It has been said that the town of Malaca is identical with *Tacola*, but I should hesitate to maintain this identification; for Ptolemy drew up his Tables in the year 163 after the Birth of Christ our Redeemer, during the Pontificate of Aniceto the First, while, according to the Malaio annals, Malaca was founded by Parimiçura, a Javanese of Balambuan, in the year 1398, in the time of King Dom João the First, called the Bastard.

It was called Malaca because Parimiçura built his first dwelling near a large tree called *Malaca*; this, the Myrabolan tree, grew all along that coast, which was then desolate and deserted and full of woods and groves, never inhabited by any people of culture and civilization, but only by some fishermen called 'Saletes', or Pirates, and sea-robbers.

So Tacola ought to be identified with another port on the same coast, for it was then famous and was frequented by substantial merchants from Alexandria, like the port of Malaca at the present day.

It may very well be that Tacola was the same as the port of Cala, or Calan, which lies in 4 degrees, the exact situation of Tacola, as stated in the Tables of the ancient geographers, and different from the latitude of Malaca which is situated in two and a half degrees.

And Tacola may well be the port of Calan, not only on account of its latitude, but also by reason of a certain similarity of name, inasmuch as by repetition throughout a long period it would have become corrupted, till from Tanacalan it was called Tacolan or Tacola; and as '*Tana*' means 'Land' in the language of the Malaio, it is clear that Tanacalan or Tanacalan is the same thing as 'land of Calan': this is shown even better by the name, which survives until our own day, given to a point of land called Ujoncalan, meaning 'Point of Calan' corruptly called Juncalan; this clearly proves that the port of Calan was a metropolis.

So the mutations and changes of this world may have altered these names, for experience shows us similar changes every day; when some misfortune befalls some city, town, or place, it is as a result abandoned with a view to the establishment of a new one at another site or place: this was formerly done in Europe, and the same thing has been done in our day by the King of Ior: since he last met with destruction and ruin, wrought by the victorious captain Dom Paulo de Lima Pereira, this King has never desired to return to his Court of Ior; he has preferred completely to abandon his celebrated Fort Cottabattu, which was the stronghold of his Empire, and has made another new Court and Town by the River of Ujontana on a high hill called Batusavar, where his son Raja Rade now reigns, in amity with the Portuguese, for the old King died in the year 1597.

Malaca is situated on the western coast of the Golden Chersonese, almost at the river-bar, right at the foot of a beautiful hill and along the banks of a large river.

The Town is at present divided into four parts, or compartments.

The first of these divisions is occupied by the people in the city and the fortress: it is entirely surrounded with forts and stout walls and splendid bastions constructed of stone and mortar, with numerous brass cannon.

The second division is occupied by the people on the opposite side of the river, and is called the country of Tanjan Upe; it extends towards the 'Mestral' or North-east; it is also called the Country of the Bendara's Rampart.

The third division is occupied by the people of Ilher and Buchet China; it extends from the fortress towards the 'Siroca' or South-east.

The fourth division is occupied by the people who live on the banks of the river; it is properly called the district of Sabba; it extends, like the river itself, towards the 'Tramontano' or North.

So in these four areas there are all told six hundred married Portuguese and landed proprietors, and in addition two thousand subjects including Christians, Idolaters, and Maumethistas or Moros.

Malaca is a Bishopric; it maintains a number of churches, and also four convents of Mendicant Orders, namely, Apostles of the Company of Jesus, Capuchins of S. Francisco, Dominicans, and Augustinians, who throughout all those parts perform most noble service for Our Lord God and for Christianity; it also maintains the Sacred Confraternity of Mercy and some Hospitals; lastly, the said town is administered and governed by a nobleman, His Majesty's Captain and Governor.

With regard to the latitude and position of the place and its port, we will state briefly that the situation of the fortress of Malaca lies in the torrid zone or burning zone, above which the constellations and signs of Aries and Virgo usually travel; it is situated practically on the Equinoctial, or but little removed therefrom, on a parallel which runs at two and a half degrees of North latitude, in front of the first climate.

That being the case, its inhabitants might rightly be called *Amphicians*, or Equinoctials, this being the name applied by the geographers to all the people of the Equator, or Equinox, because they enjoy days and nights of equal length (or almost equal length, being twelve hours and nine minutes) on account of the slight distance from the Equinoctial; moreover, they invariably have four solstices, namely, two high solstices, when the sun passes vertically above Malaca, being situated in Aries and Virgo, during March and September, and two other, low, solstices, when the sun retires during its greatest declination through each of the Tropics of Cancer and Capricorn; this movement of the sun thus gives four shadows to the Malacanos or Amphicians.

And although Alfragano and Sacrobosco (in the third treatise on the Globe) and Monteregio, Cardano, Copernico, and many others aver that the Malacanos should enjoy double seasons, that is to say, two summers, two winters, two springs, and two autumns, and although their arguments may be correct, yet experience shows that owing to some peculiar secret of nature, the truth is contrary to expectation regarding this point, as well as regarding the condition of the torrid zone. For, throughout the district of Malaca, it commonly rains at all seasons of the year, irrespective of the natural order of the seasons or points of time.

Other marvellous secrets, too, are disclosed: for instance, in October the waters of the sea rise higher than in other months; South winds and North-west winds always bring more furious storms and tempests than other winds; aged people live longer here than in other countries in spite of being subjected to fits produced by the wind, which become very dangerous when they attack the stomach.

In many parts of Malaca, especially at Baturandan, one finds that in some spots the earth contains extensive coloured veins, white, mulberry, blue, vermilion or scarlet, yellow, and green, clearly demonstrating the presence of silver mines, for the miners of New Spain follow up these coloured veins when searching for silver.

The gold-mines of Malaca are dealt with during the course of this treatise or report on the Peninsula or Golden Chersonese, so no further details are required regarding the mines in Malaca.

As to the other kingdoms, such as Patane, Pan, Jor or Batusauar, Pera, Queda, Juncalan, and Tanacarym, which lie within the limits and within the jurisdiction of the Peninsula, we shall make special reference to each of them, since they are lands containing ores of gold, and of tin or "*Calaym*".

Jor or Batusauar, the metropolitan Court of the Malaios, lies situated on the Promontory of Sincapura in one degree of North Latitude, where the land of the Golden Chersonese comes to a point, and therefore the King of Jor is called "*Raja Ujontana*", which is as much as to say, "*King of Land's End*" or of "*Finis terrae*". The present ruler is named Raja Rade; he is the great-great-grandson of the last King of Malaca.

The Empire of the Malaios was founded in Pattane by Tuan Malaio, the first Emperor, who was chosen in the third year before the Birth of Christ, during the time when Herod of Ascalon, the pagan, was on the throne; the seat of the Empire passed to Pan, then to Malaca, and is now established at Batusauar.

The Malaios are all Serracenos or Moriscos; their appearance is usually very pleasant and handsome, though they have no full beards; they wear their hair short, and curl it to look elegant and pretty; their colour is between white and dark-yellow tinged with red, usually called chestnut or brown.

They go curiously clothed, for they wear a low-cut shirt which they call the "*Baju*", made of very fine cloth, sometimes white,

sometimes dyed, either with different colours, or with the colour called mulberry, which they call "*Cacumba*".

As a covering for the lower half of the body they go swathed in wide Choromandel cloths; and for head-dress they wear a piece of silk rolled round the head like the coils of a cobra; the natives call it a "*Destar*".

For arms, they use a dagger of Charimatta steel, called the "*Cris*", which they always wear in their belts. They go bare-footed.

They are continually chewing certain aromatic leaves called "*Betre*", tempered with lime and "*Areca*" a certain kind of Indian Nut.

They make extensive use of precious perfumed unguents, rose-water, sweet-scented leaves and cloves: their head-dress or "*Destar*" is always adorned with roses and daisies.

Speaking generally, the Malaios are witty and merry, very fond of music and dancing and the dances of certain girls called the "*Raiauas*"; hence they are much addicted to luxury and pleasure.

As merchants they do but small business, seeking no more profit and gain than will suffice to provide the wherewithal of existence; all they make is immediately spent in eating and drinking to the sound of music and the concerted playing of certain small drums called "*Rabanas*" and flutes called "*Banci*".

The houses in which they live are built of wood and covered with thatch, that is to say, with the leaves of uncultivated wild Palms called "*Nipeiras*", whence they obtain the white "*Nipa*"-wine.

They use certain boats called "*ballos*" for the transport of merchandise; and for ordinary service in navigating the rivers, they employ other, small, boats which they call "*ballões*" or "*nabangues*"; for naval warfare they use "*Lancharas*" or "*bantis*".

The native weapons of the country are arrows, blow-pipes, darts called "*Soliguez*", and also Turkish lances and swords: though at the present day they use our arms both defensive and offensive, and are employing them in the course of the present fierce war which they are waging against the treacherous and insolent Achem, King or Emperor of the Northern coast of Samatra, because he has tyrannically possessed himself of this Kingdom, which according to the rights of the case, belongs to the King of Jor or Batusauar, or rather, I should say, to his son Raja Achem as being the grandson of Raja Mançor.

These Malaios, then, are so lacking in curiosity and ambition, that they have never attempted to understand the nature and constitution of their own native land nor its secrets, such as the gold-bearing ores and metals, except in so far as time itself of its own accord has disclosed them when the gold and tin appear on the ridges and mountains and rocky cliffs, as well as in the fields and streams, which commonly happens at many places in the Peninsula,

as is alleged by persons of credit and authority and vouched for by the "*Xabandar*" of Muar, who has on several occasions found grains of gold in the streams on the coast of Ujon Tana or of Jor; which shows clearly enough that the whole of this country is auriferous.

This is amply confirmed by what I saw with my own eyes when I stayed at Malaca during the time of Captain Dom Francisco da Costa, in the year 1512.

For I remember when I was walking towards a certain estate and garden of mine, I passed along by the shores and streams of Tanjon Upe, about a league away from the site of the fortress of Malaca, when I met some Mononcabos or Malaïos with sieves with which they stood sifting the sands of the shore along the coast; wishing to observe what happened, I saw in the sieves some grains of gold mixed with the sand; and they assured me that by employing this method every day they obtained very often a *pardão* each, sometimes more, sometimes less; thus they made their living, as is well known.

There can be no doubt, therefore, that extensive gold-mines exist in the territory of Malaca, especially in certain mountains such as the mountain of Gunoledan, which is so venerated both by Malaïos and by foreigners that the belief is universal that this mountain is the Terrestrial Paradise; and they imagine, moreover, that it contains the enchanted Court of the first Queen of Malaca called "*Putrigunoledan*".

Patane was the first seat of the Empire of the Malaïos; its site lies on the Eastern coast of the Peninsula in seven degrees of North latitude; it is one of the famous Oriental ports with an extensive trade and commerce; it contains even at the present day large gold-mines which have been discovered in the mountains and ranges and in other parts of the territory along the course of the River of Cea, where one finds a large quantity of gold in the form of dust and small grains, which is taken for sale to the port of Malaca, as is well-known to the captains and merchants of the latter place, who always buy it for the trade with Choromandel.

I remember seeing a piece of this gold from the River of Cea; it was a gold-nugget shaped like a small onion, with roots like a plant; it was in the house of Ninaborneo Chelim, a very large trader and merchant.

Pan was the second seat of the Empire of the Malaïos; its site lies on the Eastern coast of the Peninsula, in three degree of North latitude; the port is just as much frequented by merchants, because of the gold from its auriferous mines: it contains the best and largest gold-mines in the whole Peninsula: it was from here, one presumes, that there came the gold which formed the subject of the ancient trade with Alexandria or Grand Cairo, which passed by way of the Port of Calan, or of the Port of Tanasorir or Tana Sophir (which is nowadays called Tanasorin) through the Red Sea or Arabian Gulf in the following manner.

The *Alfragatas* or *Guelues*, which arrived from India in this strait of the Arabian Gulf, discharged their cargoes of spices and gold at the Port of Coçaer, situated on the Red Sea, and from this Port they were carried by land to Cana which stood on the edge or bank of the River Nile, which was three days' journey from Coçaer; thence they travelled by boat, so that in a few days they would reach Cairo, whence they were distributed to the other provinces of Natolia, and Europe.

Thus the lands which are within the territory and jurisdiction of the Crown of Pan are auriferous: since in the rocky cliffs and in the hardly-accessible quarries there has been found a great quantity of gold, which is nowadays taken to the port of Malaca for sale.

So much so, that the King of Pan sent from Adea a beautiful piece of gold-stone two and a half yards in length, as a present for the Captain and Governor of Malaca, João da Silva: who, out of curiosity to see gold in this form, ordered the piece of gold-stone to be broken at once in his presence; enclosed in the inside there was found a vein of gold a yard wide: this happened in the year 1586, and was well known to the people of that day.

Perat is much frequented and is the principal port for the trade in Tin or "*Calayn*" in large slabs: its site lies on the Western coast of the Peninsula, in five degrees of North latitude; here there have been discovered, in the ranges and mountains within its jurisdiction, such large mines of tin or "*calayn*", that every year more than three hundred "*bares*" of tin are extracted to supply the factory of the Captain of Malaca, and the trade of the merchants from India.

Cala or Calan is another port for the trade in tin or "*calayn*" in small slabs called 'lock-slabs': its site lies on the Western coast of this Peninsula in four degrees North: here too there have been found some mines of tin or "*calayn*", in the mountains and ranges, so that every year there are extracted therefrom more than one hundred and fifty "*bares*" of "*calayn*".

Panagin is the name of a copious river which extends as far as the sources of the rivers of Malaca: hence are extracted each year more than one hundred "*bares*" of "*calayn*".

Rombo (a place where the rivers of Malaca spring and derive their sources) as well as the Panagin, contains some iron-mines, and it is said that it also has a little gold in the mountains and a great quantity of tin in the fields and flat land.

The truth of this assertion is evident from the fact that four "*bares*" of tin or "*calayn*" in the form of 'lock slabs' were sold to me by a Morisco Monamcabo who came from Rombo to Malaca by river during a space of four days' journeying.

Ujon Calan or Juncalan is a well-known port for the trade in tin: its site lies on the Western coast of the Peninsula in eight degrees of North latitude: the natives say that some lead and iron exists in the lands within its limits.

All the tin above referred to is extracted in the following manner; the earth is dug out of the mountains and placed on certain tables, where the earth is dispersed by water in such a way that only the tin, in the form of grains, remains on the tables: it is then melted in certain clay moulds and by a process of casting is converted into large slabs of five slabs to the "*bar*", or into small slabs which are called 'lock slabs,' of two hundred and fifty slabs to the "*bar*."

Queda, a very ancient and famous port for the trade in white pepper and round black pepper, lies situated on the Western coast of the Peninsula in six degrees of North latitude; pepper is found here in such large quantities that it commonly constitutes the cargo of the *Alfragatas* or *Guelues* from Meca, besides supplying the factory of the Captain of Malaca.

Tana Sorir or Tana Sorin is a port situated on the isthmus of narrow land, on the Western coast of the Golden Chersonese or Golden Peninsula, in ten or twelve degrees of North latitude.

"*Tana*" means "land" and "*Sorir*" a certain grass (very abundant in this port) which is used to make the Soris or Souris of Bengala; so the port is called "*Tana Sorir*" or "*Land of Sorir*", as one might say "the land which produces the Sorir grass".

As this port is situated at the commencement, that is to say, on the isthmus of the Golden Chersonese, it constitutes the meeting-place of numerous merchants from Alexandria, Guzaratta, Cambaia, Indostan, and other oriental nations, on account of the gold and spices, which are always on sale there, through the medium of the people from the Peninsula, Samatra, Jaua, Banda and Macassar.

It was for this reason that the ancient writers such as Curtius, Strabo, Mela, Pliny, and others knew it as the port of the Land of Gold; as is confirmed by Ptolemy in his eleventh geographical Table.

And although they were acquainted with the gold-mines of the Perinean mountains, Acturias, Galiza, and the River Tejo, and other places in Africa, yet they applied the name "Land of Gold" only to the portion of land which constitutes the Golden Chersonese.

It may well be that this port of Tanasorir was the ancient port of Sophir mentioned by the writer Josephus in Book VIII Chapter 2, where he says that Solomon sent to a region of India called in ancient times Sophir or Sophira, and later Land of Gold: as the country of the Golden Chersonese has always been the land of Gold, it may very well be that Sorir is the ancient port of Sophir, for the difference between the names is slight, and the pronunciation almost identical.

Above all, the gold for the Temple of Solomon came from the Land of Ophir in Eastern India, as is stated by S. Hieronimo, and was not gold from the Golden Region of Peru.

Our intention, however, is not to investigate that question, but merely to deal with the mines of Gold, silver, and tin or "*calayn*", and with the pepper, for the information of the Princes of Europe: so after the briefest reference to that matter, we now consider what the land of the Peninsula produces.

The Peninsula has dense forests with trees of scented "*Aguila*", "*Calamba*", Camphor, "*Bejuim*", and some Cinnamon, also Indigo and Cassia, besides a great deal of Pepper, both round and large or long, in addition to a large quantity of aromatic "*Betre*", and "*Areca*" or Indian Nut, as well as some Brazil-wood or Sappan, and an abundance of Ginger, Tamarinds, Saffron, "*Lancoas*", and "*Casumbas*".

The woods and forests usually consist of groves containing trees which yield Pitch, Gum, and Resin, also Medicinal plants and anti-toxins, as well as herbs with powerful properties, some useful in medicine and others producing many marvellous results, for some are attractive and binding, others digestive and purgative.

Lastly, in this Peninsula are to be found the best and most tasty fruits in the world, such as the delicious "*Duriões*", "*Mangostas*", "*Tampoës*", "*Rambes*", "*Rambotas*", "*Bachoes*", "*Champadas*" and "*Lanhas*" or Coco-nuts from palm-trees, besides a large quantity of plantains or Indian Figs, many Grapes, "*Jambos*", "*Mangas*", "*Jacas*", Melons, Cucumbers, Water-melons, Pineapples, Oranges, Citrons, Lemons, Limes, Sugar-Cane, Yams, Grains of every kind, "*Sagu*" or Tapioca, which serves as bread and is a staple food, as well as many varieties of rice, garlic, onions, and all kinds of other vegetables in great abundance, in addition to white wines which the natives call "*Arat*" or "*Uraca*", made from Coco-Palms as well as from wild Palms which are called "*Nipeiras*" or "*Nipas*".

In the jungle and in the mountains are found many Elephants, Rhinoceroses or "*Baddas*", "*Zibetas*" or Civet-cats, "*Arimou*" or "*Reinou*", large Snakes, Porcupines, Stags or Deer, Hares, Bulls or wild Buffaloes; besides a large number of Apes or Monkeys, and a variety of insects.

Above all, there lives in the Peninsula the animal called "*Bruan*", so powerful and resistant, that it is impossible to wound its body, although it may receive many stabs with spears or slashes with choppers.

Moreover, the country contains a number of beautiful birds, such as Peacocks, Parrots, Partridges, Doves, Jungle Fowl, and numberless other birds with feathers of various colours: many of which are delightful by reason of their sweet melodious songs or the beauty of their plumage.

On the surface and at the bottom of the rivers are found many crocodiles or very large and frightful Lizards, some of which are white; I remember I once saw one five fathoms long; and one snake was found so huge that forty men could scarcely lift it.

Lastly, in the Peninsula there exist plants with such powerful properties that their effects cause universal surprise and astonishment; as is seen in the case of the poisonous "*Ipo*" tree.

The "*Ipo*" is a tree with a deadly poison; should its juice in any manner come into contact with a wound, however slightly the skin be broken, instant death results, and the same effect occurs if it be drunk; if the least drop of the juice should happen to fall on the body, very severe agony is caused; lastly, there is no antidote for this poison, so it were well that all should know of it in order that every one may avoid it.

Surely, too, it is the cause of no small wonder that nature should create stones in the inside and in the middle of fruits, such as the stone in the Coco-nut and in many other fruits, or that nature should produce stones in the liver of animals, such as the stone in the Porcupine, the stone in the Cow, the stone in the Hare and in other animals: but to deal with these would require a special Treatise; we cannot discuss them further in the present Report which is concerned with auriferous minerals.

To conclude entirely with the Peninsula, I will relate a curious phenomenon which occurs at the mouth and entrance of the River Panagim: here there are dense thickets of Bamboos, and among them there grow two very tall stout Bamboos which are set in such a manner that one of them towers over the other; now it is an actual fact that by day and by night human voices are heard proceeding from these Bamboos; one of them says "*Suda*", that is to say, "*Enough*", and the other replies "*Bolon*", which is as much as to say "*Not yet*".

I always regarded this as a worthless fairy-tale, until Affonso Vicente, Ambassador to Achem, assured me that he personally heard these voices saying "*suda*", "*bolon*", when he went to this place on the Panagim for the sole purpose of observing this most curious occurrence in the year 1595.

Samatra. Ptolemy in the twelfth Table of his Geography treats of the very ancient Island Taprobana which is to-day called the famous Samatra, endowed with such great riches: since in ancient times its geographical situation was wrongly stated owing to inaccurate reports, I will now make a close examination, so to speak, of its exact position.

The Island Samatra lies situated exactly on the Equinoctial in such a way that the Equinoctial divides it into two parts: thus, that portion of land which extends from the Equinoctial to five degrees of North Latitude, is called the Tramontane or Northern Land, its proper designation being the Land of the Province and Kingdom or Empire of Achem; the other portion of land, extending from the Equinoctial to five and a half degrees and ending with a point which lies in six degrees of South latitude, is called the Southern Land, its proper designation being the Land of the Gold Region, or the Province and Kingdom of Monamcabos; this

country is divided again into two portions, the Western coast belonging to the Crown of Monamcabos, and the Eastern Coast, belonging to different Crowns and called the Land of Pepper.

The Empire of Achem originated with Sidimorogon, the first Emperor, chosen in the year 1406 after Christ, during the Pontificate of Gregorio the Twelfth, and the succession has always remained in the same Royal House continuously down to Rajamancor who was treacherously assassinated by Paduca Siri Soltão in order that the latter might thus become King or Emperor of Achem; he rules to-day, but these dominions rightfully belong not to him but to the King of Jor or Batusauar, or rather, I should say, to his son Raja Achem as being the Grandson of Rajamancor.

Within the Empire of Achem are included several other Kingdoms and Principalities, such as that of Pedir, Pacem, Gori, Ancaçan, Araçan, Tico, Barus, and Priamon, which are all Vassals and Tributaries of the Imperial Crown of Achem.

Thus the boundaries of the territory and jurisdiction of the Empire of Achem begin at the Port of Priamon on the Western coast of Samatra and continue along the Northern coast thereof until they reach the Port of Araçan on the Eastern coast, which is entirely peopled by Battas, folk who eat human flesh.

Perlat is the place where they discovered the unceasing springs of Earth Oil; its situation lies on the Eastern coast of Samatra in four degrees of North latitude, within the territorial limits of Achem.

The soil in this area of Perlat is so 'oliferous' and full of oil that when it is raked or dug with mattocks, this Earth Oil called 'Minsat Tanna' wells up from underground in such quantities that several clay-vessels or jars are filled daily, so that the whole of the Eastern coast to Jamboer Point is supplied with oil for burning in the lamps at night.

In the interior of Sumatra lies a salt-water lake containing an astonishing number of 'Taynha'-fish: from this lake a certain amount of salt is obtained for the use of these very wild people.

And now I am finished with the Province of the Empire of Achem, and below I deal with the Empire of Manancabos, a very ancient Crown.

The Province of the Kingdom of Manancabos is called the Region of Gold: it comprises all that portion of land in Southern Samatra which begins at the Port of Priamon on the Western Coast of Taprobana, and continues along the Southern Coast until it reaches the Port of Palimbão, situated on the Eastern coast; this portion of land is called the Golden Region or Region of Gold, on account of the many large gold-mines which have been found there, for the whole of this Country is auriferous, as may be seen by the gold in the rocky mountains and ranges of Campar, Andriguir, Siaca, Priamon, Tico, and Barus, and by the gold found in the high mountains of Guno Merrapi, and by the pebbles and the quarries of Batan Api, and by the flat lands of Padan, and by the streams

of the River of Sunetrat and by those of Pancalan Capas, and lastly by the mineral-bearing lands of Galian Mas.

It is noteworthy that throughout this Region of Gold, the country is mountainous and rugged, well provided with mountain ranges and high peaks; such lands always produce a greater quantity of gold than the fields and flat lands.

The Empire originated with Manancambin, the first Emperor, who was chosen in the year 1039 before the Birth of Christ, during the Reign of Solomon, when the latter was building the Temple of Jerusalem; the succession has always remained in the same house and family down to Rajagaro who now occupies the throne, though he is not so powerful as his Governor or "*Xabandar*", who during his tenure of office as "*Xabandar*" of Sunetrat has grown so rich by means of the gold-trade that in his house the gold-dust is measured in measuring-tubs just as one measures out wheat, and is stored in "*Madanâs*" or Martavan jars.

The King's Court is situated in the centre of the Region of Gold, at the place called Galian Mas, where he is served by Manancabos, so-called from 'Manancambin'.

Having given a sufficient account of the Golden Region, or the Kingdom of Manancabos, I will now refer to the Pepper Kingdom and the Gold Mines.

The Pepper Country comprises the Territories of different Crowns, such as Palimban, Jambe, Andriguir, Campar, Siaca and Bencales; these are Ports for round black Pepper, called Pepper-corns. Although pepper is obtainable in all these ports, the greater quantity is to be found in Jambe, Andriguir, and Campar (which places usually produce all the Pepper required by the Captain of Malaca) and in the ports, and along the shores, of the Rivers which run right up into the Region of Gold.

All these Ports are situated on the Eastern coast of Southern Samatra, and are included in that portion of land which lies between the Kingdom of Palimban and Bencales or Arrancan.

Campar is the Port for gold; its site lies on the Eastern coast of Southern Samatra, in one degree South; it possesses an abundant River which extends as far as the Region of Gold or Pancalan Capas, a place belonging to Manancabos, or to speak more accurately, as far as Sunetrat, where is situated the Xabandar's office of the "*Xabandar*" Chiay Chetin who controls the trade and the dealings in gold from the Golden Region.

The King of Campar enjoys the profits of certain gold-mines, especially the gold from the Shores and Banks of the Rivers in his Territory, and above all that from the Shores of the Sunetrat: this gold is recovered in the following manner:—

Every day certain men of the King's house assemble, armed with cleverly-devised sieves, to sift the sands from the Shores and Banks of the streams which constitute the Sunetrat, the River of Campar; and they always find the gold mingled and mixed with the sand in their sieves; in this way the King obtains a great deal of gold in the form of powder, like grains of mustard or fish-scales.

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Gold in the shape of large fish-scales is recovered in the fields in the following manner:—

The King's Miners dig up the ground in the fields, and the earth therefrom is placed on tables in the sun to dry; after it has been dried by the heat of the sun, the gold appears in the cracks in the earth, which the miners crumble with their hands in order to separate the gold from it.

Andriguir is also a Port for Gold and for large quantities of round Pepper; its position lies on the East coast of South Samatra, in about two degrees South; the branches of its own River join with the River of Campar, so that it is possible to take ship from one Port to the other along an inland waterway; gold is found by sifting the sand on the Banks of this river, as in Campar; furthermore, gold is found in the form of "*brinjal*"-pips in the plains of black soil.

Priamon is a port for gold; it lies situated on the Western coast of Southern Samatra, in one and a half degrees South; it is a Manancabo Kingdom which was forcibly incorporated in the Empire of Achem, and pays to the latter a tribute of gold from the Golden Region; with which it communicates by means of its abundant River, much frequented by boats of the Jaos who carry salt for sale; this being the most valuable commodity in demand along the whole of that Western coast of Samatra.

Tico, also a Port for gold, lies on the Western coast of Southern Samatra in half a degree of South latitude; it also was forcibly incorporated in the Empire of Achem, and pays a tribute of gold from the Golden Region.

Barus is a Port not only for gold, but for a great quantity of Camphor, "*Bejuim*", "*Aguila*", "*Calamba*", Civet, Indigo and Ivory, besides some Cinnamon, Saffron, Ginger in great abundance, Cassia fistula, and Tamarinds: its position lies on the Western coast of Northern Samatra, in one degree of North latitude.

Finally, gold is found in a number of lofty Islands which are situated in this sea off the Western coast of Samatra, as in the following cases:—

Antonio Rodrigues de Luna sailing in a Galliot of his along this opposite, or Western, coast of Samatra, met with a storm and put in to shore for shelter: there the Negroes sold him a little gold which they said came from their Islands which lay within sight of that opposite coast of Samatra, and were called "*Pulo Mas*", which is as much as to say "*Island of Gold*".

Antonio Dias Samatra, the Pilot who was called '*Samatra*' because he was the first Portuguese to navigate that Western coast of Taprobana, also asserts in his log-books and navigation-papers that on this coast he came across Negroes who offered to sell him gold from mines in some Islands of gold.

Diogo Gil and other Portuguese captured by the King of Achem assert the existence of a Golden Isle in the Sea off the Western coast of Samatra, opposite the point of Daya, since the inhabitants thereof brought gold for sale to the Port of Achem.

The Necoda Timanaique of Masulepatan was driven by a storm from the point of Gale in Ceilan towards the Equinoctial line, where he visited an Island of gold, for on making the land he happened to find among the refuse in a furnace, which had fallen to pieces with the lapse of time, some bars or pieces of gold underneath at the bottom of the furnace; whereupon the Necoda wanted to re-fit the *Alfragata* (or *Guelue*) and *Laguel* in the creek at Batecala.

The "*Xabandar*" of Muar showed me a little gold from some Islands situated in the sea near the Port of Priamon, and the Malay or Manancabo who found it told me he had been to this Island of gold: as proof of his statement, he said it was well supplied with short Palms which yielded small coco-nuts.

The King of the Maldivas, Dom Manoel, was told by his subjects, the Callôs, that they had discovered an Auriferous Island containing flat, sandy land, almost adjoining the Island Suadu.

A few pearls and large numbers of Seed-pearls are found on the shoals in the sea off Ujon, on the Western coast of Samatra.

Bencales is a small Port producing excellent shad-fish which yield the roes called "*Turubos*" of Bencales: here is the permanent residence of a "*Xabandar*" appointed by the King of Jor or Batusauar, for the place is annexed to his Royal Crown.

It is a peculiarity of the sea along this stretch of coast that the only fish which are found there are the shad-fish, whence they obtain the roes called "*Turubos*" of Bencales, which are usually sent for sale to the Port of Malaca.

Pedir is the most ancient sea-port in Samatra: hither was brought all the gold and ivory of the country, for the trade with the Port of Tanasorir or Tanasophir in the Golden Chersonese of Malaca.

Having now described the principal gold-mines of Taprobana and the Isles off the Western coast or opposite coast of Samatra, I will now mention the other especial products which are characteristic of this land, but my account will be a brief one, because the nature and constitution of the country is almost the same as in Malaca or the Peninsula.

This is apparent from the fact that the thick woods contain "*Aguila*", "*Calamba*", Camphor, "*Bejuim*", a little Cinnamon, Indigo, Cassia fistula, a large quantity of Pepper, both round as well as large or long, besides a great deal of Aromatic "*Betre*" and "*Areca*" or Indian nut, Ginger, Tamarinds, Saffron, "*Cacumba*", and many Coco-nut palms and wild palms which produce the white "*Nipa*"-wines.

The forests and woods usually contain trees yielding oily Pitch, Gum, Resins, Medicinal Plants, and herbs of such power that the properties which they contain excite wonder and astonishment.

Moreover the island is well supplied with trees bearing tasty fruits, very similar to those of Malaca; and it also produces every

kind of grain, a great deal of "*Sagu*", tapioca, and an infinite quantity of Rice, Honey, Wax, Butter, Milk, Oils, Garlic and Onions.

The mountains and ridges are the home of numerous large elephants, Rhinoceroses or "*Badas*", "*Zibetas*" or Civet Cats, "*Arimou*" or "*Reimão*", many Porcupines, Deer or Stags, Hares, and countless breeding cows, besides a quantity of Buffaloes and wild Bulls, as well as great numbers of birds and fishes.

So Samatra is very rich and prolific in provisions and white "*Nipa*"-wines; above all, it is beautified with a number of different flowers and watered with excellent springs of pure water.

GREATER JAWA.

Marco Paulo the Venetian in Book III Chapter XIII applies the name Greater Jawa to the Island which comprised the Empire of Mataron, while the Lesser Jawa, so he states in the same book, lies situated in twenty-four degrees of South latitude, in the Sea of Lantchidol or Southern Sea, and the unknown Ocean.

The statement is confirmed by Ludovico Vartomano in his writings and by many other Geographers; so Greater Jawa is an Island lying in the Sea of Lantchidol, its Northern coast being situated in seven degrees of South latitude and its Southern coast in ten degrees South; it runs rather from West to East, with more than a hundred and fifty leagues of coast-line, than from North to South, for its latitude covers not more than two degrees, which is equivalent to thirty-six leagues.

The Island is divided into many Provinces and Kingdoms, of which the principal ones are the following:—Sunda Calapa, Cherebon, Brondon, Surubaia, Japara, Mandalique, Tuban, Pacaruan, Panaruca, Palimban, Balamboan, and finally Mataron which holds imperial sway over the whole of Greater Jawa.

The Empire of Mataron originated with Coja Baçar, the first Emperor, chosen in the Year 106; that is, later than the Empire of Samatra; though other Malaio annals state the contrary, alleging that the Empire of Mataron is more ancient than the Empire of Samatra, having been founded by Chiai Jauat, whence his subjects called themselves '*Jauas*', and the Island, too, obtained its name, '*Island of Jauat*'. I, also, am inclined to think that this must have been the case, for this Empire has always flourished and prospered exceedingly, and the succession has continued in the house and family of Chiai Jauat, down to the Emperor Tuan who now so happily fills the throne.

The people of Jawa usually call themselves '*Jaos*'; the colour of their skins is chestnut with a yellow tinge; they are of a fierce disposition, bold, daring, and careless of death; clever, skilful, with a mechanical turn of mind, and eager for any work which will bring them advantage and profit; they are merchants, great navigators, and hydrographers; moreover, they are fond of music, they go in for musical instruments, for balls and dances; they are also extremely

addicted to every form of luxury and pleasure; consequently, while they were Idolaters in olden times, they now profess the Maumethan or Serracen Creed.

The Land is most fertile, very luxuriant and fresh, one large orchard of thickly-growing, sweet-scented and aromatic trees, with fruits similar to those of Malaca or the Peninsula; and it is more abundantly provided with provisions, meat, fish, shell-fish, rice, grains, and medicines, than any other country in the Eastern Sea, for each year there arrive at the port of Malaca more than two hundred boats, which are called *Juncos* and *Tangões*, resembling *Alfragatas*, loaded with common rice, *pulot* rice, every kind of grain, ginger, garlic, onions, butter, oils, honey, wax, cassia fistula, a little cinnamon, tamarinds, coco-nuts, fowls, birds, saffron, "*cacumbas*", every kind of medicinal herb, large quantities of meat, and pickled and dried fish; lastly, they bring an enormous quantity of earthenware articles for daily use, a large number of mats, well-woven baskets, rather curious and pretty, as well as other valuable fancy-articles, besides many kinds of weapons, such as lances, darts, blow-pipes, and "*crises*" for sale; in addition, they bring large quantities of spices which they trade for other articles.

Panaruca is a Port for trade and commerce; the King of this Kingdom was on intimate terms with the Portuguese and very friendly towards them; he gave a general permission for the establishment of Christianity in his Territories; a start was made in the year 1580, when the Captain and Governor of Malaca was Dom João da Gama, by whose order and through the medium of Dom João Ribeiro Gaio, Bishop of Malaca, Churches were built and Crosses erected in the place allocated for the Settlement of the Christians, who were maintained in the Doctrine by the Capuchin Monks of Sam Francisco: this Christian settlement is now quite abolished and destroyed and entirely abandoned.

In the year 1593 there occurred in Panaruca an alarming incident which is worthy of remembrance: it happened that up in the heights of the Mountains and lofty summits there was an eruption of some brim-stone mines, accompanied by so great a roar that all the people of Panaruca were utterly terrified; for, during a period of eight days, there occurred continuous rumblings like thunder, and flashes of fire were emitted from the Mountains called the "*Gunos*" of Panaruca; during the whole of those eight days it rained such a quantity of ashes, or rather I should say, so thick a sediment of ash fell from the air, that all the fields, streets, squares, public places, and roofs of the houses were so piled up with ash, that the people could not pass along the high-ways; moreover, the fact that the air was so thick and dust-laden or full of ash, caused such intense darkness and gloom that universal night seemed to prevail.

Sunda is a metropolitan sea-port for the trade and commerce of Jaua: and is, therefore, much frequented by merchants from Alexandria, Meca, Guzarata, Cambaya, Indostan, and China, as

well as by Malaioes and other foreign peoples; so much so that, owing to the fame of its trade, Duke Mauricio of Holland despatched Cornelio de Ortiman with three Galleons and one Pinnace in order that he might establish trade with Sunda, should the three Galleons return with a cargo of spices to Port in Holland; they did in fact arrive in safety, during the year 1597.

Mataron is the Imperial Court of Java; its mountains and ranges are said to contain large Gold-mines; while in other parts of the Island extensive Mines of Sulphur, nitre, and several colours of different hues have been discovered.

Balambangan is said to be a very rich Kingdom; it lies on the opposite coast, that is, Southern Coast of Jaua, where an abundant River containing Precious Stones was discovered; it produces precious stones in such quantity and of such quality that it out-rivals every other mine, for the Precious Stones are measured out in measuring-jars, just as one measures wheat.

The Necoda Saraca brought a little gold from the mines of an Island which is situated off the Western Coast of Java; and it is certain that Gold exists in this Sea, because I have been assured by reliable people that these Islands contain Gold, which is taken therefrom to the Port of Sunda for sale.

Lesser Jaua. Marco Paulo the Venetian in the book above-mentioned, and Lodovico Vartomano in his writings, assert the existence of the Lesser Jaua situated in the unknown Ocean, or the Sea of Lantchidol, which is properly called the South Sea, in twenty-four degrees of South latitude; this is confirmed by other geographers; the same thing is alleged by Petro Plancio and Baptista in their "*Orbes terrarum*", and Atlases of the world.

The Lesser Jaua is divided into eight Kingdoms: the chief ones are Ferleche, Fansur, Basman, Lambri, and Samara, which they say contain many spices never seen in Europe; the People of Lesser Jaua are very fierce and utterly wild, so that the other Peoples of the surrounding Islands hold no intercourse with them for trade and commerce.

Borneo. Some Geographers have held that the Island of Bornea and the Lesser Jaua are identical, but Borneo fails to comply with all the conditions which Marco Paulo the Venetian mentions in Book III Chapter XIII, where he says that the natives of Lesser Jaua are people of such ferocity that on account of their natural inhumanity the other Nations hold no intercourse with them and do not communicate with them for purposes of trade and commerce; he also says that the Lesser Jaua contains an abundance of spices never seen in Europe.

This does not apply to Borneo, where the People are quite easy to deal with, and hold intercourse with all the other people of the surrounding Islands; moreover, it does not contain spices never seen in Europe; in fact, Borneo does not contain all the known spices, there is no Clove, Nutmeg, or Mace, though there is a large quantity of Camphor, "*Aguila*", "*Calamba*", "*Bejuim*", Mercury, Indigo,

and, generally speaking, the great majority of the productions which always occur in the Peninsula.

So quite clearly Borneo is not the Lesser Jaua. The Island of Borneo is situated exactly beneath the Equinoctial, in such a way that the Equinoctial divides it into two parts, that is to say, into a Northern and Southern part.

The Northern part extends from the Equinoctial until it ends in seven degrees of North latitude; the other, the Southern part, extends from the Equinoctial until it terminates in two degrees of South latitude.

So all the Northern part is called the Province of Borneo, and the other, the Southern part, is called the Province of Magermacen.

The people bear a physical resemblance to the Jaos and for this reason some Geographers have said that the Island of Borneo was the Lesser Jaua.

The Empire of Borneo originated with Chiaiborne, the first Emperor, chosen in the year 1159, during the Pontificate of Alexandre the Third, and the succession has remained in the same house and Family down to Rajacapor, who rules at the present day, enjoying friendly trading-relations with the Spaniards of Manila, and the Portuguese of Malaca.

The Borneans bear a physical resemblance to the Malaïos and have almost the same disposition, customs, clothes, arms, and religion, being Serracenos. The Trees and fruits resemble those of the Peninsula, though Borneo yields a greater quantity of Camphor, and a certain amount of Ambergris is found in the sea off the point of Saouzo.

The Land is auriferous, there being some Gold-mines in the high mountains called the "*Gunos-banuas*", where, they say, live certain white people, with long hair, who hold no communication with the other people of the Island, except on the occasion when they come down from the mountains to bring their gold for sale.

The Country contains large mines of Copper and Brass, as is well known from the trade in those metals.

Tanjonratos is a point of land in the Northern part of Bornea, situated on the West coast, in two degrees of North latitude; on the Shoals in the Sea off this point very large pearls are found almost the size of a bird's egg: these Pearls are produced in the interior of certain shells called "*Carran*", as large as an African shield.

Sucadana and Laue are two abundant Rivers in the Southern country of Borneo, wherein large quantities of Precious Stones are found.

Macaçar. The Island Macaçar lies situated exactly under the Equinoctial, in such a way that the Equinoctial divides it into two portions of land, that is to say, a Northern and a Southern portion; the Northern portion extends from the Equinoctial towards the Tramontane or North till it ends in one degree of North latitude; the other, Southern, portion extends from the Equinoctial to the

Auster or South until it ends in five degrees of South latitude: thus, this Island is divided into four large Provinces, namely, Macaçar, Boguis, Celebes and Lubos: the lands on the Western coast of the Island belong to the Crown of the Empire of Macaçar, those on the Eastern Coast to the Crown of Celebes, and those on the Southern Coast to the Crown of Lubos.

The seat of the Empire is on the coast of Macaçar: it was founded by Godinaro, the first Emperor, chosen in the year 1112, during the reign of King Dom Affonso, first King of Portugal, and in the Pontificate of Pascoal the Second: the succession has always remained in the same family down to Laujanribot, the present ruler, who is the son of King Dom João of Macaçar.

This Emperor Dom João of Macaçar was baptized by the Reverend Father Vicente Viegas, Vicar-General and Chanter of the Mother See of Malaca, in the year 1555, during the Pontificate of Paulo the First; João de Eredia, my Father, being his Godfather: owing to our negligence it came to pass that he grew cold in the Catholic Faith, so that at the present day he and all his descendants profess the Maumethan Creed.

Lubo is a powerful Kingdom of great wealth, for to this Port come certain chestnut-coloured people with long hair and no clothes; they arrive in small boats and bring Gold for sale; this gold, which they wrap in the leaves of trees, takes the form of red stones; nobody knows which Island is the homeland of these people. The Captain of Maluco, Diogo Dazambuja, received information about the matter and formed the intention of discovering this Gold.

Regarding this King of Lubo they relate an unprecedented marvel which is worth recording, namely that unlike all other animals which in general are red-blooded, he has no red blood in his composition; this is really an actual fact, and is worthy of record because it is something new which has never before been seen, and it ought therefore to cause wonder and astonishment; such is the statement made by Persons of credit and authority, for instance Antonio Vilhegas, Captain of Solor, who heard it from the people of Lubo, and especially from a certain "*Necoda*" who derived his knowledge from actual observation, for he with his own eyes saw the King of Lubo's white blood, when the latter cut and wounded himself with a knife as he took an oath according to his custom; this is all quite well-known to every one of the Macaçares. They say, too, that the King of Guarale in Timor, and the King of Botum have white blood.

Mandar is a Port for the trade in Tortoise-shell: this is found in the sea off the coast in such quantities that the shells or plates form the cargoes of the "*Tangões*" of the Jaos who trade with Malaca: tortoise-shell also occurs in the Ports of Mamoio and Curicuri, which are situated on the Western coast of Macaçar.

The Land is auriferous, for the natives declare that Gold-mines exist in the ranges and mountains of Boguir. One also finds

large mines of Copper and Brass in the high cliffs, a quantity of "*Tambaga*" in the fields, and above all a great deal of sulphur, nitre, and other minerals.

On the Shoals in the Sea around this Island are found many Seed-pearls, besides Pearls as big as a bird's egg, which are produced in the interior of Shells called "*Caran*" which are as large as a Shield.

In the Sea off this Island one usually finds a quantity of big Coral, red, yellow, white, and black, which is washed ashore by storms; in addition, one finds ambergris, for I knew a merchant who bought twelve cruzados of Ambergris which the Negroes sold him in return for Pitch, and later on he sold it to the Chelis Contractors for twelve thousand cruzados.

As the Fruits and also the Medicinal Plants and Provisions are similar to those of the Peninsula, and as the physical appearance of the People, their Arms and their Dress are the same, I need not dwell on them further.

Philippines. Fernão de Magalhães discovered these Islands, at any rate the Island called Cebu, where he died in the year 1521.

These islands are numerous, as may be seen from the fact that they extend from seven degrees of North latitude to twenty degrees; the largest are Mindanao and Luconia, where large Gold-mines occur; this is the reason why they were conquered by the Spaniards by Order of the King Dom Philippe, in honour of whom they were called 'the Philippines'.

Laquias. The Commentaries of Affonso Dalbuquerque mention these Laquias Islands, in consequence of their containing many Gold-mines, for the lumps and blocks of Gold, which the people of Gorea or Corea brought for sale at the Port of Malaca, consisted of gold from these Islands, which are called the Laquias, Major and Minor.

Laquia Major is situated in twenty-seven degrees of North latitude.

Laquia Minor is situated in twenty-two degrees of North latitude.

Japon. The Blessed Father Francis Xavier of the Company of Jesus was the first to make the Evangelical Faith known to the Japões.

The Japanas Islands are numerous: the chief of them are called Japon or Meaco, Xima, and Xicoca.

The seat of the Empire is in Meaco, in the largest Island, which is properly called Japon; here very extensive silver-mines occur on the Northern coast of the island: the latitude of the Island begins in twenty-eight degrees and terminates in thirty-nine degrees of North latitude.

Maluco. Affonso Dalbuquerque after conquering the Province of Malaca, gave orders that Antonio de Abreu the Cosmographer should be provided with three Alfragatas well supplied with men, arms, munitions and provisions, so that he might proceed with all

despatch from the Port of Malaca to the Eastern Sea or Great Gulf, to discover the famous Malucas Islands; he discovered them all and took possession of them in the name of the King Dom Manoel of Portugal on the twenty-fifth of April, 1503: so for the first time does history record that the cloves of Maluco came within the dominion and jurisdiction of the Crown of Portugal.

Now Fernão de Magalhães reached the Port of Maluco, as he had promised the Emperor he would, by sailing through his Magalanic Strait (the strait which he had himself discovered in a latitude of fifty-five degrees South) and through the Western Sea; that is to say, his ship called the 'Vitoria', with Sebastião Delcano on board, reached the Port of Tidore in the year 1521: but this voyage did not affect the ancient dominion of the Portuguese, which was anterior to that of Spain, as can be seen from the many Engravings cut by Antonio d'Abreu on the Cliffs and Rocks of Maluco, representing the happy Arms of the Crown of Portugal: this occurred nineteen years before Magalhães discovered the Strait which bears his name and reached the Port of Tidore in the name of the Emperor.

So that by the law of priority the dominion of Portugal takes precedence: and, what is even stronger, in consequence of the order made by Pope Alexandre the Sixth in the year 1493, Maluco was included in the territory and jurisdiction of the Crown of Portugal; for Alexandre the Sixth, in view of the disputes between these two powerful Kingdoms, gave the following order.

"*Limitem statuimus Meridianum circulum 100 leucis distantem a qualibet Insularum capitis viridis et earum quas vocent Assores*".

That is to say "We fix the Meridional Circle, that it be a line 100 leagues distant from and West of one of the Islands of Cape Verde or of the Assores". To explain more fully, it must be understood that the terrestrial World as a whole is divided into three hundred and sixty degrees, so it is one half of this, one hundred and eighty degrees, which represents the portion allocated to each of the Crowns.

Hence the one hundred and eighty degrees to the West belong to the Crown of Castile and the one hundred and eighty degrees to the East belong to the Crown of Portugal. So that if ever a few degrees were to be subtracted from the one hundred and eighty degrees to the West, exactly the same number should be subtracted from the one hundred and eighty degrees to the East, in order always to equalize the portion of each of the Crowns: for this reason the fixing of the Meridian is of great importance, since the greater the distance from Cape Verde, the worse it is for the Portion of the Portuguese.

The Spaniards, however, being dissatisfied with this division made by Alexandre the Sixth induced the Portuguese to come to their way of thinking: so these and other discontented parties

agreed to the following final decision ordained by Pope Clemente the Seventh in the year 1524:—

"Constitutus est communis limes Meridianus 370 leucis in occasum distans ab Insula S. Antonii Insularum Capitis viridis occidentissima"; which is as much as to say:—"A fixed Meridian is prescribed, 370 leagues to the West of and distant from the Island of Santo Antonio, which is the most Westerly of the Cape Verde Islands".

In this way, the above-mentioned three hundred and seventy leagues, representing twenty-two degrees of Western latitude, commenced further West than the first Meridian as prescribed by Alexandre the Sixth in the year 1493, running through the Point constituted by the Island of Santiago or São Nicoláo or São Vicente.

It must be understood that each degree is seventeen and a half Spanish leagues, which represents thirty-five leagues for each two degrees and seventy leagues for each four degrees.

Hence the distance between the meridional Point on the land of Cape Verde and this Meridian of Clemente the Seventh comprises some thirty degrees of longitude according to geographical or hydrographical computation, which represents five hundred and twenty-five leagues and makes two hours difference in time, allowing two hundred and sixty-two and a half leagues for each hour.

But even if one should seek precisely to determine the exact position of the one hundred and eighty degrees of longitude which belong to the portion of the Crown of Portugal, it is quite impossible to determine the exact calculation of these degrees in the territories belonging to Spain, because in those places it could not be calculated even by mathematical theorems. The only way would be for some learned Cosmographer to go to the Island of Maluco itself, and from the Vertical and Meridian thereof, observe some Eclipse, solar or lunar: so that from the difference in the hours of time at the position of Maluco and at the Cape Verde Islands respectively he could completely and accurately determine the portion of Portugal.

For if the difference in the hours of time were less than twelve hours, or were the exact twelve corresponding to the one hundred and eighty degrees, it certainly falls within the portion of the Portuguese; but if it turned out that the difference in the hours of time were more than twelve hours, it clearly belongs to the Crown of Castile, according to the order made by Pope Alexandre the Sixth.

This could also be determined by the New Art of Navigation from East to West, by the mechanical calculation of the hours with a clock worked by wheels. But it cannot be determined in the way in which all the Cosmographers pretend to fix the position of the line determining the one hundred and eighty degrees, in order not to displease the Christian Princes; what is more, even if it turns out that Castile possesses any right to the clove, yet Maluco be-

longs to the Portuguese by reason of the Gift made by the King of Castile to the Crown of Portugal.

The Malucas Islands consist of Ternate, Tidore, Motir, Machian, and Bachan; these are quite small but they adjoin another bigger Island called Gilolo, which is situated immediately below the Equinoctial; this is conspicuous for four Points or Promontories of land, running out from West to East in such a position that the most Northerly Point, called the coast of Moro, is situated in two and a half degrees of North latitude, the second Point lies in one degree of North latitude, the third Point runs exactly along the Equinoctial, while the fourth and last is situated in one degree of South latitude.

The forests and woods or groves of all these Malucas Islands contain the aromatic trees of the precious Clove so highly esteemed throughout the whole World, especially by the peoples of Europe, whose Kings have ever sought this Jewel for their Crowns, despatching discoverers to trace fresh routes to the Malucas Islands, which yield such stocks of Clove that they provide cargoes not only for the trading Galleons of the Portuguese, but also for the numerous Alfragatas of the Spaniards, and for the Guelues of the Moros of Meca and Alexandria.

The Clove resembles the laurel, but it has narrower leaves, produces numerous branches and a great quantity of flowers, which are first of all white, then green, next red, and finally, when dried, become black; the Cloves grow in bunches in the branches: the flowers, when green, surpass all other flowers for sweetness of scent.

Ternate is one of the Malucas Islands and the chief of them; it was conquered by force of arms, and that is the reason why at the present day it is heavily fortified with walls and bastions of stone and mortar, with numerous bronze cannon, arms, munitions, provisions, and men necessary for its defence, under a Nobleman, His Majesty's Captain.

The native people of this Island and of the other Malucas Islands resemble Jaos coloured black, and they employ the same weapons, except that they carry a round shield, as tall as a man, which is properly called a "*Solauaco*", and a sword five fingers wide and single-edged, which is called a "*Tagole*".

For the rest, things are the same as in the Peninsula, so I need not dilate on them.

Carbuncles. The Emperor Dom Carlos the Fifth despatched a powerful fleet of Galleons and Alfragatas with a large number of Spaniards under Captain Morones to proceed by way of the Magalanic Strait to conquer Lucões; but that famous Captain Gonçalo Pereira Marramaque, the General commanding in the seas surrounding the Malucas Islands, determined to frustrate this design because of the spices.

For the better success of his plan, the General set out from the Port of Ternate with his whole fleet in search of the Spaniards,

but when he had proceeded as far as Ciaos Islands, he met with a storm which totally scattered his fleet, so that while the General returned to Ternate, one of the Galliot which had accompanied him was carried away by the currents off the coast of Moro and discovered an Island situated in the sea off the Eastern coast of Gilolo, where the Galliot put in for water.

The people of this Island understood the language of Gilolo; and they related many things about these Islands and the other surrounding Islands to the Captain of the Galliot; and in particular the following story, which is told in several different ways but the best account is this:—While some Fishermen from the Island of the watering-place were engaged in fishing, they met with a large wooden Raft, which the current was carrying across the sea; wishing to know what was the matter, the Fishermen came up to this Raft, and on the top of it they found four naked blackmen, who resembled the people of Gilolo in appearance.

Not understanding their strange language very well, the fishermen brought them to land and made them very welcome there.

As soon as they felt at home and understood the language of the Island of the watering-place, the strangers frankly related how they were natives of another inhabited Island, and how the currents of a river had carried them away from land, till they had drifted for three days before being found by the Fishermen from the Island of the watering-place. And they maintained with great insistence that in their native Island they did not use fire-light, but for purpose of illumination at night they used the light of certain luminous stones obtained from animals called "*Lacocachos*", which were so numerous that the majority of the people usually possessed a luminous stone or Carbuncular stone to use for the purpose of illumination at night.

These people live in the tops of trees growing in the streams: they eat fish, and a great deal of shell-fish, toasted or dried by the heat of the sun, also yams, and Fruits; they cover themselves with the bark of trees; this bark, when dried, they pound with smooth stones till the pounded bark takes the appearance of coarse cloth or dimity. The truth of this matter is proved by a Letter from General Gonçalo Pereira Marramaque to Dom Leonis Pereira, Captain and Governor of Malaca, giving an account of the expedition which he undertook against the Fleet of Captain Morones: the Letter was seen by several Persons of credit and authority, especially João Serrano de Negreiros, Notary of the Council at the City of Malaca.

The matter is confirmed by Antonio Ribeiro de Basto, a Member of the Council and the principal Executor of the aforesaid Captain Marramaque who died before effecting the discovery of the Carbuncular Island.

Hence one may feel certain about the existence of this Island with its luminous stones, for it is certified in this manner by

Captain Gonçalo Pereira Marraaque and confirmed by the actual Kings of Ternate and Tidore, who conversed with the Person who saw the carbuncle stones and knew the animal "*Lacocacho*", which resembles a "*Zibeta*" or Civet-cat; all this is common knowledge throughout all the Province of Maluco, as the Captains of Ternate could say.

The Oriental Carbuncle is a luminous stone, the shape of a Bird's egg, found in the forehead of the animal called "*Lacocacho*", which in appearance closely resembles the "*Zibeta*" or Civet-cat; its colour is chestnut, or tinged with dark yellow; these "*Lacocachos*" are usually found hidden in hollows during the day-time, while at night they come out to look for food.

The Carbuncular Island is situated in the sea off the Eastern coast of Gilolo and not far from the land, for it is said that in fine weather the land of the Carbuncular Island can be seen from the Mountains of Gilolo, so it must be exactly on the Equinoctial, or very close to it.

On this subject a great deal might be written, but the gist of it all consists in saying that there could be no finer discovery in the World than the discovery of the Carbuncle.

Banda. Banda is a small Island situated in five degrees South latitude; throughout the Island the land is aromatic, for the trees bear Mace and Nutmegs, spices highly esteemed throughout the World.

The Mace tree resembles the Peach tree, but has very short round leaves; the fruit is covered with a thick skin which opens as it ripens, and through the leaf-covered skin is revealed the Nutmeg, which at first is red like a Pomegranate, a beautiful sight, but as the nut gradually dries, the red colour fades, and turns to orange.

The Bandanese are Maumethanos, and therefore show greater favours to the Idolatrous Merchants and Serracenos than to the Christians and Portuguese.

Ceyran. The Island of Ceyran is situated in four degrees of South latitude; it has always remained outside the pale of Portuguese trade though much frequented by Jáos Merchants, who declare that it contains much Mace and Nutmeg, and they also assert that it contains people with large ears, like elephants' ears, and certain other monsters, as described by Pliny in Book VII of his Natural History.

Amboyno. This is another small Island situated in four and a half degrees of South latitude: it was conquered by the Portuguese, who built there the Fortress of stone and mortar, well furnished with artillery, arms, ammunition, provisions, and men necessary for its defence, under a Nobleman, His Majesty's Captain.

Solor is another small Island situated in eight degrees of South latitude; although long ago inhabited by Idolaters, it is now inhabited by Christians converted by the Predicant Friars of São

Domingos, who built there a Fortress wherein resides His Majesty's Captain. The land contains sulphur-ores and saltpetre.

Bima is an Island situated in eight degrees of South latitude; it produces large numbers of breeding horses and a great quantity of Cinnamon, also some white Sandal-wood and immense amounts of sappan or Brazil wood. The land contains sulphur-ores and saltpetre.

Ende. The Island of Ende is situated in nine degrees of South latitude; Christianity has been established there through the Predicant Friars of São Domingos, and therefore Churches and Holy Temples have been built there. The land produces much Cinnamon and a quantity of meat-foods, fish, rice, and grains, which could support a large population; it yields, moreover, some white sandal-wood and a great deal of sulphur and saltpetre.

Bale is a small Island situated in the South Sea, in eight degrees of South latitude, between the Eastern coast of Java (the Balanbuan district) and Abima, and lies almost in the middle of the gulf, which is called the Gulf of Bale, through which the English or Hollanders usually sail when they are seeking for spices. The King of the Island is called Rajagaia; he is descended from the Royal Family of Balambuan; so far he has carried on little trade and commerce with the Portuguese, confining all his favours to the English and Serracenos or Moros from Meca, being himself a Maumethano.

The King of Bale might be called exceedingly happy and fortunate, for he deserves to be designated the Lord of the luminous Greyhound or the Dog of the Carbuncles, wherewith he might excite the great envy of all the Princes in the world. The luminous Greyhound or Dog of the Carbuncles, called 'Balanbangan' because it was born at Balanbangan, the land of Precious Stones, resembled in appearance a great black shaggy Dog; it had four eyes; I mean to say that besides its two natural eyes with which it saw, it had in addition in its forehead two other eyes resembling stones; these shone with light so brightly that they lit up the King's houses, as though the light came from two brands or torches, so that the light from the stones rendered candle-lights unnecessary at night. This is certified with great insistence by a Christian, called Paulo of Bale, who was a page of the aforesaid King, and guardian or feeder of the aforesaid Dog of the Carbuncles, which was fastened round the neck with a thick chain of gold; the account is also certified by other persons, who found themselves at that Court in the year 1580.

Timor. The Island of Timora is Gold-bearing Land, situated in nine degrees of South latitude; it is one of the finest and most prosperous of all the Islands in the Eastern Sea; for besides containing a great quantity of white sandal-wood, tortoiseshell, wax, honey, white and red cotton, fruits, and provisions, such as meats, fishes, shell-fish, rice, grains of every sort, and many plants

and medicines, it also has as its greatest asset many mines of Gold, "*Tambaga suaca*".

The Empire of this Island is divided into two parts, that is to say, North and South; the part along the Southern coast belongs to the Imperial Crown of Camanaça.

The Ports for sandal-wood on the Northern coast, called the inner coast of Timor, are Mena, Ceruião, Assan, Batigude and Adem.

The Ports for sandal-wood on the Southern coast, called the outer coast of Timor, are Camanaça, Boro, Serrin, Samoro, Fotere, Limomaçin, Batamean and Amenaban.

Tibar is a Port on the Northern coast; it supplies a large quantity of wax and honey, which could provide cargoes for several Alfragatas.

Macalere is another Port on the Southern coast, where there are found an infinite number of tortoises, which could provide cargoes for the Alfragatas.

Boulo is a Town in Timor: in the lands of its Territory and in the lands of Dalui and Macadiche grow many trees of red Cotton, almost the colour of pomegranate, which serves for the manufacture of red cloth in these territories.

Adem is a Port on the South coast, where they have discovered some mines of "*tambaga suaca*" which forms in cracks in the soil, like columns of stone.

Tutuluro is a Town in the Province of Samoro; so too is Fatoboia, where they discovered that most successful Gold-mine, which resembles a lofty Rock, according to João Baptista de la Bera Cruz, who asserts that he saw the Gold at quite close quarters when the King of Samoro visited the Mine of Gold, which glistened when the rays of the sun fell on it.

Here rises a perennial spring or stream of water which leads down to the Ports of Serrin and Tirismatauay; this stream is called the River of Gold: and it was here that the same João Baptista and Domingos de Torres stood picking out the Gold with their own hands; so there can be no doubt as to the reality of the gold.

Besides the Empires, there are in the Island of Timor many powerful Kings who have amassed a great deal of Gold, both by means of trade and commerce in sandal-wood, and by means of Auriferous mines: hence all of them possess, as a rule, great riches in the shape of gold, Silver, and Precious Stones.

The Emperor of Mena and the King of Luca became Christians, being baptized by the Predicant Fathers of São Domingos; and owing to the neglect of the latter, they turned Moros or Idolaters, as they always had been.

The Island of Gold. The Lamacheres Fishermen of the Island of Solor, while engaged in their fishing, were caught in a storm so fierce that they were quite unable to return to land; so they yielded to the force of the storm, which was such that in five days it carried them to the Island of Gold, which is situated in the Sea off the opposite or outer coast of Timor, which is properly called the Southern coast.

And so the Fishermen reached the land of Gold and attempted to find food, as they had eaten nothing during the period of the storm. They enjoyed such excellent good fortune that while they were raking the earth in search of Yams and Potatoes, they found so much Gold that they filled their Boat until it could carry no more cargo.

After taking in water and provisions necessary for the return journey to their native Country, they waited for another storm in the opposite direction, and when the storm came they went from the said Island of Gold until they reached the Island of Ende Grande, where they discharged all their Gold, much to the envy of the Endes.

In consequence, these same Endes and the Lamacheres Fishermen determined to repeat the voyage, and when they were all about to set out both the Endes and the Lamacheres were overtaken by a fear so great that they did not dare, owing to ignorance, to cross the Sea of Gold.

And it may well seem that Almighty God desires to entrust this work to Manoel Godinho de Eredia, the Cosmographer, by Order of the most happy Lord Count Admiral, Viceroy of India intra-and extra-Ganges, that the said Eredia may be the instrument of effecting an increase in the new Patrimonies of the Crown of Portugal, and of enriching the said Lord Count and the Lusitanian Nation.

All men, therefore, should recognize with gratitude this notable service, not least the said Lord, since if it is successful it will deserve to be regarded as one of the happiest and most fortunate events in the world, for the glory of Portugal.

Hence, in any event, the Discoverer ought, for many reasons, to be well equipped for the expedition in search of Gold.

First: because of being the first to obtain the Gold for the Crown of Portugal.

Secondly: because of facilitating the discovery of Gold.

Thirdly: because the Gold-Mines are the largest in the world.

Fourthly: because the Discoverer is a learned Cosmographer.

Fifthly: because of examining the descriptions of the Austral Islands on the way.

Sixthly: because of the new Christianity.

Seventhly: because the Discoverer is a wise Captain, who essays to render very great services to the King of Portugal and to the most happy Dom Francisco da Gama, Count of Vidigueira, Admiral, and Viceroy of the Indias intra-and extra-Ganges, and Lord of the Gold, Carbuncle, and Spices in Portugal's Eastern Sea.

2. A letter: 1599.

(Cf. pp. 280 and 286 *infra*).

While professing no knowledge of Portuguese history, the translator thinks it reasonably certain that the clue to the date and circumstances of this letter is to be found in the following passage 1930] *Royal Asiatic Society*.

of Couto (*Decada*. XII. Bk. III. Ch. X):—

"By this fleet there came news to the Count Viceroy of the death of his son D. Vasco, which he felt much, having no other."

The fleet reached Goa in 1599.

(*The Travels of Pedro Teixeira*. (*Hakluyt Society*: 1892) p. lxxxiv).

The letter, then, would be written by Eredia to the Viceroy, Francisco da Gama, in 1599.

The British Museum has a Photolithograph of the original: Manuscript Room, No. 29,300 h. It bears a MS note "Presented by the Duke of Saldanha, Portuguese Ambassador, 18 Mar. 1875."

It also bears two printed endorsements:—

- (1) "O original autographo existe no arquivo da Torre do Trombo" [*i.e.* the Repository of the Archives at Lisbon].
- (2) "Portugal. Secção photographica. Photolithographia. Novembro de 1874."

A facsimile of the letter, with a French translation, will be found in Janssen's *Malaca, l'Inde Méridionale et le Cathay*.

Your Lordship,

On the arrival of the ships they informed me that Your Lordship had some sad news, and therefore as a loyal servant I hastened at once to the Palace here, to express my sorrow at the death of Dom Vasco de Gama, whom God has taken to his eternal glory; often though I presented myself, I could not obtain admittance; since Your Lordship was in complete seclusion and retirement, as was natural. However, I wish Your Lordship all the happiness and prosperity which you have in the past enjoyed or which you yourself have desired. I myself have seen what I had hoped would eventuate, ships arriving from Portugal after a prosperous voyage, bringing men who would be here in good time for the expedition in search of gold.

And as the expedition is more Your Lordship's than mine, I scarcely think it necessary to remind you that it is the 13th of September which is the most favourable time both for undertaking the voyage to Malaca and also for concentrating on the business of discovery; Your Lordship is well aware of this and is provided with the necessary information on all points; such being the case, I have been making such preparations as the main requirements demanded.

For once it is understood that the search for gold is decided upon, I can undertake to make the necessary provision, and should I prove to have omitted anything, it will suffice to give an authoritative direction. But I cannot refrain from reminding Your Lordship that the achievement of our object, the discovery of gold, is intimately connected with our understanding the recurrence of the seasons in the Sea of Gold, and this implies understanding the consecutive changes in weather which is as severe as in any part of the world. To be more explicit, it should be realized that in the

said Sea of Gold winter storms occur from March until July, and that, if I can take sufficient advantage of the September monsoon, I can stay at Malaca during the whole of November, make the voyage as far as Solor during December and then set out in January for Tymor or Ende or Sabbo; I can spend the winter at some of these islands and there obtain better information regarding the gold; then during August or September in the name of Almighty God I can undertake the discovery of the happy Island of Gold.

While, if I should take advantage of the April monsoon, then it would be necessary for me to stay at Malaca during June, July, August, September, October, and November, and leave for Solor in December.

This then is the manner in which I can render further service to God and the Kingdom of Portugal and Your Lordship, for I wish to be nothing more than Your Lordship's servant and an instrument for effecting the discovery of the gold; my conscience ever goads me to undertake this discovery, for God favours me in this enterprise, and therefore I pray Your Lordship will enable me to fix my mind's eye on the mirror of this splendid achievement, relying therein on Your Lordship's powerful assistance.

May Almighty God guard you with health and life to be the protection of this Oriental India and its States.

EMANUEL GODINHO DE HEREDIA.

3. History of the Martyrdom of Luiz Monteiro Coutinho: 1615.

According to Machado, the martyrdom took place in 1588, on the order of 'Raiamancor', King of Achem, and the book was dedicated to the most illustrious D. Aleixo de Menezes, Archbishop of Braga, the dedication being dated at Goa the 11th November, 1615: the book consisted of manuscript folios with various illustrations.

This work seems to have disappeared without trace.

4. TREATISE ON OPHIR: 1616.

The original MS of this work, entitled *TRATADO OPHIRICO* is in the Bibliothèque Nationale, Paris: No. Suppl. 4567: it consists of 65 folios, with maps and illustrations.

Included at the end of the TREATISE itself are two interesting documents, entitled respectively "REPORT ON MERIDIONAL INDIA, Discovered by M. G. De Heredia in the year 1610", and "SUMMARY OF THE LIFE OF MANUEL GODINHO DE HEREDIA."

Photographic reproductions of the folios comprising this treatise have been presented to the Selangor Museum by Sir W. George Maxwell, K.B.E., C.M.G.

So far as is known, no transcription or translation of this work has been published. There follows an English translation of the

Chapter-headings in the TREATISE, and a rendering of the REPORT and the SUMMARY.

TREATISE ON OPHIR
COMPOSED
BY MANUEL GODINHO
DE EREDIA, MATHEMATICIAN,
ADDRESSED
TO DOM PHILIPPE KING OF SPAIN
OUR LORD
IN THE YEAR 1616.

FIRST PART
CONCERNING
THE DISTRICTS OF
THARSIS AND OPHIR
IN
THE ANCIENT WORLD.

- CHAPTER 1. Concerning the division of the Ancient World.
- CHAPTER 2. Concerning the scanty knowledge of other Worlds.
- CHAPTER 3. Concerning Tharsis.
- CHAPTER 4. Concerning Ophir.
- CHAPTER 5. Concerning the Asiatic Indias in general.
- CHAPTER 6. Concerning India Major in Ophir.
- CHAPTER 7. Concerning India Minor in Ophir.
- CHAPTER 8. Concerning the terrestrial Paradise.
- CHAPTER 9. Concerning the Inferno in the centre of the world.
- CHAPTER 10. Concerning the Golden region.
- CHAPTER 11. Concerning the Kingdom of Siam.

SECOND PART
CONCERNING
THE VOYAGES
OF
SOLOMON.

- CHAPTER 1. Concerning the voyages of Solomon.
- CHAPTER 2. Concerning Solomon's fleet.
- CHAPTER 3. Concerning Solomon's ports.
- CHAPTER 4. Concerning opinions about Ophir.
- CHAPTER 5. Concerning Serica or Attâ.
- CHAPTER 6. Concerning Sim and Mansim.
- CHAPTER 7. Concerning the resemblance between the Sinas and the Phenicians.
- CHAPTER 8. Concerning the Scyths.
- CHAPTER 9. Concerning the Kingdom of the Tartars.
- CHAPTER 10. Concerning Christianity in Attay.

THIRD PART
CONCERNING
THE REIGION OF
ARSARETH,
TARTARIA.

- CHAPTER 1. Concerning the captivity of Hosea, King of Samaria.
CHAPTER 2. Concerning the River Euphrates.
CHAPTER 3. Concerning the journey to Arsareth.
CHAPTER 4. Concerning the region of Arsareth.
CHAPTER 5. Concerning Astratan.
CHAPTER 6. Concerning Turcastan or Turan or Turca.
CHAPTER 7. Concerning Persia or Pharsis.
CHAPTER 8. Concerning Indostan or Mogor.
CHAPTER 9. Concerning Gozarathe.
CHAPTER 10. Concerning Tartaria.
CHAPTER 11. Concerning the Caspian Sea.
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REPORT ON MERIDIONAL INDIA.
Discovered By M. G. De Heredia
in the year 1610.

REPORT ON MERIDIONAL INDIA.

Meridional India comprises the continental land of Lucach which reaches Southwards beyond the Tropic of Capricorn and beyond the Antarctic Circle as far as the Pole, and from there extends as far as the land of Parrots, the region of Pithacoru: it includes the Java major wherein Beach is situated or Luca Antara, and the Java minor which yields spices, and other neighbouring islands such as Petan, Necuran, and Agania, all prolific in riches and gold and other metals and minerals, as well as clove, nutmegs, white and red sandalwood, and the herb "*birco*", besides other Aromatics, as is noted by Marco Polo the Venetian who speaks as an eye-witness, for he resided for some time in those Southern parts, especially in Java minor, as he sets out in his Book 3 chapter 13.

It is worthy of remark that in the year 1269—in the time of Pope Clemente the Fourth and Gregorio the Tenth, while Dom Afonso the Third was King of Portugal—, 231 years before the Discovery of the Oriental Indias, Marco Polo the Venetian (son of Nicolao Polo, a merchant engaged in the Constantinople trade) wishing to see the world in his father's company, set out from

Venice; going from Constantinople by the road through Persia and Samarcad or Turcastan, and the Desert of Lop, he passed to the Province of Cathay, Court of the Emperor Cublay or the Gram Cam; thence he crossed to China Mangin, corruptly Namquim, and at the Port of Quinsay, Chinsao or Chincheo, he embarked in a Junk or Lorch for a port in Bantan or Sunda (in Java wherein Mataron is situated); thence through the bay and canals of Bale, by certain Islands Sondur and Condor, he passed to the Southern Sea, and reached Java major containing Beach or Veach, land of gold, where this mineral abounded; and after leaving to Westward the shoal of Maletur with its traffic in spices, he passed to the South to the Island of Petan, whence he crossed to Java minor, prolific in Aromatics and spices.

Java minor with its spices was in ancient times the chief emporium of the South for the trade in spices and Aromatics and other riches: it was for a cargo of spices that Marco Polo the Venetian Merchant sailed to those parts; he found a great volume of trade in all those Ports of Ferlech, Dragoian, Lambri, Fanfur, Basma, and Samara, passing to Constantinople by way of the Red Sea.

Java major containing Beach in ancient days exported gold; it was because the country was so rich in gold that it was called Veach among the native Jaos who inhabited those Islands, a most savage and decadent race, who recovered a great quantity of gold in the Gravel or lumps of Earth.....

Ptolemy calls this Java major "Javadi or Javativa, land of gold", as he shows in Table 12.

This Java major was reached by Francisco de Rezende of Malaca in a junk driven out of its course from Timor; the Jaos of the country would not allow the people from Malaca to land, and they recovered some gold on the shore in water up to their waists: judging by a native boat which was carried away from land and came to shore at Balambuan in our Java (containing Mataron and Bantaõ and Sunda), we think that this was the Java major or Luca Antara discovered in the year 1601.

Necuram and Agania abound in cloves, mace, nutmegs, sandalwoods, and all kinds of Aromatic spices, in addition to the herb "*birco*".

Petan, with many woods of clove-trees, appears to be uninhabited: for a boat from China, belonging to Macao, after loading a cargo in Timor, reached this island in calm weather, landing at a part where they found no people; they obtained water, also fuel from the woods of clove-trees.

Luca Piatto was in ancient times inhabited by a civilized race, as is shown by the buildings of elegant construction, with towers, walls, and houses of brick and stone; its many towns have no inhabitants, being entirely depopulated, either from pestilence or from some flood; this account was given by a boat which was carried out of its course from Timor.

Luca Tambini, another Island, is inhabited by women, like Amazons, with bows and arrows on horseback: there are no men: this was observed by the occupants of a boat which was carried out of its course from Timor.

It is worth noting that the inhabitants of Java major and Java minor and the other surrounding Islands, Necuran, Agania, Petan, Condur and Sondor are savage Jaos: all the people are Idolaters, though Mouros were found at Ferlech in the year 1269.

The countries of Java major and Java minor produce a great quantity of gold and metals and minerals, clove, mace, nutmegs, sandalwoods, the herb "*birco*", and ivory; they contain elephants, rhinoceroses or "*badas*" and many animals and birds, rare and valuable, as well as all kinds of provisions.

Chiay Masiuro, King of Damut, Prince that he was, wished to make an expedition in order to explore this Meridional India; he embarked with some subjects and sailors in a boat called a "*calelus*" propelled by oar and sail, supplied with necessities, and set out from Balambuan towards the South: after a voyage of 12 days' duration, he arrived at Luca Antara or Java major, an island of 600 Spanish leagues in circumference; here the said Chiay Masiuro was well-received and entertained by the "*Xebandar*" or Governor, for the King of Luca Antara had gone by river up-country to his country-seat; Chiay Masiuro enjoyed the freshness of the country and its delights, and noted the richness and abundance of this region, where he saw much gold, clove, mace, nutmegs, sandalwoods, and other spices and aromatics and riches.

After taking samples of everything, he embarked by permission of the King of Luca Antara and his "*Xabandar*" and Governor who by way of a present for the journey gave him two handfulls of coins.

Running for 6 days before the monsoon wind from the South, he arrived back at the port of Balambuan in Java (wherein Bantan and Sunda are situated) in the presence of certain Portuguese; all the merchants there believed the account of his journey.

After hearing this account, the "*Descobridor*" Manuel Godinho de Heredia gave secret instructions to a servant of his to go, disguised and unknown, to Java (containing Mataron, Bantan and Sunda) to acquire more accurate information about this expedition on the opposite or Southern coast of Java in the great bay of the Fishermen; this servant joined the fishermen and crossed in 6 days to the coast of Luca Antara.

After noting its richness and satisfying himself as to the existence of this Meridional India, he returned to the bay of the Fishermen, and then gave information about his enterprise in the year 1610.

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Letter of Advice to the Descobridor regarding the enterprise in Meridional India.

"On your Lordship's instructions, at the risk of my life I set out from the bay of the Fishermen in a small boat with 12 men engaged at the expense of Your Lordship, who put it within my power to perform this service; and this service I did actually perform in such manner that I lost sight of Java (containing Sunda) and then on a subsequent day, after 3 day's travelling, the Mountains of Luca Antara came into sight; for another 3 days I followed the land, and then disembarked on a coast which was deserted, for I was not observed by any stranger, and I and my companion on the shore were the only inhabitants; I remained there 3 days and confirmed the truth of Chiay Masiuro's account regarding the quantity of gold, and all kinds of metals and minerals, and precious stones, cloves, nutmegs, mace, and sandalwoods, and other riches.

After making the necessary provision I took to the boat, and having a favourable wind, I arrived back after another 6 days at the bay of the Fishermen, where I arrived very ill, and I stayed in the house of my friend the fisherman who conferred on me countless favours because he knew Your Lordship in Malaca through his acquaintance with the Bishop Dom João Ryberto Gaio.

From the bay of Mattaron in Java (containing Sunda). The 14th of August, in the year 1610".

In ancient times merchants carried on extensive intercourse and trade from Luca Antara with our Java containing Mataron and Sunda, but it ceased on account of wars and conflicts between the States.

This intercourse and inter-navigation was broken off for a period of 331 years, and no further communication took place until the year 1600, when by the just decree of Heaven it happened that the boat from Luca Antara, in which Beach is situated, was carried out of its course by a storm and reached the shore at Balambuan, where the occupants were well-received by the people of the country.

In all their customs these Jaos of Luca Antara resemble the Jaos of Sunda, and there is only a slight difference in their language, much the same as between the Castellans and the Portuguese; their hair.....extends as far as the shoulders; the tonsure resembles the tonsure of Bale, with a curiously curved contour: in general they resemble the Jaos of Sunda in figure.

From all over the world there is trade with this port in Meridional India; whence issue cargoes of gold, clove, nutmegs, mace, sandalwoods, and other aromatics and spices and riches, going to the Ports of the Oriental Indias and Cathai, principally to the ports of Cathai as stated and to the Ports of the Red Sea or Erithrean Sea; thence going by land in camel-caravans by way

of Sues or Cossair they arrived after 25 days at Canna, a place on the River Nile; there they were placed on boats which were carried down by the current till they reached Alexandria in Egypt, whence they were distributed throughout Europe.

Owing to the value of this trade the ancients endeavoured to facilitate the route by diverting the Nile through Canna and Trajan's canal to the Red Sea, cutting through the Isthmus for 12 leagues, as King Sesostriis had attempted; but the design was never executed because an inundation occurred which flooded the flat lands, presumably because the level of one sea was higher than the other.

In the opposite direction we find that the mainland of Lucach runs southwards to the Pole and thence extends as far as the region of Parrots, called the region of Pithacoru, and to other Promontories in the South; it is said that it does not extend to the Magalanic Strait, because according to observations and written accounts, there is a mass of islands in that locality.

The mainland of Lucach is mostly inhabited by a white race, in figure resembling the Spaniards of our Spain; they are badly clothed, wearing shirts which are woven of plant-fibres; as arms they carry wooden staves, for they have no iron weapons; as was noticed by the corsairs on the flag-ship of Jaio d' Usquerqe who was taking the ship from China to Holland and Zealand; when passing by the high land of Lucach, he wished to obtain water and fuel as the country was very fresh and wooded; some corsairs were on the beach disembarking from their boat on land, with their arquebuses, but they were unable to proceed and had to return to the ship, on account of the stout resistance shown by these white people who killed some Hollanders with their staves: they recovered their ship with difficulty, defending themselves with their arquebuses, and continued their voyage to a safe port: this was in the year 1604.

This same mainland of Lucach extends eastwards as far as the Meridian of Timor; here live a white race which is more refined and civilized, wearing clothes of cotton and silk, and using "*cabaias*" or chemises of red, according to the account given by the Bandanese and Maluco natives, and in the Histories of the Indias.

Rui de Melo de Sampaio, Captain of the ship "S. Paulo", accidentally discovered that Southern Land called the region of Parrots or region of Pithacoru, lying on the Meridian opposite to the Island of St. Lourenço, in a latitude of 48 degrees South; and although the sailors recounted that it was a great Island, very fresh, still one presumes that it was the mainland which extends from Lucach.

This land was visited by the Flagship of Cornelio Malodiva, which had been carried out of its course by currents and separated from the rest of the fleet which was travelling from Holland to

Malaca; wishing to land for water and fuel, they disembarked in their boat; they met with no resistance on the shore, on the contrary they received good treatment.

The people of this region are white, and in figure resemble the Portuguese; they are badly clothed, wearing shirts woven from plants; they have no other weapons than darts for hurling, and bows and arrows; they enjoy all kinds of foodstuffs; they use a number of Portuguese words; and in the largest village the sailors saw a considerable quantity of bronze artillery bearing the Royal Arms of Lusitania. The corsairs were astonished at this state of things: they returned to the flagship provided with their necessary requirements and continued their voyage to the port of Malaca in the year 1606.

These Portuguese are descended from Francisco de Albuquerque and Pedro Varda Veiga and other Portuguese belonging to the two ships which disappeared far ahead off the Cape of Good Hope in the year 1503.

As it was suspected that they had reached the coast in that region, King Dom Manuel ordered the captains to have a search made through the instrumentality of Cy de Barbosa and Pedro Coresma in two ships: they could not find any trace of these people along the coast of the Cape of Good Hope, or along the coast of St. Lourenço: this was in the year 1506.

On board the ship "S. Paulo" which reached the coast of Samatra, were found some notes made by the Pilot, stating that that country was a great Island like Nova Guinea; and that along its southern coast it had a large bay and trading-ports from which large sailing-ships passed to the country of Lucach; and that the bay was inhabited by a race of white natives and that another race as white as Portuguese lived on the northern Promontory, where stood the Metal Artillery and the Arms of Portugal.

So that this land in the south, the region of Pithacoru, was discovered by Rui de Mello de Sampaio in the year 1560.

On this expedition for the discovery of Meridional India, The King Our Lord Dom Phelippe the Third of Spain despatched Manuel Godinho de Heredia with the title of "Adelantado" and the Habit of Christ, together with the twentieth part of the revenues therefrom, by virtue of his Commission given in the year 1601; and by an Instruction written at Lisbon on the 14th February 1594, the states there were to be taken with a view to their incorporation in the Crown of Portugal, according to the Bulls of Popes Nicolao the Fifth and Sixto the Fourth.

Pope Paulo the Fifth granted a Jubilate and a plenary Indulgence and other favours towards realizing the happy expedition to Meridional India, and the Reverend Father Claudio Aquaviva, General of the Order of the Company of Jesus, conferred upon the "Descobridor" the Insignia of Jesus, together with the emoluments of the said Order.....in accordance with a letter written at Rome in the year 1610.

SUMMARY OF THE LIFE
OF MANUEL GODINHO DE HEREDIA.

Manuel Godinho de Heredia, son of Juan de Heredia Aquaviva, was connected, through Lourenço Fernandez de Heredia, with the noble family of Dom Phelippe de Heredia, Count of Fuentes in Aragon, and, through Juan Francisco Aquaviva, with the noble family of the Duke of Attri, Lord of Teramo; both of whom, being kinsmen, have always displayed their graciousness by offering the escutcheons of their nobility; as is stated in the Duke of Attri's record and in the Count of Fuentes' record, which we mention below.

His mother was Dona Helena Vessiva, daughter of Dom Juan, King of Supa in Macazar, ally of King Dom Juan the Third of Portugal; she was baptized in the hermitage of S. Raphael at Machoquique by the Reverend Father Vicente Viegas, Administrator of Malaca, at the request of the Kings of Macazar acting on the advice of the above-mentioned Juan de Heredia, who then sailed away from the port of Machoquique to Malaca with the companion with whom he had formed an attachment, Dona Helena Vessiva, Mistress of the State of Machoquique; and on her departure the ruling power was assumed by her parents, as is stated in the record of the King of Macazar, Carraem Talot.

This Juan de Heredia Aquaviva, by his lawful wife, Dona Helena Vessiva, was the father of Father Domingos Godines de Heredia, Master of the School belonging to the See of Malaca, of Father Francisco Godinho Aquaviva, Canon of the same See, of Anna Godinha de Heredia, and of Manuel Godinho de Heredia Aquaviva, Discoverer of Meridional India.

This Manuel Godinho de Heredia Aquaviva was born at midnight on Sunday the 16th of July in the Year 1563; as a boy he received his first education at the College of the Company of Jesus at Malaca; at the age of 13 years he went at his own expense from Malaca to the Court of Goa where he was received into the seminary by order of the Visitor Goncalo Alvares, Professor; at this university he studied grammar, arts, philosophical and other sciences, and mathematics.

After completing his studies, in which he displayed great aptitude, he was received into the order of the Company of Jesus by the Father Visitor Alexandro Valignano in the Year 1579; there he showed his ability, and he was teacher of mathematics for many years.

But as he displayed a natural inclination for making discoveries, his Superiors wished that his talents might be utilized in the service of the State for the benefit of Christianity, so they bade him farewell for good in the Year 1580.

Being now a layman he devoted himself to the service of cosmography, with the title of "Cosmographer Major" of the State; he drew up some very excellent maps of the oriental Indias and of Asia, replacing the old drawings in the world-maps and atlases by

new chorographic representations of Catthay and Meridional India; all these maps he submitted to the King Our Lord Dom Phelippe the Third of Spain; in consequence whereof he was instructed to effect the Discovery of Meridional India, with the title of "Adelantado," with the Habit of Christ and with a twentieth of the revenues from those states if he could obtain possession of them and incorporate them in the Crown of Portugal.

By an Instruction written at Lisbon on the 14th of February 1594, and by a Commission dated 1601 issued by virtue of that Instruction, the said Manuel Godinho de Heredia was despatched on this undertaking by the Viceroy Dom Francisco do Gama, Count, Admiral; and the Viceroy Aires de Saldanha granted him many favours on his passage to Malaca, where he arrived in the year 1601.

When he was prepared to commence his voyage of discovery, he was informed by the General of the South, André Furtado de Mendoca that the southern channels were held by corsairs belonging to the fleet of Jacob Usquerque who had seized the ship from China which was on its way to Holland. And it was necessary to detain the "Descobridor" at the fortress of Malaca to assist in defending it against the guerilla assaults of the Malaios. In conjunction with his military duties he prospected for minerals, and on the order of the Viceroy Aires de Saldanha and on the instruction of André Furtado de Mendoca, General of the South, he founded the fortress of Muar at the mouth of the Muar River, to act as a trade factory and for the defence of the Malaca district. He also founded other fortresses in the straits and in other places which need not be specifically mentioned. He also made dispositions to prevent assistance in the form of men or provisions from entering the river-mouths in the Malaio territory of Jor.

Further, in his capacity of "Descobridor" he prepared maps of the straits, having at his disposal the whole southern fleet of rowing-boats, namely 12 galliots and 60 'bargantis' or 'bantis'. With this fleet, too, he continued the performance of his naval duties; he destroyed the relief ships belonging to the pirates and other ships which set out with people from Aracan in Samatra to succour the Malaios; he sank many provision ships and made sallies by land to attack the Malaios; he fired their villages and palmgroves or 'ducoes' (which resemble orchards and fruit-gardens), and caused great damage by his attacks. Furthermore, at his own expense he accompanied the General, Andre Furtado de Mendoca, at the conquest of the fortress of Jor, and assisted in every possible manner in the fortification and defence of Malaca, until illness supervened. Even when indisposed, he did not abstain from continuing his geological duties at his own expense; he explored the whole country within the territory of Malaca between the Rivers Muar and Panagin, and discovered the mines of gold, silver, 'calem' and all kinds of metals, minerals and precious stones, besides new pearl-fisheries, and mercury, alum, saltpetre, and other riches; of these discoveries authentic records exist,

Being attacked by illness and receiving in that country little help towards getting information about Luca Antara and no good news about the expedition thither, he embarked for the Court of Goa, in order to return with the Viceroy Dom Martimao de Castro; later, he wanted to travel in the Viceroy's company to Malaca, but could not do so, on account of his being very ill and crippled with "*berebere*"; however, at Cochim he was given his letter to the Governor Dom Francisco Aleixo de Menezes and provided with a relief galliot for the spring, when news arrived of the death at Malaca of the Viceroy Dom Martinao, who was succeeded by the Governor of the State; so in spite of his earnest endeavours the position of affairs became worse and worse.

He wrote to the King our Lord, communicating the good news about Luca Antara or Java the greater being explored by Chiay Masiuro, King of Damut.....

The King our Lord wrote from Madrid to the Viceroy Rui Lourenco de Tavora regarding the enterprise in Meridional India, that the "*Descobridor*" Manuel Godinho de Heredia should be granted many honours and privileges, and he ordered the confirmation of the Commissions issued in his name by the Viceroys Dom Francisco de Gama, Count, Admiral, and Ayres de Saldanha, for this felicitous voyage; and he commanded that the matter should be arranged at the Court of Goa in order that this voyage might be undertaken at once, since it involved the incorporation of those states in the Crown of Portugal.

The Pope Paulo the Fifth favoured the undertaking with his approval and the Reverend Father Claudio, General of the Order of the Company of Jesus, bestowed the Insignia of Jesus upon the "*Descobridor*" together with the rewards of the Order, as well as other favours, in order to declare Christianity and to aggrandize the Church of the new World.

By order of the same Viceroy Rui Lourenco de Tavora, the "*Descobridor*" explored the country in the district of Gozarate, and drew up chorographic representations thereof, for right down to the present day we have inadequate knowledge of the details of the region of Gozarate, improperly called Cambaia for Cambaeth, the metropolitan Town of the Bay: he also made plans of Indostan, Turcastan, Astratan, Cathay and the Chinas.

This was during the governorship of the above-named Viceroy; who was succeeded in the State by the Viceroy Dom Jeronimo D'Azavedo; the latter further availed himself of the "*Descobridor's*" services and instructed him to make a note of the Metals and Minerals in the district of Goa.

The "*Descobridor*", in taking the necessary steps for assaying the Metals of this country, discovered the metal copper, "*tambaga*", at the Village of Corlin Cornegan (?) in Goa, and at other Villages in Goan territory; moreover he discovered iron-ores in the neighbouring islands of Diuor and Vanci.....

In Malaca the "Descobridor" had discovered many mines of gold, silver, 'calem', copper, mercury, alum, saltpetre, lead, iron, and other metals besides minerals and precious stones including emeralds, diamonds, topazes and crystals, as well as new fisheries for Seed-pearls and pearls.....all these he offered to the Captain-General Andre Furtado de Mendoca in the year 1603.

He married Dona Vilante de Sampaio, by whom he had a son named Manuel Aquaviva, a handsome, talented and scholarly youth: he was born just before daybreak on the first of December, 1588, and succumbed to a convulsion at the age of 13 years.

He also had a daughter named Dona Anna de Heredia Aquaviva, who was very learned and industrious, and acquired a knowledge of the mathematical sciences: she was born at eight o'clock on the morning of Thursday, the 17th of April in the year 1587.

The said Dona Anna de Heredia Aquaviva at the age of 16 years entered the estate of matrimony, taking as her husband Alvaro Pinto Coutinho, son of Joaó Pinto Coutinho, cousin of Vasio Fernandes Coutinho of the family of Marshal Dom Fernando Coutinho.

After her marriage she went with her husband to India.

There by virtue of the Commission of 1601 the "Descobridor" arranged that in case his death occurred during the above-mentioned expedition to Meridional India, Dona Anna Heredia Aquaviva should be sole heiress of all his property.

The said Dona Anna de Heredia bore her husband a daughter named Dona Mariana Aquaviva, who was born on the 8th of June in the year 1607, and possessed great expectations of honours and favours owing to the services of her grandfather, the "Descobridor".

She had the good fortune to be very beautiful and at the same time very clever and able; she was so industrious, too, that at an early age she understood the elements of mathematical geometry.

On account of his devoutness and his demeanour and his zeal the said Manuel Godinho de Heredia was admitted by the Most Illustrious Alexander Farnes, Bishop of Oporto, Cardinal and Vice-Chancellor of the Church of Rome, Protector of the Arch-Company of the Most Holy Sacred Conception, established in the Roman Church of St. Lourenco at Damao, into the Confraternity of the Arch-Company, as appears from its records and documents; so that he enjoyed the privileges of the Arch-Company..... mentioned in the Apostolic Bull of the year 1589.

And at the same time, in the year 1589, the said "Descobridor" was admitted by the Superintendent of the Misericordia, Fernão da Foncequa, Knight of the Habit of Christ, into this Society and Confraternity for the service of God; and he fervently performed all manner of merciful and charitable works, always assisting in the burial of the Christians, even when they occurred during the winter storms, with great zeal and devotion.

5. MAPPEMONDE.

In the Summary of his life (p. 265 *supra*) Eredia relates how he re-drew the maps of various Asiatic countries, and submitted his maps to King Philip.

All his maps appear to have been consigned to oblivion except perhaps in one instance.

In 1848 the British Museum acquired from Senor de Michele-na y Roxas a manuscript Mappemonde which came from Madrid: it now bears the number Add. 17,647A.

Lithographic reproductions of a part of this map will be found in ARCHAEOLOGIA, Volume XXXVIII, (1860), in Major's *Early Voyages to Australia* (*Hakluyt Society*; 1859), and in Jannsen's book.

The most significant feature of this map is a large area of land which from its junction with the south-eastern portion of NOVA GUINEA runs south-west, west, and north-west till it reaches a point not far south of *Java mayor*; from this point it runs roughly south-west: no southern boundary of this land is indicated.

At the most northerly point, south of *Java mayor*, there is a legend "*Nuca antara foi descuberta o ano 1601 por mano el godinho de Evedia por mandado de Vico Rey Aives de Saldaha*"; "*Nuca Antara* was discovered in the year 1601 by Manoel Godinho de Eredia, by command of the Viceroy Ayres de Saldanha".

Beneath this, about half way down the western coast, there is another legend "*Terra descuberta pelos Holandeses a que chamaraõ, Enduacht, au cõcordia*"; "*Land discovered by the Dutch, which they called Endracht or Concord*".

The map is described by Major in ARCHAEOLOGIA, Volume XXXVIII (1860), pp. 439-459: an extract of the description is printed as a supplement to the *Early Voyages to Australia*.

Major there expressed the opinion that this map was a copy made at the beginning of the nineteenth or close of the eighteenth century by a person who was ignorant of the Portuguese language, as was evidenced by the errors of orthography. Major thought that the original was probably made by Eredia himself, and suggested the date 1620, after the discovery of Eendragt's Land by the Dutch in 1616 but before the discovery of the south coast by Pieter Nuyts in 1627.

Possibly the date should be placed somewhat earlier, for other parts of the western coast were discovered by the "*Zeewulf*" in 1618, and by Houtman in 1619.

Later Major changed his views: after forming the conclusion that Eredia's account of '*Luca Antara*' was a deliberate fabrication he suggested that the present mappemonde was drawn by some person in Europe, and that the legend regarding '*Nuca antara*' was inserted on the strength of the map included by Eredia in the DESCRIPTION of MALACA, cf. p. 216 *supra*. (ARCHAEOLOGIA. Volume XLIV. (1873). p. 257).

Major gives no reason for thinking that the original *mappe-monde* was not drawn by Eredia: but one may note

- (i) that the shape of the southern land is different in the two maps;
- (ii) that in the map sent with the DESCRIPTION OF MALACA, New Guinea is not joined to the southern land;
- (iii) that in the DESCRIPTION OF MALACA, Eredia uses the word LUCA a great number of times and with reference to at least 7 different places; he never writes NUCA.

APPENDIX III.

TRANSLATIONS FROM JANSSEN'S MALACA, L' INDE MERIDIONALE ET LE CATHAY.

- 1. Janssen's Foreword.
- 2. Ruelens' Preface.
- 3. Note on the Manuscript at Brussels.

1. Janssen's Foreword.

The physical history of the globe is one of the subjects which are engaging the most active attention of contemporary science. On the one hand, men are scrutinizing the bowels of our planet with burning curiosity in an endeavour to elucidate the mystery of its origin; on the other hand, they have made and never cease from making superhuman efforts to obtain a thorough knowledge of our earth's surface.

The men who have discovered those vast continents styled new worlds, have been classed among the great benefactors of humanity; the navigators who have explored unknown countries at the cost of sacrificing themselves and enduring great hardships, sometimes at the risk of their lives, who have established intercourse between peoples who had previously had no reciprocal relations; those who have left accounts of their voyages or who have advanced our knowledge by their learned works; all these men, in different degrees no doubt, see their names to-day surrounded by a halo of glory. We eagerly follow up each slightest trace of their explorations and of their labours; we wish to know all the details of their fruitful lives: the most inaccurate map, the most artless or most summary description, references apparently of the very least importance, all these proofs of their activities are reverently collected, constituting materials for geographical studies and provoking controversies and researches which are in themselves often productive of unexpected or novel results.

Such was the idea which inspired our wish to publish this work of Godinho de Eredia, a work of which certain extracts and summaries, inadequate enough, have already been submitted at discussions of geographers.

It seemed to us that it would be useful if we added to the documents already at the disposal of students, this work by a personage who is interesting in several respects.

For Godinho de Eredia was born and lived in the Far East; instructed in the studies cultivated in Europe at that period, he endeavoured to utilize his knowledge for the elucidation of various questions of ancient geography, some of which are still in dispute at the present day; he has left reports on his operations as an official explorer, he has constructed maps of countries which he traversed; in fact, he has preserved from oblivion things and facts among which science will perhaps find something worth extracting.

As a result of all these considerations we have been induced to bring forward into the light of day a work which is as curious in matter as in form; in reproducing the manuscript of Godinho de Eredia we have sought to preserve the appearance of the original; the maps, the illustrations, and a few specimen pages of the autograph manuscript have been executed in fac-simile.

We have taken the opportunity to reproduce two other documents relating to Godinho de Eredia; one of them is a map mentioning the name of the *descobridor* and found among the collections in the British Museum by the late Mr. Major, conservator of the cartographical department in that Museum; the other is a letter, signed by Godinho de Eredia, belonging to the archives at Lisbon.

We thought we ought to publish the fac-simile of these documents simultaneously with the reproduction of the manuscript belonging to the Bibliothèque Royale at Brussels.

Finally, our work ends with a French translation of the Portuguese texts.

[Initialled]. L. J.

2. Ruelens' Preface.

On various occasions during the last ten years scholars have directed their attention to the document which here sees the light of day, but they have only been able to utilize summaries all too concise or notices all too inadequate.

The time had come to undertake the publication *in toto* of the work of Manuel Godinho de Eredia and also to provide the materials for a complete understanding of the activities and labours of an interesting personage about whom little is known.

A member of the Belgian Geographical Society, a colleague of mine, whose studies, travels and tastes qualified him to undertake this work, has zealously devoted himself to the task and, we have no hesitation in saying, has surmounted very real and very numerous difficulties.

The document is now in existence, it is submitted for scientific discussion.

At the Geographical Congress at Antwerp, we revealed the existence of the original manuscript of Godinho's book; M. Léon Janssen has relied on that fact to call upon us for the preface to this printed edition.

The offer was too flattering for us to refuse the performance of this task, despite our too feeble authority. So in this introduction we shall state as briefly as we possibly can, what we know about the author of the DECLARACAM and wherein lies, in our opinion, the importance of this document.

At the western extremity of Europe, there stands out, like a sentinel on the border of the vast Ocean; a small kingdom which, though it forms only a speck on the map, yet has conquered and dominated more vast territories than were ever controlled by the conquering monarchies of old.

This Kingdom is Portugal.

Energetic, intelligent, familiar with the perils of the sea, the Portuguese people seem to have had an aptitude for discoveries and enterprises in the most distant parts.

They did not have the glory of arriving first in the New World, but nobody can dispute the crowning honour of their geographical conquests in Asia and in Africa.

Henry the Navigator, Vasco de Gama, Barthelemi de Dias, Magellan, Pedro Alvarez Cabral, are names which find their place amongst the most illustrious.

At a certain period, thanks to the labours and the bravery of these men and their successors, Portugal was a centre of wealth and power; from her ports sailed innumerable ships which went forth to conquer populous and powerful countries, at enormous distances from their mother land.

When speaking of their exploits in the Indies, Raynal cannot refrain from exclaiming: "What men must these Portuguese have then been, and what extraordinary factors made them a nation of heroes?"

Almost the very whole of Africa, the continents and the archipelagoes of the equatorial ocean, all the lands, in short, which might exist beyond the famous demarcation line drawn by Pope Alexander the Sixth (which divided the globe into two parts, the one allocated to Portugal and the other to Spain), all these lands in turn became subject to Portugal. To detail them would be a long task.

At the end of the Sixteenth century, there was in Africa and in the adjacent seas, Tangier, Ceuta, Arzilla, Madeira, the Azores, the Cape Verde Islands, Guinea, the Island of St. Thomas, the Congo and Angola, St. Helena, and, beyond the Cape of Good Hope, the country of Zofala and Mozambique.

In Asia, in the Indies, they had forts and factories ranged on every coast from the Persian Gulf to Malabar, with one great city, Goa, which stood for the capital of their Asiatic possessions.

Beyond that, they had Ceylon, the Coromandel coast, the Malay Peninsula, with one flourishing town, and, lastly, the Moluccas.

In America, in spite of the demarcation line, they conquered Brazil.

In 1580, Portugal had the misfortune to see the extinction of its national dynasty; King Henry by his will left his kingdom to Philip the Second, King of Spain, who, nevertheless, was compelled to conquer his inheritance.

For this purpose, he despatched an army commanded by the same Duke of Alba who had performed a similar office in the Netherlands, and Portugal was annexed to the Crown of Spain.

Three quarters of the world were then united under the sceptre of Philip the Second.

This annexation was a misfortune for Portugal, who would derive no advantage from the overseas conquests carried out by the Spaniards, but had to suffer from the implacable hatred which Spain and her King incurred, by way of revenge, at the hands of numerous nations throughout Europe.

The Republic of the United Provinces had just been formed.

This, like Portugal, was a small country of little importance considered as territory, but it was washed by the sea and peopled by a vigorous race who sought in commercial expansion the wealth which was denied by their own land, held down and ever trampled under foot by armed forces.

The Dutch vented all the violence of their hatred on the vast possessions of the King of Spain, and it was immediately under the blows which they inflicted that the redoubtable European colossus soon began to stagger.

The possessions of the Crown of Portugal were the first victims of the bold Dutch expeditions, first, because of their proximity to the factories and the lands which the Dutch already held, and secondly, because they were better known in the Netherlands.

In 1579, the very year of the Union of Utrecht, a Harlem youth, Hugo de Linschoten, sailed from the Texel; he betook himself to Spain and thence to Portugal which had just been conquered.

He stayed at Lisbon to study its commerce, and there, in 1881, he witnessed the triumphal entry of Philip the Second and the obsequies of the Duke of Alba.

A short time afterwards, Linschoten obtained permission to join an expedition which was preparing to conduct Vincent de Fonseca to the Indies on his appointment as Archbishop of that territory, and he left Lisbon with the fleet, composed of five vessels, on the 8th of April, 1583.

During the course of 13 years, he travelled in the service of Portugal throughout all the Lusitanian possessions in the Far East, and all the lands with which the mother-country had commercial relations.

During his journeys, he carefully noted every detail worthy of interest, and made sketches of views, scenes, costumes and plants; and on his return he wrote an account which may be regarded as the most complete geographical description of the Indies and the Archipelagoes, which men then possessed.

1930] *Royal Asiatic Society*.

Magnificently edited, the work of Linschoten ⁽¹⁾ appeared first in Dutch in 1595—1596, then in Latin, French, German, and English, and enjoyed a great number of editions. It became a classic; one might describe it as the guide which directed the expeditions launched by the Netherlands over a long period and with great success against the Spanish and Lusitanian colonies.

Six years later, there was established, with a capital of six and a half million florins, the Association organized by six towns, which under the name of 'Company of the Oriental Indies' wrested from rival powers the sceptre of colonial dominion in the inter-tropical seas.

However, the beautiful countries of the Orient did not immediately change their masters nor did the sea-faring nations in all their expeditions immediately abandon every other object except to wrest away each others' conquests.

The progress of geography, and the labours of the cartographers, particularly Ortelius and Mercator, represented on the world-maps immense void spaces, where unknown continents might perhaps be found.

At the end of the sixteenth century these voids were already filled up to a considerable extent, no doubt, but among the lands which were drawn, there were some which were merely imaginary countries; moreover, almost all the plans finish off the southern parts of the globe with the contours of a continent which in itself is almost as vast as all the other continents put together.

A number of discoveries had then still to be made: moreover, there was another attraction to stimulate the boldness of navigators, the hope of finding the LAND OF GOLD, the dream of several centuries.

Whatever may have been the motives which directed the expeditions in the Far East, it cannot be doubted that at the beginning of the seventeenth century the Dutch and the Portuguese were the only peoples of Europe whose vessels one sees ploughing the island-studded seas which lie between the Indian Ocean and the Equatorial Ocean.

The English did not arrive till afterwards; availing themselves of the embittered strife which had been created between the two rival nations since Heemskerk's expedition against Bantam in 1601, they in their turn soon acquired possessions, and at the same time extended geographical knowledge.

It is at this period, during the first years of the seventeenth century, at the beginning of the struggles between the two peoples, that reference is made to the discovery of a land which has since become the fifth part of the world.

By whom was this discovery made?

The same thing has happened in the case of Australia as in the case of America, it was slightly known the whole time and by

(1) *Itinerario, Voyage ofte Shipvaert van Jan Huygen van Linschoten, etc. Amstelredam, 1596, in f°.*

the whole world before it was really discovered. The experts have been at great pains to find traces of knowledge of this land in the accounts of voyages from the time of Marco Polo, or in vague indications in certain maps.

These views have been published and discussed by Messrs. R. H. Major, C. E. Meinicke, W. Howitt, J. E. Tenison Woods, A. Petermann, Colonel Yule and others. The question has been illuminated by conscientious studies, and important points in the history of cartography have been established.

The result of the whole discussion is that the first idea of the great land, since called New Holland, was due to the voyage of a small Dutch vessel, HET DUYFKEN (the Dove). ⁽¹⁾

This voyage has been traced several times since Alexander Dalrymple first mentioned it. M. de Jonge in his splendid work on the development of the Dutch Empire in the Indies, has embellished the account with fresh details and with meticulous exactness.

We will now analyze this geographical episode, on which the Dutch found their claims to the honour of being the first to reach the land of Australia. ⁽²⁾

On the 18th December, 1603, there sailed from the Netherlands the first expedition which the Company General of the Indies, then recently established, despatched to the Far East. It consisted of 13 vessels, carrying 1180 men, under the command of Admiral Steven van der Hagen. One of the vessels was the yacht Het Duyfken. According to the instructions, it was especially intended to remain for some years in the Indies and to maintain communications between the various factories there.

In September 1605, it was in the neighbourhood of Bantam. One finds several references to its cruises in a document published by Alexander Dalrymple, an instruction given by the Governor-General of the Indies, Ant. van Diemen, to the Commander Abel Jansz Tasman and to the pilot Frans Jacobz Visscher.

This document bears the date 29th January, 1644. Here is the translation, according to the text published by M. de Jonge.

"To enhance, extend, and improve the operations and the trade of the Dutch Company of the Oriental Indies, successive Boards of Directors have issued express orders, on various occasions, for the reconnaissance of the great country of New Guinea, and the search for other unknown countries in the East and in the South.

(1) She was a yacht of 60 tons which served as despatch-boat in the expeditions in which she took part. She had a glorious destiny. In 1594, she left the Texel with three other vessels on the first Dutch campaign against the possessions of Portugal. In 1603, she formed part of the fleet commanded by Steven van der Hagen; in 1616, she assisted in the discovery of Lemaire's Strait. One can see a representation of this vessel in the frontispiece to the account of the first of these voyages; *Journael van de Reyse der Hollandtsehe Schepen, etc. Middelburg, Langenes, 1598.*

(2) J.-K.-J. de Jonge. *Opkomst van het Nederlandsch gezag in Oost-Indie. 'S Hage, 1862—78. T. I—IX.*

The conversations which we have had, and the communications which have been addressed to you regarding the accounts, maps and other documents, have informed you, *inter alia*, that four voyages directed to this end have already taken place, meeting with moderate success: the first was in 1606, by order of Jean Willemz Verschoor, who was then in charge of the Company's affairs at Bantam. This voyage was accomplished by the yacht " 't Duyfken ", which, on the way, visited the islands of Key and Arouw, and discovered and reconnoitred only the southern coasts of New Guinea for a distance of 220 miles from 5 to 13 degrees South. She found that while this vast country was for the most part deserted, certain places were inhabited by savage and cruel blacks, who murdered several of the sailors, with the result that they could not give an account of the real condition of the country, or its productions and resources.

Lack of provisions and other necessities compelled the vessel to abandon the discovery and to return. The furthest point then discovered was in $13\frac{3}{4}$ degrees South, and on the map of the expedition it is indicated by the name of Cape KEER-WEER (Cape Return) ".

" If one compares this reference in 1644 " says M. de Jonge " with what the English captain John Saris wrote in 1605 and 1606, it appears that the two pieces of evidence are mutually confirmatory ".

" On the 18th November, 1605, there sailed from Bantam a small Dutch pinnace to effect discoveries in the island called New Guinea, and, so it is said, she has brought back a large quantity of gold from there ".

At the date of 15th June in the following year, 1606, the Journal of Saris says once more, " There has arrived here at Bantam Nockhoda Tingall, a resident of Banda, on a Javanese junk, laden with mace and nutmeg, which he sells here to the people from Guzerate. . . . he informs me of the return to Banda of the Dutch pinnace which set out on a voyage of discovery in New Guinea.

She made this Island and sent some men ashore to enter into relations with the natives, but the savages, who are cannibals, killed nine of them; and this compelled the vessel to return, under the impression that nothing useful could be done in these parts."

" So to my mind it is clear beyond all doubt " says M. de Jonge " that the DUYFKEN left Bantam on the 18th November, 1605, on Verschoor's orders, for New Guinea; on the way, she visited the islands of Key and Arouw, towards the beginning of 1606; she sailed along the South-West coast of New Guinea, as far as the river Oetanata in 5° , and then proceeding along Torres Strait, she arrived along the western coast of Australia, where she found the land in $13^{\circ} 45'$, at a point which has ever since been marked on the maps of the Company of the Indies by the name of Cape KEER-WEER.

It is probable that the DUYFKEN, on leaving Cape Frederick Henry and sailing towards the South, took a course too much to the Westward to have noticed Torres Strait. Had it been otherwise the error would not have persisted so long that New Guinea and New Holland together formed only a single huge continent, an error which lingered until the time of James Cook, although the Spaniard Luis Vaez de Torres had already found a passage between the two islands in 1606.

Eventually the commander of the yacht DUYFKEN, owing to lack of supplies, abandoned his discoveries and returned to Banda".

We accept the account which is given by MM. Major and de Jonge, and we find clear proof that there can be no question here of any discovery of Australia.

The vessel, after having passed the islands of Key and Arouw off the coast of New Guinea in 5° , proceeded along the coast from 5° to $13\frac{3}{4}^{\circ}$ South for a distance of 220 miles; this is an impossibility.

This coast does not extend beyond $10^{\circ} 20'$, and in order to arrive at this extreme point, it is necessary to pass through Torres Strait.

Then, according to the account, the furthest point which was reached was at $13^{\circ} 45'$, at the new place since called KEER-WEER.

This cape, therefore, ought to be situated on Australian territory.

But, if one consults all the maps from those of F. de Wit, belonging to the end of the Seventeenth century, to the magnificent map annexed to the prize dissertation on the discoveries of the Dutch, by MM. Bennet and Van Wyk (1825), they all mark cape KEER-WEER on the western coast of New Guinea, in the same latitude as Frederick Henry island and further north than the VALSCHE KAAP which according to MM. Bennet and Van Wyk is situated at $8^{\circ} 15'$ latitude by 138° longitude⁽¹⁾.

Lastly, one further consideration: the "Duyfken", a small vessel of 60 tons, so we are told in the original account of Admiral Steven van der Hagen's voyage, after having left KEER-WEER, which lies in 5° latitude and 129° longitude, being in want of supplies and provisions, returned to Banda.

But if KEER-WEER was situated at $13^{\circ} 45'$, how would it have been possible, in circumstances of distress, to make a voyage of nearly 10 degrees? It seems to us, then, that there is an evident error, twice repeated⁽²⁾, in the designation of the latitude $13^{\circ} 45'$.

It plainly conflicts with the other latitudes given in the instructions and with those in the maps. The DUYFKEN did not pass beyond New Guinea in $8^{\circ} 15'$, and did not reach, by a long way, the strait which Torres had discovered during the month of August in the same year 1606.

(1) *Verhandeling over de Nederlandsche ontdekkingen in Amerika, Australie, enz. door R. G. Bennet en J. Van Wyk, Utrecht, 1827, in-8°.*

(2) M. Major, we know not on what authority, extends it to $19\frac{3}{4}^{\circ}$.

It was Flinders, who, in trying to trace the route which the DUYFKEN should have followed, first introduced confusion into peoples' ideas.

Relying on the document published by Dalrymple as though it were a unique piece of evidence he summarizes it in these terms:—"On the 18th November 1605 the DUYFKEN was despatched from Bantam, on a voyage of discovery in the direction of the New Guinea group, and, so it is believed, coasted the western side of this island as far as $130^{\circ} 45'$ of South latitude. The extreme point to the Eastward reached by the vessel, was called cape KEER-WEER⁽¹⁾.

The route of the DUYFKEN, on leaving New Guinea, ran Southward along the islands in Torres Strait, as far as that part of Australian territory which extends a little to the South and West of Cape York.

It was thought that all these lands were part of New Guinea and formed its western coast. The commander of the DUYFKEN, without knowing it, also made the first authentic discovery of a part of the great Southern land; this was about the month of March 1606, for he seems to have returned to Banda at the beginning of June".

What means the reference in this passage to $130^{\circ} 45'$ South "latitude"; prima facie, there is evidently a mistake here; surely it is necessary to read "longitude", and if the figure is correct, it approximately determines the position of the "extreme point" called KEER-WEER. But in that case, it negatives the supposition that the DUYFKEN passed further south and reached Cape York without noticing the strait; a supposition which it is difficult enough to admit.

The result of all this, it seems to us, is that the DUYFKEN scarcely went beyond the point which we have designated, the point situated on New Guinea, whose position is stated by Flinders.

Moreover, of the several Dutch writers who have studied with such toil and such patriotic feeling the voyages and the discoveries of their compatriots, not one, before the time of Dalrymple and Flinders, mentions the expedition of the DUYFKEN, and in the very accounts in which this ship finds a place, not a single word is said about her discoveries in the Southern land.

Fresh details have been brought to light concerning this point of geography by a map belonging to the British Museum, by the manuscript at Brussels, here published, and by a manuscript at Paris, three documents which bear the name of a Portuguese who has remained almost unknown till the present day.

(1) Not having the original edition at hand, we avail ourselves of the German translation: "Reise nach der Austral Lande. von M. Flinders, aus d. engl. v. Ferd. Goetze. Weimar. 1816".

It rests with us to explain the position of the question and of the discussions which have been raised both about the man and about the documents emanating from him.

Manoel Godinho de Eredia is a new figure in the history of geography, a curious and interesting figure; though, we hasten to add, he can lay no claim to any particularly brilliant halo.

During two centuries his name was forgotten without being entirely unknown.

Barbosa Machado, in his 'Lusitanian Library' mentions him with the qualification of "Distinguished mathematician", and refers to his manuscript "History of the Martyrdom of Luiz Montiero Continho", dated at Goa in 1615. In 1807 his "Treatise on the Golden Chersonese" was published.

But it was in 1861 that attention was seriously directed towards him.

The learned author of the "Life of Prince Henry the Navigator", M. Richard Henry Major, in an article which takes the form of a letter to Sir Henry Ellis (ARCHAEOLOGIA⁽¹⁾ t. XXXVIII) represents him as a claimant, till then unknown, to the honour of having discovered the vast territory later named New-Holland. He relied on the evidence of a map reproduced in this volume stating in so many words that the discovery of this land was made in 1601 by Manoel Godinho de Eredia. This notice, however, did not appear sufficient to Major to establish historical truth and he hoped that fresh documents would come to confirm it.

Some time afterwards we informed him of the existence at Brussels of the manuscript here published; but other work prevented us from immediately giving more careful study to the question. It was only in 1871 at the Geographical Congress at Antwerp that there appeared in the report, t. II p. 513 (1872), our paper entitled "THE DISCOVERY OF AUSTRALIA, an account of the manuscript in the Royal Library at Brussels".

This manuscript is the one here published: it is a compilation in three treatises, written in the author's own hand and addressed from Goa to Philip III the King of Spain, on the 24th November 1613. The first treatise relates to the peninsula of Malacca, the second deals with the discovery of Meridional India: the third is a study in the comparative geography of eastern Asia.

This analysis of Eredia's unknown work attracted attention.

Some time later Major in two articles published in ARCHAEOLÓGIA (t. XLIV, 1873) again took up his study of the earliest documents relating to the Austral lands, and directing himself especially to the statements of Eredia, endeavoured to refute them.

Favourable as he had been at first to the author's claim, in the second of the articles he just as vigorously disparaged both the man and his statements. He treated the man as an impostor. One

(1) The letter is dated in 1861, but the volume of ARCHAEOLÓGIA which includes it bears the date 1860.

cannot feel too astonished at this sudden change. Meanwhile, in his first article Major had endeavoured to direct attention to five French maps or maps of French origin, marking below Java an island called Java la Grande and then a land which could not be, according to him, any other than Australia. These maps, of which the ultimate origin was perhaps Portuguese, go to prove the discovery of the world's fifth continent seventy years before the time of Godinho.

Unfortunately, no text, no account of any voyage, no notice, confirms or clears up the indications in these charts. They contain, then, only hypothetical or legendary allusions.

The epithet of 'impostor' which is applied to Godinho is clearly an exaggeration. The reader will judge for himself.

Godinho contents himself with giving an account of an expedition made by people other than himself, he relates what he has been told: nothing more. If he had wished deliberately to mislead or to lie, it would have been just as easy for him to have ascribed to himself a personal part in the action, to concoct a voyage performed by himself: such a device should present no difficulty to a man accustomed to travelling through the neighbouring archipelagoes. Instead of that he relates, very naively, it must be admitted, a strange account which can but surprise or perplex us at the present day. Yet M. Major himself felt how little justice there was in his allegation, for instead of rejecting the narratives of Godinho, he admits them and seeks to explain them. The writer, according to him, was mistaken on only one point: the application of the discoveries to the land of Australia. The expedition despatched by Godinho did not touch New Holland: what it discovered was the island of Madura.

Here one may ask if the explanation is serious. In fact this island, which figures on all the maps of that time, which one can see from Sourabaya (a locality which he names), a mile away from the coast, this island was as well known as Java itself, and Godinho was no more ignorant of it than anyone else. It is traced on one of his maps, folio 28.

But M. Major had not at that time inspected the manuscript and made himself familiar with all its contents.

A little later, at the Geographical Congress at Paris in 1875, Portugal exhibited the fac-simile of a letter of Godinho which apparently referred to the question of discovery, but which really tells us very little. It is reproduced at the end of the volume.

Meanwhile the discussion continued. Godinho's volume in autograph was exhibited at the Congress at Paris and was examined by several experts. MM. Dornseiffen, Tiele, Leupe and others in the Netherlands devoted articles to it in various reviews.

Finally, in 1878, in a remarkable work published in the Bulletin of the Geographical Society of Paris (Seventh series, tome XV p. 513), Dr. E. T. Hamy describes and analyzes an important manuscript by Godinho, discovered at the National Library at Paris by M. Léon de Cassaç,

It is a treatise, sent to the King, like the present work, from Goa, but at a later date, 1st December, 1616; it contains dissertations on Ophir, the voyages of King Solomon, Tartary etc., and ends with a "Summary of my Life", a very curious autobiography.

The author tells us that he was born at Malaca on the 16th July 1563, son of Juan de Heredia Aquaviva and Dona Helena Vessiva daughter of Don Juan, King of Supa in Macassar and lord of the State of Machoquique. In our manuscript he also recounts his origin and adds romantic details concerning the circumstances attending the marriage of his father, a Portuguese, with his mother, of native blood.

At 13 years of age he was sent to the College of the Jesuits, at Goa. In 1579, he entered the Company; but at the end of a year his passion for geography made him quit the religious habit.

Later, he became cosmographer-major of the State; in 1594 he was nominated DESCUBRIDOR, that is to say, as M. Hamy admirably explains, put in charge of the organization of discoveries destined "to add new patrimonies to the Crown of Portugal and to enrich the Portuguese nation".

The title of DESCUBRIDOR which some critics imagined to be a vain-glorious designation flaunted by Godinho, has a meaning analogous to ONTDECKEN in the Dutch commissions.

Moreover, Godinho carried out explorations as difficult as, and at that time, perhaps more venturesome than finding a new continent; he travelled through the interior of the peninsula of Malaca: he drew plans of it and no doubt he also furnished his superior officers with detailed memoranda. What he tells us in his report to the King, justifies us in saying, with M. Hamy, that in Malaca Godinho was really a discoverer.

In his first work presented to the King between 1597 and 1600, INFORMACAO DA AUREA CHERSONESO OU PENINSULA E DAS ILHAS AURIFERAS, CARBUNCULAS E AROMATICAS, published by Antonio Lourenco Caminha in the ORDENACAO DE INDIA DO SENHOR REI DON MANOEL, Lisbon, 1807, Godinho already proposed an expedition to the famous Isle of Gold, the enchanted country of which he had obtained information from the fishermen of Solor; but circumstances, namely, the attacks of the Dutch, prevented him from giving effect to the proposal. With a view to undertaking the defence of the peninsula of Malaca, Godinho constructed forts, made expeditions against the pirates, explored the interior of the country and drew up a list of the gold mines which existed there⁽¹⁾.

Having contracted ailments which rendered him unfit for active service, Godinho retired to Goa, between 1605 and 1607. It was there that he wrote the first account of an expedition to the unknown land of Luca Antara, which might well be Australia. This account is found in the present work, and the analysis of it which we gave

(1) It is published by Caminha after the INFORMACAO.

at the Geographical Congress at Antwerp has evoked discussion on this point in the world's history.

M. Hamy gives us, after the Paris manuscript, some curious complementary details about the expedition. Ten years after the discovery of this country, Godinho despatched a small ship, manned by a dozen men, in order to satisfy himself as to the truth of the account given by the first explorer. Their report, dated the 14th August 1610, confirms the truth of all the facts.

But the country which was seen by these two expeditions, was it Australia? that is to say, some part of New Holland?

The whole interest of this part of Godinho's work is contained in that question and in the reply which is given to it. Let us first re-state the gist of the discoverer's story.

In 1601 while Godinho was at Malaca, a boat manned by men coming from an unknown land was driven by a storm to Balambuan, near the south-eastern extremity of Java. These men, who were of a different race, were well received, and one of the territorial chiefs of Java named Chiaymasuro, king or chief of Damut, resolved to undertake a visit to the country of these shipwrecked men. He embarked with some companions in a rowing-vessel, and, after twelve days reached the coast of a great country called Luca Antara; on his return he related some really extra-ordinary marvels about it.

Nine years afterwards, as we have just stated, Godinho sent to this Luca Antara an emissary who confirmed the discovery.

The basis of Godinho's account, says M. Hamy, is very reasonable. Nevertheless, this learned Geographer, in a very erudite and concise dissertation, tries to prove that the land discovered by the two expeditions made at an interval of nine years was after all merely the Island of Sumba, known also, in the charts, under the name of the isle of Sandal, Sandelhout or Sandalwood, situated to the South of Bima and Flores, and 4 degrees from Java.

We cannot here take our turn to deliver ourselves of a dissertation on this point; but we may be permitted to observe that there was no need for the island of Sandal to be discovered by Godinho; it is shown on the map of the group containing Flores, Solor, and Timor (folio 48 verso) with the note "*Fortaleza do Ende minor*". This island cannot from its situation be any other than Sandalwood although in Godinho's map its dimensions are inadequate. But in any case this map shows that this group was sufficiently well known to our descobridor. It does not appear, it is true, on the map of the inter-tropical archipelago on page 28. We think we can recognize this island again in the map of the French edition of Linschoten, 1610; which in spite of the designation "Amsterdam, Henry Laurent" was really published at Frankfort by the firm of de Bry; one might add, too, that the island will be found to be marked in the map of 1616, which is part of Godinho's manuscript at Paris; this map is reproduced by M. Hamy. We find it difficult to accept the explanations given by M. Hamy as to Godinho's map of Luca

Antara and as to the turning movement to which he has made it submit in order to put it in accord with the modern maps. Moreover we cannot see Sumatra in the Java Minor which Godinho places above the austral continent.

Obsessed by the idea which he shared with all the geographers of that time, to trace the lands visited by Marco Polo, Godinho takes the names of countries mentioned by the Venetian traveller and adapts them, willy-nilly, to the newly-discovered lands.

The identification of Marco Polo's *Java Major* and *Java Minor* has been the subject of numberless discussions. Yule and many others before him have acknowledged that *Java Major* ought to be Sumatra and *Java Minor* the Java of our own day—Godinho's 'Java of Mataron'.

But one knows that this identification is not universally accepted: and the different maps in the *Declaracam* prove that Godinho was very well acquainted with Sumatra and Java, lands in which he had probably lived: and from his explanation it is clear on the evidence as a whole that his identifications relating to a great number of the names of places visited by Marco Polo differ from those of the modern geographers. For ourselves, there is no possibility of mistake; it is really Australia or at the very least the islands which fringe the north of the vast Australian continent, which is the subject of Godinho's maps and descriptions. That these maps are imperfect, that the descriptions are full of inaccuracies, we do not contest.

When one opens the accounts of those who sought for Eldorado in the 16th and 17th centuries, and those too of the voyagers charged with missions of discovery, when one looks at the sketches with which they illustrated their books and tries to sum up their stories of things which are strange, incredible, or at any rate, inaccurate, it becomes clear that Godinho's statements as a whole reduce themselves to a mere trifle: we regard them as the first intimations concerning an important discovery about which certain knowledge was obtained several years later. We have no cause to doubt the actuality of the alleged expeditions which he had attested by officers of standing.

The question, Who first had knowledge of the land of Australia, appears to us to be completely settled. It is highly probable that even during the course of the 16th century, Portuguese ships touched at one or other of its remote coasts; it is probable, too, that in some place where archives are deposited reports or maps will be discovered which throw some new light upon this subject.

"Nothing is more obscure than the Portuguese cartography" said Lelewel (II. 139); "it is only known to us by the copies or later imitations reproduced in Italy and Germany".

In the maps annexed by Godinho to his book one can readily discover more than one detail which he might have obtained from documents of this nature which are not known to us. And, for example, we will draw attention to the map on folio 28, where one

finds the outline of New Guinea drawn with remarkable accuracy. Even then, for Godinho, this great country was an island entirely detached from the whole continent; so he knew the result of the discovery of Torres Strait.

M. Hamy in a paper on the ancient cartography of New Guinea (Bulletin of the Geographical Society of Paris, 1879, Tome XIV p. 449) reproduces a map from the atlas of d'Ablancourt, published in 1700, at Amsterdam: in this map the separation of the two countries has not been effected; it marks, moreover, in the vicinity of 6° , the position of Cape KEER-WEER. The mention of this name has astonished M. Hamy. "One must not," he says "confound this Cape KEER-WEER which habitually figures in the Dutch maps of the 17th century, with that of the DUYFKEN'S voyage (1606). This latter is placed at $13\frac{3}{4}^{\circ}$ in the instructions given to Tasman by the Company of the Indies; but the ancient Dutch geographers never mention it, and besides, no noticeable salient in the coast is to be found at the corresponding latitude. All this ought to raise doubts as to the extent of the voyage made by Willem Jansz on the DUYFKEN and as to the authenticity of the discovery of the Australian continent which is habitually attributed to him". We have ventured to go further than the learned French geographer and we have entirely rejected this discovery.

Godinho's descriptions of the country of Malaca, his multifarious comments about the inhabitants, products, and affairs, as well as his biographical details, namely, those which he has given about himself (dictated by a naive vanity, as we readily admit)—all this is not without interest. Nor are the portraits, with which he illustrates his work, anything but curious. That of Francis Xavier among others, does not resemble any of those which appear among the materials which the Bollandists collected in order to write the life of this saint in the *Acta Sanctorum*. It was this portrait which prompted the gift of Godinho's memoir to the Society of Jesus and to this very day the binding of the volume bears the title "*F. Xaverius M.S. 1613*" and the fly-leaf has the inscription—

"Societati Jesu Bruxellensi. J. B. de Haze, Canonicus
Divae Gudilae donat Francisci Xaverii Indiarum apostoli
gratia, cujus sanctissimi viri imago cenitur, folio 47°,
1730".

We will not draw the attention of science to the geographical essays comparing the Oriental world of Ptolemy, Pliny, Aristotle, Marco Polo and Vartomannus with the world as known in the sixteenth century. That is a work whose value must be estimated according to the criteria of Godinho's day. It is not a little astonishing that it should have been accomplished in such a manner in the Far East, by a man with Indian blood in his veins, who had never been in Europe. It cannot be denied that our *Descobridor* possessed a remarkable degree of knowledge and erudition and that among those of mixed descent he could, up to a certain point, pass for a phoenix.

For all these reasons the *Declaracam* cannot remain buried in the cupboards of a library far from the author's country. Australia itself demands complete and entire knowledge of a document in which it is concerned. This vast continent, in which are arising to-day colonies whose prodigious development is without precedent in the annals of history, this continent can recover in Godinho's book materials for its own history. A decision of the Legislative Assembly of Victoria, dated 14th August, 1878, has sanctioned the publication of documents relating to the discovery of this province and to the first establishments which were founded there.

And in publishing the ship's log-book of the first European ship which arrived at Port Philip in 1802, Mr. John J. Shillinglaw has good reasons for saying, "when the future historians of Australia retrace this marvellous period of less than half a century, during which a coast where they fished for whales and where one saw scarcely more than a few grass huts on the shore of an unnamed river, has been transformed into this noble province of Victoria, they will realize the service rendered by those who possessed the slenderest records of the actual foundation of the Colony".

(*Historical Records of Port Philip: the first annals of the Colony of Victoria*, edited by John J. Shillinglaw. Melbourne, 1879).

It is with such considerations in view that we have conceived the publication of Godinho's work.

"Study" "evidence" "document"—whatever name we may give it, this work dates from the time of the discovery of Australia; it announces, it heralds this event, even if one will not admit that it affirms it; written in the vicinity of the world's fifth part, giving geographical details about the whole archipelago, so rich and so fertile, a golden chain which connects the old world with the Austral land, Godinho's work contains something more than a mere account from which science will profit or derive the subject matter of discussions.

[Signed]. C. RUELENS.

Note

3.

On the Manuscript of Manuel Godinho de Eredia in the Royal
Library at Brussels
by
M. Léon Janssen.

On the 1st March, 1861, the late M. Major, Conservator of the Cartographical Department at the British Museum, informed the Academy of Sciences in London of the discovery, in the collections of the British Museum, of a manuscript chart, apparently copied from an older chart, which indicated the Portuguese Manoel Godinho de Eredia as having discovered Australia.

This copy, spoiled by mistakes as it is, must have been the work of an inexperienced copyist, and M. Major, on the subject of 1930] *Royal Asiatic Society*.

the work, expressed the hope that it would one day be completed by the discovery of other documents concerning Godinho de Eredia, to whom the map in the British Museum attributed the honour of having been the first person to know about Australia.

On the other hand, on the 22nd March, 1875, the Academy of Sciences of the Institute of France, received from His Excellency Monsieur Jose da Silva Mendes Leal, then Ambassador of Portugal at Paris, a copy of a document found towards the end of the year 1874 in the archives of Lisbon.

This document had been reproduced with great accuracy by the efforts of Portuguese experts. It was a letter signed by Manuel Godinho de Eredia in which he asked some unknown person probably one of the Viceroy's of Malaca, that he might be designated to set out on the discovery of "the island of gold".

A document of vastly greater importance was found in the Royal Library at Brussels, where it had remained for a long time unnoticed, doubtless because it formed part of a special collection, and, probably too, because at the back it bore the inscription "F. Xaverii, M. S. 1613", which was not calculated to draw attention to it as a geographical document.

This manuscript, which M. Ruelens, Conservator of the Royal Library of Belgium, has made known, was found amongst the immense material collected by the Bollandists for the relation of the "Acta Sanctorum" and it appears to have been included amongst these documents by the sacred historians because it contains a curious portrait of St. Francis Xavier, with a notice relating to the apostle of the Indies.

In 1732, the manuscript was given to the Society of Jesus by Canon De Haze, as is indicated by this inscription which appears on the first fly leaf

"Societati Jesu Bruxellensi, J. H. de Haze, canonicus
divae Guduliae donat Francisci Xaverii, Indiarum Apostoli
gratia, cujus sanctissimi viri imago cernitur folio 47°
1732".

In 1773, after the suppression of the Order of the Jesuits in Belgium, the manuscript passed into the hands of the State and it figures to-day amongst the most interesting documents in the possession of our Royal Library.

Then, in 1871, while His Excellency Monsieur le Chevalier d'Antas was Minister of Portugal at Brussels, the project of reproducing this manuscript was formed. This project has remained unexecuted till to-day.

Encouraged by His Excellency Monsieur le Comte de Thomar, Minister of Portugal at Brussels, who has been pleased to lend his valuable co-operation and advice in the whole matter of this publication, we have to-day succeeded in finishing the work of reproducing the manuscript of Godinho de Eredia in the possession of the Royal Library at Brussels.

The reproduction of the numerous plans and drawings which are included in the manuscript and the re-publication of his text, have been the object of the most scrupulous care; moreover, the errors in the document have been preserved, in order to obtain an absolutely faithful facsimile. I have thought it my duty to include, with the reproduction of the manuscript at Brussels, a facsimile of the letter which exists in the archives of Lisbon, and a copy of the chart found in London by M. Major.

These are the premises for the claims of Portugal to the discovery of Australia, and for the study of the curious figure of the Descobridor "Manuel Godinho de Eredia".

It follows, indeed, from the manuscript at Brussels, that in 1601, Godinho de Eredia knew of a land which the Dutch ship "Het Duifken" only came across in 1606: and meanwhile the Dutch claim for their ship "Het Duifken" the glory of having discovered Australia.

The documents which we here publish not only serve for the discussion of this question which is so interesting for the history of Portugal and for geographical science: they show us in Godinho de Eredia a learned man and a distinguished cosmographer: furthermore they furnish very complete and most interesting details (hitherto unpublished, we believe) regarding the territories of Malaca at the beginning of the seventeenth century.

BRUSSELS, *July*, 1881.

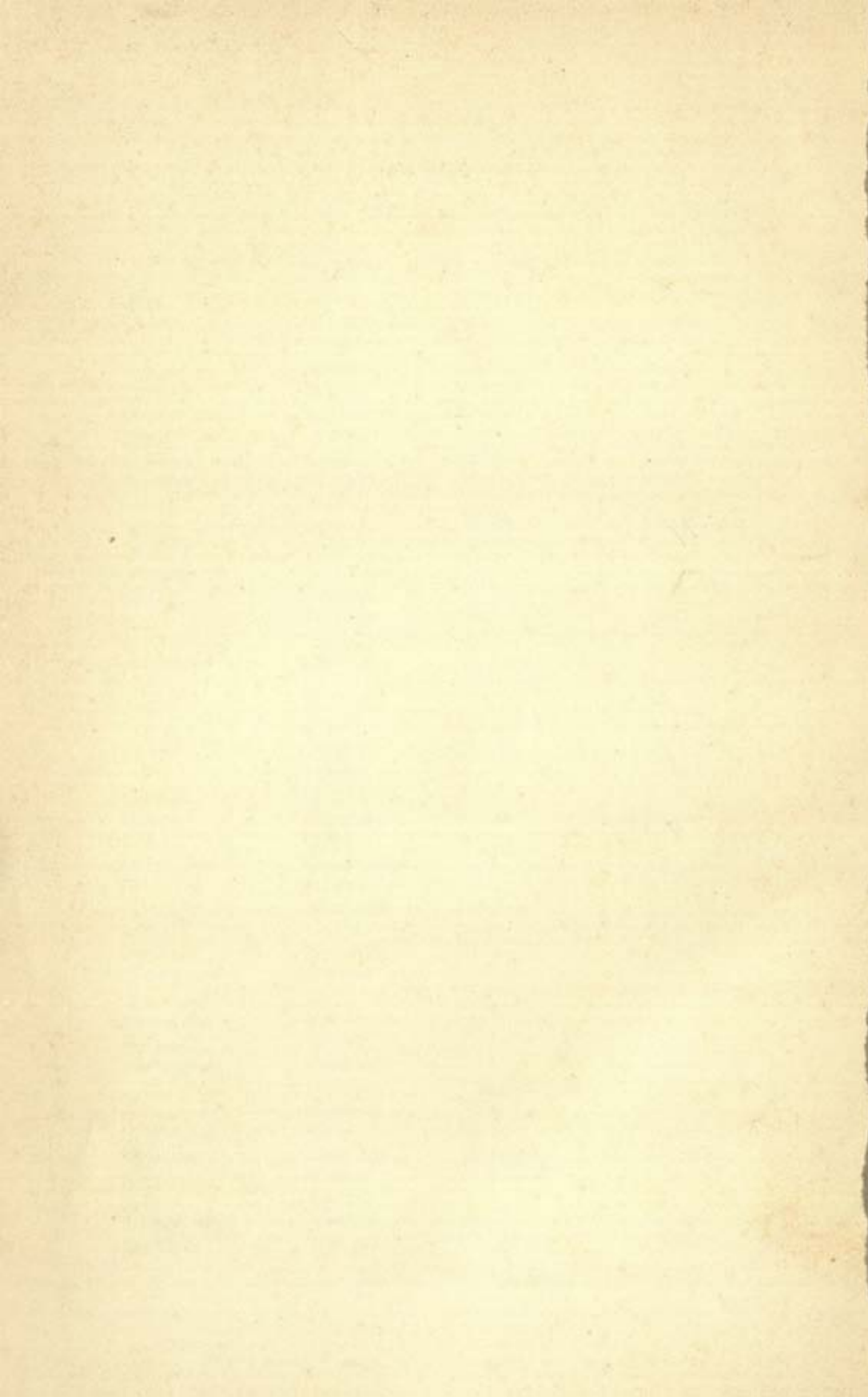
[Signed]. LEON JANSSEN.

NOTE ON THE SPELLING.

As a general rule, Eredia's spelling of proper names has been followed.

In the following cases Eredia's spelling has been varied:—

Alans	for Alanos.	Julius	for Julio
Albert	„ Alberto.	Lisbon	„ Lisboa.
Amazons	„ Amazonas.	Lob	„ Job.
Appian	„ Apiano.	Lucan	„ Lucano.
Augustus	„ Augusto.	Macaçar	„ Malacar.
Aziongaber	„ Ariongaber.	Miletus	„ Milithi.
Banda	„ Danda.	Nile	„ Nylo.
Bede	„ Beda.	Osiris	„ Osyris.
Bencales	„ Beneales.	Ovid	„ Ovidio.
Benco	„ Beneo.	Palestine	„ Palestina.
Borneo	„ Barnes.	Phaedo	„ Phoedo.
Canaries	„ Canarias.	Philippines	„ Philippinas.
Carthage	„ Carthago.	Plato	„ Platao.
Castile	„ Castilla,		„ Plattao.
	„ Castella	Pliny	„ Plinio.
Constantinople	„ Constantinopla.	Pomponius Mela	„ Pomponio
Cornelius Nepos	„ Cornelio		„ Mella.
	Nepote.	Portuguese	„ Portugezes,
Critias	„ Cricias.		„ Portugueses,
Curtius	„ Curtio.		„ Portugueses.
Egypt	„ Aegipto,	Ptolemy	„ Ptholomeo,
	Egipto.		„ Ptholemeo.
Ethiopia	„ Oethiopia.	Rome	„ Roma.
Europe	„ Europa.	Saturn	„ Saturno.
Gaius	„ Gayo.	Scyths	„ Scithas,
Galian Mas	„ Galian Mar.		„ Scytas,
Galen	„ Galeno.		„ Scythas.
Germany	„ Alemanha.	Solomon	„ Salomon.
Goths	„ Godos.	Spain	„ Espanha.
Greece	„ Grecia.	Spaniards	„ Espanhoes.
Greeks	„ Gregos.	Strabo	„ Strabon.
Gymnosophists	„ Gymnosophitas.	Suneputat	„ Nuneputat.
Herodotus	„ Herodoto.	Surubaia	„ Suzubaia.
Holland	„ Olanda.	Tartar	„ Tartaro.
Hollanders	„ Olandeses,	Taurus	„ Tauro.
	Olandezes.	Theophrastus	„ Theophrasto.
Homer	„ Homero.	Timaeus	„ Timeo.
Ilher	„ Ilber.	Turks	„ Turcos.
Israelites	„ Israelitas.	Ujontana	„ Viontana.
Italy	„ Italia.	Venetian	„ Veneto,
Japara	„ Rapara.		„ Venezeano.
Jerome	„ Jeromino.	Venice	„ Veneza.
Josephus	„ Josepho.	Vitruvius	„ Vitruvio.



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of the

Malayan Branch

of the

Royal Asiatic Society

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Sir Thomas Stamford Raffles, F. R. S.

Delegation to Java: Presentation of Sir Stamford Raffles' Bust to the Royal Batavian Society of Arts and Sciences.

The frontispiece of this Journal illustrates a bronze bust of Sir Thomas Stamford Raffles¹ presented to the "Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen" (Royal Batavia Society of Arts and Sciences) by the Malayan Branch of the Royal Asiatic Society on 23rd December, 1929.

The formal presentation was made by a delegation specially sent to Java and consisting of the President (Mr. C. Boden Kloss) accompanied by the Honorary Secretary (Mr. F. N. Chasen). The bust was received by the President of the Batavia Society (Mr. Ch. J. I. M. Welter) in the presence of a very distinguished gathering which His Excellency the Governor-General of Netherlands India graciously attended in person.

A fuller account of this ceremony and other proceedings is given below.

* * * *

The "Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen" was established in 1779 and can thus claim to be the oldest European learned institution in Asia.

It is now enjoying a period of extreme intellectual prosperity and the enviable reputation it enjoys is world-wide.

Its numerous publications are embodied in three series, the Transactions, the Journal and many Monographs. Its manifold activities include the maintenance of a large and well kept Ethnographical Museum at Weltevreden.

The history of the Society in brief is that it came into existence during the decline of the Dutch East India Company. After a moribund period it was refounded by Raffles and under Dutch rule, it has flourished for the last one hundred years.

* * * *

The British occupation of Java covered the period 1811-1816 and for most of the time Raffles was Lieutenant-Governor. It is well known however that Raffles was not entirely occupied by problems of governing and state: in his greatness and versatility he found time not only to engage in the active prosecution of natural history, archaeology and the study of the peoples he governed, but to stimulate and encourage similar tastes in others.

It is therefore only to be expected that Raffles took an active part in the affairs of the learned society he found in existence on

¹ The original of this bust, made by Chantry in 1817 and now the property of the Zoological Society of London of which Raffles was one of the founders, is at present housed in the Society's Zoological Gardens in Regent's Park and thanks are due to the President and Council of the Society for permission to have the copy made.

his arrival in Java. The Society indeed seems to have been moribund but Raffles as President rejuvenated it and the valedictory address presented to him on his departure from the country in 1816 marks the Society's appreciation of his efforts. It was in graceful acquiescence to a request contained in this address that Raffles consented to allow the Society to secure his bust "to be placed in the Hall of our Society, in that vacant niche which was intended to receive the Bust of our late Noble and revered Patron the Earl of Minto; the hopes we entertained on this point, having been, alas! disappointed, by the fatal event which deprived us of his distinguished Patronage and Protection, we turn to you, Honourable Sir, as alone worthy to replace him in our attachment and veneration." The terms of Raffles' accedence to this request were characteristic of the man. He wrote "I fear my Bust will be but a poor substitute for that which was once intended to adorn your hall, but however reluctant I feel to acknowledge myself worthy of this further mark of your flattering attention, I owe you too much respect to deny your request."

The bust was made but it never found its way to Batavia. The situation had altered: Java had been restored to the Dutch with whom Raffles was not popular because of his political views.

* * * *

The scene now changes to 1928 in which year the Royal Batavia Society celebrated its 150th anniversary. Among the delegates of the various learned societies who gathered in Java for the occasion the Malayan Branch of the Royal Asiatic Society was represented.

It was only to be expected that the informal discussions arising from the conference should revive memories of Raffles and of the bust that never reached Java. The immediate result was that the Malayan Branch of the Royal Asiatic Society decided to present a copy of the original bust to the Royal Batavia Society. The project was well received in Java and Mr. Boden Kloss therefore had the bust made in England in 1929 and brought it out with him on his return from leave at the end of that year.

* * * *

The first of the presentation ceremonies took place on the morning of the 23rd December in the cemetery at Tanah Abang, Weltevreden where wreaths were laid on the grave of Raffles' first wife, Olivia Mariamne Raffles.¹

In the name of the Royal Batavia Society of which he is Chairman, Mr. Ch. J. I. M. Welter, Vice-President of the Council of the Indies placed the first wreath on the tomb and afterwards in a short address, which Mr. Boden Kloss acknowledged, referred to the loyal help and devoted support which Raffles had received

¹ The actual grave at Weltevreden which has recently been renovated is often confused with the Cenotaph at Buitenzorg which Raffles erected to the memory of his wife.

from his wife in Java. Wreaths were also laid on the tomb by Mr. Boden Kloss on the behalf of the Malayan Branch of the Royal Asiatic Society, Sir Josiah Crosby, K.B.E., H.B.M. Consul-General, the Royal Empire Society, the British Protestant Community, the British Club and the Raffles Society. The attendance at the grave side also included Prof. Dr. B. Schrieke, Prof. Godee Molsbergen (Custodian of the State Archives) and the Rev. C. T. Cribb (British Chaplain).

The formal presentation of the bust took place before a distinguished gathering at a special meeting of the Royal Batavia Society held on the evening of 23rd December.

His Excellency the Governor-General kindly came down to Weltevreden from Buitenzorg specially to attend the function and there were also present members of the Council of Netherlands India, the Naval Commander-in-Chief, the General Officer Commanding the Troops, the President of the Volkraad, the President of the High Court of Justice, Directors of various Government Departments, the Governor of West Java, members of the Consular Body and other Dutch Members of the Society.

The British Community was also well represented. The President of the Society (Mr. Ch. J. I. M. Welter) opened the proceedings with a short address of welcome to H. E. the Governor-General and the delegates from Singapore.

Mr. Boden Kloss then handed over the bust and said:—

“Your Excellency, Mr. President and Members of the Royal Batavian Society of Arts and Letters.

It was not until I took part in your recent sesquicentenary celebrations as the representative of His Excellency the Governor and High Commissioner of the Straits Settlements and Federated Malay States that we in British Malaya became aware that your Society had long ago planned to obtain for its hall a bust of its one-time President Stamford Raffles: and we do not know to-day why that intention was frustrated. But we are a little glad that it is so for it gives us, whose home is in the town that Raffles founded, a happy opportunity to make good the more than century-old arrangement.

Mr. President, on behalf of the Malayan Branch of the Royal Asiatic Society, I have the pleasure of presenting the Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen with this likeness of Sir Thomas Stamford Raffles. We wish it to be regarded as a token of friendship from one neighbour to another; as a token of the esteem which a comparatively young Society feels for a Society which is the oldest learned body in Asia. And we hope that whenever you look upon this Bust you will remember our sincere desire that your Society may enjoy a longer, more prosperous and—if it be possible—more useful career in the future than in the past.

May all success attend the Royal Batavian Society and may its relations with the Malayan Society ever be as cordial as they are today."

Mr. Welter accepted the gift and in thanking the donors promised that it should always occupy a prominent place in the Museum. In the following very appreciative speech in English he then reviewed Raffles' career and his influence on Java:—

The man whose bust has just been offered so graciously to the Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen in the name of the Malayan Branch of the Royal Asiatic Society by Mr. Boden Kloss was not only its President for many years but undoubtedly one of the most brilliant, if not the most brilliant, of the presidents who occupied the Chair in our Society during its long existence.

By the course of circumstances being at this moment the successor of Raffles in the Presidency of the Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen, I feel it an obligation and at the same time an honour to may add to those that have been so courteously spoken by Mr. Boden Kloss, some words on behalf of our society.

A more competent speaker than I, Prof. Dr. Schrieke, will in the course of the evening give you a more elaborate exposition of the significance of Thomas Stamford Raffles for this Island of Java.

Nevertheless I feel it as unavoidable that I should try to throw a light—how ever feeble—on the life and the work of the man, to whom this evening is dedicated.

I could not do that better than by using as a guide one of his notable biographers, Coupland, from whom I have derived the following description of his character, life and work.

The most striking feature in the character of Raffles was his free and friendly relations with the natives as well as with the European community.

As at Penang and Malacca, so in Java, he made the most of every opportunity of personal intercourse with the people of the country. They were frequently in his house. He talked to them by the roadside and in their villages. When he resided for some months at Samarang, "the native chiefs were constant guests at his table." He carried on a lively correspondence with native princes and some of the Regents on scientific matters.

But it was not only with the human element in Java that Raffles made himself acquainted. He knew the island—its scenery, its mountains and jungles, its temples and monuments—as few have known it. To avoid the warm climate of Batavia he made his headquarters at Buitenzorg and from there he made long journeys, from time to time, through the wild heart of the country. "The rapidity with which he travelled", records one of his companions, "exceeded anything ever known on the

island before. The average rate was more than twelve miles per hour." "Indeed", he adds, with feeling, "several were sufferers from the very long journeys he made, riding sometimes sixty and seventy miles in one day, a fatigue to which very few constitution are equal in an Eastern climate."

But fast and far as he rode, he found time to notice and record everything of interest he saw. "I am collecting for you", he wrote to Marsden in 1812, "a variety of inscriptions found in different parts of Java Drawings of all the ruined temples and images are in hand." Again, a year later: "The "Juliana" takes home a very compact collection of quadrupeds, birds and insects, prepared by Dr. Horsfield for the Oriental Museum at the India House. A large collection of dried plants is also sent."

In 1815, he reports: "I have visited nearly all the remains of sculpture to be found in the island: they are far more extensive than at first I had any idea of Many of the Hindu deities have been found in small brass and copper casts; of these I have a collection containing nearly every deity in the Hindu mythology."

Nor, of course, did he neglect his favourite linguistic studies. In the spare moments of four years administration he made his own vocabulary of the languages of Java, extending to more than seven thousand words.

And all the while he was trying to stimulate in the permanent European community an interest as keen as his own in the natural and cultural history of Java. One of the earliest acts of his administration was his revival of the Batavian Society of Arts and Sciences. "With the celebrated Rademacher", he told Marsden, "the Society seems to have lived and died; at least it has been nearly in a torpid state ever since." So he boldly refashioned its constitution and rules so as to encourage research, gradually conquered the prejudices of some old members who "shut the door against everything new", favoured it with more than one lengthy and learned discourse from the president's chair, and left it one of the most vigorous scientific bodies in the East.

After having given you this outline of Raffles person and work, you will not be astonished, that upon learning that Raffles would resign as lieutenant Governor of Java and its dependencies in the beginning of 1816, the Batavian Society of Arts and Sciences decided to honour its retiring President in a very special way.

On the 22nd of March, 1816 in the evening probably at the same hour as this, a solemn general meeting of the members of the Society was convoked in honour of the departing President.

In the proceedings of the Society of that year, that event was commemorated in these words, which I permit myself to quote here, because, since they are written by a contemporary of Raffles and a fellow-member of the board of Directors of the Society, they contain the most competent testimony about Raffles' tenure of office

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as a President of Society. At the same time they are the most eloquent testimony which I have found about the prominent share which Raffles has taken in the management of the Society's affairs during more than four years.

I beg you to bear in mind that on the 22nd March of 1816 Raffles was no longer Lieutenant-Governor of Java and its Dependencies, that the Dutch Government was due to be restored within a short delay and that for that reason flattery and Bysantinism must have been utterly strange to the passage of the proceedings mentioned before, which runs as follows:—

As though the Society had not already suffered a sufficient loss by the death of its illustrious Patron, the Earl of Minto, whose name will always remain with us in a respectful and grateful memory, still more was felt the blow dealt to us by the departure of our meritorious president and generous restorer of the affairs of our Society, the Honourable Thomas Stamford Raffles. His modesty restrains in these proceedings the full effusion of those warm feelings of grateful attachment which fill the hearts of all the Members. (The Dutch version is much more peculiar and therefore I allow me to quote the Dutch also: 's Mans zedigheid wederhoudt te dezer plaatse de volle ontboezeming dier warme gevoelens van dankbare verkleefdheid waarvan de boezems van alle leden zijn doortrokken.)

But then the proceedings continue as follows:—

“His zeal for the honour and the extension of the Society's interests, his incessant incitement and stimulating example, and especially the affability of his noble character will remain for long time with us in pleasant memory.”

In order to give expression to the feelings of the Society towards its departing president, an address was voted which I think it is necessary to read here before you, as it contains the immediate cause of the gathering of this evening of the Batavia Society of Arts and Sciences, after nearly one hundred and fourteen years.

“Honorable Sir!

On the occasion of your resigning the office which you have so long and so ably filled in the Literary Society of Batavia, the Members of that Society cannot refrain from expressing the sentiments of regret which they feel, both for the causes which led to that resignation, and for the effect which they are apprehensive it may have on their future labours.

From the state of decay into which the Literary Society of Batavia had gradually fallen, owing to a combination of unfortunate circumstances, it was your active exertions and unwearied zeal in the promotion of literature and science that bid it rise once more, that favoured its proceedings, and has enabled it to resume its activity.

We acknowledge this with equal gratitude and pride; sentiments that with us will ever distinguish the period during which you presided over the Society and during which you have recalled it to a new existence.”

"Allow us then, Honorable Sir, to offer you the sincere expressions of our respect, regard and attachment of our anxiety to continue, aided by your correspondence and assistance in Europe, of our warmest wishes for your complete recovery, and our hopes that in the career of active life to which your eminent abilities will hereafter doubtless call you, you may have leisure to devote some part of your time to those Literary and Scientific pursuits in which you are equally well qualified to take a conspicuous and important share.

Anxious to retain among us some durable memorial of the distinguished honor we are now to lose, we solicit your consent to authorize our Agents in London to procure your Bust for us, as soon as possible after your arrival, to be placed in the Hall of our Society, in that vacant niche which was intended to receive the Bust of our late Noble and revered illustrious Patron the Earl of Minto; the hopes we entertained on this point, having been, alas! disappointed, by the fatal event which deprived us of his distinguished Patronage and Protection, we turn to you, Honorable Sir, as alone worthy to replace him in our attachment and veneration."

To this address Raffles answered as follows:—

"Deeply impressed as I have always been with the sense of your kindness, and gratified as I have on all occasions felt, at the flattering marks of your attention and regard, I must confess that I was wholly unprepared for the high compliment which you have now paid me.

To your kindness, rather than to any merit of my own, I must acknowledge myself exclusively indebted, and I hope you will believe me fully sensible of this distinction, which enhances in so great a degree the obligation which I am under to your society.

In my parting address on resigning the chair I have endeavoured to express my sentiments more fully, and I need only assure that to whatever part of the world it may be my destiny to proceed, I shall always be as proud of the honor, as I shall certainly be benefited by the advantage, of corresponding with your Society and of promoting to the utmost of my ability your laudable views and pursuits.

I fear my Bust will be a poor substitute for that which was once intended to adorn your hall, but however reluctant I feel to acknowledge myself worthy of this further mark of your flattering attention, I owe you too much respect to deny your request.

Accept, Gentlemen, the sincerest assurances of my esteem, regard and affection.

Believe me I shall ever retain a grateful and pleasing recollection of your kindness and of the hours of intellectual enjoyment I have passed in your Society.

May every success attend you!"

One hundred and fourteen years have passed before Raffles promise was fulfilled.

Since it is fulfilled, I think it is useless to make inquiries into the reasons for the prolonged postponement and on this evening I, as for the time being, the successor of Raffles in the presidency of the Bataviaasch Genootschap van Kunsten en Wetenschappen and on behalf of that Society will only express our joy and our pride that we have in our midst the bust of the man whose heart beat so warmly for our Society and who in the time of its greatest distress saved it from total downfall.

For us Dutchmen the remembrance of Raffles is indissolubly associated with Java. Here lies his principal field of activity, both as a scientist and as a governor; here he has unfolded his gifts as an organiser and a statesman. It was in Java that he introduced for the first time in the history of the world the principles of modern colonial government, whose application has in many respects survived till now. Think of our system of land-taxation, known by the name of *landrente*. Think also of the right granted to the population to elect the chiefs of the villages, afterwards called by us "the palladium of liberty". Think of his administration reforms.

There is in the Holy Scripture a word of deep wisdom, like so many others, which says: "Where your treasure is, there will your heart be." And Raffles heart was most certainly in Java.

That is the reason—a reason in my opinion raised far above all political controversies—which joins him to us, which makes him almost one of us. I would call it his love for this country. As far as I know English I could not express the feelings which Java inspired to Raffles by any other word than "love". It can not be expressed by the verb "to like" or "to be fond of" or any similar expression. It was undoubtedly more than that, a feeling much nearer to his inmost self, closer to his heart.

He who has read that wonderful book by Raffles, "The History of Java," must have found on many pages the expression of his love for that beautiful island and its inhabitants. In describing the intercourse which has subsisted in remote times between Western India and these Islands, he writes:

"Where was there a country that could more invite the retreat of holy men than the evergreen islands which rise in endless clusters on the smooth seas of the Malayan Archipelago, where elevation and tranquillity of devotion are fostered by all that is majestic and lovely in nature?"

And about its inhabitants, he wrote these appreciative words:

"In manners the Javans are easy and courteous and respectful even to timidity; they have a great sense of propriety and are never rude or abrupt. In their deportment they are pliant and graceful, the people of condition carrying with them

a considerable air of fashion, and receiving the gaze of the curious without being at all disconcerted. In their delivery they are in general very circumspect and even slow, though not deficient in animation when necessary."

The man who wrote a book like "The History of Java" must have had his pen directed not only by his brains but also by his heart.

When the events coming after the congress of Vienna cast their shadows before them in this part of the Far East, Raffles wrote to his home government:

"If I were to believe that the Javanese were ever again to be ruled on the former principles of government, I should indeed quit Java with a heavy heart; but a brighter prospect is, I hope, before them. Holland is not only re-established but, I hope, re-united. . . . I will hope that the people of Java will be as happy, if not happier, under the Dutch than under the English. I say happier, because Java will, in importance, be more to Holland than she could ever be to England; and the attention bestowed by the one country must naturally be greater than that likely to be afforded by the other."

It is impossible to deny greatness of soul to the man who, writing this, knew that the day on which he would be obliged to leave Java would be one of the saddest of his life.

The promise of Raffles has at last been fulfilled, thanks to the courteous initiative of the Malayan Branch of the Royal Asiatic Society, whose representative, Mr. Boden Kloss, has had the goodness to offer in this meeting the bust of Raffles; thanks also to the kind intermediary of His Britannic Majesty's Consul-General Sir Josiah Crosby.

In behalf of the Bataviaasch Genootschap van Kunsten en Wetenschappen I accept that highly appreciated gift, while I tender to Mr. Boden Kloss and to Mr. Chasen our heartfelt thanks for their kind intermediary and beg them to convey the sentiments of our profound gratitude to the Malayan Branch of the Royal Asiatic Society.

And now the Bataviaasch Genootschap van Kunsten en Wetenschappen has also to fulfill a promise, given a hundred and fourteen years ago, in the address which I had the honour to read to you.

To the bust of the eminent president of our Society, the statesman and scientist, to whom our Society owes such a great debt of gratitude, to the Author of the History of the Islands, he loved so much, to the bust of Sir Thomas Stamford Raffles we will give a place of honour in the building of our Society as a mark of our profound thankfulness and veneration and as an everlasting memorial of our gratitude.

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Mr. Welter was followed by Professor Dr. B. Schrieke who is not only Director of the Department of Education but also Conservator of the Ethnographical Collection in the Society's Museum. Dr. Schrieke's address, which was also delivered in English, included reference to the administrative reforms conducted by Raffles in Java. It is printed in full herewith:—

Your Excellency, Mr. President, Members of the Committee of the Royal Batavia Society of Arts and Sciences Ladies and Gentlemen!

On this solemn occasion—now that our late President has returned among us after so long an absence—you may expect me to sketch Raffles's work in the domains of science, of zoology, of botany, of archaeology, of history, of ethnography, of native customary law; his work for this society. But, his keen interest in and his contributions to the advancement of these sciences are so generally known and so universally acknowledged that it would be superfluous to dwell upon them now. It would hardly be possible to throw any new light on these familiar facts. Besides, this side of his character forms so essential a part of his personality that it cannot be separated from his work as a whole. I know no better instance to prove this contention than his own accounts of the foundation of Singapore:

"Here I am at Singapore"—he writes to Marsden only two days after his arrival—, "true to my word, and in the enjoyment of all the pleasure which a footing on such classic ground must inspire. The lines of the old city, and of its defences, are still to be traced, and with in its ramparts the British Union waves unmolested."

"I must, however, tell you where you are to look for it on the map"—Raffles writes to the Duchess of Somerset—"Follow me from Calcutta, within the Nicobar and Andaman Islands, to Prince of Wales's Island, then accompany me down the Straits of Malacca past the town of Malacca, and round the south-western point of the Peninsula. You will then enter what are called the Straits of Singapore and in Marsden's map of Sumatra you will observe an Island to the north of these straits called Singapura; this is the spot, the site of the ancient maritime capital of the Malays, and within the walls of these fortifications, raised not less than six centuries ago, on which I have planted the British flag, where, I trust, it will long triumphantly wave."

"I shall say nothing of the importance which I attach to the permanence of the position I have taken up at Singapore; it is a child of my own. But for my Malay studies I should hardly have known that such a place existed."

As was archaeology, so also was the reviving of the Batavia Society a vital part of his personality. In Holland the beginnings of the interest in economics and philanthropy had created the "Society for advancement of agriculture" in 1776 and the

"Economic Branch of the Society of Sciences" in 1777. This example had been followed in Batavia in 1778. Here too the interest in economics had been prevailing. But the new science was mistrusted by those in power, and regarded as dangerous. Accordingly the Society was thwarted and its members became suspected.

Being an advocate of the new economic principles of free trade and feeling the need of knowledge as a basis for his wide political plans, Raffles reanimated the Batavia Society as a means of encouraging researches.

* * * *

This memorial meeting however in which we pay our homage to the man who rescued our society from oblivion, is not only to celebrate the happy return of our late president to the circle of his friends. When we think of what prevented him from coming and us from receiving him, we can only rejoice at a state of affairs which enables us to give him a most sincere welcome, to forget animosities and sensibilities which divided former generations, to think impartially of the significance of his efforts for this country.

In order to understand the influence of Raffles's administration on the history of Java, it is necessary to sketch the situation as it was in his times.

The Dutch East India Company had been in a state of decay for many years. Numerous proposals for improvement of the conditions had been put forward, some had been applied, but without success. The debts in Holland were increasing.

The Batavia Government could not pay the expenses of a proper administration. The reports of the official Committee of investigation (1790), published in 1792, did not give a solution. The proposed measures affected only the internal organisation of the Company, not the system as a whole. The Commissioners, sent to Java, did not improve the corrupt situation here: they came under the influence of the oligarchy in power. In 1795 the monopoly of the Company was withdrawn and in 1798 its business was transferred to the State. The situation was gloomy.

In these circumstances Dirk van Hogendorp, a late official of the Company, who, when still in Bengal, had become acquainted with the British administration in India, attacked the Company in his publications. According to his views the old system had to be abolished altogether. The source of all evil was the monopoly of the Company, the Company as a body of merchants not being the appropriate instrument for administering a colony, having for its object nothing more than the collection of colonial produce for commercial returns. The colony could not flourish as this kind of commerce—based on the indigenous feudal system, arbitrary cultivation and vexatious impositions—exhausted the country. The prosperity of the people was sacrificed to short-sighted mercantilism. There was no way out of the rapid decline. Therefore, the

administration and the defence of the territorial possessions in the Indies had to be taken over by the State and was to be paid out of a landrent and some other regular taxes and duties as it was in Bengal.

Java belongs to Holland—Dirk van Hogendorp explains—by right of conquest. Its inhabitants are our subjects. We therefore are entitled to the revenues of the island to pay the expenses of the administration and the defence and to a subvention for the home-country. But although the Javanese have given up their political freedom, they still retain their civil rights. If we give them protection against external foes and internal oppression, and impartial administration of justice and right of property, the Javanese will always feel happy under our rule and never foster revolutionary ideas. Their reason will tell them that without our protection they will never be able to defend themselves against foreign attacks and oppression by their own chiefs.

We, therefore, must eliminate the feudal system, indemnify their chiefs and give the right of property to the people. They will enjoy the profit of their own labour and become industrious. Forced labour has to be abolished. So there will be a stimulus to extend the cultivations. The competition among the merchants guarantees them the highest price for their products and enables them to buy the articles imported from Holland. This will encourage the industries at home. Raw material such as cotton, can be exported for the mills of the mother country. In Java there is still much waste land which is to be given to industrious people—native, Chinese or European—for private enterprise. Dutch capital, now for the greater part placed in foreign investments, must be invested in Java.

Dirk van Hogendorp's ideas made a great impression even upon his opponents.¹ People hardly dared to contradict his criticism of the corruption in Java and the defects of the company system. In 1802, when an effort was made to revive the Company under a new form, his radical views were widely discussed.

Some feared that overproduction might be the effect of the introduction of the new system, with the result that commerce would not pay. According to others the Regents would become disaffected and insurrections might ensue. Some asserted that the Javanese would become too wise and expel the Europeans. Others doubted if there would be capital to be invested and denied that imports of any value could be expected from Holland. In these circumstances foreign commerce would gain the upperhand. Others would not admit the example of British administration in Bengal. Free trade there was limited and the charter of the English East India Company was renewed in 1794. According to them the decay of the Dutch Company was only caused by the frequent wars since 1780 and the supremacy of the British on the sea. Others contended that the

¹ Vgl. J. A. Sillem, Dirk van Hogendorp (1761-1822) [1890], p. 347 sqq.

native needs were so simple that there was no stimulus to exertion. If they were not forced to work, there would not be any cultivation of the soil, the Javanese being lazy by nature. It would be impossible to impose the new system upon the feudal organisation of native society in Java.

Owing to the political situation no decision as for the principle of the colonial policy could be given. The charter of the Company was not renewed; free trade was allowed, but the conditions in Java did not change. The State took the place of the Company and received the forced deliveries of products (coffee, rice, etc.)

There was still a deficit in the budget. Extraordinary measures, such as the sale of lands and the lease of villages were taken to cover the expenses and to sustain the value of the currency.

In these circumstances Daendels came to Java. His task was to establish Dutch authority, there, to organise an army and the defence of the island against a possible English attack.

Daendels did what was asked from him. He established the supreme authority of the central Government by curtailing the powers of the European Governors and Residents and of the native Princes and Regents whose feudal status he changed into that of regular officials, royal servants. He reorganised the army and erected fortifications by forced labour and feudal service. He constructed a direct military road from the West to the East of Java by forced labour. He extended the coffee plantations by forced labour. But the coffee could not be sold and the financial difficulties increased: the expenses could not be paid, although again lands had been sold, the amount of paper currency doubled and so-called voluntary loans were demanded. He could not relieve the colony from ruin.

Just as in Java people expected an English attack, in the same way, after Napoleon's conquest of Egypt, the British feared a French move against India.

The story of what happened is well known. Raffles in Penang studied the situation in the Dutch East Indies, knew of the general discontent about Daendels' rule. He entered into secret relations with some of the native princes. Thus, after the British occupation of Java, Raffles based his policy at first on re-establishing the power of princes and Regents. But after he had realised that the central authority had to be paramount, especially in a country still hardly developed economically and not properly roaded, he came into trouble with the princes and curtailed the powers of the Regents. He changed his policy, now basing it on the happiness and prosperity of the masses. He wished to break with the feudal institutions, to abolish forced labour and forced deliveries, to introduce right of property for the common people, to introduce landrent, to establish free trade. The ideas of Dirk van Hogendorp were carried into execution.

When we read his apology: "*Review of the administration, value and state of the Colony of Java with its dependencies, as it was as it is—and as it may be,*" we are struck by the fact how well informed he was about all that had happened before his arrival. Some pages read as if they were taken from Dirk van Hogendorp's books: the same method, the same arrangement of argument, the same arguments even. The resemblance cannot only be explained by the same firm confidence in "fixed and immutable principles of the human character and of human association", by the same economic principles, by the same spirit of philanthropy, the spirit of that period. Besides, we know that the system of landrent was introduced within three times twenty-four hours. Raffles' Dutch friend and advisor was Muntinghe, whose help Raffles was the first man to recognize, Muntinghe, on whose recommendation landrent was retained after Raffles' departure. Now, we know that Muntinghe was a strong advocate of Dirk van Hogendorp's views.¹)

This does not detract from Raffles' merits. It is not necessary for a leader to be an original thinker. He must have his rule of conduct and know how to chose his instruments. He must be a keen discerner of human nature, he must have a profound knowledge of mankind. And—most essential—he must have the courage to decide. Raffles knew how to chose his men. Raffles—not being bound by the traditions of the old Company—had the courage to take a radical position, to break away from the old system, although he did not abolish the forced cultivation of coffee in the Priangan regencies.

We do not know if Raffles, had he stayed longer, would have changed his policy again, if he had realised that giving orders from Buitenzorg is not the same thing as introducing a new organisation of a human society; that curtailing the powers of the Regents is not identical with abolishing the feudal system, as long as the economic basis of the society remains the same; that the classical economic principles did not apply to village communities still on a primitive level of economic development; that industry in the cultivation and improvement of the land is not encouraged merely by creating an interest in the effort and fruits of that industry. In this sense, Gillespie's criticism was not unfounded.

However this may be, we do not know if Raffles would have changed his policy as he did in Bencoolen, where he supported feudal institutions. But still, his merits remain. *He was the first man to state that Java had to be governed for its own benefit, not for the benefit of the home country.* That contention was against the mercantile spirit still prevailing at that time. He reorganised the administration of justice and his whole government breathed a spirit of benevolence and of the earnest desire to give freedom and happiness to millions of his fellow creatures.

¹ J. A. Sillem, Dirk van Hogendorp, p. 361 sqq.

His rule however was not a financial success. Raffles, too, had to sell lands to meet the expenses. He had forgotten that he was the servant of the East India Company, a body of merchants who wanted to make profit, not to extend the borders of the British Empire. His appeals for retaining Java were not listened to. The British interest, as his ambitions saw it, was not realised in England, where the strong anti-imperialistic current in public opinion, which lasted until the seventies, had risen. The effects of the American revolution on public opinion, the rising school of Political Economy (Ricardo, Malthus, James Mill and MacCulloch) as the sworn foe of mercantilism and all its works, being of course opposed to the colonial system, the views of the Philosophical Radicals, who owned Bentham as their master, all tended to regard colonies as useless or even economically detrimental to Great Britain. Utilitarianism viewed them as impediments to commerce, drawbacks to prosperity, pumps for extracting the property of the many for the benefit of the few, the strongholds and asylums of despotism and misrule. In Parliament Joseph Hume and later Henry Parnell criticised the great expense to which Great Britain was put by reason of her colonial possessions. In his classic attack on mercantilism Adam Smith had already denounced the colonial system root and branch, going so far as to assert that it would be beneficial to the people of Great Britain as a whole if the colonies were abandoned and before him, Tucker, in his numerous writings, had called attention to the heavy burdens which the possession of colonies entailed on the mother country. While Adam Smith and Tucker had been arguing that the possession of colonies was pernicious to the interests of Great Britain, their contemporaries Price and Cartwright, whole-hearted disciples of John Locke, had denied her right to exercise political authority over them. The same view was taken by the Jacobinical Radicals, such as William Godwin.

Besides in Raffles' days England after the Napoleonic wars was passing through a serious financial and economic crisis which did not encourage colonial adventures.

And, finally, Raffles could not understand that things in South-East Asia depended on dynastic interests and international relations in Western Europe.

* * * *

Raffles went and the Dutch Commissioners came. Was it a wonder that they and the Governors-General who succeeded them were inclined only to look at the defects of Raffles administration in a period during which the same Raffles caused them so much trouble. But Raffles' system as a whole was retained.

There was free trade which denationalized commerce altogether. English and American merchants had the upperhand. There was no Dutch capital of any importance ready to be invested in Java. There was no import from Holland of any significance as there was no Dutch industry worth mentioning. There were but a few Dutch

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This does not detract from Raffles' merits. It is not necessary for a leader to be an original thinker. He must have his rule of conduct and know how to chose his instruments. He must be a keen discerner of human nature, he must have a profound knowledge of mankind. And—most essential—he must have the courage to decide. Raffles knew how to chose his men. Raffles—not being bound by the traditions of the old Company—had the courage to take a radical position, to break away from the old system, although he did not abolish the forced cultivation of coffee in the Priangan regencies.

We do not know if Raffles, had he stayed longer, would have changed his policy again, if he had realised that giving orders from Buitenzorg is not the same thing as introducing a new organisation of a human society; that curtailing the powers of the Regents is not identical with abolishing the feudal system, as long as the economic basis of the society remains the same; that the classical economic principles did not apply to village communities still on a primitive level of economic development; that industry in the cultivation and improvement of the land is not encouraged merely by creating an interest in the effort and fruits of that industry. In this sense, Gillespie's criticism was not unfounded.

However this may be, we do not know if Raffles would have changed his policy as he did in Bencoolen, where he supported feudal institutions. But still, his merits remain. *He was the first man to state that Java had to be governed for its own benefit, not for the benefit of the home country.* That contention was against the mercantile spirit still prevailing at that time. He reorganised the administration of justice and his whole government breathed a spirit of benevolence and of the earnest desire to give freedom and happiness to millions of his fellow creatures.

¹ J. A. Sillem, Dirk van Hogendorp, p. 361 sqq.

His rule however was not a financial success. Raffles, too, had to sell lands to meet the expenses. He had forgotten that he was the servant of the East India Company, a body of merchants who wanted to make profit, not to extend the borders of the British Empire. His appeals for retaining Java were not listened to. The British interest, as his ambitions saw it, was not realised in England, where the strong anti-imperialistic current in public opinion, which lasted until the seventies, had risen. The effects of the American revolution on public opinion, the rising school of Political Economy (Ricardo, Malthus, James Mill and MacCulloch) as the sworn foe of mercantilism and all its works, being of course opposed to the colonial system, the views of the Philosophical Radicals, who owned Bentham as their master, all tended to regard colonies as useless or even economically detrimental to Great Britain. Utilitarianism viewed them as impediments to commerce, drawbacks to prosperity, pumps for extracting the property of the many for the benefit of the few, the strongholds and asylums of despotism and misrule. In Parliament Joseph Hume and later Henry Parnell criticised the great expense to which Great Britain was put by reason of her colonial possessions. In his classic attack on mercantilism Adam Smith had already denounced the colonial system root and branch, going so far as to assert that it would be beneficial to the people of Great Britain as a whole if the colonies were abandoned and before him, Tucker, in his numerous writings, had called attention to the heavy burdens which the possession of colonies entailed on the mother country. While Adam Smith and Tucker had been arguing that the possession of colonies was pernicious to the interests of Great Britain, their contemporaries Price and Cartwright, whole-hearted disciples of John Locke, had denied her right to exercise political authority over them. The same view was taken by the Jacobinical Radicals, such as William Godwin.

Besides in Raffles' days England after the Napoleonic wars was passing through a serious financial and economic crisis which did not encourage colonial adventures.

And, finally, Raffles could not understand that things in South-East Asia depended on dynastic interests and international relations in Western Europe.

* * *

Raffles went and the Dutch Commissioners came. Was it a wonder that they and the Governors-General who succeeded them were inclined only to look at the defects of Raffles administration in a period during which the same Raffles caused them so much trouble. But Raffles' system as a whole was retained.

There was free trade which denationalized commerce altogether. English and American merchants had the upperhand. There was no Dutch capital of any importance ready to be invested in Java. There was no import from Holland of any significance as there was no Dutch industry worth mentioning. There were but a few Dutch

people in Java. Dutch ships were rare and could not transport the colonial produce at the same low price as the English could. Merchant firms in Holland broke down. The expenses in Java went higher and higher by the frequent wars in the colony. The debts were increasing. The economic situation in Holland became worse and worse because of the Belgian insurrection.

* * * *

Then the *Netherlands trading Company* was founded and the *culture system* was inaugurated. The doctrine of the colonies existing for the benefit of the home country was still prevailing in Europe. So it was in Holland. Forced cultivation of commercial products was reintroduced. The guiding principle was the interest of Holland, but a moral justification of the new policy was not lacking.

Van den Bosch, who was sent to inaugurate the new system, was a remarkable man. In his economic theories there is much which reminds us of.....Karl Marx.¹) But in the discussions which preceded the introduction of the new measures, the whole controversy of 1800—1804 was revived again. Van den Bosch realised that there was no import from Holland of any importance to be expected: an industry had to be created. National navigation had to be encouraged. Free trade was a good thing but not at our own expense.

The same views were adopted by the public in Europe after 1870, when in France, Germany and Italy tariff walls were erected for the protection of the young national industries against the supremacy of the British trade.

The foundation of the Government were the Regents, the loyal Regents, our allies in the Java war, the natural rulers, the traditional trustees of the people. It was no good thinking in European standards in this country. Right of property was a thing entirely strange to the mind of the people. Therefore the new system, based on their traditional conception of justice, suited their needs, would be just in their eyes.

The classical economic principles did not apply to the population of Java. Why not force them to work for our and their own benefit? That was a means of educating them up to a higher level of civilisation. Why should this be called immoral? Was not compulsion the foundation of human society everywhere in the world, compulsion through men, compulsion through circumstances? Did not the Dutch journeyman, although nominally free, practically live under the compulsion of capital? Was not he forced by the economic circumstances, which often made his position worse than that of a slave? "Compulsion is found everywhere: its form only

¹ Cf. J. J. Westendorp Boerma, *Johannes van den Bosch als sociaal hervormer*. De Maatschappij der weldadigheid [1927], p. 210-233 (223), 6 sqq., 13 sqq.

depends on the circumstances and the climate. Where it is lacking, there is no civilisation. Thus, there could not be any scruples in introducing this inevitable and beneficial means if economic progress was the end."

Indeed, the culture system judged by the standards—even the European standards—of that period was not "immoral." The conditions of the working class, the workhouses, the supplies of children as labour from the orphan asylums and poor houses for the British and French factories and mills in the same period, were not less "immoral" than the effect of the culture system was in Java.

I shall not dwell any longer on the history of the culture system. The whole work of Raffles seemed to have broken down. Progressive policy had to be abandoned because of its financial impracticability.

But a new era—the economic basis of which was laid by the culture system—was coming. The interest in the old controversies was reanimated. Historical studies opened up the archives. The advocates of private enterprise contra Government exploitation combined with the humanitarians. Raffles' administration was quoted as a proof of the possibility of a progressive colonial policy. At the bottom of the historical interest and the university theses of those days are found the liberal doctrines.

From the middle of the 19th century Raffles became an inspiration to the carrying into execution of a disinterested administration, a governing of Java for the Javanese.

I have sketched you the significance of Raffles' influence on the history of Java. Perhaps I may draw your attention to the fact that the literature on the period of the British occupation is still very poor. The contents of the archives in London, in Batavia are hardly studied, have hardly been published. Nobody has even used the *Java Government Gazette* of which our Batavia Society possesses a complete set. I venture to ask: Is there not in this fact an opportunity for hearty co-operation between our society and the *Malayan Branch of the Royal Asiatic Society* in a joint effort to publish the documents of that time. Such co-operation might result in a *momentum aere perennius* for Sir Thomas Stamford Bingley Raffles.

Sir Josiah Crosby, K.B.E., H.B.M. Consul-General in Java, in a much applauded speech then alluded to the ceremonies held in September in honour of a former Dutch Governor of Java, Jan Pietersen Coen. He also thanked the Governor-General for honouring the ceremony with his presence and the several speakers for their sympathetic remarks.

The session was then closed by Mr. Welter.

After the meeting the delegates and Sir Josiah Crosby were received by the Governor-General.

* * * * *

Thus after an interval of one hundred and fourteen years Raffles returned to Java. He was received in honor, in happy contrast that occasion when, subsequent to his retirement from the country to in 1816, he was not allowed to land.

The Malayan Branch of the Royal Asiatic Society is gratified that it should have had the opportunity to extend this friendly gesture to the oldest learned body in Malaysia and is deeply conscious of the kindness and hospitality extended to its delegates in Java, in particular it is grateful to Mr. Ch. J. I. M. Welter, Prof. B. Schrieke and Sir Josiah Crosby, K.B.E..

Minangkabau Custom—Malacca.

By C. O. BLAGDEN.

The Malays in Malacca territory have a good many local differences in customary law, particularly as regards succession to property. In the case of land held on customary tenure these last are now recognized by our law (Malacca Lands Ordinance). Historically, a large part of the inland section of Malacca territory was formerly a native State under the suzerainty of Malacca but not administered by the Malacca government. This state, Naning, had its own customary law, based upon the customary law of Minangkabau, which differed fundamentally from the ordinary Malay customary law. Its boundaries did not coincide with those of the modern administrative division into districts but took in the northern parts of the districts of Alor Gajah and Jasin. Beyond those boundaries, in the territory of Malacca proper the Naning custom prevailed and still prevails in certain villages. Thus, in the Jasin District it seems that only the northernmost village, Batang Mēlaka, actually fell within the State of Naning at the time of its fall. But south of this village, in the mukims of Jus, Bukit Sēnggeh, Sēlandau, Nyalas and Chabau, the Minangkabau dialect is still spoken, and it coexists with the Minangkabau custom of female succession to land which prevails there to this day.

In the group of villages to the South of the preceding group, but still all inland, namely Kēsang, Ayer Panas, Rim, Jasin, Chinchin and Chohong, the succession to land is as a rule in fairly equal parts to both males and females, by family agreement (*pakat*). It would seem, however, that in case of dispute the Muhammadan law of inheritance, which gives the male twice the share of the female, would have to be applied, for the custom of equal partition does not appear to rest on any definitely recognized principle or established *adat*. But the point may be regarded as doubtful, unless there has been an authoritative ruling on the subject. These notes were made 30 years ago, and may be corrected and expanded by those with knowledge later than my own.

In the coast villages, Umbai, Sērkam, Tēdong, Sempang, Mērlimau, Sēbatu and Sungai Rambai, the succession is sometimes arranged by *pakat* and in that case sometimes in equal shares and sometimes in accordance with Muhammadan law. But it cannot be said that there is any custom of uniform observance in the matter, and Muhammadan law is generally recognized as being of binding authority if appealed to, and is accordingly tending to prevail over any other system of disposition. As is natural, the Kalis favour it, and it has no well established customary law (like the Minangkabau *adat*) to contend with here.

In two-thirds of the Jasin District, therefore, it seems probable that Muhammadan law, modified perhaps to some slight extent by
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the Malay tendency to keep inherited (*pusaka*) land in the line from which it has descended, will ultimately prevail. But in the Northern group the Minangkabau custom is very tenacious and there is no reason to suppose that it will be abandoned in any near future about which it would be profitable to speculate at present. The following notes are therefore mainly concerned with that custom. They were communicated to me by Pēnghulu Dēmang Japar of Bukit Sēnggeh, Jasin, District.

Succession.

1. One daughter gets all, the sons (if any) only having a claim on the land for *bēlanja kahwin* (say \$20 or \$30 each).

2. Two or more daughters divide the land equally, subject to the above claim.

3. In the absence of daughters, and their descendants, sons inherit the land equally. [This is denied at Alor Gajah: there, in such a case, the land goes to the nearest female, not to the son or sons. It is admitted, however, that a son has a right to be supported out of the land, till (*quaere*) he is married, and he may also, not of right but by *pakat* (agreement, consent), be allowed a life-interest and the use of the land during his life. But he cannot pass on any rights to his children, and at his death the land must go to the nearest female representative, or representatives by the female line (*quaere*, being themselves females?). Case decided at Ramuan China Kēchil, 28.9.95].

4. Grand-daughters through daughters represent their (deceased) mothers, but have to share *per stirpes* with the other grandchildren (granddaughters) if the land has not previously been given to their mothers. [This is not very precisely expressed. Presumably it refers to the custom of giving portions of the family property (inherited land, *pusaka*) to daughters on their marriage. On the death of the mother such portions have to be taken into account in the division of the whole property, so that each surviving daughter, and the representatives *per stirpes* of each deceased daughter, eventually get equal shares on the ultimate division].

5. The land that has not been previously given to daughters is (in the event of none of the latter surviving to inherit it) taken by the grandchildren *per stirpes* irrespective of their sex and of the sex of their parents. The reason is that grandsons, unlike sons, have no *pērentah* over the land of their cousins (the female grandchildren), therefore they are entitled to share in the land itself. (This clearly represents a considerable departure from the leading principle of succession in the female line, which is at the root of the whole Minangkabau family system. Further enquiry should be made to ascertain whether this alleged local variation has really become established, and if so in what extent of territory it now prevails.)

6. A grandson through a daughter (*i.e.* being the son of a daughter, and having (presumably) no sisters) divides the land

equally with a son if it has not been previously given to the daughter (*i.e.*, the grandson's own mother). This also is a deviation from general principle.

7. A grandson or granddaughter through a daughter divides the land equally *per stirpes* with granddaughters or grandsons through sons. (Another such deviation: all these cases seem to call for further enquiry).

8. In the absence of descendants:—
In the case of *pusaka* (inherited, family land) the *waris* get the whole: *viz.* the father or mother if living, or failing them the sisters or their representatives *per stirpes* equally, provided that if a deceased leaves a brother and a nephew through a sister, the land should be given to the brother as trustee for the nephew, the latter inheriting it on the death of the former. (Presumably this means that the brother is to be tenant for life with remainder to the nephew absolutely). In the absence of sisters and their descendants, brothers and their descendants inherit. Brothers are preferred to first cousins through females. (Another deviation from the leading principle).

9. If the deceased has parents living, they get the land in preference to their (*i.e.* the parents'?) children.

10. *Pusaka* land must, whenever possible, be kept in the family from which, through the female line, it was originally derived. (This is the leading principle of the Minangkabau law of family property. The great difference between Muhammadan law and Malay national custom, not merely in the *mukims* where the Minangkabau rules of succession (more or less modified locally) prevail but also where the land is divided equally among the children male and female (as is the case in the villages just inland of the coastline of Malacca, between the *ulu* and the actual coast-villages), is this: under Muhammadan law the property of a deceased would be divided among his relations quite irrespective of the line of descent by which it came to him (as is also the case with personal property under English law); by Malay custom, on the other hand, the relations who cannot claim descent through or relationship with that line, count for nothing. Thus A has had property from his mother, he dies and leaves surviving him B a half-brother on his father's side, and C an uncle, being the brother of A's mother. Under Muhammadan law B would get the land and C nothing. Under Malay custom C gets it, because it was A's *pusaka dari-pada ëmak-nya*, his inheritance *ex parte materna* (with which line of descent B and not C is connected). If the land had been *pëncharian* of A (e.g. originally cleared and brought into cultivation, or bought, by A himself), presumably B would even under Malay custom have had the stronger claim: probably he would have claimed and got the whole, certainly he would have claimed a share. In a case at Durian Tunggal, the land being admitted to be *pusaka*, B appeared as a witness but preferred no claim on his own account, explaining that he had nothing

to do with the land as he was the son of a different mother. In this he unwittingly followed a principle which also prevails in the English law of realty and marks one of the distinctions between it and the law of personalty.

11. In the case of *pusaka* land, in the absence of descendants you must go back to the nearest ascendant in preference to all collaterals. (E.g. *Pusaka* land given by a mother to her daughter on the latter's marriage would go back to the mother surviving her daughter if the latter had died without issue).

12. In the case of *pēncharian* the ascendants of the person who acquired it have an equal claim with the collaterals: the land must be divided. (It is not stated on what principle the division is to take place: presumably the collaterals would take *per stirpes*, but it is not clear what the proportions would be as between them and any surviving ascendant).

13. *Pēncharian* develops into *pusaka* thus: A acquires it, his daughter inherits it, to her daughter it is *pusaka*. *Pusaka* becomes *pēncharian* by sale or any other legitimate mode of transfer to a stranger (that is, in blood, presumably any one outside the normal line of family succession).

Alienation and Proprietary Rights.

14. A person cannot transfer *pusaka* land to a stranger without the consent of his (her) children, or (in their absence: presumably in default of children) of the *waris* (brothers, primarily, and failing them, cousins). Distant collaterals, however, cannot prevent a transfer, but they have a right of pre-emption at the sale.

15. This (check on alienation) does not apply to *pēncharian*, except that in certain cases the unanimous opposition of the children should prevent the sale even of *pēncharian*, e.g. when it is anticipated that the funeral expenses will fall upon them and they will have no means to meet them. (This is a very vague rule and it may be doubted whether it does more than express an opinion, rather than an established custom).

16. Whether a particular piece of land is *pusaka* or *pēncharian* is a question of fact: transfer has to be proved by written documents or (failing them) by the (unanimous?) consent of the elders of the *kampong*. (It is plain that the tendency is to assume the land to be *pusaka*, so as to hedge it in with safeguards against improper alienation, i.e., alienation to the detriment of the relatives and eventual heirs. But in most cases the fact must be locally notorious and not likely to be seriously disputed, for para. 13 shows that the transfer set up would have to be a fairly recent transaction. Evidently any land which could not be shown to have been thus recently transferred would be presumed to be *pusaka*).

17. Whenever a daughter marries, she gets a piece of land from her parents (or rather from her mother, presumably the father would at most be merely a consenting party, for he has no share in

the ownership). She does not, however, (as a rule) get the whole of her eventual share then, but only a part. When a son marries, no land is given to him, but his parents contribute \$20 as *hantaran* and from \$10 upwards towards the expenses of the wedding. The *hantaran* is given to the *waris* of the bride and is handed by them to the bride's parents as a contribution to the expenses of their part of the festivities. (Presumably this means that the expenses of the wedding feast, etc., are borne in the main by the bride's parents but by the bridegroom's parents to the extent of \$20. Thus the expenses to be borne by the bride's parents are variable, and more or less at their own discretion, while those that fall on the bridegroom's parents are limited by custom to this definite amount.)

18. On the death of the parents (here again one should, perhaps, read "mother", but possibly the father continues to have some kind of interest, not amounting to ownership, in the land after the decease of the mother), the sons get no share in the land; but they have a right to prevent its alienation or waste by the daughters or their husbands. The sons remain (as it were) guardians over the property of the family although possession (and usufruct) are vested in their sisters. The position of a son is not that of a possessor or owner, but of a person who has *pěrentah* over the land. (*Pěrentah* means "authority", and is a somewhat vague word in itself, but the nature of the authority is indicated by what has been stated). Cousins have no such rights.

19. But if a son is divorced from his wife, he has the right to go back to the land of his sister and she cannot exact rent for his occupation of any part of it. (Presumably this means merely that he can squat on it). So long as he is without a wife, he has a right to a share in the produce and occupation of the *pusaka* land. (This is a very remarkable relic of the old family communal tenure which was the basis of the whole system but has become much modified by actual division of the holdings among the individual women. Plainly under the old system, in spite of its matriarchal structure, the men had a very considerable weight in the management of the family property, and as long as they were unmarried also a share in the usufruct of it. Probably, however, this class of case would not be of long duration, as a man would generally marry again pretty soon).

* * * *

Dignities (*kěbėsaran*), like the *pěrentah* or authority over land above referred to, go according to the old custom to the *anak buah*, i.e., to a male descendant in the female line (e.g., son of a sister or female cousin). But in Malacca territory this rule is not always followed.

* * * *

Formerly people of the same *suku* could not intermarry; in these days they can. But the children of two sisters cannot, though the grandchildren can. The children of two brothers cannot; they are

in the position of *wali* (a term of Muhammadan law, evidently here we have the influence of Islam modifying the old custom). The children of a brother and a sister can intermarry.

Half-brothers and sisters, whether consanguineous or uterine, cannot intermarry.

Minangkabau Law and Custom Regarding Property other than Land in the Ulu Mukims of Malacca.

(Probably this was also communicated by Pēnghulu Dēmang Japar, of Bukit Sēnggeh, Jasin District).

Division of property other than land.

The principle is "*Pēncharian bahagi, dapatan tinggal, bawa kēmbali*". That is to say, for purposes of division, property is divided into

(1) that which was acquired before marriage (*hērtā mēmbawa*) or has been inherited (*pusaka*).

(2) that which has been acquired during the continuance of the marriage by the joint exertions (as is always presumed) of the married couple (*pēncharian laki bini*).

Therefore *pēncharian* means the acquisitions of the married couple during the continuance of the marriage, *e.g.*, by their labour (not, it is presumed, by inheritance), *dapatan* is property that the husband finds in his wife's possession or ownership when at marriage he goes to live with her; it remains hers; *bawa* is what he brings with him; it remains his. (It is plain that the *dapatan* and the *bawa* may each, theoretically, include acquired and inherited property, also that the nature of the *dapatan* and *bawa* is essentially the same, their names differing merely because the terminology is constructed from the point of view of the husband, who goes to live on the family land of his wife. The principle is that there is no common ownership of property as between husband and wife at all, except in the *pēncharian laki bini*).

I. After the death of one party (*chērai mati*):

- (a) the *pusaka* and *hērtā mēmbawa* of the deceased *i.e.*, husband, (if it is the wife that dies, her *pusaka* and the other property she possessed before the marriage) are divided among the children, male and female, in equal shares; failing children, they go to the *waris* of the deceased. (*Waris* is not defined here, but clearly means next of kin: whether, however, these are counted exclusively in the female line, is not stated, but it seems probable.)
- (b) the *pēncharian laki bini* is handed over to the survivor (widow or widower), who has control over it, but ought to keep it for the children (presumably being, in the meantime, entitled to the use of it himself or herself). At the death of the survivor it must be divided, like the

property under (a), among the children. If there be no children, the *pēncharian laki bini* is divided equally between the survivor and the *waris* of the deceased. [When the survivor eventually dies, it is presumed that his (or her) moiety goes to his (or her) next of kin].

All this is, of course, subject to the payment in the first place of the usual funeral expenses and all just debts. Wills are hardly ever made.

(II). After divorce (*chērai hidup*):

- (a) the *pusaka* and *hēta mēmbawa* remain with their original owner (in the case of the wife, she retains her *pusaka* and the other property she possessed before the marriage).
- (b) the *pēncharian laki bini* is divided equally between the two parties.

Exceptions. All the above must be understood as subject to the proviso that certain kinds of property, though actually part of the *pēncharian laki bini*, are not liable to be treated as such. Thus the following are not liable to be divided, but are exempt and to be treated as the woman's own property, viz., her actual clothes, mosquito curtain, pillows, sleeping mat, etc., and a small quantity of crockery. These, even if bought out of *pēncharian laki bini*, cannot be reclaimed by the husband. But this does not apply to jewellery or articles of value: their value must be divided if the husband claims it and if they are part of the *pēncharian laki bini*.

A house built by the husband after marriage on land belonging to the wife or her relations should in the event of divorce be estimated, and its value apportioned equally between the parties. (Thus the outgoing husband would get half the value, the wife retaining the house).

If a man plants trees on land belonging to his wife he cannot claim compensation for them in the event of divorce. "*Bērubong panjang, bērsibar lebar*" is the saying applicable. But should he be thirsty and occasionally take a coconut from the trees, it is no offence. The same applies after the death of a wife, when the land goes to the *waris* in default of children. (This proviso seems more like an expression of opinion than a definite custom: plainly, as the husband can have no further interest in the land, his act would be of the nature of a trespass, though not necessarily to be treated as criminal; and the latitude allowed to him by the dictum is too vague to be capable of strict definition).

(It is noticeable that houses and trees are differently treated above, the latter are immoveables, the former are not. This is in general accordance with the facts of the case: the ordinary Malay house merely rests on stone bases and is not fixed to the soil. Even in cases where the piles on which it is constructed are driven into the soil, it would seem that the house is not considered as permanently attached to it).

Notes on Some Further Archaeological Discoveries in Pahang.

By W. LINEHAN.

In my paper entitled "Some Discoveries on the Tembeling" published in the Journal of the M.B.R.A.S. of November, 1928, I described some objects of archaeological and antiquarian interest found in the Tembeling. The present paper deals with objects discovered mainly in the same region since my former article was written.

Mr. I. H. N. Evans of the F.M.S. Museums has been kind enough to peruse these notes and to comment thereon.

Plate X shows a four-eared vessel of red earthenware with incised linear decoration on the upper part which was found protruding from the ground on the banks of the Sat, a tributary of the Tembeling. The jar seems to be of a date not later than the Sung period (960—1279 A.D.). It was obtained through the kindness of Che Wan Ahmad, Penghulu of Ulu Tembeling. The vessel is apparently almost similar to that described in Mr. Evans' paper on "Antiquities from Sungei Batu Estate, South Kedah" (*Papers on the Ethnology and Archaeology of the Malay Peninsula*).

A four-eared jar of greyish clay approximating in shape to the vessel from the Sat but very much smaller was found in an ant-hill at Kuala Spia on the land of Che' Dal the local *Ketua* (Head-man).

Plate XI fig. 5 shows a stone-quoit disc which was found on the banks of the Tembeling a short distance below Jeram Kwi (finder: Lateh bin Khatib Pah). It is of black polished stone blunted at the edges. The quoit disc illustrated on plate XI fig. 6 is of a most unusual type. It is composed of stone weathered brown. It differs from the usual quoit disc in that its inner edge is lipped on one side. Its edges are dented from usage. It was found at Bukit Sari on the right bank of the Spia, a tributary of the Tembeling, by Lebai Nekman. Mr. Evans points out that there is a model of such a lipped disc of unknown provenance in the Perak Museum.

The specimen shown on Plate XI fig. 7 is apparently the fragment of an unfinished quoit disc. If so, the lines running from its outer edge must have been made after the object was fractured as the lines run around the object in its present condition and are evident at the point of fracture. The two concentric circular grooves in the object lead me to conjecture that the quoit disc, stone bracelet, and roundel or "cut-out" may have been manufactured in the one operation from the one piece of stone in which case the bracelet when detached from the stone would of course need a certain amount of elaboration. Mr. Evans remarks: "I agree. An unfinished quoit disc. The lines are veins, I am pretty certain. They can be traced on the broken edge to some extent and are present on both

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flat sides, as you say. I do not believe that both a quoit disc and a bracelet were being made at one time. I think that the man started cutting out a small roundel and then changed his mind in favour of a large one, or the reverse. The "bracelet" would have been too thin, I think". The specimen was found at Pasir Temprah in the Tembeling.

The stone implement shown on Plate XII fig. 2 came from Kuala Peling, a small tributary of the Tembeling just above Kuala Sat. It is sharpened on one side and is not unlike a meat-axe in appearance. The implement is somewhat similar to that found at Kuala Nyong and described by Mr. Evans in the F.M.S. Museums Journal for June 1928 (Plate LII fig. 7).

On Plate XII fig. 3 is shown a three-holed implement rather like the object fig. 2 on the same plate. It was found at Labu, Sungei Tembeling. Wan Alam the finder informed me that in former times such implements were used by Malays for making a rattan rope with triple strands. According to him the strands were passed through the holes then tied at each end, then one end was twisted until the rope was completed. The way in which the outer edges of two of the holes in the stone are worn thin and the absence of markings which the rattan strands might be expected to make in the implement after long usage incline me rather to doubt the correctness of Wan Alam's explanation. It is of course possible that such implements when found by Malays were occasionally used for the above purpose but it seems unlikely that they were originally devised therefor.

The object shown on Plate XI fig. 3 is a fragment of a five-sided bracelet of semi-opaque deep blue glass. It was unearthed at Poh, (Kampong Bantal) on the Tembeling (finder: Wan Abdulrahman). Mr. Evans remarks: "I believe this bracelet, to be of the iron age. We get exactly the same blue glass of the early porcelain age at Selinsing—a carry-over, no doubt".

While on the subject of bracelets it will not be out of place to refer to an armlet of greenish-blue glass in the possession of Dato' Maharaja Perba Jelai (Wan Tanjong), one of the four Major Chiefs of Pahang. The armlet (of which unfortunately I have omitted to take a photograph) is an heirloom in Wan Tanjong's family. It was worn by his grand-father Wan Dris when engaged in war-fare and was credited with the gift of making its wearer invulnerable. Its appearance, the magic properties attributed to it and the fact that the Malays do not use such objects make it likely that the armlet is a relic of the pre-malay inhabitants of Penang.

A fragment of a bronze object was picked up in the Pengau, a tributary of the Tembeling (finder: Imam Chik of Pagi). It bears linear decoration in relief. The object is one of the few specimens of bronze discovered in the Tembeling, the others being two fragments of bowls and the fragment of an object (unidentified) at Teluk Lubok Puai and Bukit Jong.

A most interesting find at Burau on the Pahang river is a shouldered adze head of stone (Plate XI fig. 2). This, apart from a specimen in the Taiping Museum, the provenance of which is unknown (vide Evans' *Ethnology and Archaeology of the Malay Peninsula* page 35) is the only shouldered adze head hitherto discovered in Malaya. The existence of the shouldered axe-head in the Peninsula is thus now definitely established.

The unfinished stone axe head shown on Plate XII fig. 1 was found at Pasir Sia on the Tembeling. Its very unusual size makes it worthy of illustration.

The stone implement shown on Plate XI fig. 8 may have been designed for delicate work such as the manufacture of ornaments. The Malays informed me that such implements when found by them were sometimes applied to the nose of a fighting buffalo to stimulate its courage. By them it is termed *pěrangang Kerbau*.

A lozenge-shaped object of black stone was obtained from Wan Manja of Bukit Karim, Ulu Tembeling. I am unable to conjecture what it was used for.

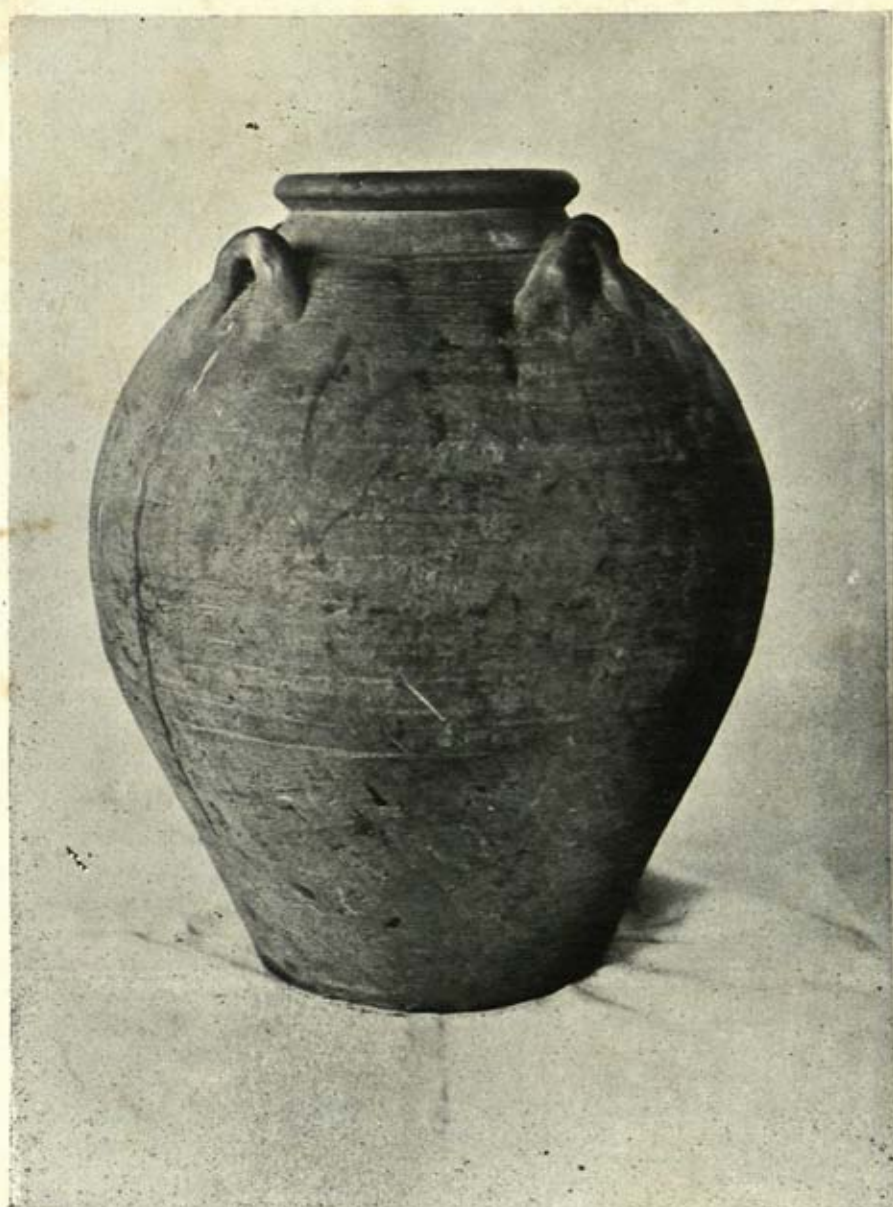
In May this year I got another opportunity of visiting Bukit Jong where last year were found a stone bracelet, two bronze fragments, a stone quoit disc and seven ancient iron implements. The following further objects were discovered:—

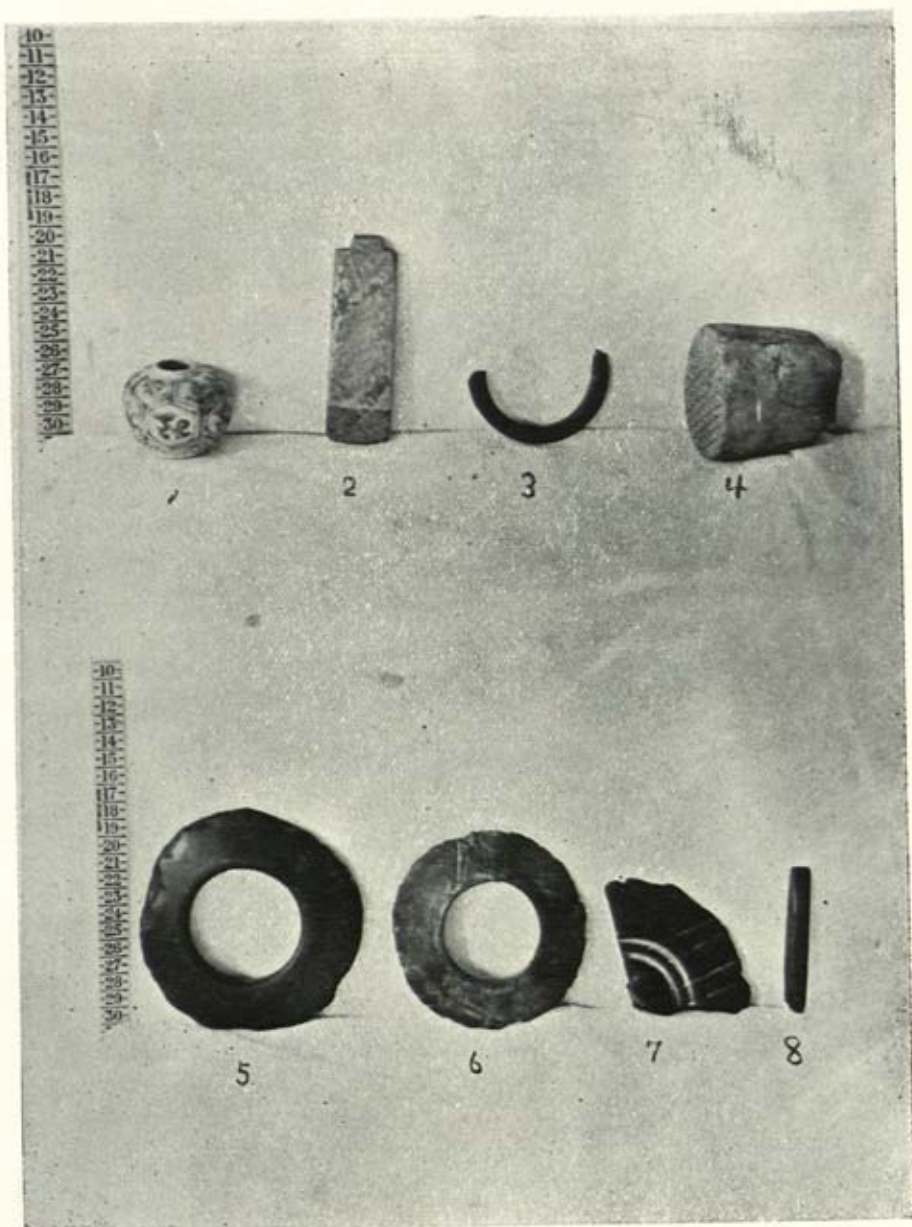
a stone bark pounder (plate XI, fig. 4), 5 ancient iron implements (plate XIII, figs. 2, 3, 4 and 5, one is not reproduced), 4 stone adze heads, a mould of baked clay, pieces of rock crystal, fragments of cord marked pottery, small quantities of iron slag, and an iron-stained stalactite.

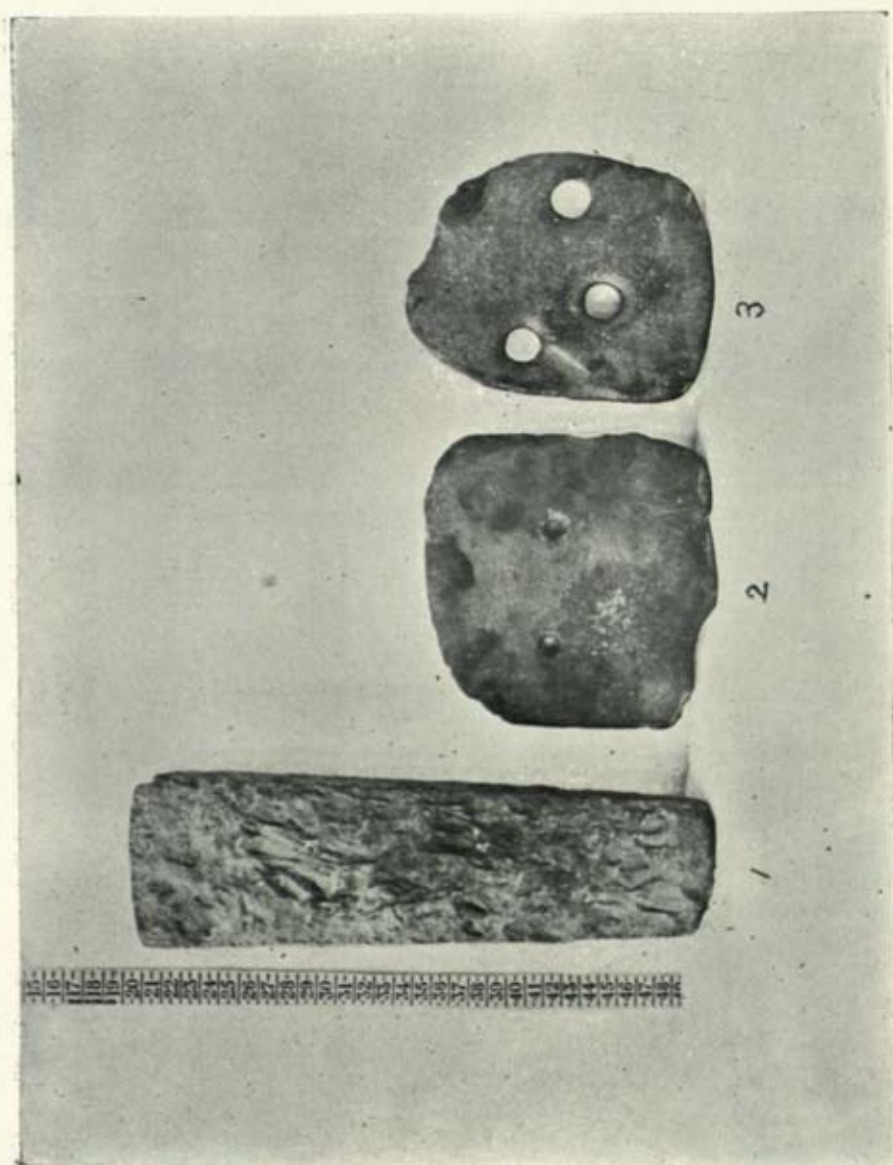
The bark-pounder was revealed by a lucky stroke of the spade in the bank of the river about seven feet from the top. It, and the mould which I describe later were the only objects discovered apparently *in situ*: they do not appear to have been disturbed by the action of the water. The pounder is of an unusual type in that it bears the traces of a tang at the proximal end. This feature seems to be absent from stone bark-pounders found elsewhere. The pounder is of whitish stone. One side of it was apparently used for sharpening purposes.

The iron implements were found in runnels leading from the bank to the river, in most cases under a shallow covering of sand. Two (plate XIII, figs. 2 and 3) are single-bladed knife-like objects. Another is similar to that shown as fig. 2 on plate XL in my paper referred to above.

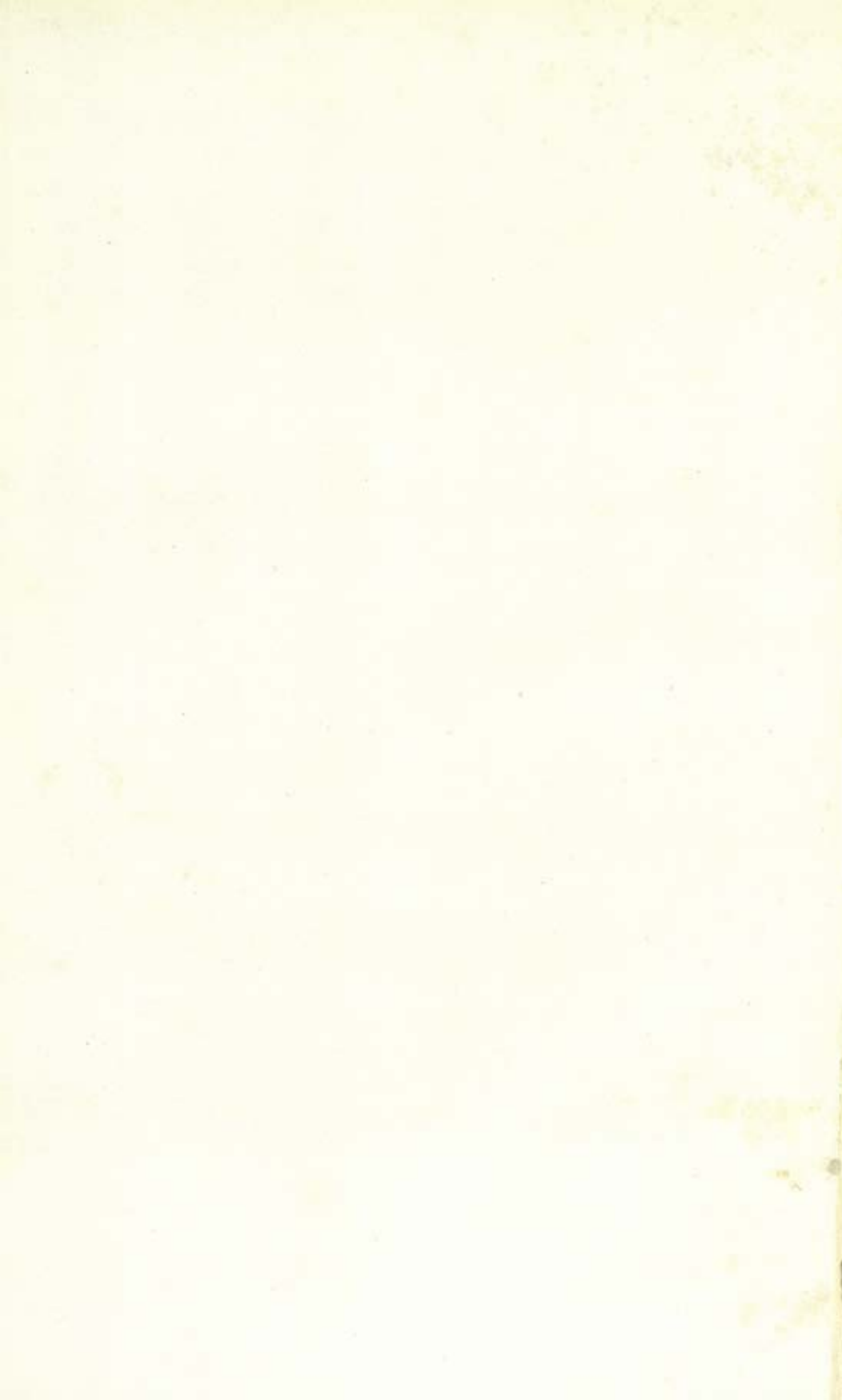
The two socketed sickle-like implements (figs. 4 and 5) are of the same type as three implements discovered at Kuala Sungai Abai (in conjunction with a socketed iron spear-head) presented by me to the F.M.S. Museums last year. The same types of weapon or tool have been discovered at Sungkai and Sengat (J. F. M. S. M. Volume XII, Part 5 June, 1928).











The stone adze heads were also picked up in runnels leading from the bank to the river. They are of common type. Two of them are well-worn objects, another is in an unfinished condition. I discovered the clay mould in a niche in the rocks in conjunction with an iron-stained stalactite. The mould seems to have been designed for the manufacture of a simple type of cooking vessel. The position in which it was found (closely surrounded by rocks on all sides) leads me to conjecture that that was the place in which the manufacture of the vessel was to have taken place. The lumps of rock crystal discovered probably came from Gunong Tahan. It is possible that they were brought there for conversion into ornaments (beads, etc.).

Shortly after the discovery of the above objects a Malay lady (Che Selamah who resides a short distance above Bukit Jong) brought me a socketed spear head (Plate XIII fig. 1) similar to that discovered at Kuala Sungei Abai last year and a small porcelain jar (plate XI, fig. 1). She stated that she had got these objects at Bukit Jong. The body of the jar is of white clay with a dull greyish-blue decoration covered with glaze (which is worn away at the base). The ornamentation consists of six panels below surmounted by six smaller panels, each panel enclosing a floral design. The jar dates possibly from the early Ming period.

To sum up, the finds at Bukit Jong up to date are: a stone bracelet, a stone quoit disc., a stone bark-pounder, four stone adze heads, thirteen ancient iron implements (including spear head), fragments of cordmarked pottery, bronze fragments, a clay mould, lumps of rock crystal, iron slag, an iron-stained stalactite and a porcelain jar.

Assuming that the latter is an intrusion (no other porcelain specimens have been found) it is possible that at Bukit Jong we have two distinct cultures, stone and iron, or a transition culture stone-iron. It is not improbable that the use of stone implements continued for a long time after the introduction of iron—the earliest implements of iron are crude, fragile and badly adapted to the purposes for which they were designed. It would be unsafe to come to a definite conclusion until the place has been more carefully examined.

A Trengganu "Keri."

By T. KITCHING.

Kuala Brang is the headquarters of the district of Ulu Trengganu, situated at the junction of the rivers Brang, Tersat and Trengganu, about 20 miles from the mouth of the Trengganu River. While on a visit there recently, I happened to notice the extremely fine specimens of "Keri" which were in general use. The "Keri" is a small sickle used for cutting out weeds from a field of growing padi, and is I believe commonly used throughout the Peninsula, but the peculiarity of the Kuala Brang "Keri" lies in the beautiful workmanship put into the handle—I have not seen anything like it elsewhere; even a few miles from Kuala Brang it is not to be found.

The handle is of rengas wood inlaid with "Timah hitam" or lead; where the lead comes from I could not ascertain—it is not used in the local Public Works Department buildings! Che Hashim the District Officer at Kuala Brang informs me that the making of these handles is a craft confined to a few people; the inlaying is certainly extremely well done, as the photograph shows.

Once each weeding season it is the local custom to have a sort of festival called *Main Balai* in which there is a competition for the prettiest *Keri*. The accompanying photograph was taken under this festival and shows the women waving their *Keri* in the air.

Malayan Plants.

A collection made by A. W. HAMILTON of some of the commoner plants and littoral trees found on Singapore Island. Identifications and descriptions by R. E. HOLTUM.

Akit. *Rhizophora conjugata* Linn. Rhizophoraceae.

Leaves narrower than in *R. mucronata*, and thinner, showing lateral veins. Calyx 4-lobed; petals 4, stamens 11—12.

Ambong ambong. *Scaevola koenigii* Vahl. Goodeniaceae.

A common shrub on sandy seashores with bright green shining leaves, white flowers and white fruit. Widely distributed from India to Polynesia.

Api-Api. *Avicennia alba* Bl. Verbenaceae.

Small tree of mangrove. Leaves simple, 3 in. long, narrowed to both ends, white beneath. Fruits in small clusters, about 1 in. long, 1/3 in. broad at base, narrowed to pointed tip.

Asam riang-riang *Vitis hastata* Miq. Ampelidaceae.

A herbaceous climber. Stem 4-winged. Leaves simple, base broad deeply cordate, narrowed gradually to apex. Tendrils opposite the leaves, red. Inflorescences about 1 in. long, opposite the leaves; flowers minute; fruit small round.



A TRENGGANU KERI



Asin-Asin *Sauropus albicans* Bl. Euphorbiaceae

A small shrub with straight lateral branches which resemble the leaves of leguminous plants. Euphorbiaceae. (also *chēkok manis* Singapore).

Rumput aur. *Commelina nudiflora* Commelinaceae—A creeping grass like plant with small blue flowers. common in waste places.

Bayam (sayor). Spinach. Probably *Amaranthus gangeticus* Linn., Amarantaceae. Erect herb, about 3 ft. tall; stem rather stout, bearing simple alternate ovate leaves, 2-3 in. long. Flowers small, in dense axillary inflorescences.

Bayam bērduri. *Amaranthus spinosus* Linn. Amarantaceae.

Erect herb more or less branched, to about 1 ft. tall; leaves simple alternate rather long-stalked, with two long spines at the base of each. Flowers minute greenish in long axillary or terminal inflorescences.

Bayam bērduri merah is only a form with a red pigment in the cells.

Bayam merah *Cetosa* sp., perhaps *C. argentea* Linn., Amarantaceae

Bayam Pasir. ? *Amaranthus viridis* Linn. Amarantaceae.

Bēbaru *Hibiscus tiliaceus* Linn. Malvaceae.

Small tree, common near sea. Leaves pale beneath, rounded, to about 5 in. across, the base deeply cordate, the apex shortly acute. Flowers large, yellow, centre red-purple.

Bēboros. *Bruguiera caryophylloides* Bl. Rhizophoraceae.

A small tree, allied to *bakau*, common in the mangrove of the Indo-Malayan region. Flowers small, green, sepals and petals numerous. (also *Boseng*.)

Bēbuas. *Premna foetida* Reinw. Verbenaceae.

A tall shrub, with large inflorescences of small greenish flowers.

Bēlewar. *Passiflora laurifolia* Linn. Passifloraceae.

A climber with rather stiff entire leaves and tendrils. Flower of elaborate structure (passion flower); fruit yellow-orange. (also *buah susu*.)

Bēlukap *Rhizophora mucronata* Lam. Rhizophoraceae.

One of the most characteristic trees of the mangrove, with stilt roots supporting the trunk laterally in the mud. The seeds germinate while still embedded in the fruit; the seedling root is thick and fleshy, and reaches more than a foot long before it falls from the parent tree. These characters are found in all the members of the family. *R. mucronata* is the largest species; its leaves are large, simple and very leathery.

Bēluntas. *Pluchea indica* Less. Compositae.

A small shrub of tidal swamps, with small serrated leaves, and small mauve or white flowers; fruit plumed, as in many other Compositae. Indo-Malaya to Australia.

Bērēmbang *Sonneratia alba* Sm. Lythraceae.

This is very much like *S. Griffithii*, (vide *Pērēpat*) and the distinction as regards leaves and fruit is a little difficult.

1930] *Royal Asiatic Society*.

Běřěmi. *Herpestis monneira* H.B.K. Scrophulariaceae.

A prostrate succulent herb, with small leaves. Usually found in wet places, abundant.

Bětak-bětak *Excoecaria agallocha* Linn. Euphorbiaceae.

Tree of the mangrove, common. Very poisonous (see Gimlette). Contains a white latex. Leaves 2 in. long, simple, elliptic, alternate edge crenate. Inflorescence of minute flowers, axillary, catkin-like, the males to 2 in. long or more when fully expanded, the females much shorter and fewer flowered.

Bijan *Sesamum indicum* Linn. Pedaliaceae.

Erect herb with simple narrow leaves and mauve pink flowers resembling a foxglove. Gingelly oil is extracted from the seeds.

Chakar Bebek. *Kalanchoe laciniata* DC.

A succulent plant with compound serrate leaves and an erect inflorescence of small yellow flowers. Crassulaceae (Stonecrop family) Probably introduced, but occasionally escaped from cultivation, especially in sandy places.

Chěkor *Kaempferia galanga* Linn. Zingiberaceae.

A small plant of the ginger family, cultivated. Distrib: India and Malaysia.

Chěndawan biring *Polystictus sanguineus*

A common wood—destroying fungus, bright red in colour.

Dam Chendol or *Pandan Sěrani* *Dracaena Porteri* Bak. Liliaceae.

A small, little branched shrub, common in lowland jungle. Leaves narrow 6-8 inches long. Fruit red.

Cherek cherek. *Clausena excavata* Burm. Rutaceae.

A shrub or small tree with long pinnate leaves, and small white flowers in a large terminal inflorescence; berries small pink.

Chingam *Scyphiphora hydrophyllacea* Gaertn. Rubiaceae.

A shrub occurring commonly in mangrove; leaves shining, opposite with rounded ends; flowers small, white, in rounded groups.

Dokong anak or *Ambin buah* *Phyllanthus urinaria* Linn. Euphorbiaceae.

A small erect weed, with horizontal branches bearing crowded simple leaves. The minute flowers hang down below these branches.

(*Naga buana* *Phyllanthus Pulcher* Wall. similar to above).

Dungun *Heritiera littoralis* Dry. Sterculiaceae.

Seashore tree. Leaves alternate, simple, to 8 in. long and 5 in. broad, stiff, white beneath. Flowers small in axillary inflorescences. Fruit 1½ in. long, woody, ovoid, keeled.

Rumpu Ekor Kuda *Themeda arguens* Hack Gramineae.

A grass of open dry places. Leaves 6-16 inches long, narrow, rough. Spikes in fan-shaped nodding heads, hairy.

Gandarusa *Gendarussa vulgaris* Nees Acanthaceae.

An erect shrub, with purple stem and long narrow leaves. Native of Eastern Asia, rarely fruits here.

Gēgasing *Ipomoea sagittaeifolia* Burm. Convolvulaceae.

A climber closely allied to the morning glories, with rather small pink flowers.

Gelang. *Portulaca oleracea* Linn. Portulacaceae.

Prostrate weed, with small fleshy leaves, usually reddish. Flowers star shaped, yellow. Common weed distributed through out the Tropics.

Gelang Susu. *Euphorbia hirta* Linn. Euphorbiaceae.

Allied to the preceding, but with leaves $\frac{1}{2}$ - $\frac{3}{4}$ inch long, stems hairy.

Gēlenggang *Crotalaria Saltiana* Andr. Leguminosae.

Small shrub. Leaves 3 foliate, pale hairy beneath. Flowers yellow, numerous, in erect inflorescences. pods small cylindric.

Gēlenggang Gajah *Cassia alata* Linn. Leguminosae.

Stout shrub, little branched, with large pinnate leaves, leaflets oblong rounded at both ends, to 4 inches long and erect spikes of yellow flowers with yellow orange bracts and calyx. Fruit pod black, 6-8 ins. long, winged.

Haroda *Ruta graveolens* Linn. Rue Rutaceae.

Commonly cultivated.

Daun Hian *Artemisia vulgaris* Linn. Compositae.

Wormwood. Introduced and escaped from cultivation (Chinese Hīān).

Jarak bēlanda *Jatropha curcas* Linn. Euphorbiaceae.

A stout shrub with large leaves, inflorescence of small greenish flowers and yellow fruits about 1 inch in diameter.

Jērēmōng *Elaeocarpus pedunculatus* Wall Tiliaceae.

Tree, Leaves simple, smooth, slightly serrate; flowers in pendulous racemes, small, white, the petals fringed at the ends.

Jērīngau *Acorus calamus* Linn. Araceae.

The sweet flag. A plant with long sedge-like leaves, widely distributed in the Northern hemisphere; probably introduced here and rarely flowers. Grows in wet places.

Jēruju *Acanthus ebracteatus* Wall. Acanthaceae.

A small shrub of the mangrove, with prickly holly-like leaves and white or mauve flowers.

Kachang Kayu. *Caajanus indicus* Spreng. Leguminosae.

Leguminous shrub, to 6 ft. or more; leaves 3-foliate. minutely white hairy; flowers yellow, pods hairy. The Dal of India.

Kachang Ketut. *Canavalia obtusifolia*, DC. Leguminosae.

A trailing seashore plant. Leaves with three leaflets, which are blunt and narrowed to the base, 2-3 inches long and wide. Flowers rose pink or mauve. Pod oblong, beaked with three ridges. Seeds dark brown.

Kadok. *Piper chaba.* Piperaceae. The commonest wild pepper, often seen by waysides.

Kait-kait *Rubus angulosus* Focke Rosaceae.
Allied to the English brambles; scrambling thorny shrub, leaves large, rounded, soft hairy beneath, fruit small orange. Common in low-lands.

Kantan. *Phaeomeria imperialis* Lindl. Zingiberaceae.
Stem fleshy, below ground. Leafy shoots erect, 12 ft. or more tall, leaves to 2 ft. by 6 in. Flowers on a stalk 3 ft. tall, each flower bud covered with a large pink fleshy bract; flowers pink, the lip with a white edge.

Kapas hantu. *Hibiscus abelmoschus* Linn. Malvaceae.
Hairy shrub with 3 or 5-partite leaves, yellow flowers and large green fruits. Found all over the tropics; occurs sporadically in waste ground, or cultivated.

Kēmangi. *Ocimum canum* Sims. Labiatae.
Cultivated-widely distributed in tropical Asia and Africa.

Kēmunting. *Rhodomyrtus tomentosus* Wight Myrtaceae.
Bush, of rather similar appearance to the Melastomas. Leaves 3-veined small, pale beneath; flowers pink, with many stamens.

Kēpiting. *Cassia obtusifolia* Linn. Leguminosae.
A small leguminous bush, common in waste ground. Flowers bright yellow, pods slender cylindrical curved. Not conspicuously hairy (see next sp.)

Kēpiting. (*kēling*) *Cassia hirsuta* Linn. Leguminosae.
Much like the preceding, but very hairy. Introduced from America.

Daun kērak nasi. *Torenia polygonoides* Benth. Scrophulariaceae.
A small prostrate herb, with small roundish leaves; flowers white and brown. Common in waste ground.

Kērēmak. *Alternanthera sessilis* Brown Amarantaceae.
A small erect weed, allied to the Indian spinach and to the commonly cultivated Gomphrena (globe amaranth).

Kērēndak. *Carissa carandas* Linn. (Apocynaceae).
Spiny shrub with a pink fruit as big as a cherry.

Kērok-kērok *Ficus chrysocarpa* Reinw Urticaceae.
Shrub with large simple soft-hairy leaves, and brown hairy ovoid fruits.

Kēsom *Polygonum minus* Huds. Polygonaceae.
A small glabrous herb, leaves linear or lanceolate, about three inches long, sheath short with long cilia on the edge. Flowers in spikes, very minute, five or more in each bract.

Kētombak. *Emilia sonchifolia* DC. Compositae.
A common composite weed with small pink flowers and plumed fruits like the groundsel.

Kiambang *Pistia Stratiotes* Linn. Araceae.
Floating plant, consisting of a tuft of bright green leaves about 2 ins. long; roots numerous, much branched. Cultivated by Chinese possibly native on some rivers of the Malay Peninsula (Ridley).

Kupu mani or *Sēlusoh Kuching*. *Acalypha indica* Linn.

Euphorbiaceae.

Erect herb, with ample serrate leaves. Flowers minute on short lateral branches, unisexual; the female enclosed in a triangular bract when in fruit.

Lakum

Vitis trifolia Linn.

A climber with tendrils, trifoliate rather fleshy leaves, and small green flowers, very common in the lowland of Malaya, in open places (Vitaceae, allied to the grape vine).

Lēkir

Amorphophallus Prainii Hk.

Araceae.

Leaf compound solitary, on tall fleshy green stalk, mottled with gray; Common in lowland jungle. The large inflorescence grows from the tuberous stem after the leaves have died.

Lēnggadai

Bruguiera caryophylloides Bl.

Rhizophoraceae.

Tree of mangrove. Leaves to 4 in. by 2½ in., narrowed gradually to base, apex acute. Flowers small green, in groups of 2 or 3. Root of seedling, while hanging from parent tree about 8 in. long.

Lēnggundi

Vitex trifolia Linn.

Verbenaceae.

Large shrub, leaves trifoliate or simple, white beneath; flowers blue, in terminal inflorescence. A curious creeping form is found in the sand by seashores. Widely distributed in South Asia and Australia.

Lētup lētup

Passiflora foetida Linn.

Passifloraceae.

Creeping or climbing plant, with three lobed hairy leaves and spirally twisted tendrils. Calyx bladder-like, fruit small yellow; allied to the passion fruits, introduced from South America and now common throughout the Peninsula. Used as a cover crop.

Lidah Badak

Opuntia monacantha Haw.

Cactaceae.

Stout succulent plant. The stem consists of flattened segments 8-10 ins. long and about 3 ins. wide, narrowed towards each end. The segments are covered with small protuberances which bear long thorns. Flowers yellow about 3 ins. across, fruits pear shaped, 3-4 in. long.

Lidah Buaya

Aloe Sp.

Liliaceae.

Succulent plant from South Africa, consisting of a rosette of thick fleshy leaves growing from a short stem. Leaves 1 ft. or more long, tapering to the apex, usually thorny along the edge and sometimes on the back also. The same Malay name would serve for almost any species. Flowers orange or yellow, numerous, on a erect branched inflorescence, usually 1-3 ft. tall.

Lidah Jin

Sansevieria zeylanica Willd.

Liliaceae.

Bowstring hemp. A plant of the lily family, allied to the Yuccas. The stiff erect leaves yield a fibre.

Lidah pipit

Portulaca quadrifida Linn.

Portulacaceae.

A prostrate weed with small narrow succulent leaves and yellow flowers.

Limau kingkit or *Limau kiya*. *Triphasia trifoliata* DC Rutaceae.

Shrub probably from China. Leaves trifoliate, leaflets more or less toothed, small, rather stiff, with two spines at the base of each. Fruit small, red containing sweet juice and a few seeds. (Chinese Kim-kit).

Maman. *Cleome viscosa* Linn. Capparidaceae.

A small stiff shrub with small trifoliate leaves, yellow flowers and slender dehiscent fruits which are covered with viscid hairs.

Mampĕle or *Kening nabi*. *Melia azadirachta* Linn. Meliaceae.

The nim tree of India, introduced and frequently cultivated.

Manik tasbeh. *Coix lachryma-jobi* Linn. Graminaceae.

Coarse broad-leaved grass, about 3 ft. high; inflorescences numerous in the axils of the leaves. The fruits are enclosed by persistent sheathing bracts, which are hard, smooth and white when ripe, and about 2/5 in. long.

Manjakani.—the gall or oakapple of a species of *Quercus*.

(Imported from India).

Mata kĕli. *Solanum nigrum* Linn. Solanaceae.

This species is a common weed in England, but the tropical form differs in being a less robust plant, with smaller leaves and flowers.

Mĕmpĕlas bunga. *Tetracera assa* DC. Dilleniaceae.

A slender woody climber with white and pink flowers. Common in thickets and on the edge of jungle.

Nilam *Pogostemon Cablin* Benth. Labiatae.

Aromatic herb, cultivated for the perfume contained in its leaves (Patchouli).

Nyireh. *Carapa obovata* Bl. Meliaceae.

Tree of mangrove swamps. Leaves pinnate with 1 or 2 pairs of leaflets which have blunt tops and are narrowed to the base. Fruit round, as big as a large orange.

Pakis. *Nephrolepis biserrata*.

A common fern of open places, where the soil is good and in young secondary jungle (Many ferns are called pakis).

Pĕdara *Ximenia americana* Linn. Olacaceae.

Shrub or low branching tree, spiny. Leaves 1½ in. long, simple, ovate, slightly fleshy, smooth. Flowers small white; fruit plum-like, yellow, pulpy (Ridley).

Pekak. *Illicium verum* Hook. fil. Winteraceae.

Star anise. A fruit imported from China, yielding an oil similar to that of aniseed. The fruit is woody, star shaped, consisting of eight narrow carpels which dehisce along one edge, exposing a single brown seed in each. (Chinese Peh Kak).

Pĕngaga. *Hydrocotyle asiatica*.

A small creeping herb with orbicular leaves often found in grassy places. The only common local member of the family Umbelliferae; it belongs to the genus containing the English pennywort.

Pēpitis. *Dischidia Gaudichaudii* Done. Asclepiadaceae.

A very common climbing epiphytic plant, with very small orbicular leaves. Contains a white latex.

Pēpulut. *Urena lobata* Linn. Malvaceae.

A small erect shrub of the mallow family, with pink flowers and spiny fruits. Common by roadsides.

Pēřpat. *Sonneratia Griffithii* Kurz. Lythraceae.

A tree of the mangrove; its roots have erect branches growing up out of the mud serving as aerating organs. Leaves stiff smooth roundish with narrow base. Fruit smooth round, surrounded by the sepals like a star.

Pēria nyonya. *Ipomoea pulchella* Roth. Convolvulaceae.

Slender creeper with pink flowers, allied to the morning glories. Native in India and Indo-China, cultivated in Malay Peninsula.

Pēria pantai. *Colubrina asiatica* Brngn. Rhamnaceae.

Large shrub. Leaves simple, alternate, to 2 ins. long, ovate toothed, the apex acute. Flowers small greenish in axillary inflorescences; fruit $\frac{1}{4}$ in., globose with three lateral grooves, the base joined to the cup-like remains of the calyx.

Pētai belalang. *Leucaena glauca* Benth. Leguminosae.

Large spreading shrub, thornless, with bipinnate leaves, leaflets very small. Flowers white in globose heads, which are borne on short stalks in the leaf axils. Each head of flowers produces a group of long pods. Allied to the Mimosas.

Piai. *Acrostichum aureum* Linn.

A large fern, found in tidal swamps throughout the tropics. Its fronds have large simple leaflets the upper ones being densely covered beneath with brown sporangia.

Po'ok *Mentha javanica* Bl. Labiatae.

A small strongly scented herb, stems hairy, leaves lanceolate toothed. Flowers in axillary whorls, calyx hairy with triangular teeth, corolla hairy pale lavender colour. (Chine Póh hò).

Rēngkam. *Sargassum* sp.

One of the common larger seaweeds of the coast.

Rokam bēlanda. *Flacourtia cataphracta* Roxb. Flacourtiaceae.

Small tree. Leaves alternate, 3 ins. long narrowly elliptic, edges serrate. Fruit globose, dark reddish when ripe; styles joined together at apex of fruit (not separated as in *F. rukam*).

Rotan dini. *Flagellaria indica* Linn. Flagellariaceae.

A common slender climbing plant, with narrow leaves which end in tendrils. Flowers small white.

Puku ruku *Ocimum basilicum* Linn. Labiatae.

Aromatic labiate herb of the dead-nettle family. Widely distributed in tropical Asia, Africa, and the Pacific. Locally cultivated.

Sēkēntut. *Paederia foetida* Linn. Rubiaceae.

A slender climber with opposite simple leaves.

Sēlaseh. *Ocimum sanctum* Linn. Labiatae.

Probably cultivated only: it has a wide distribution in S. Asia and Polynesia.

Sēlēguri. *Sida rhombifolia* Linn. Malvaceae.

Small erect shrub, common in waste ground. Belongs to the mallow family; flowers small yellow (also *Sangga berduri*).

Sēmalu or *malu malu.* *Mimosa pudica* Linn. Leguminosae.

The sensitive plant. A native of America, early introduced into the East and now common everywhere (also *Kēman*,—Kedah).

Sēmpong. *Blumea balsamifera* DC. Compositae.

The Ngai camphor. A tall straight shrub; leaves large softly hairy; flowers in a large terminal panicle, small yellow, Whole plant aromatic.

Sēnecheng *Dalbergia torta* Grah. Leguminosae.

Long climbing shrub, Leaves 5-foliolate, leaflets oblong blunt small. Flowers small white in dense axillary inflorescences. Pod flat, brown, with one or two seeds.

Sēsawan. *Hedyotis auricularia* Linn. Rubiaceae.

Herb, to 2 ft. tall, common in waste ground. Leaves opposite, about 1½ x 1 in., softly hairy, flowers small white in axillary groups.

Sēnyēchang. *Allophyllus ternatus* Lour. Sapindaceae.

Shrub or small tree. Leaves 3-foliolate, leaflets to 3½ in. long, elliptic, acute, somewhat dentate. Flowers small, in axillary racemes 5 in. long; fruit globose, red, size of a pea, sometimes twinned.

Sēnudok. *Melastoma polyanthus* Bl. Melastomaceae.

Very common shrub in open country, with three-veined leaves and mauve flowers Found in the South of the Malay Peninsula only, in the north it is replaced by another species, *M. malabathricum*.

Sēpanggil. *Clerodendron paniculatum* Linn. Verbenaceae.

Small erect shrub with large roundish leaves and a large terminal pyramidal inflorescence of small red flowers. Cultivated, and in waste ground.

Sēpēkong. *Ageratum conyzoides.* Compositae.

The commonest local weed of the family Compositae; flowers mauve. It takes the place of the English groundsel and is similar in habit.

Sēpuleh. *Eurycles sylvestris* Salisb. Amaryllidaceae.

Small lily-like plant, with short broad leaves and a group of small white flowers on an erect stalk. Distributed from Malaya to Australia, and said to be native, near the sea, in the north of the Peninsula. Commonly cultivated.

Sērai. *Cymbopogon citratus* Stapf. Gramineae.

Lemon grass; of similar habit to *C. nardus*.

Sērāi Wangi. *Cymbopogon nardus* Rendle. Gramineae.
Citronella grass; a tall tufted grass, containing an aromatic oil.

Sērūnai (laut) *Wedelia biflora* DC. Compositae.

A scandent shrub with simple leaves and yellow daisy like flowers, common near the sea.

Sēsop. *Lumnitzera coccinea* W. & A. Combretaceae.

Tall tree of mangrove swamps. Leaves about 3 ins. long by 1 in. broad, rounded at the apex, narrowed gradually to the base. Young stems red. Flowers bright scarlet in dense terminal inflorescences.

Sētada. *Podocarpus polystachyus* R. Br. Coniferae.

Small tree, common by seashores, densely bushy, with small very narrow stiff leaves, 2 ins. long. It has no flowers, belonging to a southern group of conifers.

Sētawar. *Costus speciosus* Sm. Zingiberaceae.

Stems 6 ft. or more tall, spirally, twisted, bearing simple leaves and a large terminal inflorescence. Flowers large white, buds protected by large red bracts.

Sētu *Enhalus koenigii* Rich. Hydrocharitaceae.

Plant growing abundantly in shallow sea, near shore. Stem embedded in sand, leave 2-3 ft. long, $\frac{1}{2}$ in. wide. Female flowers borne on long stalks, rising to the surface of the water; male flowers on short stalks, becoming detached when mature and rising to the surface, where they float freely, pollinating the female flowers. When pollination is completed, the stalk of the female flower contracts spirally, and fruit ripens below the surface. Fruit ovoid with longitudinal bands of bristles, containing numerous seeds.

Sisek Naga *Desmodium heterophyllum* DC. Leguminosae.

A small creeping leguminous plant, common in grassy places, leaves trifoliate flowers small pink:

Sisek naga pēpēri or *seگان.* *Euphorbia thymifolia* Burm. Euphorbiaceae.

A common prostrate weed, with pink stems and very small crowded leaves about one-fifth inch long.

Daun Sorok *Lycopodium cernuum* Linn.

A more or less prostrate plant of moss like appearance, the longest shoots three feet or more long with numerous lateral branches, covered throughout with small moss like leaves. Often very abundant in waste places.

Sudu sudu *Euphorbia neriiifolium* Linn. Euphorbiaceae.

A shrub with thick fleshy stems and simple fleshy leaves at the ends of the branches, each with two thorns at the base; contains a white latex: it is native in southern India and cultivated in the Malay Peninsula.

Tahi Babi. *Adenostemma viscosum* Forst. Compositae.

A herbaceous weed similar in appearance to *Ageratum conyzoides*, but with larger leaves and fewer inflorescence of white, not mauve, flowers.

Tangki *Neptunia oleracea* Low Leguminosae.

Floating aquatic herb with horizontal stems. Outer part of the stem consists of a thick layer of soft white tissue, roots borne in bunches on the stem, much branched. Leaves bipinnate, leaflets small. Flowers small yellow in globose heads on stalks 1 in. or more long.

Tapak Itek *Ancilema nudiflorum* Br. Commelinaceae.

A small grass like herb with pale green leaves and small pink flowers. Belongs to the same family as *Rumput aur.*

Tapak kuda *Ipomoea pes-caprae* Roth. Convolvulaceae.

A common plant creeping in sand on seashores, leaves large stiff two lobed, flowers pink.

Tēmangau *Glochidion superbum* Baill. Euphorbiaceae.

Small tree. Leaves to about 10 in. by 5 in. hardly stalked broad and slightly cordate at the base, apex acute, stiffly coriaceous, covered with soft hairs above, and with longer brown hairs on the prominent veins beneath. Flowers small pink, in dense clusters, unisexual.

Tēngar. *Ceriops Candolleana* Arn. Rhizophoraceae.

A common small tree of the mangrove, allied to the Rhizophoras.

Tētulang. *Euphorbia tirucalli* Linn. Euphorbiaceae.

Small tree with cylindrical branches and very small leaves; contains a white latex, native of Africa cultivated locally.

Tērong pērat *Solanum aculeatissimum* Linn. Solanaceae.

A very prickly dwarf shrub. Flowers small white; fruit red like a small tomato. Common on sandy seashores (Ridley).

Tērong pipit *Solanum torvum* Sw. Solanaceae.

A small shrub common in waste ground. Leaves large hairy, flowers white with prominent yellow stamens, fruit half inch spherical yellow. Allied to the potato.

Tinjau bēlukar *Macaranga rubiginosa* Ridl. Euphorbiaceae.

Common small tree of *belukar*. Leaves alternate, longstalked ovateacuminate, about 6 ins. long by 2½ broad at base. Leaf stalks and veins beneath leaves red. Flowers small reddish in pendulous inflorescence on the lower part of the branches below the leaves.

Daun tumbuh daun *Bryophyllum calycinum* Salisb. Crassulaceae.

A tall fleshy herb, leaves opposite, simple or three partite, oblong or elliptic, crenate. Flowers in a tall panicle, calyx purplish green, corolla green, reddish purple above. Probably introduced from Africa.

Tumu *Bruguiera gymnorhiza* Lam. Rhizophoraceae.

Tree of mangrove swamps. Leaves 4 in. long $2\frac{1}{2}$ in. broad elliptic apex acute; flowers solitary in leaf axils. Calyx bright red with 12 long narrow teeth; petal shorter than calyx bilobed.

Turi *Sesbania grandiflora* Pers. Leguminosae.

Small slender leguminous tree, with long pinnate leaves, large white papilionate flowers and long slender pods. Distributed from Mascarenes to N. Australia, but not reckoned native in Malay Peninsula by Ridley. (Also *Gēti*, Kedah).

Tutop bumi *Elephantopus scaber* Compositae.

A herb of the family Compositae. It has small mauve flowers and a rosette of leaves lying close to the surface of the earth; it is often found in grass plots.

Ubar. *Eugenia lepidocarpa* Wall. Myrtaceae.

Tree, leaves opposite, about 6 by $2\frac{1}{2}$ ins., stiff, almost sessile very closely resembling those of *E. grandis*. (jambu laut) Differs from *E. grandis* in having a ribbed calyx; that of *E. grandis* is smooth.

Udat *Avicennia officinalis* Linn. Verbenaceae.

Common small tree in mangrove. Leaves 2 in. long apex rounded or acute base narrow, veins distinct, pale beneath. Fruit hairy, ovoid 1 in. long when ripe. (*A. lanata* Ridley appears to be only a form of this with leaves very hairy beneath.)

Urang areng *Eclipta alba* Hassk. Compositae.

A common weed, with small opposite leaves and small white flowers.

Kedah Natural History Notes.

By A. W. HAMILTON.

*Bambun or
Bangbun*

A small Mongoose, *Herpestes*.

A most intractable animal reputed by Malays to have a savage and painful bite.

It is fairly numerous in the tall reed beds of the Kedah coastal plain where it has runways and is alleged to live on fish or prawns. As it is seldom seen very few Malays even recognise the animal when met with.

Mērēbah Bidan

The yellow-crowned Bulbul, *Trachycomus zeylanicus* (Gm.).

A fine songster with clear melodious tones often kept as a cage bird. Elsewhere it is called *Bēbarau*.

Chak uban

The white-headed Munia, *Munia maja* (Linn.) (*Uban*, grey haired).

Chak puting damar

The black-headed Munia (or Chestnut-bellied Munia), *Munia atricapilla* (Vieill).

A small gregarious chestnut brown finch with a black head and neck. (*Putting damar*, the fag-end of a torch).

Chak Tuli

The sharp-tailed Munia, *Munia striata subsquamicollis* St. Baker. A small white brown speckled finch. (*Tuli*, deaf, on account of this finch's apparent indifference to the noise made to scare it from the crops).

Gēlam

The Chestnut Bittern, *Ixobrychus cinnamomeus* (Gm.). Common in reedy patches of paddy fields and light brown in colour as is a fish of the same name.

Sēgan

The nightjar, *Caprimulgus macrourus bimaculatus* Peale. *Sēgan*, lazy, owing to its laziness in waiting until the last possible minute before flying out of harm's way, and also as it does not trouble to make a nest but lays its eggs in a depression on the ground). Elsewhere this bird is called *burong tukang*—i.e., the workman as the "tock tock" of its note is like the blows of a hammer on a nail.

Sěpah Pětěri

The scarlet-backed Flower-pecker, *Dicoeum cruentatum ignitum* (Begbie).

The Malay name has been wrongly recorded as *Sěpa Putěri*, or *Supa Putri* (H. C. Robinson).

Sěpah Pětěri. The princess's betel quid. The story goes that *Tuan Pětěri Bulan*—The moon Princess—once expectorated her quid of betel nut and the crimson stream fell to earth and was turned into the scarlet-backed Flower-pecker.

Chěnkhalā or Murai Gila

The Fantail Flycatcher, *Rhipidura javanica*. Robinson gives the Malay name as *Měrbok Gila*, obviously a mistake, as it bears no resemblance to the *Měrbok* or Barred ground Dove but does resemble in its black and white plumage and spread of tail the *Murai* or Magpie Robin. The sobriquet of *gila* or mad is due to its erratic actions.

Punai Halban

The green pigeon *Treron vernans griseicapilla* (Sch).

Chiap Chiap

The Crested Wood Quail, *Rollulus roulroul* (Scop.).

Chok or Anak Chok

The Tree Sparrow, *Passer montanus malaccensis* Dubois. The common house sparrow of Malaya known in the south of the Peninsula as *pipit gěnting*.

Kěděra (Laut)

Curlew Sandpiper. *Tringa ferruginea* (Brünn).

Common on mud-flats

Burong Kěděra

Pallas' Mynah, *Agrospar sturnius* (Pall.)
A migrant that appears in flocks.

Sěriap

The Purple Heron, *Ardea purpurea manilensis* Meyen.

At one time this large heron was extremely numerous in Kedah particularly over the large marshy area in the region of Kota Sarang Sěmut now it is rarely met with. Malays state that it nested on the top of the dense beds of *pěřěpok* reeds and Malayan Royalty used to proceed on Heron-egg collecting picnics mounted on elephants.

Sintar Api

The Malayan Banded Crake, *Rallina fasciata* (Raffles). A handsome rufous brown bird with resplendent red eyes whence its Malay Name *Sintar Api*, the fiery Sintar, in contra-distinction to *Burong Sintar* the Blue breasted Banded Rail. The banded crake inhabits light secondary jungle and thickets and is caught in large numbers during a short period in June and October by Malays who call the birds in a likely patch of ground during the day and having erected slight converging fences of twigs drive the birds after dark into a rotan basket trap placed at the apex of the fences. The bird is good eating.

Sang Serut

The wood partridge *Caloperdix oculea* (Temm). The name is said to be derived from the note of the two sexes when replying to each other.

Měřbah Chabai

The stripe-throated Bulbul, *Pycnonotus finlaysoni* Strickl.. Kept occasionally as a cage bird.

Měřbah Kapor

The yellow-vented Bulbul. *Pycnonotus Goiavier analis* Hossf.

The Malay name is due to its chalk coloured underparts.

Kambing Gurun

The Serow. *Capricornis sumatrensis* subsp.

All portions of this dweller on inaccessible limestone crags are looked on as efficacious remedies for various ills. The spittle or any oily extract 'Minyak' obtained from the serow's meat is believed by Malays to be a valuable healing unguent in cases of wounds, fractures or rheumatic ailments.

*Ikan Karin**Ikan Sěmpilai**Ikan Sěmpilai**Batu*

Ctenops vittatus, the fighting fish *Betta sp.* (also *ikan pělaga* or *bělaga*) *Betta sp.* but larger than *Sěmpilai*.

The *Karin* and *Sěmpilai* are tiny fresh water fish found in ponds and ditches and kept for fighting by Malay Children and youths. The fish are put in separate glass jars which are placed in proximity so that the pugnacity of the inmates is aroused on sight of each other

and the *Karin* particularly bursts into all the colours of the rainbow. When sufficiently aroused both the combatants are placed in one jar and bets are laid on the result of the fight.

The *Sěmpilai batu* is a slightly larger fresh water fish said to be caught in hill streams and is also occasionally used for fighting; all are termed *ikan pelaga* or fighting fish but only members of the same genus are matched to fight together.

The Relation of Weight to Wing Area in the Flight of Animals.

By E. BANKS.

Curator, Sarawak Museum.

Few subjects have been more discussed than the Flight of Animals but during four years comparative isolation I have been unable to consult most of what had previously been written and found whilst on leave that my contribution to the subject had already been made by a German some forty years ago (Mullenhoff 1885) an account of which may be found in Prof. Ray's article on Flight (Newton 1893-6).

It had been my intention to find some relation between the weights of various Bats, Birds and Insects and the wing area supporting and propelling them; others have sought such a relation since Mullenhoff's time but I know that I am presenting here fresh data, regarded from a rather different point of view and I think carrying the investigation a stage further than before.

Briefly Mullenhoff, Harting and others found heavier Birds to have a relatively smaller Wing Area than lighter ones, $3 \sqrt{\frac{\text{Wing Area}}{\text{Weight}}}$

being within limits fairly constant. Mouillard (1881) independently noted the same thing about relative Wing Area and though Von Ledenfeld (1904) discounted the accuracy of the above mentioned constant doubt has been thrown on the correctness of his own calculations (1906). I have not seen the most important works of Marey (1874) whilst that of Hankin, containing the most remarkable series of observations, deals more particularly with soaring Flight. I am indebted to Dr. de Fenis (1921) for publishing many Weights and Wing Areas of Bats.

One point should be made clear in which I have differed from former observers, for they have included the surface area of head, body and tail as well as Wings in computing their Wing Area whereas I have taken the area of the Wings only; whilst therefore I have been able to make use of Mullenhoff's data in support of my own I have been unable to mix them owing to this difference.

Most of my measurements were made in Borneo on specimens collected for the Museum here, comprising about 123 species of Birds, 40 of Bats and 186 of Insects; Mullenhoff measured 192 examples of 88 species of Birds, 12 Bats and 75 examples of about 50 species of Insects. To find the Wing Area of a specimen I laid it breast upwards on a sheet of paper and fully stretched one wing about at right angles to the body; in Birds this wing was then pressed flat and a pencil drawn round its edge, beginning pre-axially where humerus and body join and finishing postaxially at the humeral feathers lying beside the flank. The Area of this tracing

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was accurately determined with a surveyors Planimeter; in Birds the tracing itself ignored the gaps between feather tips and the degree of concavity of the wing but as all birds got the same treatment and an average of several species of about the same weight was finally taken, individual or slightly inaccurate variations are not prominent. The wings on one side of the Insects were stripped off and pinned out separately, the area being determined as before, except for the Elytra of Beetles which were ignored; the chief source of error lies in the weighing of the Insects, some Bees losing as much as 12% owing to evaporation whilst being carried about. Wing areas measured as above were then doubled to give total Wing Area; all Weights were converted to Grammes and Wing Areas to Square Centimetres to conform with other observers.

There was at first no obvious connection between Weight and Wing Area until the measurements were treated in a becoming way. If for each individual the total area of all its wings be divided by its Weight and this figure be plotted against that Weight then the comparative increase or decrease in Wing Area relative to Weight may be seen at a glance, high figures indicating a relatively large Wing Area. To reproduce graphs of just this would serve no useful purpose for the main features may be seen in graphs illustrating other points as well; these graphs show even more clearly than other observers have pointed out, that small fliers have a much larger relative Wing Area than heavy fliers and that as weight increases relative Wing Area becomes at first very rapidly less and then decreases more gradually until there is little further change.

As it happened the ratio Wing Area to Weight was found to vary considerably, not that more than a few species were aberrant but that the plottings covered a wide but fairly regular range in depth varying about some mean representing a general decrease in relative Wing Area. Prof. Huxley then suggested dividing the material into its Orders or Sub-Orders, plotting separate curves for each and to further simplify matters to divide each Order or Sub-Order into groups by weight; taking for plotting purposes the mean Weight and Wing Area of these groups. This is shown in the accompanying graphs, two compiled from my own measurements and two in confirmation from those of Mullenhoff, the figure beside each point plotted indicating the number of examples whose mean has been taken; these measurements as well as individual ones, both of mine and his, will be found in the Tables at the end of the article.

Roughly speaking the curves in the graphs have somewhat similar slopes, it being clear that relative Wing Area decreases very sharply at first as Weight increases, decreases more gradually in middle weights and shows very little change as maximum Weights are reached; there is a strong tendency for high relative Wing Area Orders (as indicated by the upper curves) to have numerically and actually higher relative Wing Area light Weight species than low relative Wing Area Orders *e.g.*, there

are many Sparrow-like birds whose ratio Wing Area: Weight is between 4 and 6 but there is only one Pheasant-like bird of anywhere near the same Weight and its ratio Wing Area: Weight is much smaller. Strictly speaking the slopes are more nearly parallel in middle and high weights, the upper curves indicating a high relative Wing Area in the small Weights out of all proportion to relative Wing Area in the same small weights of the lower curves.

As was to be expected the curves derived from Mullenhoff's measurements are arranged in very much the same order as those derived from mine.

I mentioned that Mullenhoff, Harting and others obtained a "constant" $3 \sqrt{\frac{\text{Wing Area}}{\text{Weight}}}$ and in the tables this will be found calculated individually and for each group, varying from 5.8 to 2.8 in Birds and Bats, from 12.6 to 1.6 in Insects, but mostly from 6 to 3 so that the "constant" is possibly the same for all, about 4, which as Prof. Levy points out is primarily a geometrical property and not a consequence of any essential biological factor.

It is of interest to give here the maximum and minimum of this "constant" for the various Orders, which are arranged roughly in descending order of magnitude of relative Wing Area.

	Max. Min.		Max. Min.			Max. Min.		Max. Min.	
	Banks		Mullenhoff			Banks		Mullenhoff	
Strigiformes	5.1	3.9	5	4.5	Rhopalocera	12.6	2.7	12.8	4.8
Lariformes	5	4.1	5.2	4.2	Heterocera	10	2.8	4.2	3.4
Ardeiformes	5.2	3.6			Neuroptera	7.4	3.4	7.2	3.6
Accipitriformes	5.8	3.2	5.2	4.4	Phasmidae	5.9	5		
Passeriformes	4.5	3.1	4	3.6	Blattidae	4.2	2.5		
Piciformes	4.8	3.2	4.1	3.2	Cicadidae	3.6	2.9		
Columbiformes	3.8	3.2			Gryllacridae	5.2	2.3		
Ralliformes	3.8	2.8			Coleoptera	3.1	1.6	2.4	1.6
Charadriiformes	4.2	2.8	3.7	3.4	Hemiptera	3.3	1.6		
Anseriformes	4.2	2.9	3.1	2.5	Diptera			3.8	1.6
Galliformes	4.2	2.9	3.6	2.6	Hymenoptera	3.45	1.7	2.1	1.1
Cheiroptera	5.2	2.8	4.3	3.6					

From this it is clear that the maximum and minimum limits of the constant $3 \sqrt{\frac{\text{Wing Area}}{\text{Weight}}}$ are numerically higher though not

necessarily farther apart in high value Orders than in low value ones, so that the extreme limits of variation are not to be found within any one Order.

There are various details of minor interest: in grouping by Weight many exceptional individuals lose their outstanding character

but some if included would sooner upset any reasonable average than themselves; thus the Argus Pheasant has an exceptional Wing Area owing to the enlargement of its secondary wing feathers as a Secondary Sexual character but there are three at the end of the table of Piciform Birds—the Nightjar, Frogmouth and Giant Swift—which for no apparent reason are very exceptional as regards their relative Wing Area.

It is also evident from the graphs and table that many Insects have a very much greater relative Wing Area than Birds, the ratio Wing Area: Weight reaching 300 or so in some of the former and not more than 10 in the latter, in which they are accompanied by some of the lowest Insects. With regard to the Birds, the good fast flyers such as Ducks, Partridges and Pheasants, Waders and Pigeons are the lowest ones as regards relative Wing Area and something of the same sort may be true for Insects. For the Birds, high relative Wing Area in an Order signifies many very light species but comparatively low relative Wing Area means few light species and a swift direct flight in general.

The male Flying Fox is usually heavier than his mate but has about the same Wing Area, for at a time when the female is carrying the young her weight must nearly approximate his and she require about the same Wing Area. Bats on the whole are surprisingly high as regards relative Wing Area; the Flying Squirrel (*Iomys thomsoni*) and the Flying Lemur—both of them only gliders—rather low down. Flying Lizards I have not included in the graphs but the ratio Wing Area: Weight is about 5 so that they would take a surprisingly high place among Birds considering they only glide. Mullenhoff's Flying Fish are of interest in taking a place below any Order of Birds and may point to them as being gliders, rather than flappers.

Summary.

1. Lighter fliers have a larger Wing Area relative to Weight than heavy ones as has been shown before; this not only applies within the various Orders of Birds and Insects but the latter being lighter have on the whole much larger relative Wing Areas than the former.

2. The relation of Wing Area to Weight has been expressed graphically by a number of approximately parallel curves representing various Orders and Sub-Orders.

3. These curves show that relative Wing Area decreases very rapidly among light weight fliers as weight increases and that the decrease is less marked in middle-weights.

4. These curves are only approximately parallel; for high relative Wing Area Orders and Sub-Orders have comparatively much bigger relative Wing Areas in the light Weights than do low Relative Wing Area Orders.

5. Low relative Wing Area Orders and Sub-Orders have on the whole numerically fewer light Weight species than the other Orders.

6. $3 \sqrt{\frac{\text{Wing Area}}{\text{Weight}}}$ is a "constant" (about 4) in Bats, Birds and Insects but is subject to some variation, particularly in Insects.

7. The difference between the maximum and minimum limits of variation of this "constant" is about the same in each Order and Sub-Order, but the actual limits are figuratively greater in high than low relative Wing Area Orders.

8. Strong, swift, direct fliers among Birds have the lowest relative Wing Areas and fewest light species.

Indifferent German prevents me doing full justice to Mullenhoff's remarkable article and it is unfortunate that it should be so inaccessible for there is a great deal more in it dealing with other aspects of flight.

Finally I have to thank Dr. D. L. MacKinnon of King's College for assistance and advice, Dr. D. M. S. Watson of University College and Prof. H. Levy of The Imperial College of Science and Technology, London, for kindly considering the Mechanical and Mathematical possibilities of this article. In particular my thanks are due to Prof. J. S. Huxley for his constant encouragement and advice and for suggesting a method of procedure without which this paper would not have reached a satisfactory conclusion; I feel fortunate in having had such an abundance of material and in having had him to direct operations.

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STRIGIFORMES.—(OWLS.)

	Sex	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean Wt. of group.	$\sqrt[3]{\frac{W. A.}{Wt.}}$	$\frac{\sqrt[3]{W. A.}}{\sqrt[3]{Wt.}}$ of group.
Scops lempiji Horsf.	♀	71	71	453	453	6.4	6.4	5.1	5.1
Athene noctua Scop	♂	117		369		3.1		3.9	
Ninox scutulata Rafles	♂	177	147	503	431	2.8	3	3.9	3.9
Ketupa ketupa Horsf.	♂	684	684	1958	1958	2.9	2.9	5	5
Huhua orientalis Horsf.	♂	850	850	2216	2216	2.6	2.6	4.9	4.9

LARIFORMES.—(GULLS & TERNS.)

Sterna minutus sinensis Gm.	♂	42	42	210	210	5	5	4.1	4.1
Sterna melanauchen Temm.	♀	92		342		3.7		4.1	
Anous stolidus L.	♀	156	124	748	545	4.4	4	5	4.5
Sterna bergii Licht.	♂	252	252	800	800	3.1	3.1	4.5	4.5

PELICANIFORMES.

Fregata ariel Gould	♂	750		2021		2.7		4.9	4.9
Sula sula	♀	793	771	1954	1987	2.4	2.5	4.8	
Plotus melanogaster	♂	1360	1360	1941	1941	1.5	1.5	3.8	4.3

ARDEIFORMES.—(HERONS.)

Ardetta sinensis	♂	92		260		3		3.6	
Ardetta cinnamomea Gm.	♂	156		468		3		3.9	
Butorides javanica Horsf.	♀	184		591		3.2		4.2	
Dupetor flavicollis Lath	♂	205		963		4.7		5.2	
Ardeola bacchus Bp.	♂	205	168	915	639	4.4	3.6	5.1	4.4
Egretta eulophotes	♀	311		924	924	3		4.5	
Gorsachius melanolophus	♂	307	309	767		2.5	2.75	4	4.2
Garzetta nigripes Temm.	♂	453	453	1192	1192	2.6	2.6	4.5	4.5
Mesophoyx intermedia Wagl.	♀	708	708	2086	2086	2.9	2.9	5	5

ACCIPITRIFORMES.—(EAGLES, HAWKS.)

Microheirax fringillaris Drap.	♂	34		133		4		3.5	4.5
Microheirax fringillaris Drap.	♀	57	45.5	151	142	2.7	3.3	3.2	3.3
Accipiter virgatus	♀	155	138	468	460	3	3.15	4	
Accipiter virgatus	♂	120		449		3.3		4.3	4.1
Astur trivirgatus Temm.	♀	340		774		2.2		4	
Baza jerdoni Blyth	♂	390	365	1457	1115	4	3.1	5.2	4.6

ACCIPITRIFORMES—(EAGLES, HAWKS.)—Continued.

	Sex	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean Wt. of group.	$\sqrt{W. A.}$ $\sqrt{Wt.}$	$\sqrt[3]{W. A.}$ $\sqrt[3]{Wt.}$
Baza jerdoni Blyth	♂	474		1593		3.3		5.1	
Circus spilonotus Kaup	♂	510		1700		3.3		5.1	
Falco peregrinus Tunst.	♂	510	498	1087	1460	2.1	2.9	4.1	4.6
Haliastur intermedius Gurney	♂	570		2383		4.2		5.8	
Macaerhampus alcinus Westernmann	♂	595	582	977	1680	1.5	2.9	3.7	4.7
Spilornis cheela bacha Daud	♂	722		2044		2.8		5.1	
Circus spilonotus Kaup	♂	728	725	2295	2169	3.1	2.9	5.7	5.4
Poliaetus humilis Mull & Schleg.	♂	850		1928		2.2		4.6	
Falco peregrinus Tunst.	♂	906		1406		1.5		3.8	
Spizaetus limnaetus Horsf.	♀	1048	933	2552	1962	2.1	2	5	4.4
Haliaetus leucogaster Gm.	♂	1925	1925	4845	4845	2.5	2.5	5.7	5.7
Poliaetus ichthyactus	♀	3265	3265						

PASSERIFORMES.

Hirundo gutturalis Scop.	♂	17		106		6		3.1	
Rhipidura javanica Sparrm.	♂	14		121		8.6		4.5	
Purnesia supercilialis Salv.	♂	11		45		4		3	
Prionochilus xanthopygius Salv.	♂	7		54		7.7		3.8	
Orthotomus cinerascens Blyth	♂	7		35		5		3	
Pratincola rubicola L.	♂	11		67		6		3.6	
Aegithina viridis Bp.	♂	14	11.5	69	71	5	6	3.4	3.5
Chloropsis viridinucha Sharpe	♂	21		133		6.3		4.1	
Anthus obscurus Lath.	♂	24		110		4.5		3.6	
Iole sp.	♂	35		121		3.4		3.3	
Lalage terat Bodd.	♀	28		140		5		3.9	
Pycnonotus plumosus Blyth	♀	28		125		4.4		3.6	
Artamus leucogaster Valenc.	♀	42	30	203	140	4.8	4.7	4.1	3.7
Dissemurus paradiseus L.	♂	68		305		4.5		4.2	
Petrophila manila Bodd	♂	57		195		3.4		3.6	
Pitta granatina Temm.	♂	57		185		3.2		3.5	
Irena criniger	♂	64		224		3.5		3.7	
Platylophus coronatus	♀	88	61.5	321	246	3.6	3.6	3.7	3.7
Pityriasis gymnocephala Temm.	♂	127	127	433	433	3.4	3.4	4.1	4.1
Platysmurus aterrimus Temm.	♀	198	198	555	555	2.8	2.8	4	4
Eulabes javensis Osb.	♀	312		603		1.9		3.6	
Corvus compiler Rich.	♀	454	383	912	757	2	2	3.9	3.7

PICIFORMES.

Macropteryx comata Temm.	♂	21		110		5		3.8	
Cypselus subfurcatus Blyth	♀	28		121		4.3		3.6	
Alcedo ispida bengalensis	♀	28	26	102	111	3.6	4.3	3.3	3.6

PICIFORMES.—Continued.

	Sex	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean Wt. of group.	$\sqrt{W. A.}$ $\sqrt{Wt.}$	$\sqrt[3]{W. A.}$ $\sqrt[3]{Wt.}$
Halcyon chloris Bodd.	♂	71		254		3.6		3.8	
Chotorea mystacophanes Temm.	♂	71		200		2.8		3.4	
Caloramphus fuliginosus Temm.	♂	42		126		3		3.2	
Calypomena viridis Raffl.	♂	57		182		3.2		3.5	
Gauropicoides rafflesi Vig.	♂	71		292		4.1		4	
Nyctiornis amicta Temm.	♂	64	63	305	226	4.7	3.6	4.3	3.7
Halcyon concretus Temm.	♂	85		255		3		3.6	
Chrysophlegma mallacense Lath.	♂	99		299		4.1		4	
Pyrotrogon kasumba Raffl.	♂	92		254		2.7		3.5	
Centropus javanicus Dumont	♂	149		428		2.9		3.9	
Zanclostomus javanicus Horsf.	♂	205	126	500	347	2.4	2.8	3.8	3.7
Centropus sinensis Steph.	♀	316		1000		3.1		4.6	
Thriponax javensis Horsf.	♀	368	342	1065	1032	3	3	4.5	4.5
Alophonerpes pulverulentus Temm.	♂	482		927		1.9		3.7	
Carpoccyx radiatus Temm.	♂	482	482	974	950	2	2	4	3.8
Anthracoceros malayanus Raffl.	♂	964		1732		1.8		4.2	
Anthracoceros convexus Temm.	♂	1070	1017	1941	1836	1.8	1.8	4.3	4.2
Buceros rhinoceros L.	♂	2722		3072		1.1		4	
	♀	2353	2537	3126	3100	1.3	1.3	4.2	4.1
Rhinoplax vigil Forst.	♂	3175	3175	5080	5080	1.6	1.6	4.8	4.8
Caprimulgus macrurus		64		393		6.8		4.9	
Chaetura gigantea Temm.	♀	184		241		1.3		2.7	
Batrachostomus auritus		205		1396		6.1		6.3	

COLUMBIFORMES.—(PIGEONS.)

Geopelia striata	♀	50	50	148	148	3	3	3.3	3.3
Spilopelia tigrina Temm.	♂	120		331		2.7		3.6	
Osmotreron vernans L.	♂	106		231		2.1		3.2	
	♀	135	120	334	300	2.5	2.5	3.5	3.4
Columba palumbus L.		397		774		2		3.8	
Myristicivora bicolor Scop.	♂	454		654		1.4		3.3	
Butorion capelli Temm.	♂	454	435	611	746	1.3	1.7	3.2	3.4
Carpophaga aenea L.	♂	567	567	862	862	1.5	1.5	3.5	3.5

RALLIFORMES.—(RAILS.)

Hypotenidia striata L.		135		264		2		3.1	
Amaurornis phoenicurus Forst.	♂	177		464		2.6		3.8	
Gallicrex cinerea Lath.		198		446		2.2		3.6	
Rallus aquaticus L.	♂	127	159	259	358	2	2.2	3.2	3.4
Gallinula chloropus L.		354		393		1.1		2.8	
Gallicrex cinerea Lath.		397	375	653	525	1.6	1.4	3.4	3.1

CHARADRIIFORMES.—(PLOVERS.)

	Sex	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean Wt.	Mean of group.	$\sqrt{W. A.}$	$\sqrt{Wt.}$	Mean $\sqrt{W. A.}$	Mean $\sqrt{Wt.}$
Rhyacophilus glareola Gm.	♂	54		205		3.8						
Tringoides hypoleuca L.	♀	57		173		3						
Glareola orientalis Leach	♀	71	60	304	227	4.3	3.7		4.2		3.8	
Capella stenura Kuhl	♀	127		231		1.9			3			
Heteractitis brevipes Vieill.		117		292		2.6			3.5			
Capella coelestis L.	♂	116		255		2.2			3.3			
Limnecoryptes gallinula L.	♂	93		163		1.7			2.8			
Ochodromus geoffroyi Wagl.	♂	85		192		2.2			3.1			
Charadrius dominicus Mull.	♂	106	107	341	246	3.2	2.3		3.9		3.5	
Numenius variegatus Scop.	♀	510	510	661	661	1.3	1.3		3.2		3.2	
Numenius arquata L.	♀	808	808	1028	1028	1.2	1.2		3.4		3.4	

ANSERIFORMES.—(DUCKS & GEESE.)

Quercedula crecca	♀	311	311	424	424	1.4	1.4		3		3	
Mareca penelope L.	♀	680		675		1			2.9			
Dafila acuta L.	♂	624	652	882	789	1.4	1.2		3.5		3.2	
Anas boschas	♀	1048	1048	1091	1091	1	1		3.2		3.2	
Branta bernicla L.	♂	1474	1474	1260	1260	.86	.86		3.1		3.1	
Anser cinereus L.	♀	3232	3232	2524	2524	.8	.8		4.2		4.2	

GALLIFORMES.—(GAME BIRDS.)

Excalfactoria lineata Scop.	♂	50	50	95	95	1.9	1.9		4.2		4.2	
Perdix cinerea L.	♀	283		407		1.4			3			
Melanoperdix nigra Vig.	♂	248		386		1.5			3.1			
Rollulus roulroul Scop.	♂	269	266	328	373	1.2	1.3		2.8		3	
Acomus pyronotus Gray	♂	922		1303		1.3			3.6			
Acomus pyronotus Gray	♀	907		1090		1.2			3.4			
Phasianus colchicus	♀	907	935	831	1074	.9	1.1		3		3.3	
Argusianus grayi	♂	1564		3623		2.3			5.2			
Lophura nobilis Scl.	♂	1843	1843	1595	1595	.86	8.6		3.3		3.3	

MAMMALS.

Iomys thomsoni		113		231.6		2			3.4			
Galeopterus volans		1034		1427		1.4			3.8			

REPTILES.

Draco sp.		1.92		9		4.8			2.5			
Do.		3.7		19.4		5.2			2.8			
Do.		6.2		33.6		5.4			3.1			

CHEIROPTERA.—(BATS.)

	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean W. A. Wt. of group.	$\sqrt{W. A.}$ $\sqrt{Wt.}$	$\sqrt{W. A.}$ $\sqrt{Wt.}$
<i>Vesperugo abramus</i>	5.5		62		11.3		4.5	
<i>Myotis capaccini</i>	6		51		8.5		3.9	
<i>Vesperugo pipistrellus</i>	6		55		9		4.1	
<i>Myotis mystacinus</i>	6		63		10.5		4.3	
<i>Thyroptera tricolor</i>	6		76		12.6		4.8	
<i>Miniopterus australis</i>	6.5		74.7		11.5		4.6	
<i>Rhinolophus hipposiderus</i>	8		86		10.7		4.6	
<i>Myotis emarginatus</i>	9		93		10.3		4.6	
<i>Macrotus waterhousii</i>	9.5		116		10.7		5.1	
<i>Vespertilio muricola</i>	10.2		94.6		9.2		3.8	
<i>Nyctimene brasiliensis</i>	10		81.5		8.1		2.8	
<i>Plecotus auritus</i>	10		78		7.8		4.1	
<i>Eomops whitleyi</i>	12		67.1		5.6		3.6	
<i>Miniopterus schreibersii</i>	12.5	8.3	119.3	80	9.5	9.6	4.7	4.3
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<i>Nycteris thebaica</i>	16.5		138		8.4		4.6	
<i>Rhinolophus mehelyi</i>	16.5		126		7.6		4.4	
<i>Miniopterus dasythrix</i>	17		118.2		7		4.2	
<i>Molossus obscurus</i>	18.5		83		4.5		3.4	
<i>Carollia brevicauda</i>	18	17.3	134	119.8	7.4	7	4.4	4.2
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<i>Molossus nigricans</i>	20.5		125.2		5		4.1	
<i>Scotophilus nigrata</i>	23.5		153		6.5		4.3	
<i>Rhinolophus ferrum equinum</i>	23		178		7.7		4.7	
<i>Mystacina velutina</i>	24.5		108		4.4		3.6	
<i>Nyctimene papuans</i>	25	23.3	155	143.8	6.1	6.1	4.2	4.2
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<i>Rhinolophus trifolius</i>	28.3		165.3		5.8		4.2	
<i>Taphozous longimanus</i>	28.3		117		4.1		3.5	
<i>Taphozous longimanus</i>	28		154		5.5		4.1	
<i>Cynopterus brachyotis</i>	31		234		7.5		4.6	
<i>Nyctinomus limbatus</i>	33		134.6		7.5		3.6	
<i>Molossus nasutus</i>	37.5		135		3.3		3.5	
<i>Myotis myotis</i>	38.5		246		6.4		4.6	
<i>Hipposideros diadema</i>	42.5		350		8.2		5.2	
<i>Cynopterus brachyotis</i>	45		226		5		4.2	
<i>Phyllorhina diadema</i>	57		317		5.6		4.6	
<i>Epomorphus minor</i>	67	39.2	218	204.4	3.3	5.2	3.6	4.1
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<i>Pteropus sp.</i>	311		1131		3.6		4.9	
<i>Eidolon helvum</i>	377		838		2.1		3.9	
<i>Pteropus sp.</i>	470		1482		3.2		4.9	
<i>Pteropus sp.</i>	500		1659		3.3		5.1	
<i>Pteropus edulis</i>	697	471	1291	1277	1.9	2.7	4	4.5

4.2

RHOPHALOCERA.—(BUTTERFLIES.)

	Fam.	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean Wt. of group.	W. A. Wt.	Mean Wt. of group.	W. A. Wt.
<i>Eoxylides tharis</i> Hubn.	N	.04		7		175			7.7	
<i>Terinas clarrissa</i>	N	.045		17		377			11.5	
<i>Neptis hylas</i> L.	N	.045		9.4		208			8.6	
<i>Mycalesis medus</i>	N	.05		10.5		210			8.8	
<i>Arhoparia lycaenaria</i>	L	.055		6.6		120			6.7	
<i>Ideopsis d. daos</i> Boid	N	.05		44.5		892			18	
<i>Athymia idita</i> Moore	N	.06	.05	15.8	14.5	263	320	10	10.2	
<i>Euthalia godarti vacillaria</i> Butl.	N	.11		13		127			7.5	
<i>Dercas gobrias</i> Hew.	P	.12		22		183			9.4	
<i>Telicota bambusae</i> Moore	H	.11		15		137			8.1	
<i>Junonia atlites</i>	N	.12		16		133			8.1	
<i>Cirrochroa orissa orissides</i> Fursth.	N	.13		21.8		106			9.2	
<i>Faunus stomphax</i> West.	A	.15		20.8		140			8.5	
<i>Danaida aspasia shelfordi</i> Fursth.	N	.158		21.9		138			8.7	
<i>Terinas clarrissa</i> Boisd.	N	.175	.184	24	19.3	137	138	8.7	8.5	
<i>Hasora chuza</i> Hew.	H	.2		9.4		47			5.2	
<i>Danaida elotis</i> Cr.	N	.195		27.8		142			9.1	
<i>Melanitis leda</i> L.	N	.214		23.5		110			8.1	
<i>Hestia lynceus</i> Drury	N	.2		52.8		264			12.4	
<i>Danaida similis</i>	N	.2		22.6		113			8.1	
<i>Papilio demolion</i> Cr.	P	.22		29.3		133			8.9	
<i>Papilio evemon arthea</i> Jord.	P	.25		19.5		78			7.5	
<i>Euploea mulciber portea</i> Fursth.	N	.23	.213	27.6	26.5	120	126	8.6	8.4	
<i>Euthalia godarti limbata</i> Fursth.	N	.33		13.2		40			5.2	
<i>Amathusia phidippus</i> L.	N	.29		71.4		247			12.6	
<i>Euploea crameri</i> Lucas	N	.31		33		110			8.5	
<i>Euploea diocletianus</i> Fab.	N	.31		31.7		102			8.3	
<i>Cynthia erota erotella</i> Butl.	N	.32		27		84			7.6	
<i>Cynthia erota</i>	N	.325		37.4		115			8.9	
<i>Amnosia decora baluana</i> Fursth.	N	.39		30.5		78			7.5	
<i>Euploea crameri</i> Lucas.	N	.395	.332	36.5	35.1	92.4	108	8.2	8.3	
<i>Papilio neptunus</i> Guer.	P	.4		27.5		69			7.2	
<i>Papilio memnon</i> L.	P	.43		51.1		120			9.5	
<i>Nepthis leucothoe</i>	N	.47		13		28			4.6	
<i>Papilio helenus</i>	P	.44	.436	55.1	38.7	124	85	9.7	7.7	
<i>Precis hedonia</i>	N	.6		15		25			4.6	
<i>Papilio brookeana</i>	P	.735	.667	65.6	40.3	90	57	8.9	6.7	
<i>Adolias dirtea</i> Fab.	N	.85		30.5		36			5.8	
<i>Terias harina</i>	N	.9		15		16.6			4	
<i>Kerana diocles</i>	L	.98		7.4		7.6			2.7	
<i>Thaumantis aliris</i> Westw.	D	1.405	1.034	105	39.5	77	34.3	4.2	4.2	

HETEROCERA.—(MOTHS.)

	Fam.	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Wt.	Mean Wt. of group.	$\sqrt{W. A.}$	$\sqrt[3]{W. A.}$	Mean $\sqrt[3]{W. A.}$ of group.
<i>Sameodes cancellalis</i> Zell.	G	.016		1		62			3.9		
<i>Boccharis telphusalis</i> Walk.	P	.017		1.5		90			4.7		
<i>Stalagmia guttaria</i> Boisd.	H	.02		7.5		375			10		
<i>Trichaster apicalis</i> Walk.	S	.03		1.1		36			3.3		
<i>Panaetha maculifera</i> Walk.	P	.08		7.11		90			6.1		
<i>Urapteroides asthemia</i> Guer.	E	.092	.042	14.2	5.5	154	134		8.3	6	
<i>Sylepta lunalis</i>	G	.112		3.4		30			3.8		
<i>Vitessa pyraliata</i> Wlk.	P	.12		5.9		49			4.9		
<i>Hippocystus boerharia</i> Fab.	S	.28		4.8		17			3.3		
<i>Milionia basalis sharpei</i> Butl.	A	.27		21		80			7.1		
<i>Macroglossum heliophiala</i> Boisd.	S	.3		4.4		14			3.3		
<i>Macroglossum insipida</i> Butl.	S	.31		3.8		12			2.8		
<i>Macroglossum insipida</i> Butl.	S	.31		5		16			3.3		
<i>Trabala innorata</i> Moore		.314	.252	17	8.1	54	46	6	4.3		
<i>Deilemera tripunctaria</i> L.	A	.505		7.9		15			3.5		
<i>Ophiura fulvotaenia</i> Guer.	G	.58	.542	17.3	12.5	30	22.5	5	4.2		
<i>Thereta suffusa</i> Wlk.	S	.8		12.11		15			3.5		
<i>Herse convolvuli</i> L.	S	.83		13		56			3.8		
<i>Theretra nessus</i>	S	.84		14.5		17			4		
<i>Anthera jana fusca</i> Roth.	Sat.	1.11	.897	45.8	21.8	41	22.1	6.5	4.5		
<i>Deilephila hyponotus</i> Cran.	S	1.97		25.1		12.7		4			
<i>Attacus atlas</i>		1.29		101		78		9.2	6.6		
<i>Emmodia pudeus</i>		2.45		33.5		13.6		4.3			
<i>Attacus atlas</i>		2.97		139		47		8.2	6.2		

DRAGONFLIES.—(NEUROPTERA.)

	L	.06		5.9		98		6.2			
		.06		8.9		148		7.4			
		.072		4.8		67		5.2			
		.07		8.1		115		6.9			
<i>Trithemis aurora</i> Burm.	L	.09		6.8		70		5.8			
<i>Nannophya pygmaea</i> Camb.		.02		1.9		95		5			
Do.		.02		1.7		85		4.8			
<i>Brachydiplax chalybea</i> Brauer.		.03		4.9		163		7.1			
		.04	.05	3.4	5.3	85	103	5.4	6		
<i>Trithemis aurora</i> Burm.		.11		7.9		72		5.8			
		.11		6.2		56		5.2			
		.115		8.1		70		5.8			
		.13		8.6		66		5.8			
<i>Neurothemis</i> Sp.		.13		7.2		55		5.3			
<i>Neurothemis sophronia</i>		.16		9.3		58		5.6			
		.17	.132	16.8	9.1	99	68	7.4	5.8		

DRAGONFLIES.—(NEUROPTERA).—Continued.

Fam.	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Wt.	W. A.	Mean of group.	$\sqrt{W. A.}$	$\sqrt[3]{Wt.}$	Mean of group.
Rhyothemis phyllis Salz.	.24		9.3		40				6.4		
Orthetrum sabina Ill.	.25		15.8		63						
Do.	.27	.25	12	12.3	44	49	5.3	5.8			
Cratilla metallica Brewer	L .432		15		37		5.1				
Do.	.48	.456	7.1	11	15	26	3.4	4.2			

PHASMIDS, MANTIDS, STICK-INSECTS.

	.1		7.7		77		5.9				
	.11		6		54.5		5.1				
	.19	.13	9	7.6	47.5	59.6	5.2	5.4			
Marmessoides marmessus Westw.	.213		10.3		50.7		5.3				
Do.	.25	.231	11.7	11	46.8	48.7	5.4	5.3			
Anauroidea Sp.	.325	.325	11.9	11.9	37	37	5	5			
Heirodula dayaka Westw.	1.47	1.47	38.7	38.7	26.3	26.3	5.4	5.4			

BLATTIDAE.—(COCKROACHES.)

Homalosilpha	.198	.198	3.6	3.6	18	18	3.2	3.2			
Homalosilpha ustata Burm.	.65		11		17		3.8				
Aspidopsis wallacei	.65	.65	13.88	12.4	20	18	4.2	4			
Periplaneta lata	1.157		12.3		14.5		3.3				
Pseudophoraspis nebulosa Burm.	1.29	1.22	18.7	15.5	12.7	13.6	2.5	2.9			
Paranauphoeta lyrata Burm.	1.87		4.3		2.3						
Panesthia javanica	2.32	2.09	17.08	11	7.3	4.8	3.1				

GRYLLACRIDAE.—(GRASSHOPPERS.)

Discotettix belzebuth Sarv.	.15		1.7		11.3		2.4				
	.15		2.9		20		3.1				
Gryllotalpa Sp.	.17	.156	2.3	2.6	13	14.7	2.7	2.7			
Traulia Sp.	.21		1.94		9.2		2.3				
	.242		6.6		27		4.1				
	.255		3.6		13.4		2.9				
Traulia sanguipennis Stal.	.29		3.1		10.3		2.6				
	.29	.256	3.75	3.76	12	14.4	2.9	2.9			
Phlaeoba antennata Br.	.39		4		10		2.7				
	.42	.405	3.2	3.6	8	9	2.7	2.5			
Traulia dimidiata De Haan	.63		12.8		20		4.1				
Traulia sanguipennis	.71		5.7		8		2.6				
Peitharcireus Sp.	.78		5.3		7		2.5				
Cantatops luteolus Serv.	.8		4.6		5.7		2.3				
	.88	.79	6.8	5.6	7.7	7.1	2.7	2.5			

GRYLLACRIDAE.—(GRASSHOPPERS.)—Continued.

Fam.	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Wt.	Mean W. A. of group.	$\sqrt{W. A.}$	$\sqrt[3]{W. A.}$	Mean $\sqrt[3]{W. A.}$ of group.
<i>Cyrtacanthacris succintum</i> L.	.97		12.9		13			3.6		
Do.	.99	.98	13.7	13.3	14		13.5			
<i>Gastrimargus marmoratus</i> Thurnb.	1.81	1.8	17.7	17.7	9.8	9.8	3.4	3.4		
	14.8		74.5		5		3.5			

CICADAS.

<i>Heuchys</i> Sp.	.28	.28	3.6	3.6	13	13	2.9	2.9		
<i>Ayesha spatulata</i> Stal.	.93	.93	8	8	8.6	8.6	3.6	3.6		
<i>Tacua speciosa</i>	4.93	4.73	37.8	37.8	8	8	3.6	3.6		
<i>Pomponia imperator</i>	9.01	9.01	55	55	6.1	6.1	3.5	3.5		

COLEOPTERA.—(BEETLES.)

<i>Aspidomorphus sarawacensis</i> Speth.	.06		1.5		25		3.1			
<i>Episcapha 4-maculata</i> Erot.	.067	.063	.9	1.2	13.4	19.2	2.3	2.2		
<i>Cicindela aurulenta</i> Fab.	Cic.	.083	.083	1.1	1.1	13	13	2.4	2.4	
<i>Euphitrea wallacei</i> Bal.	Chrys.	.11		1.3		11.8		2.3		
<i>Porrorrhynchus marginatus</i> Cast. Gyr.		.11		1.1		10		2.2		
		.108		1.03		9.5		2.1		
<i>Ceragria gigas</i> Cast.	Lag.	.107		1.1		10		2.2		
<i>Astathes posticalis</i> Thoms.	Cer.	.17		1.03		9.5		2.1		
<i>Xenocerus russatus</i> Jord.		.18		1		5.5		1.7		
		.18		1.1		6		1.8		
<i>Hemiops crassa</i>	Elat.	.19	.144	1.5	1.14	8	8.3	2.1	2.2	
<i>Achthomus bihamatus</i> Furm.		.2		1.1		5.5		1.8		
<i>Litta ruficeps</i> Ill.		.21		1.03		5		1.7		
<i>Cereopsis dictator</i> Pasc.		.26		1.03		4		1.6		
<i>Rhytidodera simulans</i> White		.315		2.97		9.4		2.5		
<i>Anomala cuprescens</i> Weide	Rut.	.348		2.2		6.6		2.1		
<i>Aplosomyx albicornis</i> Fab.	Chrys.	.358	.28	2.7	1.82	7.6	6.2	2.3	2.3	
<i>Catharsius molossus</i>	Luc.	.61		5.1		8.3		2.6		
<i>Setenis coracina</i> Knock	Ten.	.46		3.2		7		2.3		
<i>Macronota diardi</i> G. & P.	Luc.	.8	.62	3.6	3.9	4.5	6.6	2.	2.3	
<i>Mormolyce phyllodes</i> Hagenb.	Car.	.905		9		9.83		3.1		
<i>Palimna tessellata</i>	Long.	.91	.907	3.6	6.3	4	6.9	1.9	2.5	
<i>Oryctes</i> Sp.	Lam.	1.055		5.4		5		2.3		
<i>Cyclommatus tarandus</i>	Lam.	1.252		6.9		5.5		2.4		
<i>Leucopholis stauringeri</i>	Lam.	1.27		7.5		6		2.5		
<i>Aceraius laevicollis</i>	P	1.515		5.1		3.3		1.9		
<i>Leucopholis emarginata</i>	Lam.	1.64		5.1		3		1.9		
<i>Neocerambyx alexis</i> Pasc.	Cer.	1.75	1.41	7.1	6.2	4	4.4	2.2	2.2	

COLEOPTERA.—(BEETLES.)—Continued.

	Fam.	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Wt.	Mean W. A. of group.	$\sqrt[3]{\text{W. A.}}$	$\sqrt[3]{\text{Wt.}}$	Mean $\sqrt[3]{\text{W. A.}}$ of group.
<i>Calcothea auripes</i> Westw.	Cet.	2.65		9.6			3.6		2.2		
<i>Agestrata chinensis</i>	Cet.	2.945	2.79	11.8	10.7		4	3.8	2.4	2.3	
<i>Xylotrupes gideon</i>	Lam.	3.44		16.4			4.8		2.6		
		3.96	3.7	13.7	15		3.7	4.2	2.3	2.4	
<i>Xylotrupes gideon</i>	Lam.	6.25	6.25	20.8	20.8		3.3	3.3	2.4	2.4	
<i>Trichogomorphus milon</i>		7.292		15			2		2		
<i>Aeolistes aurifaber</i>	Long.	7.892	7.592	25.8	20.4		3.2	2.6	2.5	2.2	

HEMIPTERA.—(BUGS.)

<i>Leptocoris costalis</i> H. & S.		.02		.77			38.5		3.2		
<i>Cosmolestes picticeps</i>	R	.04		.38			9.5		1.8		
<i>Velitra rubropicta</i> A. & S.	R	.053		.77			14.5		2.3		
<i>Homaloceros limbipennis</i>	R	.065		1.8			27		3.3		
<i>Aulacophora flavomarginata</i> Duv.		.06		.9			15		2.3		
<i>Colobesthes falcata</i> Guer.	F	.08		.77			9.6		2		
<i>Velinus nigrigenus</i> Serv.	R	.09	.058	.9	.9	10	18.1	3.2	2.7		
<i>Velinus nigrigenus</i> Serv.	R	.12		1.2					2.2		
Do.		.12		1			8.3		2		
<i>Sycanus vicillus</i> Stal.	R	.12		1.3			10.2		2.3		
<i>Velitra rubropicta</i> A. & S.	R	.15		2			13.3		2.6		
<i>Eulyes amoena</i> Fab.	R	.18		2.2			12		2.6		
<i>Mictis filicornis</i> Wlk.	Cor.	.19	.145	1.4	1.5	7.4	10.2	2	2.3		
<i>Chrysochoris</i> Sp.	P	.232		1.5		6.4		2			
<i>Urusa crassa</i> Walk.	P	.2		.9		4.5		1.6			
<i>Chrysochoris</i> Sp.		.204	.212	2	1.46	9.8	6.9	2.4	2		
<i>Mictis macra</i>	R	.31	.31	2.2	2.2	7	7	2.2	2.2		
<i>Aphana farinosa</i> Web.		.44		7.7		17.5		3.6			
		.8		9		11.22		3.2			

HYMENOPTERA.—(BEES, WASPS.)

		.02		.5		25.		2.6			
		.034		1		30		3			
<i>Heniscopilus nigropectus</i> Camb.		.04		1.5		37.5		3.5			
<i>Hemipalpa rugosa</i> De Quer.		.05		1.3		26		3.1			
<i>Eumenes arcuata</i>		.09		1.3		14.4		2.5			
<i>Vespa dorylloides</i> Sauss.		.09	.054	1.3	1.15	14.4	24.5	2.5	2.8		
<i>Salix sericosoma</i> Sm.		.136		1.8		13		2.6			
<i>Anthophora zonata</i> L.		.13		1		7.7		1.9			
<i>Vespa</i> Sp.	V	.145		1.4		10		2.2			
<i>Vespa dorylloides</i> Sauss.	V	.19		1.9		10		2.4			
<i>Polistes sagittarius</i> Sauss.	V	.2		2.3		11.5		2.6			
<i>Sphex aurulentus</i>		.22		2.2		10		2.4			
<i>Vespa bellicosa</i> Sauss.	V	.26	.15	.9	1.6	3.5	9.4	3.45	2.5		

HYMENOPTERA.—(BEES, WASPS.)—Continued.

Fam.	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	Wt. W. A.	Mean Wt. of group.	$\sqrt{W. A.}$	$\sqrt[3]{Wt.}$	Mean $\sqrt{W. A.}$	$\sqrt[3]{Wt.}$ of group.
<i>Scolius opalina</i> Gm.	V .32		1	3			1.4			
<i>Salix auocericeus</i> Guer.	V .326		1.4	4.2			1.72			
<i>Vespa bellicosa</i> Sauss.	V .38	.342	1.1	1.2	3	3.4	2.9	2		
<i>Xylocopa collaris</i>	V .412		2	4.8			1.9			
<i>Vespa bellicosa</i> Sauss.	V .44	.426	1.1	1.55	2.5	3.6	1.37	1		
<i>Salix anthracinus</i> Sm.		.543	5.1	9.4			6			
<i>Xylocopa linyorum</i> Fab.	V .61		2.3	3.7			1.78			
<i>Xylocopa collaris</i> Lep.	V .675		1.9	2.8			1.95			
<i>Vespa cincta</i> Fab.	V .627	.637	2.45	2.32	3.9	3.5	2.5	2.1		
<i>Xylocopa latipes</i> Drury	V 1.62	1.62	5.4	5.4	3.3	3.3	1.9	1.9		

MULLENHOFF'S MEASUREMENTS.

STRIGIFORMES.—(OWLS.)

<i>Athene passerina</i>	129		442		3.4		4.1			
<i>Asio otus</i>	275		1010		3.7		4.9			
	232		1102		4.7		5.4			
	237	227	1154	927	4.8	4.1	5.5	5		
<i>Strix flammea</i>	400		1190		2.9		4.7			
<i>Asio brachyotus</i>	370	385	1230	1210	3.3	3.1	4.9	4.8		
<i>Syrnium aluco</i>	1777	1777	3020	3020	1.7	1.7	4.5	4.5		

ACCIPITRIFORMES.—(HAWKS.)

<i>Falco tinnunculus</i>	129		642		5		5			
<i>Do. minor</i>	147		546		4		4.4			
<i>Do. kobeck</i>	282		970		3.4		4.7			
<i>Accipiter nisus</i>	♀ 260		800		3		4.4			
	275		690		2.5		4.3			
	150		496		3.3		4.2			
	♀ 250		710		2.8		4.2			
	♂ 266	222	866	715	3.2	3.4	4.6	4.4		
<i>Falco subbuteo</i>	510		1684		3.3		5			
<i>Do. migrans</i>	620	565	1904	1794	3	3.1	5.1	5		
<i>Astur palumbarius</i>	800		1520		1.9		4.2			
<i>Buteo lagopus</i>	862		2280		2.7		5			
	890		2020		2.2		4.6			
	900		2220		2.5		4.9			
	750		2420		3		5.4			
	1000		2359		2.3		4.8			
	1000		2445		2.4		4.9			
	1000	900	2510	2221	2.5	2.4	5	4.8		

ACCIPITRIFORMES.—(HAWKS.)—Continued.

Sex	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean Wt. of group.	$\sqrt{W. A.}$ $\sqrt{Wt.}$	Mean $\sqrt{W. A.}$	$\sqrt{Wt.}$ of group.
Pandion haliaetus	1950		3142		1.5		4.5		
Vultur cinereus	1535		3233		2.1		4.9		
sp.	1664	1716	3131	3169	1.9	1.8	4.7	4.7	
Pandion haliaetus	3055	3055	5852	5852	1.9	1.9	5.2	5.2	
Haliaetus albicilla	5000		7973		1.6		5.2		
	4500		7000		1.5		5		
	4900	4800	6200	7057	1.3	1.4	4.6	4.9	

LARIFORMES.—(GULLS.)

Sterna minuta	53		185		3.4		3.6		
hirundo	116		427		3.6		4.2		
cantiaca	174		660		3.8		4.6		
Larus ridibundus	197	145	662	483	3.4	3.6	4.4	4.2	
canus	355	355	1118	1118	3.1	3.1	4.7	4.7	
Do.	642		1748		2.7		4.8		
Do.	720		1742		2.4		4.6		
Do.	785		1920		2.4		4.7		
argentatus	565		1082		1.9		4		
Do.	842	710	1150	1528	1.4	2.1	4.1	4.5	
	1035		2380		2.3		4.8		
	1080		1936		1.8		4.3		
	1225	1113	1880	2065	1.5	1.8	4	4.3	

PASSERIFORMES.

Parus coeruleus	9.1		.28		3		2.5		
Fringilla spinus	10.1		50		5		3.3		
Parus major	14.5		62		4.3		3.2		
Fringilla cannabina	19		55		3		4.3		
Hirundo urbica	18		120		6		4.1		
Hirundo rustica	15.7		135		8.6		4.6		
	19.4		114		6		3		
	18		110		6		4		
	20	15.9	134	90	6.7	5.4	4.3	3.7	
Passer domesticus	28.3		76		2.7		2.8		
	34		82		2.4		4		
Lanius excubitor	31		144		4.6		3.8		
Alauda cristata	36.8		202		5.5		4.2		
arvensis	32		150		4.9		3.8		
Emberiza gubernatrix	25.5	31.3	100	126	4	4	3.4	3.6	
Saxicola oenanthe	56		125		2.2		2.9		
Emberiza garrula	60		88		1.4		2.4		
Turdus merula	94		230		2.4		3.3		
♂	88.8		212		2.4		3.2		
	74		168		2.3		4.1		

PASSERIFORMES.—Continued.

	Sex	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A. Wt.	Mean Wt. of group.	$\sqrt{W. A.}$ $\sqrt{Wt.}$	$\sqrt{W. A.}$ $\sqrt{Wt.}$
<i>Sturnus vulgaris</i>		78		202		2.6		3.3	
		82.5		192		2.3		3.9	
		86.4		170		2		3	
<i>Turdus pilaris</i>		100		186		1.8		2.9	
<i>Garrulus glandarius</i>	♂	103.4		202		2		3	
		125		443		3.3		4.3	
		132		508		3.8		3.6	
		180		565		3.2		4.2	
		156		546		3.5		4.3	
		165		490		3		4	
		188		551		3		4	
<i>religiosa</i>		161		376		2.3		3.5	
<i>Nucifraga caryocatactes</i>		176		460		2.6		3.8	
		174	114	466	315	2.6	2.5	3.8	3.8
<i>Pica rustica</i>		202		560		2.7		4	
		190		522		2.7		4	
		179		482		2.7		3.9	
		275		690		2.5		4	
		212		540		2.5		3.9	
<i>Corvus monedula</i>		230		700		3		4.3	
		225		601		2.7		4	
		204	214	610	600	3	2.7	4.1	4
<i>Corvus corone</i>		507		1144		2.2		3.8	
		484		988		2		4	
		498		1284		2.5		4.5	
		477		1190		2.5		3.6	
	<i>frugilegus</i>	575		1285		2.8		4.5	
		419		1144		2.2		3.8	
	<i>cornix</i>	615		1343		2.2		4.3	
		615		1280		2		4.2	
		698		1144		1.6		4	
		595		1286		2.1		4.2	
		565		1310		2.3		4.4	
		557		1260		2.2		4.3	
		557		1324		2.4		4.4	
		547		1324		2.4		4.4	
		519		1280		2.5		4.4	
		498		1003		2		4	
		375	535	1156	1220	3	2.3	4.7	4.2

PICIFORMES.

<i>Cypselus apus</i>	♀	33.5		144		4.3		3.7	
<i>Upupa epops</i>		49.1		329		6.6		4.9	
<i>Merops apiaster</i>		18.3	33.6	117	166	6.4	5.8	4.1	3.2
<i>Ceryle maxima</i>		86		288		3.3		3.8	
		83	84.5	270	279	3.2	3.2	3.7	3.7

PICIFORMES.—Continued.

	Weight in grammes,	Mean Wt. of group,	Wing Area in sq. cms.,	Mean W. A. of group,	W. A. Wt.	Mean Wt. of group,	W. A. Wt.	Mean Wt. of group,
<i>Picus viridis</i>	101		408		4		3.8	
<i>Ptyctolophus sulfureus</i>	250		544		2.2		3.7	
<i>Psittacus erythaeus</i>	200		710		3.5		4.5	
<i>Chrysotis amazonia</i>	300	225	897	640	3	3.2	4.4	4.1

CHARADRIIFORMES.—(PLOVERS.)

<i>Tringa sp.</i>	495		136		2.8		3.2	
<i>Totanus sp.</i>	47		144		3		3.3	
<i>Totanus sp.</i>	49		149		3		3.3	
<i>Glareola torquata</i>	95		343		3.6		4	
<i>Charadrius minor</i>	59.5	60	183	191	3	3.1	3.4	3.4
<i>Tringa cinclus</i>	120		262		2.2		3.3	
<i>Streptilas interpres</i>	136		235		1.7		3	
<i>Hoplopterus spinosus</i>	160		636		4		4.6	
<i>Charadrius pluvialis</i>	190		366		2		3.2	
	170		334		2		3.3	
<i>Vanellus cristatus</i>	190		614		3.2		4.3	
	204		642		3		4.3	
	232		720		3.1		4.3	
	232		730		3.1		4.4	
<i>Limosa rufa</i>	208		425		2		3.5	
	220		428		2		3.4	
	227		444		2		3.4	
	235		492		2		3.6	
<i>Totanus fuscus</i>	229	196	494	487	2.1	2.3	3.6	3.7
<i>Gallinago coelestis</i>	300		440		1.4		3.1	
	270		490		1.8		3.4	
	300		505		1.6		3.9	
<i>Scolopax rusticola</i>	300		500		1.6		3.3	
	320		500		1.6		3.3	
	300		505		1.6		3.3	
<i>Hemitragus ostracoleus</i>	341		708		2		3.8	
	358		562		1.6		3.3	
	389	297	670	542	1.7	1.6	3.5	3.4
	437		697		1.6		3.5	
	445		642		1.4		3.3	
	521		740		1.4		3.4	
	555		722		1.3		3.3	
<i>Numenius phaeopus</i>	440		964		2.2		4	
<i>Numenius sp.</i>	585		920		1.6		3.6	
	673		1020		1.5		3.6	
	695		936		1.3		3.4	
	762		924		1.2		3.3	
	898	601	1160	872	1.3	1.4	3.5	3.5

GALLIFORMES.—(GAME BIRDS.)

<i>Coturnix communis</i>	92.1	92.1	142	142	1.5	1.5	2.6	2.6
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GALLIFORMES.—(GAME BIRDS.)—Continued.

	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Wt.	Mean Wt. of group.	W. A.	Wt.	Mean W. A. of group.	W. A.	Wt.	Mean W. A. of group.
<i>Perdix cinerea</i>	450		365			.8			2.5				
	320		336		1				4				
	372		382		1				4.2				
	375		366		1				4				
<i>rufa</i>	280		320		1.1				2.7				
	380		400		1				2.7				
	340		340		1				2.6				
<i>Tetrao bonasia</i>	370		340		.9				2.6				
	375		375		1				2.7				
<i>Logopus alpinus</i>	530		640		1.2				3.1				
	650	404	452	392	.7		.97		2.4		3		
<i>Tetrao tetrix</i>	1350		995		.7				2.8				
	1030		850		.8				2.9				
	1200		880		.7				2.8				
	730		530		.7				2.5				
<i>Phasianus colchicus</i>	1000		775		.77				2.6				
	950		755		.8				2.8				
	1100		855		.8				2.8				
	1000		880		.88				3				
	1570		895		.56				2.5				
	1250		896		.7				2.8				
	1125	1118	900	928	.8		.7		2.9		2.7		
<i>Tetrao urogallus</i>	2700		1785		.66				3				
	2600		1800		.7				3.1				
	1450		1380		.9				3.3				
<i>Pavo cristata</i>	3300	2510	3480	211	1		.8		3.9		3.4		
<i>Otis tarda</i>	8900		5729		.64				3.6				
	9600	9200	5937	5933	.6		.6		3.6		3.6		

ANSERIFORMES.—(DUCKS & GEESE.)

<i>Fuligula nyroca</i>	508	508	642	642	1.2	1.2	3.1	3.1
<i>clangula</i>	827		480		.6		2.3	
<i>glacialis</i>	922		550		.6		2.4	
<i>Anas sp.</i>	606		642		1.6		3	
<i>boschas</i>	880		685		.8		2.7	
	1100		900		.8		3	
	900		710		.8		2.7	
	900		735		.8		2.8	
	950		838		.85		2.9	
	900		813		.9		2.9	
	1000		687		.7		2.6	
<i>Fuligula cristata</i>	1116	918	1440	770	1.3	.88	3.6	2.5

CHEIROPTERA.—(BATS.)

<i>Vespertilio pipistrellus</i>	3.7		49.6		13.3		4.5	
Do.	5.6	4.6	50	49.8	9	11	4	4.3

CHEIROPTERA.—(BATS.)—Continued.

	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Wt.	W. A.	Mean Wt. of group.	W. A.	Mean Wt. of group.	W. A.
Plecotus auritus	10.4		70			6.7		3.8			
Glossophaga soricinis	14.6		94			6.5		3.9			
Taphozous saccolaemus	18.7	14.9	158	107		8.5	7.2	4.9		4.2	
Morinops sp.	20.8		94			4.5		3.5			
Vespertilio murinus	20.9		180			8.9		4.8			
Do. do.	34.9		140			4		3.6			
Molossus longicaudatus	33.5		104			3		3.1			
Phyllostoma perspicillatum	47.7	31.5	190	141	4	4.9		3.8		3.7	
Do. spectrum	164	164	626	626	4	4		4.5		4.5	
Pteropus edulis	1380	1380	1630	1630	1.2	1.2		3.6		3.6	

RHOPHALOCERA.—(BUTTERFLIES.)

Lycaena argus	.01		2.9			290		7.5			
Argynnis aphirophe	.025		4			160		6.8			
Vanessa C-album	.04		3.3			82.5		5.4			
Pieris brassica	.08	.04	9.3	4.9	116	162		7			
Rhodocera rhamni	.183		52.5			287		12.8			
	.13		11.4			87		6.7			
Vanessa urticae	.114	.142	8.4	24.1	74	116		6			
Pieris brassica	.2	.2	16.6	16.6	83	83		7			
Papilio podalirius	.34	.34	11.2	11.2	33	33		4.8			

HETEROCERA.—(MOTHS.)

Sphinx pinastri	.43	.43	10	10		23.3	23.3	4.2			
	.54		10.3			20		3.9			
Smerinthus ocellatus	.55	.45	9.8	10		18	19	3.8			
Sphinx ligicstri	1.37		16			11.7		3.6			
	1.9	1.6	18.6	17.3		9.8	10.2	3.47			

NEUROPTERA.—(DRAGONFLIES.)

Setodes pilosus	.01		1.4			140		5			
Agrion puella	.03		2.2			73		5			
Ephemera vulgata	.03	.023	1.2	1.6		42	85	3.6			
Libellula vulgata	.15		7.3			48		5.1			
Calopteryx virgo	.1	.125	11.1	9.2	111	79		7.2			
	.2		14			70		6.4			
Cordulia aenea	.24		10.5			44		4.9			
Libellula 4-maculata	.29	.24	11	11.8	38	51		5			
Libellula cancellata	.44	.44	14	14	32	32		4.9			

NEUROPTERA.—(DRAGONFLIES.)—Continued.

	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Mean Wt. of group.	W. A.	Mean $\sqrt{W. A.}$	Mean $\sqrt{W. A.}$	Mean $\sqrt{W. A.}$	Mean $\sqrt{W. A.}$
<i>depressa</i>	.62		14.5		21			4.5			
<i>Cyanea</i>	.6		13.3		22			4.3			
	.92	.71	23.9	17.2	26	23		5			

COLEOPTERA.—(BEETLES.)

<i>Ludius aeneas</i>	.06		.67		11		2
<i>Colymbetes grapii</i>	.07	.06	.82	.74	11.7	11.3	2.2
<i>fuscus</i>	.27		2.4		9		2.4
<i>Acilius sulcatus</i>	.3	.28	2	2.2	6.6	7.8	2
<i>Calosoma sycophanta</i>	.64		3.9		6.1		2.3
	.8		3.3		4		2
<i>Melolontha vulgaris</i>	.66	.7	2.8	3.3	4.2	4.7	1.9
	.97		3.6		3.8		1.9
	.95	.96	3.6	3.6	3.8	3.8	1.9
<i>Dyticus marginalis</i>	1.3		6		4.6		2.2
	1.9		5.1		2.7		1.8
	1.8	1.7	4.8	.52	2.7	3.3	1.8
	2.3	2.3	6.6	6.6	2.8	2.8	1.9
<i>Hydrophilus piceus</i>	3.3		6.7		2		1.7
	3.2	3.2	6	6.3	1.9	1.9	1.6
	4.9		7.7		1.6		1.6
	5.2	5	7.8	7.7	1.5	1.5	1.6

DIPTERA.—(FLIES.)

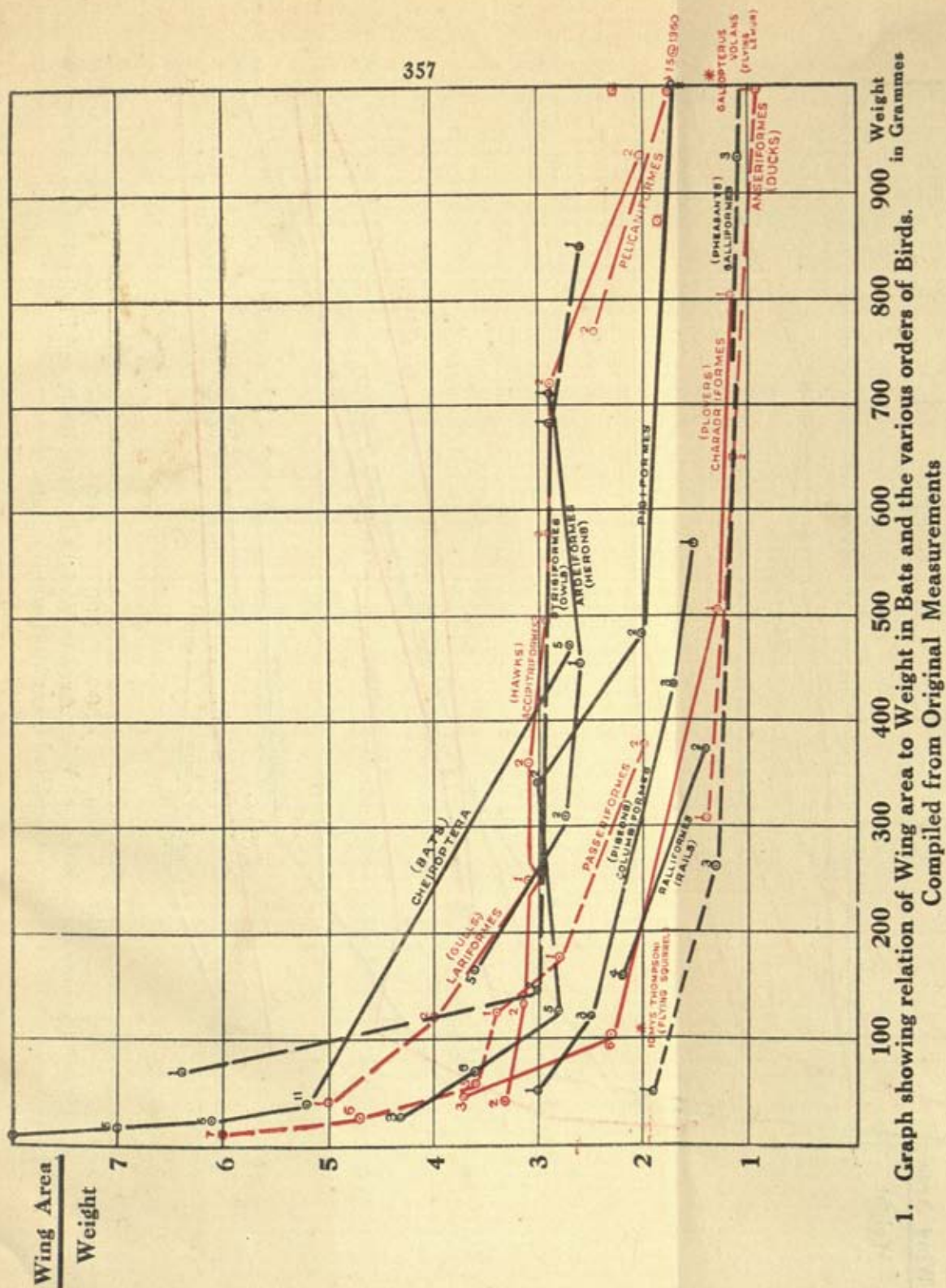
<i>Culex pipiens</i>	.003		.3		100		3.8
<i>Chironomus stercorarius</i>	.0012		.035		30		1.7
<i>Syrphus scriptus</i>	.007	.004	.17	.16	24	51	2.1
<i>Musca domestica</i>	.01		.16		16		1.7
	.01		.18		18		1.9
	.016		.25		16		1.9
<i>Leptis scolopacea</i>	.03		.62		21		2.5
	.03		.83		27		2.3
	.03	.02	.46	.41	15	19	2.3
<i>Pachyrina pratensis</i>	.04		.7		17.5		2.4
<i>Eristalis aeneus</i>	.04		.32		8		1.6
	.04		.31		7.9		1.6
	.04	.04	.32	.41	8	10	1.7
<i>Pollenia rudis</i>	.05		.37		7.4		1.6
<i>Musca vomitoria</i>	.065		.72		11		2.1
<i>Pachyrina pratensis</i>	.07		.86		12.3		1.9
<i>Leptis scolopacea</i>	.08	.065	.84	.7	10.5	10	1.8

DIPTERA.—(FLIES.)—Continued.

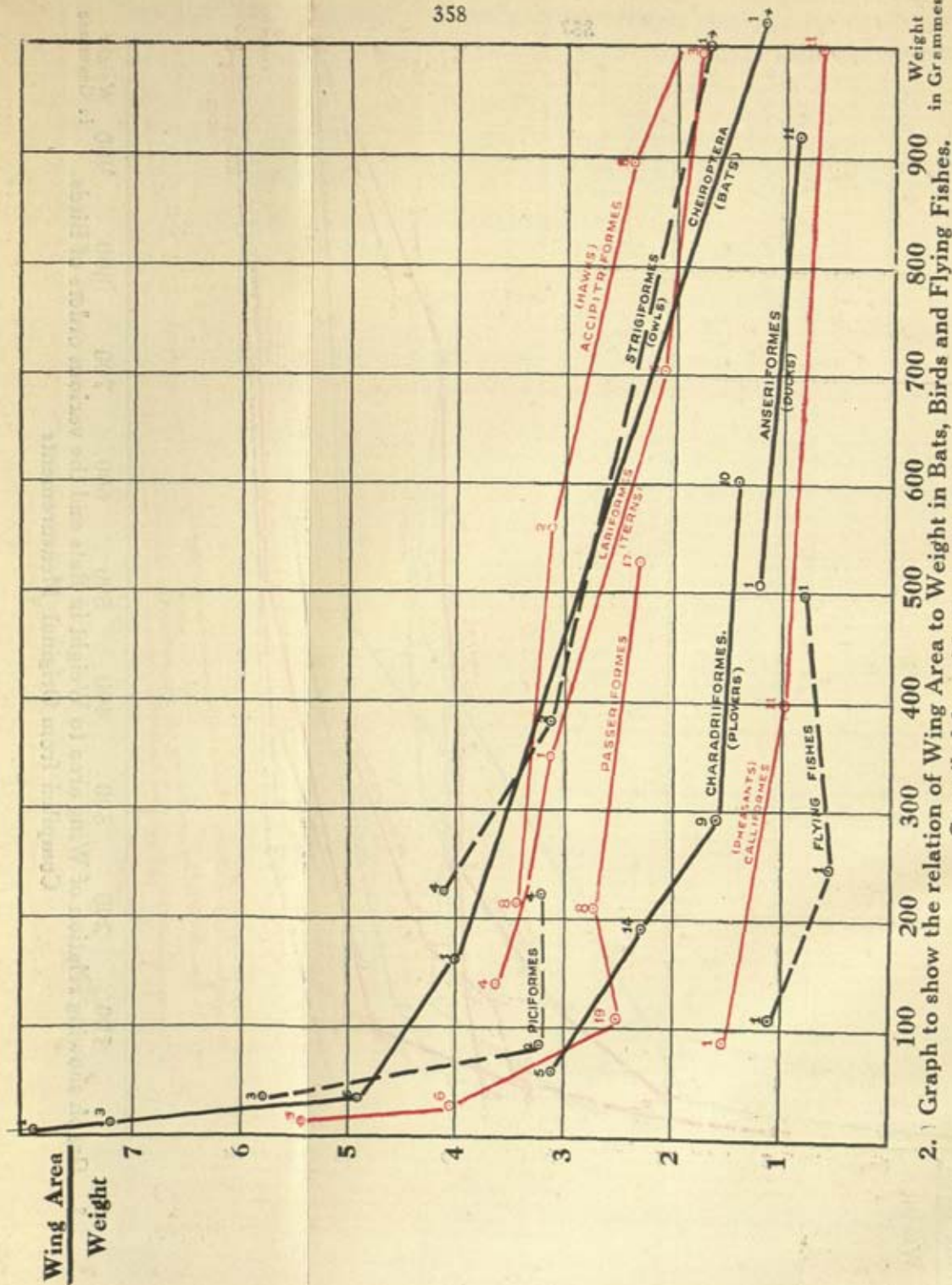
	Weight in grammes.	Mean Wt. of group.	Wing Area in sq. cms.	Mean W. A. of group.	W. A.	Mean W. A. of group.	$\sqrt{W. A.}$	$\sqrt[3]{W. A.}$	Mean $\sqrt[3]{W. A.}$ of group.
<i>Eristalis</i> sp.	.09	.09	.34	.34	3.8	3.8	1.3		

HYMENOPTERA.—(BEES.)

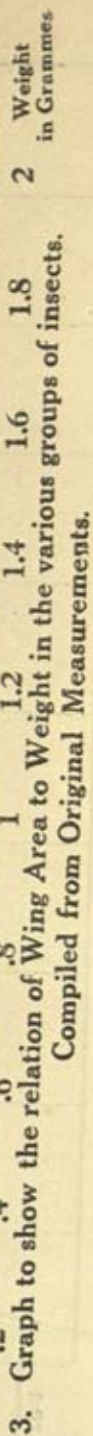
<i>Systropha spiralis</i>	.01		.45		45		1.76		
	.01	.01	.32	.38	32	38	1.4		
	.01		.34		17		2		
	.02		.27		13.5		1.9		
<i>Dichron gibba</i>	.02		.3		15		2		
<i>Sarcophaga stercoraria</i>	.02	.02	.38	.32	19	16	2.17		
<i>Osmia adunca</i>	.03	.03	.38	.38	13	13	1.9		
<i>bicornis</i>	.053	.05	.47	.47	9	9	1.8		
<i>carinaria</i>	.07		.5		7		1.7		
<i>Apis mellifica</i>	.07	.07	.4	.45	5.7	6.3	1.5		
	.1	.1	.57	.57	5.7	5.7	1.6		
<i>Bombus pratorum</i>	.27	.27	1.4	1.4	5	5	1.1		
	.44		1.03		2.3		1.3		
<i>muscorum</i>	.34	.39	.81	.92	2.4	2.3	1.3		

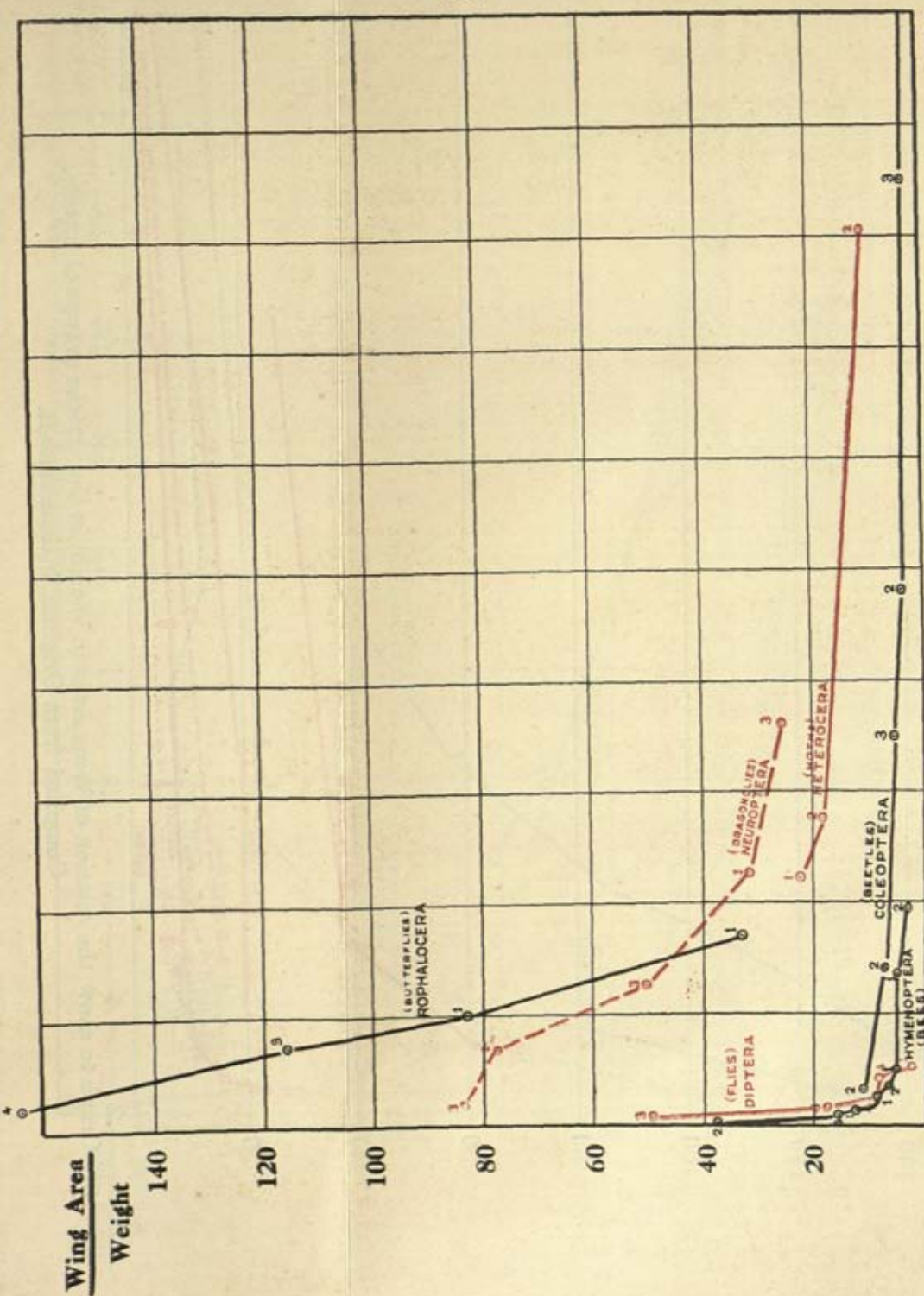


1. Graph showing relation of Wing area to Weight in Bats and the various orders of Birds.
Compiled from Original Measurements



2. Graph to show the relation of Wing Area to Weight in Bats, Birds and Flying Fishes. Compiled from Mullenhoff's Data.





4. Graph to show the relation of Wing area to Weight in various groups of insects.
Compiled from Mullenhoff's Data.

Obituary.

HERBERT CHRISTOPHER ROBINSON.

Herbert Christopher Robinson, who was born in Liverpool, in 1874 and became a member of the Society in 1904, died in 1929 at Oxford after a long illness. His active biological career began in 1896 with a visit to Queensland where he made a collection of birds. From 1897 to 1900 he was an assistant in the Liverpool Museum where he collaborated with Dr. H. O. Forbes in the production of catalogues of the important bird collections of the Museum. In 1901 and 1902 he and the late Dr. Nelson Annandale, who became eventually Director of the Zoological Survey of India, were jointly engaged in travel and research in the Malay Peninsula the results of which, both ethnographical and zoological, were published under the title "Fasciculi Malayenses." In 1903 Robinson became Curator of the Selangor Museum and Inspector of Fisheries, Federated Malay States, and in 1908 Director of Museums and Fisheries, F.M.S.

Besides his regular duties he organised and for some years controlled a Meteorological Service, primarily in connection with a search for hill-station sites; and he organised, and was in charge of, the Arts and Crafts section of the Malayan Pavilion at the Britain Empire Exhibition. He retired on pension in February, 1926.

Robinson was a man of unusual ability: there were few subjects he could not master in a short time: though later he specialised on mammals and birds of Malaysia he was possessed of wide knowledge of, and competence in anthropology, zoology and botany.

Robinson had long planned to produce a set of volumes on the Vertebrate Fauna of the Malay Peninsula analogous to those of the "Fauna of British India" series and in 1912 there was published under his editorship a volume on the Reptilia and Batrachia by Dr. G. E. Boulenger. It was his intention to produce the other sections in collaboration with the writer of this notice but the war, the demands made by their current work on the time of both and the various duties Robinson undertook for Government outside those of his appointment made this impossible and the task was deferred until his retirement on pension when it was still further postponed by the request of his Government that he should first produce the less purely systematic work on "the Birds of the Malay Peninsula" on which he was engaged when he succumbed to his final illness and of which he completed two of the five volumes projected. Shortly before he became incapacitated he was elected co-editor of "Ibis." Under his direction were issued some eleven

volumes of the "Journal of the Federated Malay States Museums" which contains many of the papers written by him. His contributions however, to the Society's Journal were only five in number:

On three Vertebrates new to the Malay Peninsula. No. XLIV, 1905.

New Mammals and Birds from Korinchi, Sumatra. No. LXXIII, 1916.

On a collection of Birds from N. E. Sumatra. No. LXXX, 1919.

On a collection of Birds from N. E. Sumatra. Part II. No. LXXXI, 1920.

The Bearded Pig in the Malay Peninsula. No. LXXXV, 1922.

Besides his early visit to Australia and his many journeys in the Malay States (he was the first European to reach the summit of Gunong Tahan) Robinson visited for the purpose of biological investigation the Siamese portion of the Malay Peninsula, the Rio-Lingga Islands, Sumatra and Java. He had travelled in India and during the war was on service at Basra: when on furlough he always paid long visits to Switzerland for mountains had a great attraction for him, but in the east what he perhaps enjoyed most was cruising on inspection in his Fisheries launch.

Mr. H. C. Robinson was a Vice-President of the Society for the Federated Malay States in 1909, 1913, 1922, 1923 and a Member of Council in 1920. He was elected an Honorary Member in 1927.

C. B. K.

NOTICE.

XVIIIe Congrès International des Orientalistes.

Secrétariat: Musée Ethnographique, Rapenburg 67/69,
Leiden, Pays-Bas.

Première Communication.

En vertu de la décision prise le 1 septembre 1928 à la dernière réunion du XVIIe Congrès International des Orientalistes à Oxford, le XVIIIe Congrès devra se réunir aux Pays-Bas.

Un comité s'est formé dans la ville universitaire de Leiden pour organiser la préparation du prochain congrès. Ce comité a décidé provisoirement que le XVIIIe congrès se réunira à Leiden (lieu de réunion du VIe congrès en 1883) dans la semaine du 7 au 12 septembre 1931.

Le comité adresse cette première communication aux orientalistes et aux sociétés orientalistes en les priant de lui accorder leur collaboration, pour que le congrès soit assuré d'une réussite complète. Nous espérons qu'on voudra donner au contenu de la présente communication une publicité aussi grande que possible.

Le comité se propose de faire paraître dans quelques mois une seconde communication, accompagnée de l'invitation définitive pour le congrès.

Leiden, avril 1930.

J. H. KRAMERS,

Secrétaire.



(341) *[Signature]*

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"A book that is shut is but a block"

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