THE SIAM SOCIETY.

(FOUNDED 1904.)
For the Investigation and Encouragement of Arts, Science and Literature in relation to Siam, and neighbouring countries.

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HIS MAJESTY THE KING.

VICE-PATRON:
HIS ROYAL HIGHNESS PRINCE DAMRONG RAJANUBHAB.

HONORARY VICE-PRESIDENT:
HIS ROYAL HIGHNESS THE PRINCE OF KAMBAENG BEJRA

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At the 89th meeting held on Tuesday, May 30th, 1922, at the old British Court House the President proposed that the name of H. R. H. the Prince of Kambaeng Bejra, Commissioner-General for Railways, should be submitted to the next Ordinary General Meeting for election as Hon. Vice-President of the Society according to rule No. 8. This was agreed to.

The Hon. Secretary reported that about 25 members had sent in replies to the circular sent out by the Society last December, proposing to form "groups" or "sections" for studying various scientific subjects as indicated therein. The sub-committee considered that this was enough to justify them in forming about five "sections" and had provisionally appointed leaders for each of them, and dates for the opening meetings. These dates, however, depended upon whether the Society was able to find permanent quarters before then.

The Hon. Secretary reported that The University of Padua had sent a notice of the 7th centenary of its foundation and had invited the Siam Society to send delegates for its celebration on May 14th-17th. The President had written to Prof. F. G. Pullé of Bologna University (Corresponding Member) requesting him to attend on the Society's behalf. A similar invitation had been received from the Société Asiatique de Paris for their centenary on July 10th-13th, and the President had invited Prof. F. Lorgeon (Hon. Member) of Paris, to be our representative on that occasion.

At the 90th Council Meeting held on July 14th, 1922, at the old British Court House, at 6-30 p.m. a letter from Mr. J. Crosby was read by the President, saying, that owing to his permanent departure from Siam to take up the position of British Consul-General at Batavia, he was obliged to resign from the Society. After nearly 18 years' connection with the Siam Society, in one capacity or another, he bid farewell to his colleagues on the Council and to his fellow members, with much regret. The President expressed the regret of
the Society at losing Mr. Crosby, and Prof. Cœdès proposed and Mr. Num seconded that Mr. Crosby's name should be brought before the next general meeting for election as an Honorary Member—Carried.

The question of fixing the price of the next number of the Society's journal to non-members, according to rule 22, was brought up. It was mentioned that the cost of production of the last number was so heavy, that the price of Tsz. 6.00 asked for it was not enough. The forthcoming number would also be an expensive one, and it was therefore proposed to raise the price of it to Tsz. 8.00. This was agreed to.

At the 91st meeting, held at the old British Court House, on August 10th, 1922, at 6-15 p.m. it was decided to present His Royal Highness Prince Damrong Rajanubhab, the Vice-Patron of the Society, with an address of congratulation in commemoration of His Royal Highness's 60th birthday. Major Seidenfaden submitted a design he had received from the Arts and Crafts School for a case for the address. It was to be executed in leather, with symbolical and other figures upon it in silver. The address to be engrossed on hand-made Siamese paper with space for the signatures. The design was examined and approved, and Major Seidenfaden was appointed to look after its production. It was agreed that the address should be in English.

ORDINARY GENERAL MEETING.

An ordinary general Meeting of the Society was held at the new rooms in Chartered Bank Lane on Monday, October 2nd, 1922, when a most interesting paper was read by Prof. G. Cœdès, (Vice-President), entitled "Etude sur les ex-voto amulettes et autres emprunts Bouddhiques en terre cuite et en metal." This lecture was delivered in French, and about 35 members and their friends were present. A large number of ancient and curious earthenware and metal charms or figures (known as Pra pin) were displayed, and the learned professor's paper was much enjoyed by an appreciative audience.

This paper will be published with illustrations, in an early number of the Journal.
The President, Mr. Graham, was in the chair, and before inviting Prof. Cœdes to read his paper, he submitted the name of H.R.H. the Prince of Kambaeng Bejra, Commissioner-General for Railways, to the meeting for election as Hon. Vice-President of the Society. The President remarked that His Royal Highness was well-known as a distinguished authority on all matters connected with transport and travel in this country, and that his acceptance of election was an honour to the Society. The election was carried unanimously by acclamation.

The President then submitted the name of Mr. J. Crosby, C.I.E., O.B.E., late British Consul-General and now serving in that capacity at Batavia, for election as Honorary Member. Mr. Crosby had been connected with the Society for many years, both in a private capacity, and as a member of the Council, and it was with much regret that the Society received his resignation. The election of Mr. Crosby was carried unanimously.

After Prof. Cœdes had read his paper, a few questions were asked by interested members, and replied to by the Professor and the meeting terminated.

THE SOCIETY'S HEADQUARTERS.

Ever since its foundation, the Siam Society has laboured under the disadvantage of being without a permanent "home" or headquarters either for holding its meetings, or housing its library.

In the early days when its membership was comparatively small, and its library comprised a few books only, it was found sufficient to hire a room from time to time for the meetings and to pay a small sum in rent for house room for the small book shelf which contained the library. The great expansion, however, which has occurred during the last year or two in the membership, and the large additions to the library have made it imperative that the Society should find some room which it could call its own. Such a room has now been found on the first floor of the former Falck & Beidek building, familiarly known as the "Hang Singto" in Chartered Bank Lane, which is conveniently situated, and suitable for the purposes of the Society.
The Library which for some time past has been housed in the Royal Library through the kindness of H.R.H. Prince Damrong, has been removed to the new room, and is open for the use of the members on Wednesdays and Saturdays from 5-30 p.m. to 7-30 p.m. when the Assistant Librarian is in attendance. The rent, furnishing, lighting and attendance are expenses which the Council feel are justified by the recent large increase in the membership. The "study sections" which are mentioned elsewhere, are designed to promote a still further increase, for it is hoped that when the activities of these sections become known, many persons who are not at present members, will join in order to take advantage of the facilities they afford for study, and the exchange of information regarding subjects of scientific interest connected with Siam.

It is suggested that members possessing articles likely to be of interest to the Society, such as photographs, old prints, models or relics, etc., connected with Siam, might donate or loan them for exhibition in the Society's room, which makes a very appropriate repository for such objects, for the interest and benefit of all the members.

THE STUDY SECTIONS.

Some months ago, the Council of the Siam Society issued a circular to the members proposing that groups or sections for the study of various scientific subjects should be formed. The object of this proposal, it was stated was "to give to every member who came to take advantage of it the fullest possible benefit of his membership in the Siam Society, and to bring members of similar tastes in touch with each other."

A leaflet containing a list of the various subjects accompanied the circular and members were requested to mark any of them in which they were interested and return it to the Hon. Secretary, when, if the response was sufficient, arrangements for making up the sections and appointments for meetings, could be made.

Replies came in rather slowly, but in the course of a few months some twenty-five leaflets had been returned, and the Council considered they were justified in proceeding with the scheme. Un-
fortunately, the lack of a permanent meeting room was a serious obstacle to commencing work, and it was not until the Society had acquired its present handsome quarters that it was possible to notify the members that the sections were formed, and were ready to commence their meetings.

The Sections now formed and in operation are as follows:

1. Technology and Fine Arts.
   Leader: Mr. J. G. Raggi.
   Hon. Secretary, Dr. Eldon James.

2. Sociology.
   Leader: Mr. B. O. Cartwright.
   Hon. Secretary, Mr. J. Michell.

3. Physical Anthropology.
   Leader: Dr. J. R. Redfield.
   Hon. Secretary, Mr. B. O. Cartwright.

   Leader: Prof. G. Cædes.
   Hon. Secretary, Major Seidenfaden.

5. Agriculture, Transport and Travel etc.
   Leader: Mr. W. A. Graham.
   Hon. Secretary, Major Leo Day.

The opening meetings were chiefly concerned with appointments of officers and arranging their programmes and dates for future meetings etc. The attendance was not large at any of them, but a lively interest was shown by those who did attend, and the discussions showed that there was a large and most interesting field of research in each of the subjects mentioned.

The Council trust that this development will be heartily supported. All members whether they have already sent in the list of subjects or not, are cordially invited to attend the meetings. The object of the movement is for the free exchange of ideas and information regarding any subject of interest appropriate to the known aims of the Society, not necessarily confined to those suggested on the circular, and not merely the delivery of lectures by "experts". Any further information regarding the sections will be readily supplied by the several Secretaries, or by the Hon. Secretary of the Society.
POTTERY IN SIAM.

At a meeting of the Siam Society held on the evening of the 29th March the President, Mr. W. A. Graham, read a paper on "Pottery in Siam". The lecturer had before him a long table on which were arranged numerous earthenware and porcelain objects, which he exhibited to illustrate his remarks.

Mr. J. Crosby, c. i. e., who was in the Chair, having made an introductory statement, Mr. Graham read his paper and subsequently an informal discussion took place, the audience examining the exhibits and discussing them with considerable interest.

Mr. W. Blankwaardt referred to allusions made by the lecturer to the National Museum and suggested that the Siam Society might approach the Authorities with a view to an alteration of the hours during which the Museum is open, the present arrangement being ill adapted to the public convenience. To this the President replied that the Society would do what it could in the matter, and it is interesting to note that by the kindness of H. E. the Director General of the Royal Fine Arts Department more suitable arrangements have since been made.

Mr. Graham's paper was as follows:

I

The word Keramic includes in its meaning anything pertaining to pottery, and Keramics is a general term for the study of the art of pottery.

Pottery in its broad sense, includes all objects made from clay and then hardened by fire, from the roughest earthenware to the most refined and delicate porcelain, and it is to a consideration of such objects, either made in, or peculiar to, Siam, that I now invite attention.

The first thing that strikes one on approaching the subject is the evidence of the extreme antiquity of man's knowledge of the
use and value of burnt clay. How he first came by that knowledge there is, of course, no direct evidence of any sort, and all we can do is to surmise that somewhere about the period when the discovery of the uses of fire caused him to leave off being a raw flesh and berry eating creature, he may have begun to feel a want for something in the shape of a receptacle for the storage of the food he was learning to accumulate; in fact the beginnings of a larder. For this he may at first have used a simple hole or depression excavated in the ground, and finding that unsatisfactory because he couldn't carry it about, he may have taken a lump of damp clay from the nearest river-bank and flattened it or squeezed it into some sort of shape and so have obtained, when it dried and hardened, a portable receptacle of a kind, in which he could carry his cooked food when hunting his prey or running away from his enemies. The next development would probably be an unintentional scorching or baking of some such dried mud receptacle, and the consequent accidental production of a "pot", a strong, hard object, impervious to water and of a cheerful red colour, pleasing to the sight and, by increasing his mobility, of the greatest assistance to man in his struggle for existence with the sabre-toothed tiger, the hairy mammoth and other monsters that made human life precarious and exciting in the later Paleolithic age.

Whether or not such surmise is anywhere near the truth as to the origin of pottery, will never probably be known, but it is known that the very earliest dawn of historical times found the art of making pottery in a highly developed condition, and long established as an ancient practice amongst the most diverse and widely separated races of man.

The question arises. How came it that the virtues of burnt clay were known, and made use of by methods of extraordinary similarity, by groups of men separated from each other by vast distances of land or water and utterly unaware of the very existence of each other?

In the days when it was believed that man first appeared upon the earth some seven or eight thousand years ago, in a state of complete development, the presence everywhere of the primitive arts
such as stitching, cooking, archery, fire-making, pottery, etc., was accounted for by the theory that they were discovered by individuals when man was still in the "cradle of his race", wherever that may be supposed to have been, and made part of his outfit when he set forth from home to people the world.

But modern science now teaches that man's existence is not a matter of a few thousands of years, but of an unknown number of hundreds of thousands, and that he was already firmly planted in most parts of the world long before he had reached the high development implied by the possession of any implements, tools or arts at all. This makes the theory of discoveries or inventions by individuals, and subsequent distribution all over the world, practically untenable; for imagine a rather superior monkey in some Asiatic jungle, stumbling across a new way of cracking nuts, or the skulls of his rivals; what means are there by which such a great discovery could be communicated to, and adopted by monkeys in the forests of South America? The idea seems absurd! Yet man, when he first began to be man, was not far removed from a superior monkey or ape of to-day.

Modern Science meets this difficulty with the pronouncement that the theory of individual discovery is, in fact, exploded, and that it is now generally believed by the wise, that groups or communities of mankind were gradually, and more or less simultaneously evolved all over the world from their pre-human ancestors, and that the course of that evolution included the simultaneous discovery of the uses of, and the means to make, the primitive implements that are now to be found lying about on, or just below, the earth's surface in every country. But these implements, wherever found, are not only rather alike but are exactly alike. Paleolithic remains of man's handiwork found in America, Europe, Asia, and Africa are entirely similar in every respect, and Neolithic weapons, tools and implements, including pottery, collected from America, the Mediterranean shores and Madaugas are absolutely identical. Now one can conceive of the possibility that men in similar states of development and living under similar conditions might, quite independently of each other, invent implements having a considerable degree of resemblance; but that they should make
entirely similar objects in many places at one and the same time, and that these objects should continue identical through countless centuries, as improvements were thought of or circumstances compelled change, it is difficult to believe heartily. In fact, to many, this idea may seem almost as absurd as the other.

However, the things are there and must have had a beginning, and judging by the evidence that we have, Neolithic man must have been busy making, improving upon, and breaking, the pottery invented by his Paleolithic forebears, for some twenty thousand years or so before the earliest historical time.

It has, I believe, been established that Neolithic man inhabited Siam. And Neolithic man made pottery. In fact, Neolithic implements and remains of pottery have been found together in Kambodia. Hence we may with some confidence believe that pottery has been made in this country for a great if indefinite number of centuries.

There seems to be a tendency in this part of the world, when in doubt as to the origin of any art, legend, industry, agricultural product, &c, to say that it came from China, or if not, then from India; and in a monograph on pottery produced under Government auspices in Burma, the point is gravely discussed as to whether the art of making pottery was brought there from India or China, the verdict going finally in favour of China. One may acknowledge readily that many good things have come out of China and that, owing to the early advance of that country in arts and industries, the countries near her owe her a good deal of their enlightenment, but there appears to be no necessity for a belief that she had at any time a monopoly of primitive Neolithic crafts. I think we are amply justified in believing that the successive races that have occupied this country, at least since the first incursion of the tribes from which the Mon, Khmen, L'wa, &c, are descended, all brought an already ancient knowledge of pottery with them when they came here, and that they found an equally ancient knowledge existing amongst the aboriginals they displaced.

The belief in the, so to speak, indigenous nature of the pottery industry in Siam is encouraged by the extraordinary prevalence of
pieces of broken pot in practically all parts of the country. You have doubtless noticed, whenever you dig a hole in your garden, or whenever excavations are made for the building of a new house, bits of pot are turned up out of the earth. That is, of course, quite accountable, and to be expected in or near a great city like Bangkok, where a large population has been unceasingly occupied during the last hundred and forty years or so, in throwing away pieces of broken pot. But what about the shards that are continually coming to light in places where man has apparently never lived? What about the fact that when an eight- or ten-metre high river-bank caves in, revealing alluvial beds untold centuries old, pieces of pottery are frequently found sticking in even the lowest strata uncovered? What about the discoveries of railway constructors, miners and others, whose business it often is to dig in the ground in the wild and unfrequented parts of the country? The fact is that we walk about upon a surface-soil of which it may almost be said that quite an appreciable percentage is composed of fragments of pottery: fragments that may be twenty days or twenty centuries old; and when we come across those fragments in the jungle remote from man's habitation, we may feel justified in moralizing upon the great age of the potter's craft. Not that we do so, however. Pieces of broken pot are so thickly sown over the earth's surface, we are so accustomed to seeing them, and one chip of earthenware is so very like another, that a fragment unearthed even in the most unlikely place, usually passes unnoticed, or at best raises no more than a vague speculation as to where the dence it may have come from.

It is when specimens of pottery are found more or less entire, or bearing characteristics which may serve as some sort of indication as to their date, place of origin and the purpose to which they were put, that they begin to be of some interest, and such specimens must naturally be of comparatively recent origin. Probably the most ancient pottery known in Siam is that which has been found in the neighbourhood of the ancient Khmen ruins that are dotted about the Mounthons of Korat and Ubon. From time to time people living near those ruins, dig up in their fields, jars of coarse earthenware, covered with a brown glaze and shaped with some attention to ornamentation as well as usefulness. These, being quite unlike the
pottery used by the people, and of entirely unknown origin, are
naturally looked upon with fear and suspicion, and are
usually deposited at the nearest Wat, in order that any baleful magic
lurking in them may be neutralised by the sanctity prevailing there,
and prevented from harming the finder or his neighbours.

A few years ago I was shown half a dozen specimens of this
ware at the Wat of Ban Kampeng village, on the road from Korat to
Ubon. They were all between sixteen and twenty-four inches high,
of very coarse texture but adorned with ornamental lines and circles,
and of rather graceful shape. The brown glaze was cracking off,
apparently because the earthenware beneath was rotting, and all the
specimens were more or less broken. They had been found
at different times below the surface of the earth, in fields near the
ruins of an ancient stone wall of unknown history. Later I saw
another collection in the possession of the Governor of Surindr, very
much like the first lot, and found in the earth near the town of
Surindr, which stands in the middle of ancient Khmen relics of all
kinds; sanctuaries, aqueducts, reservoirs and so forth. I have here
a specimen of this pottery which was found near a hamlet called
Ban Prasart on the site of an ancient Khmen settlement in
Changwad Kukan. The piece is unfortunately broken, the whole of
the lip is missing, but enough is left to indicate that it was made
by a person of some artistic perception. But though graceful of
shape and somewhat elaborately ornamented, it must, even when
undamaged, have had a rather rough appearance, and the other pieces
I have seen are much the same in this respect. As regards its age
there is no reason of which I am aware why it should not be
coeval with the stone ruins near which it was found. I take
it to be a relic of the ancient Khmen civilization, and therefore
anything between 1000 and 1600 years old!

The period of Khmen culture passed away long ago and during
succeeding centuries the darkness of poverty and ignorance gradually
closed down on the people whom it had once enlightened. But its
influences, long submerged, were, apparently never absolutely destroy-
ed, at least on the plateau of Eastern Siam, for, under the modern
encouragement of a paternal Government, the potter’s art now re-
Ancient Khmer glazed earthenware.

Ancient tile, Phra-Pim, and terra-cotta votive offerings. Also modern earthenware from Chiangmai.
appears, and the remote posterity of those who made this ancient earthenware, find means to express their artistic instinct in the peculiar whitish clay pottery, of Ubon. (Here was exhibited a terracotta statuette of a shepherd boy, the pedestal arranged as a cigar-ash tray and match-box holder?) One can perceive at a glance the extreme modernity of this latter work that I am able to give you the privilege of inspecting!

As I have suggested there is every reason to presume that at the period of this Khmen earthenware, and before, pottery of sorts was being made all over Siam. But unfortunately very little ware that can even vaguely be assigned to those early times has come to light. Here and there amongst the ruined cities of the North, the terra-cotta pedestal of a sacred image has been found, such as that described by Holt Hallett as seen by him near Penyow, south-east of Chiangmai; and now and again an old Phrachedi collapses and delivers up Phra Pim and other earthenware objects placed in it when it was built. Such things as these last, having been preserved from the action of the elements, may sometimes be dated (approximately) but of course the great mass of old earthenware has totally disappeared or has become mere unrecognisable fragments.

The impressed clay tablets known as Phra Pim deserve attention because amongst them very old specimens can be more or less identified. From early Buddhist times it was the custom for the pious to make offerings, at Phrachedi and other sacred spots, of these tablets, either baked into terra-cotta, or raw (green, is I believe, the potter’s term), impressed with an effigy of the Buddha. Some years ago a large number of the unbaked kind was found on the floor of a cave at a place called Mat Harn in the Puket Monthon, and these, on being examined by experts, were pronounced, by virtue of certain characters stamped on them, to be not less than 900 years old. They had lain in the cave beneath a thick layer of dust and dirt and when found were quite fresh and even soft, but they soon cracked and crumbled after exposure to the air. There are, or were until lately, some of these tablets in the Museum at the Mahatai and a few are preserved in the British Museum. You are probably aware that the limestone hills of the Peninsula are full of caves, and many of them,
some even in the heart of what is now Malay and Mohammedan country, contain large and very ancient effigies of the Buddha. These caves were doubtless visited by countless pilgrims in ancient days, and votive tablets probably lie concealed in most of them.

Twenty five years ago when Archaeology and antiquarian research were almost unknown in Siam, terra-cotta Phra Pim were quite common objects amongst the bricks and other débris of old and abandoned Wat. Most of them have now been picked up and placed in museums or in the custody of modern Wat, or are kept by the people as charms or in collections of antiquities. Fourmeneau in "Le Siam Ancien" gives several illustrations of these, (Part I PL XXIII) and says that the smaller ones when found are worn as amulets.

When railway construction began in Siam, and for some years afterwards, it was the custom to demolish Phrachedi and Phra Prang near the line and to use the bricks as ballast. Some of the Phra Pim found in pagodas thus destroyed at Phra Pa Don near Nakon Patom, are quite possibly 1400 or 1500 years old. Fourmeneau's specimens, which came from Sawankalok and Sukotai, may be 700 or 800 years old.

Amongst the few Phra Pim that I have here, one is of ascertainable date as it was found at Ayuthia inside a Phrachedi that fell down a few years ago, this being one of the original constructions of the reign of Phra Chao U Thong; that is to say of the middle of the 14th century A.D. The specimen is well executed, the details having been carefully worked out. Evidently it was gilded when new. Moulds or dies from which Phra Pim were made have occasionally been found. Small quite modern Phra Pim made to order in China of variously coloured clays and imported for wear as amulets, can usually be bought in the bazaars.

Though it is the general impression that in old times the great majority of Siamese houses were roofed with grass, palm leaves or nippa (clark), yet the making of earthenware tiles must have been a considerable industry for, not only were palaces and Wat all roofed with tiles, but we learn from Van Vliet who described the
Ayuthia of 1630, that the houses of the official and better classes generally, were tiled, while "the common or poor people live very poorly in reed and bamboo houses, the roofs covered with cocos leaves or bad tiles." Hence it would seem that, in the capital at any rate, the demand for tiles must have been considerable.

According to Fournereau, "Les tuiles étaient de différentes sortes: plates et rectangulaires avec crochet, plates et arrondies à la partie inférieure, enfin concaves et convexes comme chez les Romains." He might have added "et comme chez les Chinois aussi," for concave and convex tiles, laid alternately, are a feature of the most ancient Chinese buildings. Many old Wat with concave and convex tiles are still to be seen in Siam and here and there can be found specimens of the peculiar and effective ornamentation arrived at by turning up the end of the lowest convex tile of a course, and impressing on that end the figure of a Dēwada, angel or other design. I am fortunately able to show you a specimen of such earthenware, which entitles the otherwise humble tile to some slight consideration amongst the artistic productions of the potter.

Fournereau goes on to say that the old time tile was usually covered with yellow, green, blue, grey or white glaze, but here I think the learned gentleman has been led away by the beautiful coloured tiles he saw in Bangkok, has jumped to a conclusion, and taken a fall. For I can find no reference to any coloured tiles being used for the buildings of old Ayuthia or earlier. I have never seen any such on really old buildings, and my Siamese friends tell me they are, in fact, modern. Old Van Vliet, who mentioned tiles no less than seven times in his account of Ayuthia, says that the roofs of all palaces, Wat and tiled houses were red, that is, simply the colour of burnt clay. The variegated tiles which beautify so may buildings in Bangkok, were apparently an innovation of the early 19th century and came from China. They are now made in Bangkok by a Chinese Syndicate on the west side of the river at Bang Chark.

Writing of Pattani in 1744 Alex: Hamilton says "At the present day it carries on a small trade with Bangkok, Singapore and neighbouring States, the exports being tin, lead, gutta, fish, tiles and earthenware."
The tiles referred to here would doubtless be those curious, thin, light little squares known here to-day as *Kruekuan Songklu*, or tiles of Singora which, at least until the arrival of the modern cement tile, were imported into Bangkok regularly.

Once upon a time a Government ship was despatched down the peninsular coast on a delicate mission not unconnected with the Malay Dependencies. There was a strong body of stout marines on board and also a Subtle Emissary with a persuasive tongue and guileful heart. (This was, of course, a long time ago). In due course the mission was successfully accomplished and the ship prepared to return. It happened that a high official connected with the expedition was building a new house in Bangkok at the time and, as it seemed to him unsafe for a fine Government ship to be going about practically empty, he arranged to have her ballasted with Singora tiles. (This was, I say, a very long time ago). The ship set out crammed simply *full* of ballast, met with rough weather and, though this was a very, very long time ago, neither ship nor stout marines nor guileful emissary have ever been heard of since!

In the museum at Ayuthia where, under the fostering care of H. E. Phaya Boran Rajdhanindr, one of the most learned archaeologists of Siam, a very valuable collection of old pottery has been got together, there are many specimens of common earthenware of variable quality and design, that have been found amongst the ruins of that city and in the neighbourhood, and that are all at least 150 years old. Some are very rough in texture and workmanship, and others are of fine clay, carefully executed and of graceful design. None of the articles are quite similar to the earthenware pots of to-day though the differences are in many instances small.

In the Museums of Bangkok and Ayuthia are preserved specimens of the large earthenware pipes made by Faulkon to conduct the water from the sacred lake, Chub Sorn, to the Palace at Lopburi.

The Bangkok and Ayuthia Museums also contain good examples of the large jars for which Nakon Sawan was at one time locally famous, jars with a small mouth, a pronounced lip, very wide and
rather squat body and narrow foot; of content about four times that of the large water jars now made at Pakret, with which everybody in Bangkok is familiar. The specimen at Ayuthia has a thin glaze which, however, covers only the upper half of the jar. Those in Bangkok have a much thicker and more complete glaze and are in fact very remarkable pieces of earthenware. These large Nakon Sawan jars are not made now though pottery works persist there.

Concerning the alms-bowl of the mendicant Buddhist monk, called "Bhatr", (from the Sanscrit "Patra", a plate or cup). My youth was spent in a part of Burma where alms-bowls are made of hard pottery, turned a shining black by a coating of sesameum oil applied before firing in the kiln. When therefore, I began this paper, I went to that part of Bangkok that is called "Ban Bhatr" because alms-bowls are made there, to study the local process. I was told then that these articles are made here of iron, and it shocked me to realise that for twenty-five years I have been going about in blind ignorance of that fact. However, a man, seeing my concern, produced an old alms-bowl of pottery, and I went away thinking that these iron bowls might be a mere modern innovation. But, on looking up De La Loubère who wrote of things in Siam about 1680, I read; "When they (the monks) go in search of food they carry a bowl of iron in which to receive whatever may be given them"! I have, however, seen several old pottery alms bowls at Ayuthia, and so may perhaps conclude that "Bhatr" may be of either material. I am told that in the Chiang Mai neighbourhood also, where fine black pottery is made, the "Bhatr" is usually of iron but that many old earthenware bowls are preserved in Wat, and that once upon a time they were all of this material. (A black terra-cotta alms bowl was exhibited).

All over the country amongst the paper, plaster and wooden, votive offerings made at San Chao and similar shrines, the curious will find small baked clay images of one sort or another that have been presented by the pious in search of, or in acknowledgement of, spiritual assistance. These scraps of pottery are, some of them, quite interesting, though almost always of very rough material and careless execution. They are about on the same level as the little earthenware toys that are common and can be seen on sale in most
bazaars. I once picked up two of them near a ruined shrine at Sawankalok, and I like to think these may be of extreme antiquity, though probably they are not so at all. One represents an elephant in the attitude of adoration and the other is apparently a child with mumps, wearing anklets and a top-knot and holding a bantam cock in its lap. Perhaps somebody can explain any significance there may be about the latter. The mumps may be a potter's accident but the other things are apparently intentional.

Of the innumerable places where pottery of sorts is made in Siam to-day, the most noteworthy, after Bangkok, are Chieng Mai and neighbourhood, Nakon Sawan, Ayuthia, Bang Bua Tong Pakret, Pattani, Ubon and Chantabun. In all these places one may see potters working by the methods, and with the implements, that are common to the business all over the world. The kneading and mixing of the clay, a laborious and important process, the throwing on the wheel, the beating of the green pot to the required thinness and shape, the impressing of the ornamental pattern, the firing and the final rubbing, scraping, and polishing off; all these operations are performed in a manner practically identical with those of the potters of Europe, America, everywhere.

I don't want to take you back to the beginning of time,—of which you have already had enough,—but really! The Potter's Wheel!! One must look back for a moment to consider that stupendous fact. It is a matter of record that in Egypt 3500 years ago and in China 4000 years ago, clay was being spun on wheels in all respects identical with those that may be seen to-day in any pottery-works of Stafford-shire, beside the Seine, the Rhine and the Tiber, and on the banks of the Menam Chao Phaya. Drawings of potters at work have been preserved for us from the ancient civilization of Egypt, which might almost have been copied from 20th century workers in Siam. There is the wheel in the shape of an inverted cone, turned with the foot as by Chinese potters at Bang Chark in Bangkok, or with the hands as by the Siamese at Pakret and elsewhere. It is a wonderful phenomenon!

Right here in Bangkok one may watch the wet clay rise on the wheel under the deft fingers of the operator, who passes it to
another by whom it is whacked and thumped to the required thin-
ness and smoothness before being fired; and one will not forget that
800 years ago a bibulous old tent-maker of Khorassan stopped by
the way to watch that very same operation and wove the incident
into an immortal quatrain.

The potteries of Chiang Mai are extensive and peculiar. In
addition to the places where the ordinary rice-pots, water-jars and
bowls of daily use are made, there is quite an industry concerned
with the making of a fine porous terra-cotta ware, examples of
which, in the shape of water—bottles, small jars, filters and so forth
are now-a-days distributed all over the country by means of the
railways. There is also a long-established factory which turns out
a special grey-green earthenware of roughish clay, burnt very hard
and covered with a green glaze. This institution is situated not far
from the Pratoo Chang Penuak and is owned by a Shan family in
whose hands it has been for some generations. The clay is dug
from a deep hole right on the spot. The owner is an affable person
who takes pleasure in showing his premises, but on the subject of
his glaze he maintains a silence as of one who holds a secret that
nothing shall induce him to reveal. In Scotts' Upper Burma Gazetteer
we may read, however, of a substance used for glazing pottery
in the Southern Shan States; a substance, yellow in colour and con-
taining 90.8 per cent of a lead compound, which, mixed with rice-water
to a viscid fluid consistency, and smeared, with a little blue-stone
added, over earthenware, gives, on firing, a vitreous green glaze. After
reading this, it scarcely seems necessary to worry the Shan potter of
Chiang Mai about his ancestral secret. This pottery is fired at a
fairly high temperature and the glaze is certainly much the best be-
ing produced anywhere in Siam at the present day.

Small terra-cotta bottles or vases of many degrees of fineness,
are another production of Chiang Mai. I once asked two or three
friends from the north what these were for, and they replied that
they are generally used for containing the water required for the
mixing of gin and bitters! I found it difficult to believe that the
short-drink vice had reached such proportions in the north, the
evidence of my European informants notwithstanding, and I pre-
ferred to believe that they are really intended for use as flower hold-
ers and for the ordinary innocuous requirements of the Lao household.

The potteries at Nakon Sawan and Ayuthia produce nothing in these times that is particularly worthy of special notice, though they turn out plenty of ordinary ware. Those of Ayuthia are situated at the suburban village of Sa: Bua where they flourished during the palmy days of the old capital, and it is interesting to note that many families of the present colonies of potters at Pakret and at Ban Tanao Sri on the river a few miles north of Bangkok, emigrated from Sa: Bua about 130 years ago, presumably in order to supply pots for the new capital.

The ware of Pakret and neighbourhood is too well known to need description. It consists largely of the big water-jars in which before the days of condensers, artesian wells and water-works, we used to store water collected in the wet season for use during the dry. I remember about a hundred of them standing in the space under the British Legation! Also in those unsophisticated times, one of them, with a ladle or dipper, formed the sole appliance for the bath.

The Pakret pottery being usually thick, requires more firing than most and, to make the utmost of the heat, oval topped kilns are used, whereas for ordinary pottery the kilns are square and quite open at the top.

At Bang Bua Tong in the South of Monthon Ayuthia, west of the river, where the clay is good, there are several villages devoted to the making of pottery. Here are two enlarged photographs from a factory there belonging to H. E. Phya Sukkum, who specialises in the ordinary cooking pot:—Simple, elegant, thumped to the nth degree of hardness and thinness, it is rather a wonderful production; but it is so cheap and common that it is never noticed. Besides its legitimate purpose which is to cook rice, it is put to many household uses. Half a dozen unused pots stand on a shelf in every house and serve as money-box, larder, wardrobe and a cache for odds and ends, and, when smallpox and cholera are about, an old pot makes an excellent boggle to frighten away the wicked, “phi,” from the houses door. (Here was shown a fire-blackened pot with
Red earthenware cooking apparatus (Bang Bua Tong).

Red earthenware water-pot (Ban Tanao Si).
a grotesque face drawn upon its bottom with white lime). The Siamese potters of Ban Tanao Sri, Bang Bua Tong and elsewhere are always ready to undertake special orders in addition to their regular business and, under guidance, are capable of quite artistic work.

The pottery of the peninsular districts is neither very good nor remarkable. There is here a specimen curry pot obtained in the far interior of Pattani from a small and very primitive factory. Pots of similar shape are to be found at Ayuthia and elsewhere but they are all of better make and material. Such pots are not thrown on a wheel but are laboriously worked by hand. There is much sand in the clay and the firing is poor.

In Bangkok of late years a good deal of pottery making has been undertaken by Chinese. The largest factory at Bang Chark on the west bank of the river has already been mentioned. Here many sorts of flower-pots and stands, bowls, tiles and other objects intended to be ornamental, are made, but few ordinary household utensils. Other Chinese factories are smaller and are usually devoted to the making of one particular thing. The earth is brought from various places, chiefly from Bang Bua Tong, whence also supplies are carried to many distant Siamese potteries. A good clay is brought all the way from Lampang for special uses and a remarkably fine dark clay, the origin of which is kept secret, is also used. Many productions are glazed and coloured with material that is all imported from China. Coloured tiles, a specialty, have been noticed.

The potter’s trade in Siam is not very lucrative. The wholesale prices obtained are very small, from 3 to 5 ticals per 100 for rice pots, and Tcs. 6/- per 100 for larger pots used for collecting palm-sugar juice and so forth, being usual. The large water jars of Pakret are sold wholesale at 45-50 stgs.

Nevertheless Siamese potters seem able to make a profit which, when eeked out with a garden or a little rice-land, provides them with an income sufficient to induce them to continue working contentedly at the business. As for the Chinese potters of Bangkok; when they are asked How is business? They, of course, always reply “Kat Thu n” which, in this, connection means “Rotten.”
II

I pass now to the consideration of what is usually called the higher form of the potter's art, namely of the vitrified clays, the highest development of which is porcelain; but before doing so, it appears desirable to consider very shortly the development of Keramics in China, whence vitrified clays and porcelain came to Siam.

According to Bushell, a well-known authority, to Burton and to others, the Chinese were the first potters in the world to discover the art of glazing pottery with powdered felspathic rock and limestone, under the influence of very high temperature. This was during the Han dynasty and consequently some time between 206 B. C. and 220 A. D. From this discovery porcelain resulted, the productions of the industry passing, during centuries of unremitting experiment in the mixing, refining and firing of various clays and powdered stone, from simple terra-cotta, through many stages of more or less vitrified stoneware, with glazes of ever-increasing refinement of substance and colour, to a highly vitrified, translucent, white ware covered by a white glaze, which made its first appearance in the 12th century A. D., or near the end of the Sung dynasty.

The word porcelain, it may be remarked, is not derived from Chinese but from the Portuguese word "porcellana", which literally means, "of, or pertaining to, a little pig." Cowrie shells were called "Porcella" or "little pigs" because of a fancied likeness of their polished surface to the round back of a piglet; the resemblance between white China-ware and cowrie shell struck the European mind at once and hence the name for the latter was extended to the former. In Chinese, earthenware is "Yao" and porcelain, "Tchéki", according to Père Entrecalles. (Lettres Edifiantes et Curieuses des Missions Etrangères. Vol. 18, page 236).

The earliest attempts to colour porcelain by painting as distinguished from the fine colours obtained in the glaze, were made in the 14th century A.D., when blue and red under the glaze were first produced, and it was not until near the end of the 16th century that the use of enamel colours fired over the glaze was introduced.

Sawankalok and Sukhotai were once the alternate capitals of old Siam, and in the neighbourhood of the ruins of both these cities
there are situated the very numerous remains of ancient Pottery works, which were, once upon a time, devoted to the manufacture of a pottery quite unlike the ordinary earthenware to be found elsewhere in the country. These remains have been described by Prince Damrong, by Gerini, Lyle and others, and referred to by the learned Dr. Hansen in a recent paper read before this Society, and have doubtless been seen by many of you, and therefore a minute description of their present appearance is unnecessary now. Suffice it to say that they consist of an immense number of small kilns surrounded by heaps of broken or mis-shapen pots, bowls, bottles, dishes, etc., of peculiar shape and material, evidently the accumulation of failures thrown away on opening the kilns after firing.

On examining this débris it is found to contain pieces of a ware made of exceedingly fine clay, very pale grey or almost white, burnt to the consistency of stoneware, that is, slightly vitrified, and overlaid with a thick, transparent greenish, blueish, greyish or brownish glaze. Parts of the clay that have been exposed to the firing uncovered by the applied glaze, are usually light brown and slightly glazed by vitrification of the clay itself. The Kilns are lined with bricks, the surfaces of which are found to be highly glazed by fusion of the sand contained in them. In fact, it is plain that here are the remains of potteries where much ware has been made by the very-high-temperature method; indeed, a kind of primitive porcelain.

In the "Pongsawadan Muang Nua", or Annals of the North, there is an account of an expedition of the Siamese King Phra Ruang to the Court of China, (the details of which are evidently mythical), ending with a reference to certain Chinese potters brought thence on the return journey and installed near Sawankalok to make pottery. Whether or not there is a substratum of truth in this legend, there appears no room for doubt that in the palmy days of Sawankalok and Sukhotai there were people there who made pottery by the Chinese method, and who were in all probability Chinese themselves. Moreover, there is nothing repugnant in the idea that such Chinese potters may really have been placed there by Phra Ruang, who seems to have been the
greatest, proudest, most ambitious and, as one might say, most swanky king of the Sawankalok era and therefore might be expected to feel that, as the Emperors of China had their royal pottery factories at Pien-Chow and Hang-Chow, so he (Phra Ruang) must have his own at or near his capital.

The date of Phra Ruang's reign is disputed, but must have been somewhere between the 10th and 13th centuries A. D.; or while the Sung dynasty potters of China were working through the stoneware stages towards porcelain, with single glazes of various colours but with no knowledge of painting. Looking at the spoilt remains of the Sawankalok and Sukhotai potteries that we have, I see no reason to suppose that the best these Sawankalok people could produce, was much, if at all, inferior to contemporary Sung productions in China, and I venture to express the opinion that if we could see the failures that the Pien-Chow and Hang-Chow potters threw away, we should find them very much the same sort of stuff as this.

But—it would seem that, while the multitudinous potters of China vied constantly with each other in improving their wares, the two or three potteries isolated in Siam must have got left behind. Gerini says somewhere that the glazes used at Sawankalok were probably imported from China, but evidence of this does not appear, and I see no reason to suppose either that the potters who came to Siam could not make glaze, or that they could not find the materials for it here. It seems to me probable that they knew their job and that they worked away for a few generations with such material as they found at hand, possibly improving slightly, and then, as they became more Siamese and less Chinese, falling slowly back. They never produced true porcelain because they never had the requisite pure white clay to mix with their felspathic powdered rock, whereas if they imported glazes they might equally well have imported Kao Lin and so kept abreast of the times.

About 1370 A. D. the Chinese, under the earliest Ming Emperor, were producing vastly improved pottery, and were beginning to make porcelain painted with blue under the glaze. By the end of the 14th Century this blue porcelain probably found
Sawankalok Pottery.

Chinese Crackle! (Sawankalok Chin).
its way to Siam. Though Ayuthia had by then been founded, Sawankalok was still an important place and the potteries there would be still going fairly strong. The rough attempts to produce colour under the glaze that appear in some Sawankalok ware may perhaps be allocated to that period. There are in both the Ayuthia and Bangkok museums, plates of, I think, unmistakable Sawankalok origin, with very rough under-glaze blue painting, and there are many specimens with more or less badly executed designs in brown or black lines under the glaze. That seems to be about as far as the Sawankalok-Sukhotai potters ever got. From then on they seem to have declined gradually, falling from the status of 'Purveyors to Royalty' to that of makers of inferior cheap crockery, until, before the rising tide of imports from China, they faded away altogether; some people think in the 16th century A.D., others in the 18th.

That the ware of Sawankalok-Sukhotai ever contributed seriously to the famous export of glazed pottery and porcelain from Martaban to the Mohammedan countries of the Levant, as is claimed by some, seems to me highly improbable. That trade was most active in the 16th and 17th centuries, and if, at that time, Sawankalok could produce of ware good enough in quality and large enough in quantity to compete in that trade, we should almost certainly have had fairly numerous specimens still in existence to-day; whereas the remains of the industry are little more than mere fragments such as you see here.

The learned and indefatigable Phaya Boran has managed, during 20 years, to collect about 150 pieces of Sawankalok ware in the Ayuthia museum, a few intact but most flawed or damaged, and only one fit to compare with the celebrated Martabani ware,—and that one may be Chinese. The evidence all seems to point to the probability that Martaban, and perhaps Ayuthia, were no more than ports of transhipment for porcelain consigned from China to the West.

The collector of pottery in Bangkok may sometimes be surprised to find that a piece of grey crackled ware offered him as Sawankalok is, on further investigation defined as Sawankalok:
Muang Chin (Chinese Sawankalok)! It seems that a few years ago anything grey, or pale green, and cracked, had to be called Sawankalok to please collectors, and from this the more ignorant persons connected with the traffic in porcelain and its semblances, both as buyers and sellers, seem to have concluded that Sawankalok was, in fact, the generic term for all crackled ware, some being Chinese Sawankalok and some Siamese Sawankalok!

I have never seen any Siamese ware that resembled Chinese Crackle in any but the most superficial way.

With the introduction of true porcelain from China it would appear that descendants of King Phra Ruang abandoned the idea of having their own Royal Potteries and took to using these superior white Chinese wares. With the development of the great King-te-Cheng works, the output of Chinese pottery increased very much, and early in the 16th century it was being exported, not only to all neighbouring countries, but to Europe. We know from the reports of early travellers, that much of this ware came to Ayuthia, and no doubt, before the century was ended, not only the Royal Court but the nobility, and possibly even the common people, habitually drank tea out of Ming cups. In the time of Wan-li, the last of the Ming, the output of Chinese porcelain was enormous and, though Ming ware is not exactly common here now, there is probably a good deal more of it in existence in this country than people think.

Anderson, in his English Intercourse with Siam in the 17th century, page 30, quotes Ramusio, a Portuguese writer of about 1550 A. D., as saying that the merchants of Surat traded with Tenasserim (practically the same thing as Mergui, Moulmein or Martaban) in spices, silk, benzoin and porcelain; and again William Methold, an East India Co.'s factor, wrote in 1619 that the merchants of Golconda carried goods to Tenasserim and thence overland, 14 days, to Siam (Ayuthia), returning with all sorts of Chinese commodities, as "porcelain, satin, beniamin of Cambodia, tin, and sappan wood."

The above is evidence of the presence of Ming-porcelain in Siam, and much more could be produced if time allowed and the mere recapitulation of evidence were less tedious.
To clinch the matter I exhibit a piece of Ming found in Siam. Observe the colouring and design! Obviously Ming period! See the glaze, worn dull where exposed but still bright inside! Clear evidence of great age! The article is a narghile, hukha, hubble-bubble or water-pipe: a thing not used in China but without which no orthodox Persian, Turk, Egyptian or Arab can exist. Hence an article made for the Levant trade. Detained in Siam, however, probably by some Moslem smoker, it has passed from his descendants to non-hukha smokers who have cut off the spout, plugged the hole and made the thing into a bottle.

It may have been about the end of the Ming period that the Court of Siam first began to send designs, both of shapes and ornamentations, to be carried out in porcelain in China; but this is more or less conjecture on my part as there are no quite authentic specimens of such Ming ware extant, while of written evidence of the fact, I know none. Regarding the 17th century, however, one feels rather more confident, for the ruins of Ayuthia have yielded rice-bowls, covered waterpots, dishes and little cinerary urns, Siamese in design and shape, which seem to be not later than the Kang Hê (Tsing) Chinese period 1662-1722. Here, also, H.R.H. Prince Damrong comes to the rescue. His book, 'A History of Chinese Porcelain', published in 2460, i.e. about four years ago, a most excellent, learned, and comprehensive work, deals at length with Siam-Chinese ware and is a reservoir of valuable information from which, were I able to read Siamese with less trouble than is the case, I should have been happy to give you extracts.

I have been privileged to see pieces of blue under the glaze and of enamelled polychrome porcelain, undoubtedly of Siamese design, the owners of which can trace their (the porcelain's) history back beyond the 18th century, and I have compared these with companion pieces found at Ayuthia in situations that show them considerably anterior to the last Burmese invasion. I cannot show those pieces here because they are too precious to be carried about. An enamel bowl is especially remarkable for the excellence of the workmanship. The design consists of four effigies of Kinari Ram, i.e., dancing beings, half bird, half
woman, of Siamese legend; surrounded by floral wreaths on a red ground, the whole outside of the bowl being covered with enamel. The inside is enameled with diaper pattern in the same colours as the outside. A covered pot (Toh) for holding perfume is even more remarkable in that it is apparently the beautiful prototype of the not so beautiful Thépanom ware of which I will speak in one minute.

The nearest things to the above described ancient and beautiful work that I am able to produce for your inspection are, a bowl enameled outside and on the bottom of the inside, which, I believe, can be known by its red base as belonging to the 17th century; a little dish and a saucer.

I come now to the peculiar ware distinguished by the effigies of Nora Singh, mythical beings half man half beast, and Thépanom, or praying angels surrounded by conventional clouds on a black, blue, purple or sometimes white enamel ground. The inside of the rice-bowls of this ware is green with a pink open lotus in the centre. The outside design has much in common with the ancient and celebrated Tom Siamese silver ware. The earliest of this porcelain apparently dates back to the last Kings of Ayuthia and it seems to have been the favourite ware down to the first reign of the present dynasty. It is said to have been painted at Canton and the very best of it is clearly in decadent imitation of the beautiful ware of which the covered pot above alluded to is one of the few surviving examples.

There must have been a very great deal of it made for, 30 years or so ago, it had almost no price and crowded the shelves of pawnshops. I myself once saw a large crateful of these rice-bowls sold to a German for export at 3 salungs each. The ware is still fairly common in pawnshops but is now much more expensive than it used to be.

Other designs were used at the same period as the Thépanom, the colours being in accordance with the well known 'Five colour' style called in Siamese, 'Bencharong'. Lotus designs are found, bowls being painted to look like open lotus flowers or covered with
Siamo-Chinese enamelled porcelain 19th century.

Siamo-Chinese enamelled porcelain (inferior quality)
Late 18th and early 19th century.
different coloured panels each of which bears a spray of the five sacred flowers which grow in the seven lakes of Himaphan (fairy land). Apparently the best of this old ware was reserved by sumptuary laws for the use of those of royal blood; that available for the ordinary official class and the gentry being of inferior execution and somewhat different design. These last were never green inside. The peasantry and lower orders generally use imported crockery of ordinary Chinese make.

Thépanom ware gradually changed its appearance and, seemingly, after the 1st reign of the present dynasty, the best of it was no longer reserved for royalty. It continued to be made and imported, however, through all the subsequent reigns and, latterly, Japanese imitations of the oldest styles have been put on the market.

In the Second Reign the royal green tended to disappear from the best ware. This was the time of a vigorous production in China, of exceedingly beautiful porcelain, especially rice-bowls, and these last doubtless took the Siamese fancy, for a fashion set in then of patterns with birds and flowers, butterflies and flowers, or just simply flowers, and also very effective diaper and one-colour designs. This fashion amounted practically to a return to the pre-Thépanom manner and there can be no doubt that from the aesthetic point of view it was superior to that to which it succeeded. An immense quantity of such wares was made at King-Te-Cheng and imported, the sumptuary laws reserving the use of gold ornamentation for articles supplied for persons of royal blood. In the best rice-bowls the outside centre of the cover was adorned with an open lotus flower. It is curious that green-inside cuspidors seem to have appeared for the first time in this reign.

Apparently there was never much desire on the part of Siamese to have vases or other purely ornamental pieces made after their own peculiar designs. From the first the ordering of porcelain from China seems to have been simply a question of obtaining articles for daily household use, of as pleasing an appearance as possible. For ornamental purposes solely, Chinese designs were accepted.
The Third Reign synchronised with the Tao Kuang period in China, a period of continued activity in porcelain making, though the zenith as regards excellence of quality, in painting if not in the substance of the porcelain, had been passed. H. M. Phra Nang Kla, of Siam, seems to have been a true artist, and some of the porcelain imported by his orders is as good as anything of the kind to be seen. But the imports of the nobility and gentry at this time show a decline.

In the Fourth Reign the first symptoms appeared of a tendency to the use of European porcelain, and from this time the rapid decline of Siamo-Chinese porcelain may truly be dated. King Rama IV was a student of European ways and manners and was the pioneer of their introduction into his country. The Copeland and Garrett and the Wedgwood porcelain that he ordered from England instead of getting articles from China, is still preserved in various parts of the country.

With the Fifth Reign the manufacture of Siamo-Chinese porcelain may be said practically to have come to an end. The royal household was now supplied chiefly from Europe and in obedience to the dictates of the royal inclination, the national taste underwent a great change. In the earlier part of the reign the country may be said to have followed after false gods in matters artistic and, hypnotised by the glamour of Western Culture, to have forgotten its highly distinctive and sometimes beautiful national productions, in a rapt contemplation of the monstrosities of middle 19th century Europe.

King Rama V, however, outgrew his youthful bedazzlement by the West and cultivated a fine taste in true Chinese ornamental porcelain, a fashion for which consequently set in, giving an impetus to the importation of superior Chinese ware, and resulting in the formation of several fine collections of the same. Being also at heart an ardent lover of all things Siamese, the King, in his later years, introduced the science of archaeology to the knowledge of his people and, resulting therefrom, there dawned upon their imagination the fact that Siamo-Chinese ware of the first three reigns and
Siamo-Chinese enamelled porcelain (superior quality)
Late 18th and early 19th centuries.

Siamo-Chinese enamelled porcelain Rice-bowls (left to right)
1st, 2nd and 3rd reigns of present Dynasty.

Siamo-Chinese enamelled porcelain Rice-bowls (left to right)
4th, 5th and 6th reigns of present Dynasty.
earlier, though originally made for purely utilitarian purposes, was, much of it, very interesting as well as, sometimes, beautiful. A cult of this old ware thereupon took root and grew until it became a craze. Stacks of bowls and dishes, covered with the dust of years, were produced from cupboards and odd corners where they had long stood disregarded and forgotten, and were snapped up by collectors at prices that have increased until they have become prohibitive except to the rich. There are now some very complete collections of Siamo-Chinese porcelain in Bangkok, but as articles of use in high places the ware tends to disappear; the art of making it is in course of being forgotten and the trade in it is in the throes of death.

Ever since the making of Siamo-Chinese porcelain began, there has been a constant succession of blue under the glaze articles of Siamese design supplied to the order to the Royal Family and of the nobility and, latterly at any rate, for the public market without special order.

Efforts were made during the Fifth Reign to paint porcelain in Siam, not for sale but more for amusement. There was at one time a small workshop in the Wang Na, where quite good work was done, under the auspices of the last, so-called, Second King; and the late Prince Divakorn also employed artists who produced for him some pretty little cups and saucers, bowls, &c.,. The porcelain was mostly imported from China but a little was actually made in the Wang Na. These articles are somewhat sought after now but as few were made they are not often to be found.

As of yore, the common people use today the rough cheap Chinese crockery of the period, the flow of which into the country continues unabated. Such crockery includes cuspidors (Kratorn) and dishes (Cham Cheuang) of Siamese shape.

May I draw your attention for a moment to these small articles, called "Pi"? They are porcelain made in China for Siam and therefore come within the scope of this paper.

A few years ago I saw in a book-sellers' list, a book advertised for sale as "Ramsays Siamese Porcelain"; for 5s. Being at that time
unaware that there exists no book in European writing devoted solely to the subject of Siamese porcelain, and being at the same time anxious to learn, I sent the necessary five shillings, and received, to my grave disappointment, a small publication, a simple catalogue, called “Ramsays Siamese Porcelain and other Tokens”; containing some 350 illustrations of these strange and insignificant looking little objects. I then found that quite a cult of “Pi” exists; that German students have raged furiously together over them and that the discovery of a new one is the signal for palpitations of the heart in certain learned circles. “Pi” are the tokens that the gambling farmers of former days were allowed to issue to their clients in place of coin of the realm. Originally intended for the convenience of gamblers when playing, they naturally came into use as small change in the markets and shops. They were first used about 1760 and by 1875 they had, by the abuses and misuses that accompanied them, become such a source of worry and loss to the State that they were prohibited in the latter year. And why Messrs. Haas, Hamel, Schlegel, Chevillard and Ramsay should get so excited about them, is one of those things that are so difficult for ordinary people to understand.

A few words in conclusion about the brown, purplish or reddish, polished teapots with metal mounts that are to be seen in every Siamese house. These are called Hpan in Siamese and they are made at a place called Sin Hoe Tek, some four days journey into the interior from Shanghai in China. They are not composed of natural clay or earth, as would at first sight appear, but of hard rock, ground into fine powder and formed into an artificial earth after the manner of porcelain clay. They are imported into Siam in great numbers in a rough unfinished condition and the polishing and mounting of them constitutes an established minor industry in Bangkok, located chiefly near the Swing (Sao Ching Cha).

The process of polishing begins with the grinding or filing of the surface of the pot with a substance composed of powdered spinel or inferior sapphire, mixed with melted sticlac and set hard. Several such files, of increasing fineness, are used in succession, until a perfectly smooth surface is obtained to which an infinitely thin covering of sticlac adheres. The grinding or filing implement is called “Khakh
Bejra" which, I believe, means "Refuse or Dust, of Gems". The words, as pronounced, sound like K-a-k P-e-t but you will of course understand that, to be consistent with the accepted system of transliteration of Siamese words, I have spelt them K-h-a-h-k B-e-j-r-a. The final polishing is done by rubbing with the hard outside surface of a bamboo.

An industrious worker can turn out a finished teapot fit for ordinary use in a day, but, for the finer specimens a week, a fortnight or even a month is not considered too long for the polishing. The making of these teapots is an ancient and cherished Chinese art and superior productions bear the marks of the Emperors in whose reign they were made, like porcelain. The collection of Hpan (tea-pots) is a favourite hobby in Bangkok and authenticated old specimens of good workmanship often change hands amongst collectors for fabulous sums.
THE FUNERAL CUSTOMS OF THE MONS.

by R. HALLIDAY.

Some time ago a friend wrote saying he had attended a Mon funeral and asking why certain things he had witnessed were done on such occasions. This suggested to me the idea of writing on the subject of this paper. I find it is very common for people to ask why certain things are done when things appear strange to them, but it is not easy to give satisfactory answers. On this matter of the customs at Mon funerals I have a book that professes to give the origin of such customs, and the reasons for some of them. On close examination, however, one finds that it is rather a didactical treatise intended to encourage the devout in the practice of their religion. From the Buddhist standpoint it is rather a fine piece of devotional reading. From the point of view of the enquirer into the funeral customs its chief value lies in its tabulation of the various practices connected with the reverent and affectionate laying away of the remains of the dead. This booklet of some twenty pages of palmleaf manuscript is entitled "Anissainsa Kammathān", which being translated is "The Advantage of a Dead Body". The idea is that there is profit to the living in considering the various things that are done to the dead before they are finally laid away from sight. We shall return to this little book later.

In writing at some length on this subject in "The Talaings" I made use of another and somewhat longer work, which set forth the practices to be observed in the varied conditions and circumstances under which death at times takes place. From that work we can learn the only real reason for the various practices observed in connection with the dead, and that is, that custom kept alive by tradition has decreed that these various observances cannot be lightly set aside. In fact there is great danger to those who neglect them. In borrowing the copy of this work, "Lokasamratti", which has always been readily placed at my disposal, some weeks ago, the owner of it remarked to me with concern that there was now far too much neglect of its rulings. In this case, although like many other books, the origin is referred back to the Buddha's time, there is no reference to the religion
except as the monks and other religions are mentioned in, the
carrying out of the various practices, as for instance, when gifts to
the monks are forbidden in certain circumstances, or when a religious
mendicant is the proper person to carry out a certain act. From
this it is very evident that the origins of the customs are anterior to
the introduction of Buddhism among the people. The explanations
usually offered when people ask the reason for the various practices
are to be discredited as of no actual value to the earnest enquirer.
I feel quite content when I can find out what seems to be general
practice either in one special form or in variations of it. In this
paper I shall simply state what I have seen and heard of the
practices.

A circumstance which strikes one at the very outset, when
one comes into close contact with death amongst this people is the
preparations made for the last scenes, and for burial or its equivalent
as soon as death is seen to be inevitable. Not long ago word was
brought to me that an aged person in whom I was interested was
nearing his end. As confirmatory of this I was told that the house
was being arranged for death. On reaching the house I found that
the inner room in which the old man lay adying as it was thought,
had been cleared of everything not actually needed. Mats were
spread on the floor with cushions here and there, and curtains had
been hung up, and a canopy of white cloth was being prepared.
There was of course no ceiling. Such relatives as had been able to
answer the summons had gathered in and were sitting about in the
death chamber or helping with the preparations in the outer part of
the house. Later in the day, those who had been out in the fields
and further away also came, some not getting there till late at night.
It was in this case the head of a family when more attention is paid
to this act of respect and reverence, but even in other cases there is
always a measure of this attitude in the near presence of death.
Then I found the family anxious for what they called the service
for the living, which they deemed a very desirable thing. It seems
that the act of death is to be seriously recognised from the religious
point of view, though one wonders whether the people do not see
some magical influence in the observance. The dying in his
extremity is addressed as “Araham” “saint”, as if he had attained
archatship, though whether the people recognise the full signification is quite another thing.

It is not considered out of place to begin at once to make preparations for the last respects even before the death actually takes place, when that event is seen to be near. The coffin is sometimes being made whilst the dying is still conscious. In fact, there are cases when it is deemed fitting to have everything ready to carry out the funeral rites as soon as life is extinct. This is the course of procedure in the case of a person dying in a strange village as indicated in the book “Lokasamuti”. When a person is seen to be dying in a village other than his own, it is fitting that his family and relatives should seek out the necessary things for offerings and cremation before death actually takes place so that the corpse can be carried forth at once. Haste is also needed in the case of contagious and other loathsome diseases, and then often no time is taken even to make a coffin, but the body is carried forth with mats and blankets.

In ordinary cases, however, as soon as death has actually occurred, the women take charge in the house and the men in the street, and one will hear the wailing of the women, and see the men busy erecting an awning to shelter the coffin-makers and the musicians. You can never be in any doubt in passing a house where a corpse is lying.

In the bathing of the corpse there is rather a curious arrange-ment, though what might be its origin, or what its signification, I do not know. The body is bathed by pouring over it seven water-pots of water. The water has to be drawn by seven persons each born on a different day of the week. In proceeding to the well the one born on Sunday goes first, followed by the one born on Monday, the one born on Tuesday, and so on. When the water has been drawn, the drawers keep their order, but the one born on Saturday now leads the way, and the one born on Sunday comes last. According to the booklet “Anissainsa Kammathān” already mentioned, the water should be first boiled and then cooled. When the bathing has been accomplished a chew is put in the mouth of the dead and a piece of money. The two thumbs are tied together, and the big toes with cotton thread. Two pieces of split bamboo the length of the corpse
are placed along the sides of the coffin. These are the bamboo rests for the corpse.

When the body has been dressed and coffin, a suitable structure is made on which to rest the coffin, with a canopy over it. Here the body lies in state till the time of carrying forth, whether long or short, and may be viewed by all as the coffin is left open. It is a duty of the living to view the dead, and reflect on this end of life. A light is placed at each end of the coffin—pumot parang at the head, and pumot kerw at the foot. The latter is in a pot set in a basin of chaff standing on a tripod.

In carrying away the coffin from the house some peculiar customs are observed. The "Anissamsha Kammathān" says the corpse must not be taken out of the house by the door, because it is the way used by the household, but that the wall must be broken open. This, it seems, is according to circumstances. At a funeral in Ayuthia Monthon I was told that the rule was that the corpse must not pass under a cross beam. In Siam the main part of the house is in three sections, and the body must not be passed from one section to another. If death took place in the middle section which usually has the door, the coffin could be taken out at the door. Otherwise the wall must be broken open, and the body taken through the breach. Sometimes the dying one was removed to the middle section before death took place, so that the body could be carried out at the door. According to the "Lokasamutti", it is only under certain circumstances that the ordinary door cannot be used. It is pretty much the same with the use or non-use of the ordinary stair, although I think that in all cases something is done in case of the stair. At one funeral, I saw the ordinary stair used with a slim bamboo cane laid against it. At another place I saw the coffin carried down quite a different stair at the opposite part of the house. Sometimes the stair is simply turned over. A Mon stair is usually detachable—a biggish short ladder of five steps. It would seem, therefore, that these things are done so that there may be no fault to find.

There is quite a definite understanding as to the road that must be taken to the cemetery. When death takes place outside the village or town, the body must not be brought into the village. Hence even when the nearest road to the cemetery would be through
the village, if the death takes place outside the bounds the long roundabout way must be followed rather than come into the village again. The town of Ye in the Amherst District of Tenasserim, Lower Burma, stands on the site of an old city. Deaths taking place outside the old city wall though in the modern town have to be taken away another way rather than bring them within the old bounds. In villages on the Menam Chao Phaya, Siam, the coffin is taken to the water's edge and put on a boat to be taken to the monastery grounds where the cemetery is. On the Meklong where the water is not convenient for this purpose, the coffin is carried out to the edge of the fields, to avoid passing through the village, and carried round to the monastery, where the service is held and the cremation takes place.

In carrying the coffin, away from the house, a looking-glass is to be taken, and a knife. With the knife the path is to be scratched. The bearers are forbidden to look round behind, but are to keep their eyes fixed on the looking-glass, and on the knife carried before. A drinking vessel of water is to be carried, and a coconut. The coconut is to be broken open, and the water in it and the drinking vessel sprinkled on the corpse. On arrival at the cemetery, the coffin is to be turned round three times, and then placed on the pyre. It is here the corpse is to be sprinkled, and the cords tying the thumbs and big toes are to be cut, and then the fire is to be applied. There does not seem to have been any religious service in the original procedure. The present day Buddhistic service could only be introduced after the coming of the religion in any case. But even in the booklet mentioned which gives the rites a Buddhistic origin, no mention is made of a religious service.

There is always now a service held at the cemetery and sometimes also one at the monastery. I propose to describe them as I have seen them. The service I attended at a monastery took place in the preaching hall. There were mats spread at one end of the hall for the monks, the people occupying the main part of the building. The officiating monk sat with legs crossed, on a raised pulpit standing in the middle of the back part of the hall. The coffin was brought in, and the people made a request for the reading of the law. Tapers were then distributed and
lighted. It was explained to me that this was an offering to the law. The three refuges and the five precepts were repeated by the people, after which the monk read in a clear voice what purported to be a discourse of the Buddha. Following this there was another service at the place of cremation. The coffin was opened, the corpse turned face down, and the bottom knocked out of the coffin. The three times turning round of the coffin also took place here. We were all again presented with fire lighters, and it was the privilege of everyone to help in lighting the pyre.

At another funeral on the banks of the Meklong, the coffin was carried right from the house to the place of cremation. It was the funeral of a Kamnan's wife, and over forty monks were present. The people made the three reverences to the monks and asked for the service. The monks first repeated the Namo in praise of the Buddha, response by the people following. The three refuges were recited by the monks, the people following responsively. In the same way the five precepts were repeated. This was followed by something I did not catch. The Pali service usual on such occasions was now intoned by the monks, one of whom acted as leader. The people sat in worshipful attitude with their palms placed together. Some growing tired or forgetting, relaxed by and by and sat more at ease. Some women sat chatting and wanted to converse with anyone who would do so. At the close the people bowed and repeated some formula.

There is a curious custom of throwing a cloth across the burning pyre from one person to another. Some say any cloth may be used, but one booklet says it is the cloth that covered the corpse, and is to be thrown three times. In the booklet a reason is given for it, but that I take it is only a pious reflection on the act. There may, however, be something in the fact that whilst it has been passed through the fire it remains unscathed by the fire. But see the explanation given under.

There are many restrictions in certain defined cases. For a child under ten years no coffin should be made, and cremation is not allowed. Suicides, and people killed by lightning are to be buried standing and the forehead left bare on top. I have no actual instance of this, however. Should the person struck by lightning
die on the spot, he must be buried there. If death results at home
the burial may take place in the cemetery.

I should like to close with a brief résumé of the pious reflec-
tions of the author of "Anissasāna Kammathān". Nothing what-
ever of our bodies is imperishable; and all must come to the condition
of a dead body without fail.

The firewood signifies merit and demerit—sin and righteous-
ness ill deeds and good deeds. These stir our minds like the heating
of water; the former leads us on to the place of punishment and the
latter brings us to the condition of bliss. The three stones on which
the pot is boiled are the three stages,* the worlds of Desire, of Form
and of absence of Form, through which it is fitting that men must
make their way until Nirvāṇa the realm of bliss is attained.

The pot signifies our frail body, and the water boiled in it
the attachment of the five senses. When the fire has burned out a
person has reached the state of sanctification.

The threads tying the thumbs and great toes are the three
snares namely, children who snare the neck, property which snares
the feet, and wives who hold the hands. These attachments the
sharpest knife cannot sever nor could ages of wearing of water make
us free. The sharp knife which cuts the cord is the wise effort by
which Nirvāṇa is attained.

The pieces of split bamboo put along the two sides of the
corpse direct men to the way pointed out by the Allwise, whereby
we may put aside wrong views and attain right ones.

The four cross pieces in the couch are the four Āpāyus, the
eight abodes of heavenly bliss and the four Brahma heavens, which
if a man knows he may by contemplation free himself from the
miseries of life and attain the realm of Nirvāṇa.

The corpse must not be taken out at the door because it is
the way for the household to come and go. The wall must be
broken down. In this we are following the example of the royal
Suddhodhana—a of the Sākya tribe.

* Kāmāvacarabhūmi, rūpāvacarabhūmi arūpāvacarabhūmi. According to our
booklet the first comprises hell, the preta world, the asura world; the world of beasts, of
men, and of angels (the six devalokas). The second comprises, the sixteen heavens of
corporeal Brahmās, and the third the four heavens of formless Brahmās.

a The father of Gotama Buddha.
The corpse is carried out with the head to the front as the Buddha did with his august father. Before that time it was usual to carry with the feet first.

We repeat the five precepts on arrival at the cemetery, because on the death of the Bodhisatva as Chaddanta five hundred Pratycka Buddhas came and recited the vinaya precepts.

The cloth covering the body is thrown across the fire three times to show the imperishable nature of the three stages. One must enjoy or suffer according to one's merit or demerit.

The path is scratched to signify that there must be no going back, but a straight course for Nirvana maintained.

The mirror is carried in front and no glance made behind, because there must be no going back on the old life, but the view kept ever forward to the attainment of bliss.

The sharp knife signifies the knowledge which enables us to cut away the evil actions which beset us, and so free ourselves from misery.

The coffin is turned round three time to make people reflect and not pray for the continual course of the three stages.

The cocoanut water is pure water undisturbed, and not like the river or the sea water which is muddy and clear by turns, just as in life in this struggle merit and demerit alternate.

Money is put in the mouth of the corpse to show the utter worthlessness of worldly wealth. The bliss of Nirvana is the true wealth.

They put a chew in the mouth to show that whilst in life the mouth is prone to speak all kinds of evil to the detriment of others, in death it cannot even chew its own quid, another has to chew for it.

On return from the cemetery the tables and trays have to be overturned, because men must be turned with their face to the ground, and that they may meditate on heavenly bliss.

I have thus given a faint idea of the pious reflections of a religious Mon on the things his people do in laying away the dead from sight. If it at the same time helps to fix attention on the various Mon funeral customs the purpose of my paper will be answered.
NOTE SUR UNE STATUDE DE PRINCESSE
SIAMOISE DE L'ÉPOQUE D'AYUDHYĀ.

Par

G. CARDÉS

Conservateur de la Bibliothèque Nationale

Vajiráñāṇa.

Le Koṭ Maṇḍirapāla ou Loi des Gardes du Palais, promulguée à Ayudhya en 1458 A. D. par le roi Paramatmālokanātha, contient une brève description des divers costumes et des différentes parures qui étaient réglementaires à cette époque pour les princes et les princesses de la famille royale, et constituent en quelque sorte leur "uniforme" de cérémonie.

Ce passage, que l'on trouvera dans l'édition des Koṭhmāy en deux volumes par BRADLEY (Vol. II., pp. 126-127) présente, même pour les Siamois les plus instruits, certaines difficultés d'interprétation provenant, d'une part de ce que les termes techniques désignant les parties du costume ou les objets de parure sont en majorité d'origine khmère, et d'autre part de ce que les figurations de princes et surtout de princesses de l'époque d'Ayudhya sont extrêmement rares.

Aussi, la statuette qui fait l'objet de cette note, outre sa valeur artistique et le charme qui se dégage des traits si fins de son visage et de son torse si gracieusement modelé, cette statuette présente-t-elle un intérêt exceptionnel. Examinée à la lumière du texte du Koṭ Maṇḍirapāla, elle devient susceptible d'une identification à peu près certaine, et, du même coup, certains termes obscurcs du texte se trouvent heureusement éclairés.

Cette statuette en bronze noir, qui mesure 0m.42 de hauteur sur 0.27 x 0.22 à la base du socle, fit longtemps partie de la célèbre collection de Phya Sundarabimol (Phle Vasuvat), Directeur adjoint de la Régie de l'Opium, récemment décédé. Après la mort de ce dernier, elle fut acquise par Monsieur C. Niel, Conseiller à la Cour Suprême, chez qui elle se trouve aujourd'hui.
Statue de Princesse Siamoise de l'époque d'Ayudhya (Face)
Les traits caractéristiques, qui la distinguent à première vue d'une image de divinité féminine, sont la présence d'une sorte de veste croisée sur la poitrine, et l'aspect de la coiffure composée d'un diadème et d'une coiffe laissant apparaître deux petits chignons ronds, un sur le sommet de la tête, et un autre par derrière.

Si l'on se reporte au passage du Kot Manḍirapāla décrivant la tenue de gala des reines et des princesses (1), on voit que :

"Les reines Phra Agganahesī et Phra Rājadevī portent la tiare pointue (Mongkut) et des babouches dorées ; leur parasol a trois étages et leur véhicule est une litière (2). Les reines Phra Rājadevī et Phra Aggagājāyi n'ont pas de tiare, mais portent un chapeau, font un chignon en forme de queue de hansa et portent des babouches en velours ; leur parasol a deux étages et leur véhicule est un palanquin orné de makaras. Les filles du roi, de premier et de second rang, portent un chapeau, font un chignon rond et mettent une veste à broderies d'or. Les petites filles du roi, de premier et de second rang, portent un diadème, font le chignon rond, et mettent une veste de soie à étoiles."

Notre statue ne peut représenter ni l'Agganahesī ni la (première) Rājadevī, puisqu'elle n'a ni la tiare pointue ni les babouches, et qu'elle porte une veste. Elle ne représente pas davantage la (deuxième) Rājadevī ou l'Aggagājāyi, toujours à cause de la présence de la veste et de l'absence de babouches, et surtout parce que la

(1) พระอภิเษกเกศี, พระราชินีที่ทรงใส่ประจำโลก, มีมาภูมิ เกือก ทอง อีกแส้นขึ้น, พระราชินีนี้จ่าสี. พระราชินีพระ大大提高ยา, พระที่ไปประจำโลก ลำภูมิ, พระที่มามาจากทั้งหมด, เกือก ก้มหน้า ลักษณะ มีอยู่ใน สองขึ้น, เทวีนี มีภูมิ, ลูกเธอ เอกไทยทรง พระมามาวัย กลม เลื้อยโลก อาว. ตนมี เธอ เอกไทยใจเกี่ยว เผด็จมาวัย กลม เลื้อยโลก แพร ตำราจารึก.

(2)  Cette explication des termes จัลสีกและน่า กิ่น m’a été donnée par S. A. R. le Prince Narisaranuvattivongs. Les images de ces véhicules figurent sur les anciens bas-reliefs khmères (Cf. Groslier, Recherches sur les Cambodgiens, fig. 64 et Pl. VII A ; litière de la Reine-Mère). Par makara il faut sans doute entendre nāga.
coiffure ne saurait être qualifiée de chignon en forme de queue de hamsa (1).

Restent les princesses, filles et petites filles du roi, qui, les unes comme les autres, mettent une veste et portent le chignon rond, comme notre statue. Il eût été difficile au fondeur de représenter d'une façon suffisamment claire les broderies d'or ou les étoiles qui distinguent ces deux séries de princesses. Mais il y a, suivant le texte précité, un ornement caractéristique réservé aux petites filles du roi : le Sirophet (=Sanskrit Sīrovaṣṭa, "bandeau de tête, diadème"), et c'est manifestement cette parure qui orne la tête de la statuette.

On arrive donc, par élimination, à identifier celle-ci avec l'image d'une princesse petite fille du roi. Ainsi que je l'ai déjà dit, le texte de la "Loi des Gardes du Palais", en même temps qu'il fournit une identification tout à fait satisfaisante, acquiert par là une précision nouvelle : les termes au premier abord un peu embarrassants de शिरोपे, मणिसिंह, तीरिच दे perdent leur obscurité dès qu'ils sont pour ainsi dire illustrés par l'image.

Telles sont les raisons qui m'ont poussé à publier cette statuette, unique en son genre. Qu'il me soit permis, en terminant, de présenter mes remerciements à S. A. R. le Prince Damrong Rājānu-bhāb qui fut le premier à me signaler le passage du Koṭ Maṇḍirapāla, et à M. C. Niel qui a bien voulu autoriser la reproduction d'une des pièces les plus intéressantes de sa collection.

(1) Cette expression désigne sans doute ces coiffures terminées par une longue mèche, comme on en voit fréquemment sur les bas-reliefs khmères (Groshier, Ibid, fig 27, U. V. W.)
Statue de Princesse Siamoise de l'époque d'Ayudhya (Profile).
THE YANG KALO' (KARIENG) OR WHITE KARENS.

Translation of a paper received from Chiengmai in answer to the Society's Questionnaire, by E. J. WALTON.

Section I.

Physical Characteristics.

1. They are of medium physique and well proportioned.
2. Neither stout nor thin, but just medium.
3. The face is flat full face, and square in profile. The nose is small and flat full face, and of the shape of a right angled triangle in profile.
4. The lips are thin and dark in colour, broad across and curling upwards.
5. The hair on face, head and body is mostly long, the individual hairs slender and straight and usually sprouting. The hair on the body is short, and the individual hairs small and fine; on the legs they are coarser and longer—at the most about an inch or so—not growing thickly, soft, not curly, black in colour.
6. The eyes are blackish in colour.
7. They are not horizontal. The external corner of the eyelids is a little higher than the rest of the lid.
8. The colour of those parts of the body which are protected from the sun by clothes is of a whitish yellow; the exposed parts are dark yellow. New born babies all have dark blue spots (called non-permanent birth marks) on their backs and buttocks which disappear at about 1½ to 2 years of age.

Additional Information.

(a) Generally the skull is square but some are misshapen.
(b) The teeth are mostly black through chewing areca nut and bark.
(c) Many men and women pierce holes in their ears about 3 centimetres broad.
(d) Many of the men tattoo their bodies and legs; the body and arms are tattooed in red with vermilion in the form of dragons and various superstitious figures; the legs are tattooed in black with figures of dragons—fantastic animals tattooed according to the fancy of the tattooer—and also in lines.

Section II.
Habitations and Customs.

1. Habitat. The people like to settle on the slopes or tops of hills within reach of streams; they are also found on the lower levels and near the main rivers, but only in very small numbers. They are numerous in all parts of the Ambhoe of Mê Sariêng and also in the Ambhoe of Mê Hong Sơn. They like to live in small communities of not more than 30 houses at the most and the villages are from 8 to 24 hours' distance apart.

They are agile and not at all stupid. They call themselves "Pákäh Yo’" but by the people living round about they are called "Yâng". Speaking generally they are not very polished in their manners, as their race has no culture of its own, i. e., they don’t know much about decent manners or politeness.

2. Habitations. Their villages are subject to the ordinary administration of the District. When built on the tops of hills, they are not fenced, the stream and the hill itself being looked upon as the boundaries. If a fence is built, it is only built on the entrance side. Those who live in the low country by the rivers do make fences, using logs or bamboos or slabs (timber).

As regard the actual houses, the people living in the hills build flat houses resembling sheds, roofed with split bamboo slats overlapping each other and looking in the distance like corrugated zinc sheets. The roof is used for drying the rice on. There is a low bamboo floor, square, but no partition walls or outside veranda; the house-ladder goes straight up to the door of the house. The kitchen and the place for receiving visitors are in the sleeping room. The furniture consists of 2 or 3 earthenware cooking-pots, a big wooden platter on which to serve up the
rice and from which every one in the house eats; spoons made of bamboo for dipping out the curry; bamboo cylinders for drawing water, and to hold the drinking water and the water for general use; mats for lying on, woven out of a tree resembling a rush; wooden pillows; baskets, sieves, betel boxes, etc. As a rule very little attention is paid to cleanliness.

3. Clothing. The men usually wear sarongs and trousers with a short coat without waist and sewn up to the throat (formerly worn also by the the Siamese); if they wear a long shirt coming down below the knees, they don't wear sarongs or trousers in addition. The coats both of men and of women are without sleeves.

Unmarried girls wear a long white garment reaching nearly to the ankles and no other under garment. Married women wear short jackets embroidered with seeds ("Job's tears"), and "sins" of various colours. There are no special clothes for festival days, but only for the marriage day when new clothes prepared by the bride and bridegroom are worn.

The hair in the case of the men is worn long and knotted on the right towards the back of the head, and a long silk or cotton head-cloth is worn. The women knot the hair right on the back of the head, and use as a head-cloth a square of cotton about 70 centimetres long and folded from corner to corner (diagonally) with the knot in front. Many kinds of ornaments are used. The men sharpen bits of ivory with pointed ends and put them in their ears: these they call "Nā di ka cho' mē." Women have many kinds of ornaments, such as silver or brass armlets of which they put a number of pairs on each arm; silver earrings; and small bells round the ankles. Also they tie black cotton threads round their legs above the calf and round the ankles. They wear many strings of beads round their necks.

4. Food. Rice and the flesh of various kinds of animals such as bulls, buffaloes, pigs, crabs, fish, tortoise, sambur, barking deer, snakes, etc.; also smaller species such as tree-lizards (μυάλα), frogs, etc.—whatever they happen to come across. If they come across
any animal, it will likely come in their line of food, and there are few species that they won't eat. They are fond of liquor and like to distil it themselves. They smoke tobacco in pipes, but opium smoking is very rare. Areca nut and betel are popular with both men and women. Cooking pots and other utensils are as described in clause 2.

5. **Hunting and fishing.** They are keen hunters and fishermen. For fishing they use casting nets, and weel; and various instruments for shooting, trapping and catching animals, such as cross-bows, snares, traps, spring-traps, pointed stakes and guns. They shoot every kind of animal.

6. **Means of Transport.** They have no vehicles of any kind.

7. **Agriculture.** They grow rice and vegetables (gourds, cucumbers, etc.) and grow them well; they plant on the tops of the hills. Their agricultural implements are knives, axes, spades, mattocks etc. Varieties grown are white rice (½), sticky rice, maize, a sort of cucumber, melons, millet with big seeds, etc. They keep fowls, cows and bulls, buffaloes, pigs, goats, dogs and cats, but not bees.

8. **Commerce.** There are no shops or markets in which goods are sold. They have measures; the 'sok' is the unit of length, whilst for measuring capacity they use a woven bamboo measure resembling the Siamese rice bushel ( ), but without the wide mouth. They have a large and a small measure. They use Rupees a great deal. They barter goods, as for example, rice and chillies for cane sugar, areca, betel, etc.

9. **Industry.** They plait bamboos, forge iron, make pots and weave and sew and embroider, and dye cloth but their work is very rough.

10. **War.** For weapons they have guns and swords, spears, sharpened stakes and cross-bows.

11. **Social organisation.** Their methods of showing respect and exercising authority in the family are those common in rural communities, but they regard the eldest son as superior and give him complete authority in his family. They bring up their children in the way common to jungle and hill folk, that
is to say, they do not make much fuss over them, and apart from rice and milk let them eat anything else that is going. They are not in the habit of adopting children or of separating from their own children. Visiting between young men and girls prior to marriage takes place at night, but the girls are very careful, for the custom of the people does not allow of a girl giving herself to a man before he becomes her husband. A girl who does so is looked upon as the lowest of the low, so that even if a girl is forced by a man, she must hide the fact for fear of losing her good name and finding it difficult to get a husband, since it is recognized by the men that if a girl has secret connection with any man not her husband, nobody will court or marry her.

Weddings are celebrated as follows: The bridegroom is taken in procession to the home of the bride. Before they reach the house, that is to say whilst they are still outside the compound the bride's people must meet them with liquor, and before the groom's party enter the bride's compound, magic ceremonies must be performed by an "ächän" to protect them, for they may become spell-bound (ဦးပွင် as they call it in the north). When the ceremonies are over, the procession enters the bride's compound and goes to the house to the accompaniment of gongs and drums. Having reached the house, the "go betweens" conduct the bridegroom into the house, and there he divests himself of the clothes which he has worn since leaving his home, and puts on clothes prepared for him by the bride's people. The bridegroom is handed over and the ceremony is at an end. When the "go-betweens" and the bridegroom's friends prepare to return home, the bride's people supply bottles of liquor and accompany them on their way; they stop and drink the liquor together continually and when it is finished, go to their homes.

Parents have the right to beat and abuse their children in a just fashion. When the eldest son approaches the age of 20, if the father and mother think it fitting that he should exercise
authority in the family, they give him authority over all the other children.

As regards inheritance, the eldest son is sole heir but may, at his discretion, share with his younger brothers and sisters. It is very uncommon for them to take estate cases to court, for their custom is well known to them all.

They bring up and educate their children in the ordinary way, teaching them to work the rice fields and make a living out of the land.

They are subject to the civil and criminal law of the country, having no legal codes of their own.

12. Art. They do a little in the way of drawing and painting, carving, moulding clay, and music, but their work is very inferior. They have dances and they compose songs called by the northern people "Sô Yâng" (i.e., Karen songs). They have games of various kinds on the occasion of the death of a headman of a village; these they call "Yôkkri" "Khu'n pu'ng". They have no writing of their own, but some of them learn foreign writing. They have tales in their language.

13. Science. They have the divisions of days, months and years. The day is divided into morning, midday, evening; 30 days make a month. The Siamese 5th month is their 1st month, 12 months make a year, so the Siamese 4th is their 12th month. They have no era of their own. They have little knowledge of drugs or medicine. When ill, they consult omens and the soothsayers to find out what spirit has got hold of them. They trust to offerings to the spirits to cure themselves.

14. Religion. They believe in and sacrifice to the spirits. A newly born baby is laid on a cloth and put in a flat basket and they go through a ceremony of sifting and buying it. When the age of maturity is attained, there is no particular ceremony. When a person dies, they take the clothes away and wrap the body in a white cloth as one wraps up boiled rice in a packet; they then tie it round and round with pô (rope of hibiscus tree) or rattan and wrap it up in a second covering of bamboo mat-
ting. The relations then come and tell the corpse the road to travel, so as not to go up and be born in Heaven but to come and be born again amongst his own people, for they regard Heaven as an empty space where there is no working of rais or ploughing of fields and men must fast and hunger. After one, two, or three days, the relatives carry the body away and burn or bury it, whichever they think best. When burying, they make the grave a little longer and broader than the body. Men are laid on their faces and women on their backs, and the grave is filled in with earth. Long boards are laid on top of the earth and two wooden hooks are driven in between the neck, the intention being to prevent the spirit of the dead person from going up and being born in Heaven. They make a rail and hang on it new cloth and new coats and other objects as presents to the dead person; if there is any gold or silver amongst the presents it is buried at the spot. Over the cloth and jackets, they spit betel juice to make them stained as they believe that unless they do this, the dead person will not get them. The places where bodies are buried or burnt are not looked after.

Offerings to the tutelary spirits of the locality are made when they first clear rais (fields) or plant rice or reap it; also when they build a new village or house. They salute the spirits supposed by them to be in trees, in piles of stones, stones or streams, but they have no particular tree which should be worshipped; any big tree or stone or river or stream in which they assume there is a spirit, they salute it whenever they come on it, and if they make a sacrifice, they sacrifice a fowl, believing that the angels and the guardian spirits are there. This belief in spirits is inherited from ancient times and is passed on. They believe that God created the world and that the next world is Heaven, which they regard as an empty space where one has no means of livelihood. They have a story which has been handed down to them to the effect that when God came down to build the world, he summoned them to come and make merit and live together in the world, but they did not arrive in time as they were busy sacrificing to and feeding the spirits. God then gave them the name of "Yang" (not yet)
which subsequently became "Yâng". Accordingly they hold that for them it is no sin to kill animals, seeing that they have no religion and were not in time to be present when God founded the world.
เรื่อง ว่างกาย ธรรมเนียม ปราบดนตรี การ เลี้ยงชีวิต
ทั้งภาษา ชาวยาง กระเตาะ (เกียว)

ประเภทที่ 1

<table>
<thead>
<tr>
<th>คำ ถาม</th>
<th>คำ ตอบ</th>
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</thead>
<tbody>
<tr>
<td>1) รูป ทรง สิ่งฐาน ดูง ต่ำ เท่า ใจ ทรง ทรง อย่างไร.</td>
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<tr>
<td>2) อันทั้งนั้น หรือ ชิ้น ชิ้น จำหน่าย</td>
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<tr>
<td>เป็น ประจำ ิต.</td>
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<tr>
<td>3) สักหนึ่ง แห่ง หน้า ตา เมื่อ ดู ทรง จำเก่า หน้า เป็น อย่างไร เมื่อ ดูชิ้น หน้า เชียง เป็น อย่างไร คูก หน้า เมื่อ ดูทรง และ ดูชิ้น มี สักหนึ่ง อย่างไร.</td>
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<td>4) วิมี่ นี้ ปาก หน้า บาง อย่างไร มี บรรดา สิ่งฐาน อย่างไร บ้าง.</td>
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<td>5) หมดเศษ ๆ แห่ง และ ขน ตาม ส่วนที่ กาย มี สักหนึ่ง อย่างไร ตาม ธรรมชาติ มัน ออก กาย ซึ่ง อย่างไร</td>
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<td>6) ไม่ยังสำคัญ และ ไม่ยอมนัก มัน ว่า พอ ปาก ทรง.</td>
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<td>7) สักหนึ่ง แห่ง หน้าตา เมื่อ ดู จำเก่า หน้า แบบ เมื่อ ดูชิ้น ๆ  phức์ หน้า เชียง แบบ คือ ที่เพิ่ม บน คือ ตรึง เล่ หวย แบบ เมื่อ ดูชิ้น บน คือ ที่เพิ่ม บน คือ ตรึง หวย หวย</td>
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<td>8) วิมี่ นี้ ปากบาง มี ลิ้น กลืน และ สิ่งฐาน กระชับ เข็ญ ขึ้น.</td>
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| 9) หมดเศษ ๆ แห่ง และ ขน ตาม ส่วนที่ กาย มี สักหนึ่ง ไว อย่า เสีย ใด มาก เสียเล็ก และ เลี่ยม
ก้า ราม
หมาย บาง ห่าง ที่ คุณ ไม่คุ้น อย่างไร
แน่นอน ประการใด แม่ หยิก หรือไม่
หยิก ก้า หยิก ๆ เอง เอง เป็น
เพราะ ซึ่งแต่ยังไงได้อย่างหนึ่ง หนวด
เครา ก้า ดี แม่ เหมือน ก้า ดี มี เป็น
อย่างไร.

๖) ดูกนี้ยา มีสิ่ง สรรพนาม
อย่างไร.

๗) หัวตา กับ หางตา ได้ระดับ
ก้น หรือไม่ หรือ หัวตา กับ หางตา
ช่างใด ซึ่งกัน เข้าประการใด
ลบ ช่าง หางตา กับ ลบ ช่าง หัวตา
ลูก ที่กัน เข้าประการใด.

๘) สิ่ง สรรพนาม ของร่างกาย
ซึ่งไม่ดูกนี้ยา เส้น เสร็จ
บิด มันป้อม อย่างไร ถิด กัน อย่างไร
กับ ลอน ของร่างกาย ซึ่งไม่มีเครื่อง
นุ่ง ที่บิด บัง เสี้ยง ที่บั้น เบื้อง
คอด มี แผ่น ห่าง ๆ เวียก ๆ หิด อยู่
ตาม หลัง บัง หรือไม่ บัน กำเนิด

ก้า ทะบ
(ตามธรรมชาติมั่นใจก้า)

๖) ดูกนี้ยา มีสิ่ง ล้อม ช่าง
ที่ก้า.

๗) หัวตา ที่ หางตา ลูก
ไม่ได้ระดับ น้ำ (เรียก) ชอบ ช่าง หาง
ตา ลูก แล้วชอบ ตา เลิก น้อย.

๘) สิ่ง สรรพนาม ของร่างกาย
ซึ่งไม่ดูกนี้ยา เส้น เสร็จ เสร็จ
บิด บน เรียก หลัก อัน ของร่าง
กาย ซึ่งไม่มีเครื่อง นุ่ง ที่บิด
บน เลือก ค่อน ช้าง หลัก ที่บั้น
เมื่อเว้าคอด มีแผ่น ห่าง ๆ เวียก ๆ
(ที่เรียก ว่า บัน กำเนิด ช่วง วรรค)
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<th>คำ ถาม</th>
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<td>ตีติ้ง อยู่ ตาม หลัง และ กินทุกคน ต่อ ประมาณ อยู่ ๑ ปี ครีบ นิ่ง ๒ ปี กี่ หาย หมด.</td>
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คำ ซึ่ง แจง เพิ่ม เทิม

๑ บาง คน มี ระยะไกล ศัลยะ ถูก ศัลย ตาม ธรรมชาติ เป็น ศัลย เหลือ.

๒ โดย มาก มัก ยี่ห้าม ให้ที่นั่น ต่ำ เพราะ กิน หมา และ เบิ่งกันไม่.

๓ โดย มาก ชาย พึงมัก ชอบ จน ทุก และ เกือบ ให้ ถึง เกือบ ๓ เซ็นติเมตร.

๔ โดย มาก ชาย มัก ชอบ สัก ตาม ตัว และ แกร่ง ตา ตัว และ แข็ง ตา ตัว ศัลย ขัด แกร่ง เป็น ฐู ศัลย์ ผืน และ ยันต่าง ๆ ตา ลัก ตัว หมัก ตา เป็น ฐู ศัลย์ ผืน และ เป็น ฐู ชิด ๆ กี่ มิ.

ปั้นหาดที่ ๒๐

ว่า ทั้งยิ่ง และ ที่อยู่ และ ถูกพิมพ์ ธรรมเนียม

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<th>คำ ถาม</th>
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| ๑) ว่า โดย ฐาน ที่ อยู่ ที่ ไป. | ๑) คน จัดพัก นี้ โดยมาก มัก ชอบศิลปิน เล่นอยู่ ตาม หลัง เขาหรือ บน ล้น เขา ที่ อาศัย น้ำ ที่ยิ่ง ได้ เถื่อน อย่าง มาก ตาม ที่ ลุ่ม ๆ และริม แม่น้ำ น้ำ ลำ ที่ มี แพร่ ไป จนหมด นี้ย
คุณ ผาฟะ นี้ โดย มาก มัก มี อุ้ย ถาม
ที่ ดัง ๆ ของ ยำเตрог เมะ ละเรียง
และ ใน ท้อง ที่ ยำเต rog ดัง ๆ ของ จั่น
วีเตะ เมะ อย่ง ลอม และ ไม่ ไป อยู่
เปน บิ๊ก มเนะ เมะ หนา มัก อุ้ย เปน
หมู่ ๆ ใน หนู หนึง อย่ง มาก มี เพียง
กี่หมู่ หนึง สิง หมู่ หนึง ทำง กัน ตั้ง
๔-๒๔ นาฟิกา เปน อย่ง พอดี เปน
คน มี เซอร์ไว ไม่ คู่ จะ ใส่ ที่บ้าน
ไถน ถ้า เขา เรียก สถิติ ของ เขา ง่า
" ปรากฏ " ส่วน คน สถิติ คิว อุ้ย
ใกล้ เด็ก เรียก สถิติ ของ เขา ง่า
" ยัง " ถ้า ง่า โดย ที่ ไป แต่
กิริยา มายการ ของ เขา ไม่ ลุ่มผัวเริม
ร่วม เพาะ สถิติ ของ เขา เริ่ม ไม่
มี การ ลิ้น ตา อะไร กัน.

๒) ถ้าโดย ฐาน ที่ อุ่ย โดย

๒) หมู่บ้าน ที่ อุ่ย เขา จัดการ
บุกครอง ตาม พระราชบัญญัติ บุกครอง
ท้อง ที่ เครื่อง ข้อม ภาย นอก เข้า
กิ่ง โภพ
กิน รวม กิน ใน กระบอก นั้น หมวด ทุก ๆ
คน ซึ่ง อยู่ ใน เรือน นั้น ข้อน ทำ
ตั้งให้ ไม่ ไม่ ลำบาก ตั้ง แกล่ง กระบอก
ไม่ให้ ไม่ ลำบาก ตักน้ำ แล้ว ใส่ น้ำ กิน
และ น้ำ ใส่ เลือ ฐาน ตั้ง อยู่ พร้อม
ไม่ให้ ซินดิ หนึ่ง คล้าย ตันกล้า ลำบับ ปู
นอน หมอน ไม่ ลำบับ หมุน และ
ตะแกรง กระชั่ง ตะแกรง เขียน
มหาก วินา ตาม ธรรมชาติ กระทำ
ขา ความ สดับ มี น้อย ที่ ผล.

3) ตามปกติ ชาย ปาก นุ่ง ใส่
บางแกล่ง ใส่ ครุ ลง กิน แกล่ง เลือ กระบอก
อย่าง ตั้ง ทำ ใจ ใส่ เลือ กระบอกอย่าง
ยาว ลง ปาก เหล้า ไม่ ต้อง นุ่ง ใส่
และ แกล่ง เลือ ทุก ชิน
แดน เลมอ ไหล่ ไม่มี เด่น ต่อ ยุก
ออก ไม่ ขัด ฟัน หูฟัง ฟ้วย ราบ
หญิง เลี้ยง เบื้อง สาด (คือ หมาย ความ
น่า ยัง ไม่มี สาร) ใส่ เลือ กระบอก
สิ้น ราวก ลง ไป เก็บ ชิ้น ชิ้น เท้าไม้
คำ ตอบ

ต่อง นุง เดี๋ย นี่มี ด้วย แล้ว ไร้ เลือ
สืบ ฝัย แสดง ตั้ง อยู่ ดู อยู่ และนุ้น
ซึ่ง สิ่ง ต่าง ๆน้ำ นุง หนึ่ง ใน รั้ว นัก
ขัด ถ่าน ไม่มี มี แต่ นั้น แต่ งน
เพา นั้น คือ เบื้อน นุ้น หนึ่ง แต่ เลือ
ใหม่ ที่ คู่ บาก สำน มี เต็ม มี ไร้ การ
ไว้ แม่ นุ้น ชาย ไว้ แม่ ยาว เกสร แม่
คงไว้ไป ช้าง ชาย เหี้ย สวาย ที่ ชาย นิ้ว
หนัง และ มี แก้ ไหม หรือ ดี ชาย
ไฟ คือ น้๊า หนึ่ง เดิม แม่ สมบูรณ์
ที่ ชาย แล้ว มี แก้ ชาย ฝี่ เหลี่ยม
ตาม ๑๐ เรื่อง ตีเนื่องจิต พัฒ ทะเบียน
ไฟ คือ น้๊า และ เขา เลือก ไว้ ช้าง หน้า
เครื่อง ประดับ ร่าง กาย มี หลาย อย่าง
สั่งหัว ชาย เขา แอ ยา มา เหล่า ให้
เหมือน และ ปลาย เรียก แล้ว ใส่ หู
เรียก ว่า “ น้ำติ bothering ” หญิง
มี เครื่อง ประดับ ประดับ หลาย อย่าง คือ
ก้าว เร้น หรือ ที่ เหลี่ยม ใส่ แฮม
จะหลาย ๆ คู่ มี ต่าง หู ทำ ดี ไหน
ก้า ถาม

ก้า ตอบ

ไม่หู และ ดู พอน ดู ชื่อ เท่า
ก็มี เชือก ด้าย ตาก ๆ คาด ที่ เที่ยว
ของ และ ที่ ชื่อ เท่า ก็มี ดู ก็ยัง
สิ่ง ๆ ซี้ย เป็น พวงมาลัย แซงนอน คอ
คน นะ หลาย ๆ พวง。

( 54 )

๔ ) ห้า ตั้ง ยนตร การ บริโภค

๔ ) ยนตรยนตร และ เนื้อสัตว์ ต่าง ๆ
ทุก ชนิด เบื้อง เหนือ นั้น, ควาย, หมู
ปู, ปลา, เต่า, ทาร์, ฮีบี, เนื้อ,
ยุ ลั่น และ สัตว์ เลี้ยง บาง ชนิด
เบื้อง เหนือ, ซึ่ง กบ และ อย่าง ชนิด ๆ ฮีบี
เลี้ยง เต่า พบ ประ นั่ง สัตว์ อะไร เลี้ยง
โดย มาก มักจะ เบื้อง ที่ เสา
ก็ได้มี จำนวน ที่ เสาไม่กิน น้อย
อย่าง เช่น มี ผัก เมือง และ
เช่น ต้น กิ่ง ใบ และ ผัก ยาเส้น
ยั่ง กิ่ง ยา นั้น ไม่ไฉ่จะ มีใคร
ดูน หมัก พูลนั้น เบื้อง ที่ เสา
เช่น และ กิน ทุก ๆ คนไม่ต่าง ซ้ายและ
หมุง เครื่อง พูล เครื่อง ต้น ๆ และ
การจะ เครื่อง ใช้ ร้อย ต้น ๆ ต้น
มี ปรากฏ ใน ชื่อ ๕ เลี้ยง.
คำถาม

5) ถ้าด้วยกรุงเทพน้อยใส่ปลา.

คำถามตอบ

5) เข้าไปคุณ ชมทหารน้อยที่
ปลาเสียงที่ ปลา มี แห่ง เขา
ยิ้ม ค่า ขั้ว ต่าง ๆ มี หน้าไม่ ตัก
บัง ขั้ว นั้น เข้า ขั้ว หวย ขั้ว
ปีน เขา ยิ่ง ตู้ๆ ป่า ได้ทุก ชนิด.

6) ถ้า ด้วย คุณสามกรณ์ไปมาก
ต่าง ๆ

6) ยานพาหนะ ต่าง ๆ ไม่มี.

7) ถ้า ด้วย การ กลิ่น

7) มีการท่านเข้าไว้ด้วย, ทำ
แสง ต่าง ๆ ตรงที่ เขา ปลูก งอก
งาม ตี และ เขา ปลูก บน ล้น เขา
เครื่อง มือ มี มี ท่าน, เลี้ยง,
เจ็บ, ลาว พิชิตผันที่ เขา ปลูก
มี ข้าว ข้าว ข้าว เหี้ยง ข้าว ใส่
แสง วัน แสง ไทย ข้าว ฟัง เม็ด
ใหญ่ ลาว เขา เสียง ไกล. ใคร.
ระเบิด. รถ. และ ลูกนัก.
แบม. ตีนี่ เขา ไม่ได้ เลี้ยง.

8) ถ้า ด้วย การ คือ ชาย แลก

8) การ เจริญ วัน ดี ตกหลา ชาย
อย่างไม่มี เขา ไข้ เครื่อง วัน คง คือ
นั้น ลอน ย้าย ไข้ ดอก เครื่อง ตรงไว้
คำ ถาม
ไม่ ไม่ สถาน ปุ๊ป คล้าย สัก ทอง ข้าว ของ เวลา แต่ ปาก ไม่ เยอะ มี 2 ชนิด คือ อย่าง ใหญ่ และ อย่าง เล็ก เชน นิยม ใช้ เนื่อง รวมกัน และ สิ่ง ของ ซึ่ง ๆ เอา ที่ แรก เปลี่ยน บัน เชน เอา ข้าว และ พิก ไป แรก น้ำ อ้อย หมัก ฟู ว่า ๆ

4) การดักกระพริบของ เชน การที่สูญ การติฝ่า การที่หม่อ การ หอ ทุก การบนบ๊ก การยั่วถาม แล้ว มี บัง แต่ แปล ของ หมา ๆ

คำ ตอบ

6) เครื่อง ยายบุญ ฤทธิ์กิณัช ของมี ปูน ฐาม ทอง เหลน หลาน น้ำ ไม่ แปล เครื่อง ประหาร

33) การ เกษม นับ ตื่น และมี คุณภูมิ ใน ระหว่าง ครอบครัว อย่าง คน สมบูรณ์ บ้าน นอก แต่ เขา ถือ ถูก สาย หัว ปี แปล ใหญ่ และ มี อ่าน ผิวที่ ธาตุ ใน ครอบ ครัว นั้น กรณี เลย้ดุก เขา รักษา และ เลย้ดุก สถาน
คำ ถาม

กั้ว ตอบ

ธรรมชาติ คน ชาย ป่า ชาย ตอน ก็อยู่
ไม่ได้ประโยชน์ ประกอบ จะถูก นัก หนา
ส่วน ชาย นอก จาก บ้าน กัน เราม ชาย
อีก ๆ แล้วแต่ จะมี ให้กัน
ทุก อย่าง การ รับ ลูก บุญธรรมและ
การ ตั้ง ชาย จาก ลูก ไม่ได้จะมี
การ ไป มา หา สู่ ใน กระท่าง หญิง กัน
ชาย ก่อน ที่ จะ รับ เบื้อง สมัคร กอน
มี ไป มา หา สู่ กัน เสมอ ใน
เวลา กระท่าง คืน แต่ จ่าย หญิง กระท่าง
มาก เพราะ ประโยชน์ ไม่ยอม ให้
เลย ตั้ง ก่อน ที่ จะ ได้ แห่ง กัน แบน
สมัคร กอน เพราะ เรา ต้อง ว่า ที่
หญิง ยอม เลย ตั้ง ให้ แก่ ชาย ก่อน
ที่ จะ ได้ แห่ง บาง เลย นับ ว่า แบนคน
เหล่า ที่ ลูก หญิง จะ ได้ เลย ตั้ง
ไป โดย ลูก ก่อน ที่ ก็ต้อง เปิด บัง
ไม่ให้ ใคร ๆ เพราะ ลูก เลย ชือ
และ ผู้ชาย รั้ง เลย หา เริ่ม ได้ อยาก
เพราะ ตาม นิยม ของ ชาย รั้ง ที่
หญิง ชาย นั้น ที่ลอบ เลย ตั้ง ให้กัน
คำ ทปรี

ขาย คน ไค คน หนึ่ง โดย มี ได้ แต่ง
งาน กัน เขา จง เกี่ยวก ไม่ ซื้อ และ
แต่งงาน ที่มี หญิง นั้น แฝดน เธิ่น หาด
ขนิ่ง วิหาด แต่งงาน กัน นั้น วิชีที่
ทำ กัน นั้น ศิลป์ เจ้า ปาก มา ส่ง ที่
บ้าน เจ้า สาว ภรรยา ที่ จะ แตะ มา ถึง
บ้าน เจ้าสาว ( ศิลป์ นอก บริเวณบ้าน )
ต้อง มี พลัง ทาง เจ้า สาว นำ เขา สุข
ไป รับ เจ้า ปาก และ เหมิน ภรรยา
ที่ ต้อง เข้า แก่ เข้า ปาก จะ เข้า บ้าน
( ใน บริเวณ บ้าน เจ้า สาว ) จะต้อง
มี อาชญา ทำ วิชี เศร้า เทป ป้อง กัน
เริ่ม เข้า แก่ พลัง เจ้า ผู้ใด ( เพราะ
เข้า คือ สำ เนีย มี รูป คุณ เรียก
ตาม ทางหา มหา หรือ สำก " รูป ดี ")
เมื่อ ทำ วิชี เสร็จ เหล่า ที่ แล้ว เข้า บริ
เนิน บ้าน เจ้า สาว จน ึงเวียน อีก
เหล่า ที่ มี รั่ว กลาง เมื่อ ึง บ้านเจ้า
สาว เหล้า เข้า ภรรยา ที่ มี บัน ปาก
เริ่ม เจ้า สาว และ เตร้า เสือ เหล่า ที่
เข้า ปาก นุ่ง มา จาก บ้าน อีก เขา
ค่า ครบ

เลือก ณ ที่ ของ เจ้าสาว เลี้ยงมีไว้ นั้น
ผูก ผูก ต่อไป และ ทำ การ ล่าง ตก
เจ้า บ่าว เบื้อง อนั้น เสร็จ การ เมื่อ เจา
แก่ แล้ว พวก พวก เจ้าบ่าว จะ กลับบ้าน
ไป พวก เจา สาม บัด หา สร้า ไป ขาย
ตาม ไป ล่าง และ หมู่ แล้ว สร้า ที่นั้น
เวียงไป ณ สร้า มัน ถ้า เท่า กลับ
บ้าน เบื้อง อนั้น เสร็จ การ พวก
แม่ มี อ่าน จึง ยิ่ง ตี ค่า ใน บูทร์
บูทร์ ได้ ด้วย ขอบบitemid>รวม และ ถ้า เมื่อ
บูทร์ ขาย หัวปี เข้า มี แล้ว ขาย ยิ่ง
เจ้า. ๓๐ ปี บิดา มารดา เห็นเจ้า สม
ครบ จะ เบื้อง ญี่ ใหญ่ ปกครอง ยก บิดา
ให้ ถ้า มอบ อ่าน ของ นั้น ให้ แก่
บูทร์ ขาย ใหญ่ มี อ่าน เห็น บูทร์
ที่ยิ่ง ต่อไป การ ล้วง เข้า ถ้า
มรุก เข้า ให้ บูทร์ ขาย หัวปี เบื้อง
ยิ่ง มรุก รู้ ฝึก ตาม ใด จะ แบ่ง
ยิ่ง ให้ นั้น ๆ ได้ ตาม สนุน เรื่อง
mรุก โดย มมาก เข้า ไม่ ก็ กล่าว ดัง
ใจ ศาล เพราะ เขา มี กรรมเนื่อง
คำ สำภาพ

รั้งกิ้น อยู่ ต้น หนึ่ง กระ เล่น ดู ภาพ ตก เต่า
เข่า เล่น สกัด ลง ใหม่ ตาม ฝั่ง น้ำ ท้ า ไว้ ขึ้น เข้า แล้ว ทำ
มา หาก กิน ตาม บูรี ล่า ส่าง ว่า ด้าน เขา
อยู่ ต้น อยู่ ผ่าน ภูเขา ภูเขา
ภูเขา ผ่าน ข้าง รูป บาน ของ เขา เหล่า
ไม่มี。

(3) การตกตีเยื่อเล็ก เก็บอี
และ ตกขึ้น โมใส่ มี แบ่ง เต่า ปลา
อย่าง เล็ก ที่ สุด การ มั่นคง พื้น
ว่า หาก เล่น มี บาง เรียก ตาม ชาว
เหลือ ว่า "ซ้อน" การ ตก เรื่อน
ต่าง ๆ มี ใน เขา ที่ ตน อยู่ ใหญ่ ใน
บ้าน นั้น ตาย เข้า เรียก ว่า "รอบ
กิ่ง" "ขึ้น มิ้ง" หมู่สิ้น ชาติ เขา
ไม่มี แต่ บาง คน เข้า เรียบ หมู่สิ้น
ชาติ ชิน นิทาน นิยาม ของ เขา ที่
มี ตาม ภาษา ของ เขา。

(3) เขาบับ เขาวัน เดือน ปี
ศึก นับ เข้า เราก เล่น ยืน ใน
คำ ถาม

คำ ตอบ

หนึ่ง มี 3 เขา นั้น นั้น นั้น 3-
2-3 ไป จนครบ 30 นั้น เบื้อน เดือน
1 เดือน เขา นั้น ตั้ง ต้น เดือน 2
ของ เขา เบื้อน เดือน ที่ 3 และ เดือน
2-3 ต่อไป จนครบ 30 เดือน เบื้อน
1 ปี เดือน 2 ตรง นั้น เดือน ที่ 30
ของ เขา นั้น ปี ชอง เขา ไม่มี บาง
ใช้ หมาย ยา วิธีแพทย์ ไม่ได้ ไง มี ที่
มี บาง เลยป่วย เขา ใช้ เลยบาง หาย แล
มือ นิ้ว มี ต้อง อะไร ไม่มี บาง
แก้ ด้วย ยา ฝี นั้น บังสังงาน ต่าง ๆ

๓๔) เขามบือคุ้มและให้ นี่ เล่น
มี หลายคน เขา เล่น ทำ
ลง ให้ กะโตะ และ ทำ ชิ้น รูม และ
จัด ชื่อ เมื่อ ลูก ยัง เขา แป้ หมู่
สาร เขา ไม่มี ชิ้น อย่าง ใด เมื่อ
คนตาย แล้ว เขา เล่น ยัง และ เลือ
มัน หมู่ ให้ แล้ว เขา ยัง ตาย ห่อ อย่าง
ห่อ ชื่อ ตั้ง เขา ปุ่น หรือ ปราด มัด
แป้ เปล่า ๆ แล้ว เลือก ลำแหน่
กว่า ตาม

หยุด ขึ้น หนึ่ง เสิร์จ เล่าว่า ญาติ
ที่ นั่ง มา บอก ทางไม่ให้ขึ้นไปเกิด
บน ศาลรัฐ ให้มา เกิด อยู่ใน หนึ่ง
ของ เขา นั้น ขึ้น เพราะ เขา ถือว่า
ศาลรัฐ นั้น เป็น ที่ ว่าง ไม่มีที่ทำใจ
ไม่มา จะไม่ได้ไป อุทัย ถิ่น ๆ อยาก ๆ
เมื่อ คณะ กำลังติดต่อ ขึ้น หรือ ขึ้น
พวก ญาติ ที่ นั่ง ช่วย กันหาม ไป เท่า
หรือ ถึง เล่า เข้า จน เขา จะเหมาะ รีดมัง
เข้า ชุด หุบ ให้กร่าง ยาวยาว ๆ ทับ เลือก
นั่ง เล่า เขา ชะค นั้น ๆ ญาติ
增多 พราย ชาย นอน ครั้ง และ กลับ
ตัว คืน เสิร์จ เล่า เขา ไม่
เป็น ตอน ๆ ยาว ๆ ทับ บน ขึ้น นั้น
หนึ่ง และ มีไม่ ยาว ๆ อัน ใกล้ใจ
ที่ ทหาร คง ไม่ขึ้น ที่ ปักนี้ เขา
หมาย ความ ว่า ไม่ให้ธุรฐานของ
ขุนที่ ตายไป นั้น ไป บังเกิด บน ศาลรัฐ
และ มี ร้าย ไหม เลือกใหม่ และ ลิง ของ
ต่าง ๆ ซึ่ง จะให้แก่ คนตาย นั้น เขา
ทำ ทำ และ เธียก ของนั้น ยุก และ
คำ ถาม

หรือ ไว้ ที่มี เริ่ม ทาง อะไร ก็ยัง

ไว้ ใน ที่ นั้น จมูก เลือก นั้น เขา

ยัง น้ำ มาก ขึ้น เลย ให้ เก็บ หมด

ทั้ง นี้ ถ้า ไม่ ทำ แต่ นี้ เขา ถือ

ร่าง คน ตาย จะ ไม่ได้ ละทม ที่ๆ

เรีย คุณ แม่ คุณ เขา ไม่ มี การ รัก

หา อะไร การ บูชา พระ ที่ เหมาะ ที่

เขา มี เทว<List autosuggest='true' width='750'>謝</List> เมื่อ จะ ลงไป กลาง หรือ

ปลุก ขึ้น ไป เกี่ยวกัน ไป หรือ

จะ ไป ด้วย บ้าน ใหม่ ปลุก เรื่อนใหม่

การให้ ไว้ เขา สมุติ ด้านที่ ตั้ง ไม่

หรือ กอง, ก่อน ที่, เน่า ลาเข่า

ที่ มี แล้ว ไม่ เชือ ต้น จะให้ ศาtube

กท เป็น ต้น ไม่ ใหญ่ หรือ ก่อน ที่, เน่า

ร่ำเข่า จะให้ เขา สมุติ ด้าน มี ใบ

ที่ เขา พบ ให้ เข้าที่ ใหญ่ ทุก ขาด และ

ที่ มี การ เสื้อ เขา เล้ย ด้วย ไว้ เพราะ

เขา เชือ ข้า พวก เทพ และ มี รักษา

อยู่ ที่ เหมาะ ที่ เขา เชือ ต้น ถึง จะ ดู

เน่า ไม่จาก ไป และ เชือ กัน หรือ

มา เขา เชือ ข้า หรือ เข้า เน่า บัน

บัน
ค่า สาม

คำ ทับ

tal ให้โลก มี ชื่น โลก หน้า เขา

ต้อง จา แปน ศรัทธา และ ศรัทธา นั้น

แปน ที่ ต่าง เปล่า ไม่มี ที่ ท้าง หาคืน

เขามี นิยาม เล่ากัน ศิษยวะมากต่า "แม้

cring พระ เจ้า จะ ธง มาก สร้าง โลกนั้น

พระ เจ้า ได้รับ เชิก พาก เขาให้มา

ถ้า บูญ และ มาก อยู่ โลก รวม กัน ทัน

พระ เจ้า แต่ ตัว เขา มา ไม่ทัน

เพราะ เขาจะ ถ้า เล่นนี้ เหล่า เลี้ยงนี้

อยู่ พระ เจ้า จึงให้ชัยพาก เขา

ค่า "ยัง " ครับ ต่อ ๆ มา จึงได้

เรียก กัน ค่า "ยัง " จมัน เขาจึง

ต้อง ตัว ของ เขา ค่า ซึ่ง สัตว์ "ไม่มาก

เพราะ เขาไม่มี สถานะ และ มาก ไม่

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<td>เสียงติ่ง</td>
<td>noise</td>
</tr>
<tr>
<td>ตาม</td>
<td>to smell</td>
</tr>
<tr>
<td>กลิ่นหอม</td>
<td>to smell sweet</td>
</tr>
<tr>
<td>กลิ่นเนียน</td>
<td>to smell evil</td>
</tr>
<tr>
<td>ไทย</td>
<td>English</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
</tr>
<tr>
<td>คุก</td>
<td>to speak</td>
</tr>
<tr>
<td>ร้องเพลง</td>
<td>to sing</td>
</tr>
<tr>
<td>หัวแม่</td>
<td>to laugh</td>
</tr>
<tr>
<td>ร้องไห้</td>
<td>to weep</td>
</tr>
<tr>
<td>ร้องตะโกน</td>
<td>to cry</td>
</tr>
<tr>
<td>ถ่มน้ำลาย</td>
<td>to spit</td>
</tr>
<tr>
<td>ไอ</td>
<td>to cough</td>
</tr>
<tr>
<td>หาย</td>
<td>to yawn</td>
</tr>
<tr>
<td>ติ่ง</td>
<td>to be hungry</td>
</tr>
<tr>
<td>หิว กิน</td>
<td>to thirsty</td>
</tr>
<tr>
<td>อาบน้ำ</td>
<td>to suck</td>
</tr>
<tr>
<td>สัมผัสน้า ล้างมือ</td>
<td>to bathe</td>
</tr>
<tr>
<td>ผิว</td>
<td>comb</td>
</tr>
<tr>
<td>หนังผิว</td>
<td>the comb the</td>
</tr>
<tr>
<td>โกน</td>
<td>hair</td>
</tr>
<tr>
<td>มีความเข้มข้น</td>
<td>to shave</td>
</tr>
<tr>
<td>ให้บั่น</td>
<td>to be in good</td>
</tr>
<tr>
<td>ไข้</td>
<td>health</td>
</tr>
<tr>
<td>ล้างห้อง</td>
<td>fever</td>
</tr>
<tr>
<td>ไปถ่ายอุจจาระ</td>
<td>diarrhoea</td>
</tr>
<tr>
<td></td>
<td>to stool</td>
</tr>
<tr>
<td>คำนาม</td>
<td>English</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>ไปทำยสาอ</td>
<td>to urinate</td>
</tr>
<tr>
<td>โรคค้า</td>
<td>plague</td>
</tr>
<tr>
<td>โรคหลวก</td>
<td>cholera</td>
</tr>
<tr>
<td>สีตาด</td>
<td>small-pox</td>
</tr>
<tr>
<td>หมู</td>
<td>medicine man</td>
</tr>
<tr>
<td>ยา</td>
<td>medicine</td>
</tr>
<tr>
<td>ตา둡ต</td>
<td>blind</td>
</tr>
<tr>
<td>หูหมดค</td>
<td>deaf</td>
</tr>
<tr>
<td>ป่</td>
<td>mute</td>
</tr>
<tr>
<td>ขาสั้น ขามะลายก</td>
<td>lame</td>
</tr>
<tr>
<td>หลังโปล</td>
<td>hunchback</td>
</tr>
<tr>
<td>เกิด</td>
<td>to be born</td>
</tr>
<tr>
<td>ตาย</td>
<td>to die</td>
</tr>
<tr>
<td>ฝังคนตาย</td>
<td>to bury the corpse</td>
</tr>
<tr>
<td>แย่งคนตาย</td>
<td>to burn the corpse</td>
</tr>
<tr>
<td>กั้ด</td>
<td>to be afraid</td>
</tr>
<tr>
<td>จะไม่ölüะก</td>
<td>to steal</td>
</tr>
<tr>
<td>ฆ่า</td>
<td>to kill</td>
</tr>
<tr>
<td>ขาว</td>
<td>white</td>
</tr>
<tr>
<td>ดำ</td>
<td>black</td>
</tr>
<tr>
<td>เหลือง</td>
<td>yellow</td>
</tr>
<tr>
<td>คำาถาม</td>
<td>English</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>ไก่</td>
<td>green</td>
</tr>
<tr>
<td>แดง</td>
<td>red</td>
</tr>
<tr>
<td>น้ำเงิน</td>
<td>blue</td>
</tr>
<tr>
<td>นั้น นั้นนั้น นั้น</td>
<td>this man</td>
</tr>
<tr>
<td>นั้น นั้นนั้นนั้น</td>
<td>that man</td>
</tr>
<tr>
<td>นั้น นั้นนั้น นั้น</td>
<td>I, me</td>
</tr>
<tr>
<td>นั้น นั้นนั้นนั้นนั้น</td>
<td>my father</td>
</tr>
<tr>
<td>นั้น นั้นนั้นนั้นนั้นนั้น</td>
<td>our child</td>
</tr>
<tr>
<td>นั้น นั้นนั้นนั้นนั้นนั้น</td>
<td>a high tree</td>
</tr>
<tr>
<td>นั้น นั้นนั้นนั้นนั้นนั้น</td>
<td>this tree is higher than that</td>
</tr>
<tr>
<td>นั้น นั้นนั้นนั้นนั้นนั้นนั้น</td>
<td>this mango tree is the highest in the garden</td>
</tr>
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<td>นั้น นั้นนั้นนั้นนั้นนั้น</td>
<td>I am going to the market</td>
</tr>
<tr>
<td>นั้น นั้นนั้น</td>
<td>I come from the market</td>
</tr>
<tr>
<td>นั้น นั้นนั้นนั้นนั้นนั้นนั้น</td>
<td>I am going to the market</td>
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<td>I come from the market</td>
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<td>I come from the market</td>
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<td>นั้น นั้นนั้นนั้นนั้นนั้น</td>
<td>I am going to the market</td>
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<tr>
<td>นั้น นั้นนั้นนั้นนั้นนั้น</td>
<td>I come from the market</td>
</tr>
<tr>
<td>คำตาม</td>
<td>คำแปล</td>
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<tr>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>ไทย</td>
<td>English</td>
</tr>
<tr>
<td>ผู้เขียนจะไปในป่า</td>
<td>to-morrow I shall go into the forest</td>
</tr>
<tr>
<td>วันนี้เขียนได้ไปในป่า</td>
<td>yesterday I was in the forest</td>
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<td>น้าบ้าน</td>
<td>in front of the house</td>
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<tr>
<td>หลังบ้าน</td>
<td>behind the house</td>
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<tr>
<td>โคกมา</td>
<td>who comes?</td>
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<tr>
<td>ถ้าฝันใหญ่</td>
<td>if I recover</td>
</tr>
<tr>
<td>ใช้</td>
<td>yes</td>
</tr>
<tr>
<td>ตั้งแก่</td>
<td>together</td>
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<tr>
<td>หนึ่ง</td>
<td>one</td>
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<td>สอง</td>
<td>two</td>
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<td>three</td>
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<td>four</td>
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<td>five</td>
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<td>หก</td>
<td>six</td>
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<tr>
<td>เศ็ด</td>
<td>seven</td>
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<tr>
<td>คำนำม</td>
<td>English</td>
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<tr>
<td>แมงง</td>
<td>eight</td>
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<td>nine</td>
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<td>สิบเอ็ด</td>
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<td>ยี่สิบ</td>
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<tr>
<td>ยี่สิบเอ็ด</td>
<td>twenty-one</td>
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<td>สามสิบ</td>
<td>thirty</td>
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<td>สี่สิบ</td>
<td>forty</td>
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<td>fifty</td>
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<td>หกสิบ</td>
<td>sixty</td>
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<tr>
<td>เจ็ดสิบ</td>
<td>seventy</td>
</tr>
<tr>
<td>สี่สิบ</td>
<td>eighty</td>
</tr>
<tr>
<td>เก้าสิบ</td>
<td>ninety</td>
</tr>
<tr>
<td>คำแปล</td>
<td>Thai</td>
</tr>
<tr>
<td>--------</td>
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<td>ต่ำก่อข้า</td>
<td>ร้อยหนึ่ง</td>
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<td>ร้อยกี่หนึ่ง</td>
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<td>ต่ำก่อข้า</td>
<td>แสนหนึ่ง</td>
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</tbody>
</table>
นิทานเรื่องที่ส่งไปให้แปล

The Parable of the Prodigal Son in Karen.

(...)
ไฟย่นอ่อน เลือกไฟตามเกณฑ์ ภายใต้กําแพงเมือง อาณานิคมต่อไป
ไฟอย่างแน่นอน ไฟภูเขาดอยปุย หน้าบันชั้นและที่บันยั้ง แล้ว
อาศัยอยู่ถึงเวลานี้บ้านเก่าอีกเเละ.
นิทาน ชาติ ธง เข้า  A Karen tale

โปรดร่วมมือกับการอ่านเต็มปีกมีก่อนที่จะเจอดол แจดคิ
ตามลูกป่าทั่วเต็มบาน ตำลARSERย์แม่จะเริ่มมาเต็มอยู่ มีก่อน
อื้อแรกไม่ให้คงธง เลือดใส่แผลไว้ แกะเหล็กตั้งขับจิตน้า
ขณะแต่จะเป็นก่อนเมื่อผ้าเหนือไม่ใช่ผ่า.

แปล เป็นภาษาไทย   Siamese translation

มีชายคนหนึ่งไป เลย์ที่ เรือนสาร ในขณะนั้น แย้มส้ม ผ่อ ธง
ผู้ชายได้ เท่า มากดิหนึ่ง จึง เขา เตา นั้น ผู้เล่า ที่ ชาย เรือน
เครื่อง ชายผู้นั้นไป ตั้ง บ้านผู้ชาย จึง เขา หูเด็ก เต่า ฟัง ที่ ช่อง ฝ่า สิ่ง ที่ เขา
ผูก เตา นั้นไป เท่า ที่ ตัดใจ จึง ราย เลียง หัว ๆ ชายผู้นั้นไม่ทัน
สังเกตว่า อะไร และไม่ได้ยิน ตาม ลำบากกู้ผู้ชาย มา ผูก ต้น ผูก จึง ตรง
หู เตาไป ฝ่า จน ใกล้ช่อง ที่ เขา ผูก เตา นั้น เท่า ที่ ตัดใจ จึงอย่า
ปากกัดหูชายผู้นั้น ชายผู้นั้น ลำบากกู้ผู้ชาย หลาย จึงผูก แตก เเบ่ง ๆ
ทำความ ๆ เต่าเท่าที่ หาก ปล่อยไม่ชายผู้นั้น จึงดิน และ ลงสาม
ชายหูสองต้น ออกมา เท่าที่ ดีมมา ดีย์ ในทันใด นั้น ผ่อ ของผู้
สำหรับยืน เท่า จึงผูก กับ ดูกว่า เริ่มต้นก็มี พวก ๆ และ เซีย ๆ อยู่ที่
ได้ดูม จึงสงกรุ่ง ผู้ในทันใดนั้นชายผู้นั้นตลาดที่จึงกระดาษหู
สองต้น ออกมา จากช่องฝ่า เท่าที่ ถัดหูอยู่นั้นก็ได้ดีมา ดีย์แล
โดยน้ำทุกช่องต้น เท่ามีช่องอยู่ที่หูสองต้นชายผู้นั้นจึง หลักคิ้วมา
สองต้นโดยกำลังแง หูก้าวแตก เท่าที่ กัดหูอยู่นั้นจึงกระเดินไปปลูก
ปากผ่อ ของผู้นั้นใครโดยกำลังแง ปากแตกและพันที่ทำหมดฟันปาก.
English Translation.

A man went visiting to the house of a girl. Now it happened that at that time the girl's father had brought a tortoise and tied it on the veranda of the house. When the man reached the girl's house he put his ear up against a hole in the wall just where the tortoise was tied in order to listen. The tortoise was scared and shouted lustily. The man did not realize what it was and thought it was the girl speaking, so he put his ear right up against the opening where the tortoise was tied. The tortoise being scared opened its mouth and bit the man's ear, but he, thinking it was the girl playing a joke with him, just spoke softly saying: "it hurts, it hurts", but the tortoise did not let go. The man then began to wriggle and to drag his ear away but the tortoise came with him. Just then the girl's father heard and said to his daughter: "what is the noise under the house ugh, ugh, it hurts, it hurts?" And he ran down to see. By that time the man was frightened and had pulled his ear away from the opening but the tortoise, still biting him, came along with it and the weight of the tortoise hung on to the ear, so the man shook his head vigorously till the ear was torn away; the tortoise rebounded and hit the girl's father hard on the mouth and broke his teeth and his mouth.
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THYSANOPTERA FROM SIAM AND INDO-CHINA.

COLLECTED BY MR. W. DOCTERS VAN LEEUWEN.

By H. H. KARNY, Buitenzorg, (Java).

In the following paper are considered the Thysanoptera, collected by Mr. W. Docters V. Leeuwen in the year 1920, both gall-forming species, and flower-thrips. It seemed to be useful to treat the Siamese Thysanoptera and those from Annam and Cochin-China together, because forms, hitherto only known from one of these countries, may be found in the others in the future; it is not to be expected, that the Thysanopterous fauna of these countries should be very different.

From the territory here treated, only two species of Thysanoptera were hitherto recorded, so far as is known to the author, namely Dinothrips sumatrensis Bagnall (from Tonkin) and "Pana-rothrips gracilis" Bagnall (from Siam). All other species enumerated below are new for these countries and 17 of these must be considered as new species. Our knowledge of the Thysanoptera of Further India is thus greatly increased by the collections of Mr. Docters V. Leeuwen, and I am very much indebted to him for entrusting this very interesting material to me for study.

SUBORDER TEREBRANTIA HALID.

Family Thripidae UZEL.

Sub-family Sericothripinae KARNY.

1. Scirtothrips angusticornis n.sp. (Fig. 1.).

Female.—General colour brownish black. Fore femora yellowish brown; middle femora a little darker, with distinctly pale knees; hind femora black, but distinctly pale at base and knee. All tibiae and tarsi yellow. Antennae yellow, with the two first joints lightest, the third and fourth shaded with grey at apex, fifth in the
distal half and the following nearly wholly grey-brown. Fore wings dark, with a clear cross band near the base, reaching from the end of scale to the end of first-third of their length.

Head very short, one-half broader than long, with large, blackish eyes, occupying nearly the whole length of head. Mouth-cone in the lateral view pointed; maxillary palpi slender, distinctly more than half as long as the mouth-cone, with two long joints equal in length and a third shorter one at base. Labial palpi as long as the apical joint of the maxillary ones, with a very short annular segment at base and long, slender segment at apex.

Antennae very long and slender, nearly 5 times as long as the dorsal surface of head. First joint only a little wider than long, second cup-shaped, as broad as the first, nearly twice as long as wide. Third segment fusiform, with the distal constricted part sub-cylindrical, at the insertion of bristles as wide as the preceding joints, nearly three times as long as wide. Fourth antennal segment of a similar form to the third, equally long but a little narrower. The two following joints still narrower, about cylindrical, but the fifth narrowed basally, the sixth apically; the sixth shorter than 3 and 4, the fifth still shorter, but nevertheless three times as long.

![Fig. 1. Antenna of *Scirtothrips angusticornis* n. sp.](image)

as wide. Style slender, a little shorter than half of the preceding segments; its apical joint longer than the basal.

First antennal segment with a long bristle at its inner surface; second with a shorter one near base and with a crown of stronger bristles near apex. Third joint with long, strong setae behind the middle, and close behind these at the anterior margin with a fork-shaped arrangement of sense-cones, reaching about to the
apex of the joint. Fourth segment with the bristles and sense-cones as in the preceding joint, but the latter inserted at the posterior margin. Segment 5 and 6 with a crown of weaker bristles, only one at the anterior margin longer and stronger.

Prothorax one and a half times as long as the head, with a stout spine at each hind angle, and a few shorter and weaker bristles scattered over the surface. Disc striate with distinct, transverse wrinkles. Fore and middle femora stout; tibiae constricted at base, and set with a few bristles at apex; neither tibiae nor tarsi with a tooth. Hind legs longer and slenderer, with very long, bristle-bearing tarsi.

Pterothorax a little wider than long; the sides of meso-and metathorax arched. Wings reaching about to the end of abdomen; fore pair distinctly colored, with long fringe and very weak bristles, of which there are 4 on the fore margin of the scale, a continuous series of about 30 on the anterior vein, and only two on the posterior vein (in the distal half).

Abdomen very broad, subglobular in the basal half, and conically pointed in the distal part. All segments at their hind angles set with long bristles; those of the apical segments especially long and stout.

Measurements:—Total length of antennae 0'34 mm. I. joint 0'02 mm. long, 0'025 mm. wide; II. joint 0'045 mm. long, 0'025 mm. wide; III. joint 0'07 mm. long, 0'025 mm. wide; IV. joint 0'07 mm. long, 0'02 mm. wide; V. joint 0'05 mm. long, 0'015 mm. wide; VI. joint 0'06 mm. long, 0'015 mm. wide; VII. joint 0'01 mm. long, 0'005 mm. wide; VIII. joint 0'015 mm. long, 0'005 mm. wide. Head 0'07 mm. long, 0'11 mm. wide. Prothorax 0'10 mm. long, 0'17 mm. wide. Fore femora 0'15 mm. long, 0'04 mm. wide; fore tibiae (including tarsi) 0'22 mm. long, 0'03 mm. wide. Pterothorax 0'20 mm. long, 0'25 mm. wide. Middle femora 0'14 mm. long, 0'04 mm. wide; middle tibiae (including tarsi) 0'22 mm. long, 0'03 mm. wide. Hind femora 0'18 mm. long, 0'035 mm. wide; hind tibiae (including tarsi) 0'30 mm. long, 0'03 mm. wide. Length of wings (without fringe) 0'65 mm. Abdomen 0'55 mm. long, 0'26 mm. wide. Total length 0'9 mm.
I have in the material before me only one (female) specimen of this very remarkable species, collected by Mr. Docters v. Leeuwen in flowers of Desmodium spec. (No. 46) together with a Taeniothrips longistylus, at Bang Saphan Yai (Southern Siam), dated 12. X. 1920.

I place this aberrant form with some doubt in the genus Scirtothrips Shull. It differs from all species of this genus at once by the extraordinarily long and slender antennae and by the dark colour of body; diverging from Sericothrips by the presence of postero-lateral prothoracic bristles, from the Thripinae by the posterior vein of fore wings nearly abortive, set only with two weak bristles. Perhaps it should form a new genus.

Subfamily Thripinae Karny.

2. Frankliniella vicina n.sp.

Female.—Head and thorax light yellowish brown, abdomen dark, blackish brown. Legs pale, yellow. The two first antennal joints of the same colour as head, the following pale yellowish-grey, nearly clear, but a little darker-grey at apex; sixth segment and style dark. brownish-grey. Wings clear.

Head twice as broad as long; eyes black, more than half as long as head. Dorsal surface with a pair of short, stout postocellar bristles. Front below the insertion of antennae with a pair of long, downwards directed bristles. Mouth-cone short and blunt. Maxillary palpi inserted near its base, reaching to its tip; their two basal segments nearly equal in length, the first widest, the third longest and narrowest. Labial palpi a little longer than the apical joint of the maxillary ones, with a very short annular segment at base, and a long, slender one at apex.

Antennae stout, nearly three times as long as the dorsal surface of head. First joint very small, a little wider than long, nearly parallel-sided. Second segment cup-shaped, twice as wide as the first, and distinctly longer than broad. Third joint broadly fusiform, a little shorter and narrower than the preceding one. Fourth segment of a similar shape, but distinctly slenderer, narrower and longer than the third. Fifth joint short, narrower at base, transversely truncate at apex. Sixth segment longer than each of the preceding ones, fusiform, widest near the base, somewhat broadly united with
the fifth, gradually tapering to apex. Style short; its two joints equal in length, a little longer than broad.

Second, third and fourth antennal segments with a crown of long, stout spines near apex; the usual sense-cones of 3 and 4 short and stout.

Prothorax a little longer than head, distinctly wider than long. All bristles very long and stout; the anterolateral pair about half as long as the prothorax, the anteromarginal ones a little shorter. Each hind angle with two bristles, equal in length, and distinctly longer than the anterolateral ones; posteromarginal pair half as long as the posterolateral ones. Fore legs very stout, their femora about twice as long as broad; tibiae a little narrower, with some stout spines at the end. Tarsi distinctly two-jointed, without teeth.

Pterothorax scarcely broader than long, with two very long bristles near the insertion of fore wings. Middle and hind legs long and stout; their femora and tibiae thickened in the distal part; the latter ones with a row of strong bristles at the outer, and a similar row of shorter and stouter ones at the inner margin; a long, thick, black spine at apex. Tarsi slender, distinctly articulated, with a few bristles near the middle.

Fore wings reaching about to the base of eighth abdominal segment, clear, with moderately long fringe and strong bristles; those of the fore margin only a little shorter than the breadth of the wing, those of the veins distinctly shorter. About 20 bristles on the costa and on the anterior vein, 12 on the posterior vein, and 4 on the scale.

Abdomen about as wide as pterothorax, three times as long as broad, tapering to the tip. All segments with moderately long bristles at their hind angles; those of the ninth and tenth segment very long and stout, longer than the segments themselves. Ovipositor distinctly curved downwards, with strongly serrate margins, over-reaching a little the tip of the last abdominal segment.

**Measurements of female:**—Total length of antennae 0.22 mm. I. joint 0.01 mm. long, 0.015 mm. wide; II. joint 0.04 mm. long, 0.03 mm. wide, III. joint 0.035 mm. long, 0.025 mm. wide; IV. joint 0.04 mm. long, 0.02 m.m. wide; V. joint 0.03 mm. long
0·015 mm. wide; VI. joint 0·05 mm. long, 0·015 mm. wide; VII. joint 0·007 mm. long, 0·005 mm. wide; VIII. joint 0·007 mm. long, 0·003 mm. wide. Head 0·08 mm. long, 0·16 mm. wide. Prothorax 0·11 mm. long, 0·18 mm. wide. Fore femora 0·10 mm. long, 0·05 mm. wide; fore tibiae (including tarsi) 0·11 mm. long, 0·035 mm. wide. Pterothorax 0·20 mm. long, 0·18 mm. wide. Middle femora 0·11 mm. long, 0·045 mm. wide; middle tibiae (including tarsi) 0·13 mm. long, 0·035 mm. wide. Hind femora 0·15 mm. long, 0·045 mm. wide; hind tibiae (including tarsi) 0·19 mm. long, 0·035 mm. wide. Length of wings (without fringe) 0·65 mm. Abdomen 0·65 mm. long, 0·20 mm. wide. Total length 1·0–1·1 mm.

**Male.**—Distinctly smaller than female. Head and thorax of the same colour, but abdomen paler, light greyish-yellow. Third antennal segment comparatively longer than in female. Bristles of the last abdominal segment still longer; no tooth-like spines. Testes orange-yellow, situated in the seventh and eighth abdominal segments. Penis sharply conical, slender, over reaching the tip of abdomen.

**Measurements of male:**—Total length of antennae 0·21 mm. I. joint 0·01 mm. long, 0·015 mm. wide; II. joint 0·03 mm. long, 0·025 mm. wide; III. joint 0·04 mm. long, 0·02 mm. wide; IV. joint 0·045 mm. long, 0·02 mm. wide; V. joint 0·03 mm. long, 0·015 mm. wide; VI. joint 0·045 mm. long, 0·015 mm. wide; VII. joint 0·005 mm. long, 0·005 mm. wide; VIII. joint 0·005 mm. long, 0·003 mm. wide. Head 0·07 mm. long, 0·13 mm. wide. Prothorax 0·10 mm. long, 0·16 mm. wide. Fore femora 0·10 mm. long, 0·05 mm. wide; fore tibiae (including tarsi) 0·11 mm. long, 0·035 mm. wide. Pterothorax 0·20 mm. long, 0·18 mm. wide. Middle femora 0·09 mm. long, 0·04 mm. wide; middle tibiae (including tarsi) 0·14 mm. long, 0·035 mm. wide. Hind femora 0·14 mm. long, 0·045 mm. wide; hind tibiae (including tarsi) 0·15 mm. long, 0·035 mm. wide. Length of wings (without fringe) 0·55 mm. Abdomen 0·45 mm. long, 0·16 mm wide. Total length 0·8 mm.

This species was collected by Mr. Docters v. Leeuwen at Mour Man, in flowers of *Celosia argentea* L. (No. 76), dated 26. X. 1920 (together with *Hoplothrips soror*).
It comes in my determination table (Zool. Ann. 1912, pp. 334-336) nearest to *Fr. breviceps* BANGNALL (England), in WATSON's key to the American species (Florida Buggist, June 1919, p. 3), to *Fr. runneri* MORGAN. But *breviceps* has the thorax dark, and *runneri* differs by the coloration of antennae and wings. The Australian *Fr. trybomi* KARNY has also differently colored antennae, and the body a little paler. *Fr. nigriventris* UZEL (Central Europe), finally, has wings distinctly shorter, either entirely rudimentary, or not overreaching the sixth abdominal segment.

3. **Frankliniella persetosa** *n.sp.*

*Female.*—General colour uniformly dark brown; legs a little paler. Antennae of the same colour as body, only the third segment most a very little paler. Fore wings shaded with greyish.

Head hardly broader than long, with straight parallel cheeks. Eyes black, occupying a little more than the half of length of head. Behind them on each side a stout postocular bristle, and a similar pair behind the posterior ocelli. Anterior ocellus directed forwards between the insertion of antennae. Front with some short hairs, and with two pairs of stout, downwardly directly bristles, one below the insertion of antennae, the other close to the base of mouth-cone. The latter short and blunt, maillary palpi shorter than in the preceding species, their joints of the same shape as there. Labial palpi as in *vicina*.

Antennae twice as long as head, stout. First joint very small, a little wider than long. Second segment cup-shaped, broader than the first, distinctly longer than wide. Third joint of a similar shape to the preceding, but a little narrower. Fourth segment fusiform, as wide as the third, but longer. Fifth joint as long and broad as the third, narrowed at base, transversely truncated at apex. Sixth segment as long as the fourth, fusiform, widest near the base, somewhat broadly united with the fifth, gradually tapering to apex. Style shorter than the half of the sixth joint, but longer than in the preceding species; its basal segment as long as wide, the apical one longer and narrower.

Segments 1—5 with a crown of stout bristles before the apex. Sixth segment with a few bristles near the middle; style only with a
few weak hairs. Sense-cones of the third and fourth joint stout and short, but distinctly overreaching the end of their segments, of the usual shape.

Prothorax as in the preceding species. Fore legs a little longer and distinctly slenderer; tarsi and spines of tibiase as in vicina.

Pterothorax hardly longer than wide, with straight sides converging backwards. Sutures of mesosternum formed as an inverted T, these of metasternum Y-shaped. Hind coxae somewhat larger than the middle ones, closer to one another. Middle and hind legs practically as in the preceding species.

Fore wings reaching to the sixth abdominal segment, somewhat shaded with grey, with moderately long fringe and extraordinarily long and stout bristles. 16 on the fore margin, nearly as long as the breadth of the wing; 14 on the anterior vein, only a little shorter; 11 on the posterior vein, nearly as long as those of the costa. Scale with 5 bristles. Hind wings greyish, a little paler than the anterior pair; their vein darker only in the basal part.

Abdomen long and slender, only a little wider than the pterothorax, three and a half times as long as broad, gradually tapering to the tip, bluntly conical at apex. All segments with a strong bristle at each hind angle and with a few smaller ones along the posterior margin. The two last abdominal segments with very stout and long setae, longer than the segments themselves. Ovipositor shaped as in vicina, but hardly reaching to the tip of abdomen; its base at the fore margin of the eighth abdominal segment.

Measurements:—Total length of antennae 0'22 mm. I. joint 0'15 mm. long, 0'02 mm. wide; II. joint 0'035 mm. long, 0'025 mm. wide; III. joint 0'035 mm. long, 0'02 mm. wide; IV. joint 0'04 mm. long, 0'02 mm. wide; V. joint 0'035 mm. long, 0'02 mm. wide; VI. joint 0'04 mm. long, 0'02 mm. wide; VII. joint 0'01 mm. long, 0'01 mm. wide; VIII. joint 0'015 mm. long, 0'005 mm. wide; Head 0'11 mm. long, 0'12 mm. wide; Prothorax 0'13 mm. long, 0'17 mm. wide. Fore femora 0'12 mm. long 0'04 mm. wide; fore tibiae (including tarsi) 0'13 mm. long, 0'035 mm. wide. Pterothorax 0'23 mm. long, 0'22 mm. wide. Middle femora 0'10 mm. long, 0'035 mm. wide; middle tibiae (including tarsi) 0'13 mm. long, 0'03 mm. wide. Hind femora 0'12 mm. long, 0'03 wide; hind
tibiae (including tarai) 0'19 mm. long, 0'025 mm. wide. Length of wings (without fringe) 0'65 mm. Abdomen 0'8 mm. long, 0'24 mm. wide. Total length 1'2 — 1'4 mm.

Two females from Susràsthra Dani (Southern Siam) collected by Mr. Doctors v. Leeuwen in flowers of Ipomoea spec. (No. 44), together with Thrips japonicus, dated 1 X 1920.

This species is closely allied with Fr. nervosa Uzel (Europe and North America), but diverging from it and also from insularis Franlin, by the uniformly colored antennae. The Australian Fr. trybomii Karny is distinctly paler, and has the head constricted backwards, and the fore wings clearer. Fr. persetosa is at once distinguished from the preceding species by the dark head and thorax.

4. Taeniothrips longistylus n.sp. (Fig. 2).

Female.—General colour dark brown. Fore legs and all tarsi greyish-yellow; fore femora at the outer margin darker, brown; fore tibiae shaded with grey. Antennae uniformly dark grey brown, but the third joint paler, yellowish grey. Fore wings dark grey-brown at extreme base and the scale, then in the first third broadly clear, transparent, further greybrown, with a clear cross-band in the distal part; apex dark.

Head one and a half times as wide as long; cheeks nearly straight, slightly granulated, subparallel. Eyes black, occupying a little more than half of the length of head, with some very short hairs between the facets. Ocelli large, with red pigment-cups, arranged in a rectangular triangle, the anterior one placed near the middle of eyes, directed forwards; the posterior ones a little before the hind border of eyes, directed upwards. Dorsal surface of head with a pair of long, stubut postocellar bristles, and a very short, weak, forwardly directed hair behind the eyes on the cheeks. Occiput with a very fine, tranverse striation.

Antennae a little more than twice as long as the head, slender. First joint broad, cylindrical, one and a half times as wide as long. Second segment cup-shaped, twice as long as the first, and a little narrower than it. Third joint broadly fusiform, as wide as the second, and as long as the two preceding ones together.
Fourth segment of the same size as the third, a little more constricted apically. Fifth joint very small, distinctly narrower than the preceding ones, three times as long as wide, but only a very little longer than the second, nearly fusiform, but transversely truncate at apex. Sixth segment slender, fusiform widest before the middle, nearly as long as the third, but distinctly narrower. Style long and slender, nearly half as long as the preceding joint; its apical segment longer and more slender than its first.

First joint with a crown of short, weak bristles near the end. Second segment with a similar arrangement of longer and stouter setae. Third joint with strong bristles in the distal half, and with the usual fork-shaped pair of sense-cones, reaching to the end of first third of the following segment. This with a crown of long, stout bristles behind the middle, and with the sense-cones a little shorter and more curved than those of the preceding joint. Fifth segment with some bristles in the distal part. Sixth joint with a transverse row of bristles near the middle, before them only some very short hairs, behind them a few short bristles. Style with weak, short hairs and two longer and stouter ones at apex.

Front with two pairs of downwardly directed bristles, one below the insertion of antennae, the other before the base. Mouth-cone bluntly conical, reaching to the middle of prothorax. Maxillary palpi three-jointed, about three-fourths as long as the whole mouth-cone; the first joint widest and longest, nearly as long as the two others together; these about equal in length, the third still narrower than the second. Labial palpi very slender, distinctly narrower and somewhat longer than the last maxillary-palpal joint.

Prothorax transverse, ovate, a little longer than head, and distinctly wider than long. At each anterior angle a small, forwardly
directed bristle; at each posterior angle two long and stout bristles, equal in length, and about half as long as the prothorax. Fore coxae ovate. Fore legs stout; their femora thickened; tibiae with some hairs along the outer margin, and with a few stout setae at the end, especially on the inner side. Tarsus slender, two-jointed, with a few hairs, but without tooth.

Pterothorax distinctly wider than prothorax, somewhat longer than broad; sides of meso-and metathorax arched, somewhat converging behind. Suture of mesosternum as in *Frankliniella persetosa*, that of metasternum X-shaped. Middle and hind coxae subglobular, rounded; the latter distinctly larger and much closer to one another than the former. Middle and hind legs long and stout; chaetotaxy as in the fore legs, but the apical spines of all tibiae still stronger.

Wings reaching to the seventh abdominal segment, fore pair with distinct cross-bands. Fringe long, bristles long and stout. Costa with about 25 bristles; anterior vein with 14 from base to the apical third; the apical clear cross-band without bristles on the anterior vein, then two in the dark apical part. Posterior vein with about 14 bristles, equidistant throughout its whole length, 4 of them in the apical clear cross-band. Scale with 4 long bristles along the fore margin, one at the surface near the base, and with a thick transparent processus (sensa-cone?) at the apex. Hind wings narrower than the fore pair, with a dark longitudinal vein throughout the whole length.

Abdomen broader than the pterothorax, three times as long as wide, gradually tapering to apex, which is bluntly conical. All segments with a long, stout bristle at the hind angle, and another before this at the middle of each side; further with a half dozen smaller bristles along the posterior margin. Setae of the last two segments very long and stout, distinctly longer than the segments themselves. Ovipositor as in *Frankliniella persetosa*.

*Measurements of female*:—Total length of antennae 0'31 mm. I. joint 0'02 mm. long, 0'03 mm. wide; II. joint 0'04 mm. long, 0'025 mm. wide; III. joint 0'06 mm. long, 0'025 mm. wide; IV. joint 0'06 mm. long, 0'025 mm. wide; V. joint 0'045 mm. long, 0'015 mm. wide; VI. joint 0'055 mm. long, 0'02 mm. wide; VII. joint 0'015 mm. long, 0'01 mm. wide; VIII. joint 0'02 mm. long, 0'005 mm. wide.
Head 0'11 mm. long, 0'16 mm. wide. Prothorax 0'13 mm. long, 0'20 mm. wide. Fore femora 0'12 mm. long, 0'06 mm. wide; fore tibiae (including tarsi) 0'22 mm. long, 0'04 mm. wide. Pterothorax 0'32 mm. long, 0'27 mm. wide. Middle femora 0'12 mm. long, 0'05 mm. wide; middle tibiae (including tarsi) 0'20 mm. long, 0'045 mm. wide. Hind femora 0'18 mm. long, 0'05 mm. wide; hind tibiae (including tarsi) 0'31 mm. long, 0'04 mm. wide. Length of wings (without fringe) 0'9 mm. Abdomen 1'0 mm. long, 0'35 mm. wide. Total length 1'4-1'7 mm.

Male.—Smaller than female, but of the same colour. Antennae comparatively longer, the third joint paler and also the basal part of the fourth greyish-yellow. Fore femora longer and more thickened than in the other sex, entirely dark brown. Abdomen small, distinctly narrower than the pterothorax. Penis short; its basal part subglobular, then tapering to apex, which is curved. Before the base of penis there are two pairs of thick, black, short spines on the ninth segment.

Measurements of male:—Total length of antennae 0'31 mm. I. joint 0'02 mm. long, 0'03 mm. wide; II. joint 0'04 mm. long, 0'025 mm. wide; III. joint 0'06 mm. long, 0'02 mm. wide; IV. joint 0'06 mm. long, 0'02 mm. wide; V. joint 0'04 mm. long, 0'015 mm. wide; VI. joint 0'055 mm. long, 0'015 mm. wide; VII. joint 0'015 mm. long, 0'01 mm. wide; VIII. joint 0'02 mm. long, 0'005 mm. wide. Head 0'14 mm long, 0'16 mm. wide. Prothorax 0'14 mm. long, 0'19 mm. wide. Fore femora 0'15 mm. long, 0'09 mm. wide; fore tibiae (including tarsi) 0'16 mm. long, 0'05 mm. wide. Pterothorax 0'25 mm. long, 0'24 mm. wide, Middle femora 0'15 mm. long, 0'055 mm. wide; middle tibiae (including tarsi) 0'18 mm. long, 0'04 mm. wide. Hind femora 0'18 mm. long, 0'045 mm. wide; hind tibiae (including tarsi) 0'24 mm. long, 0'035 mm. wide. Length of wings (without fringe) 0'7 mm. Abdomen 0'50 mm. long, 0'18 mm. wide. Total length 1'0-1'1 mm.

This species seems to be common in different flowers. Mr. Docters v. Leeuwen collected it in flowers of the following plants: Desmodium spec. (no. 46; Bang Saphan Yai, Southern Siam; 12 X. 1920; together with Scirtothrips angusticornis). Canavalia ensiformis (L.) Dc. (No. 53; Bangkok, Siam; 9. X. 1920; together
with *Physothrips vitticornis*). *Clitorea* spec. (No. 56; native forest near Saigon; 19 X. 1920). *Vigna* spec. (No. 61; Saigon; 20. X. 1920). *Canavalia ensiformis* (L.) Dc. (No. 73; Ca-Nai 26. X. 1920; together with *Physothrips vitticornis* and *Thrips japonicus*). *Crotalaria saltiana* ANDT. (No. 75; Malam; 26. X. 1920).

This new species, by the chaetotaxy of body and the cross-banded fore wings comes near to *Taeniithrips s. str.* and agrees here in chaetotaxy of fore wings only with *T. distalis* KARNY from Japan. But this latter has the antennae entirely dark and their middle joints longer and more slender than *longistylus*.

5. **Physothrips vitticornis** n.sp. (Fig. 3).

*Female.*—General colour dark brown, with rich, reddish hypodermal pigmentation, with gives to newly developed specimens a bright red colour. Fore tibiae a little paler than the femora, yellowish at the end; all tarsi yellowish. The first two antennal joints as dark as the body, the third pale, yellowish, the fourth somewhat darker, yellowish grey. The following segments greyish brown, but a little paler than body. Therefore the whole antennae grey-brown, with a paler cross-band, formed by the yellowish third and fourth joints. Fore wings dark, grey, at most with a little, indistinct clearer patch near base (as in *Ph. fumosus* TRYBOM).

Head a little wider than long, with the cheeks arched and somewhat converging posteriorly. Eyes, ocelli, chaetotaxy of head, and sculpture of occiput as in *Taeniithrips longistylus*. Mouthcone conical, tapering to apex, pointed, overreaching distinctly the midst of prothorax. Palpi as in the former species.

Antennae twice as long as head, moderately stout. First joint short, twice as wide as long. Second segment cup-shaped, a little narrower than the preceding one, and a little more than twice as long. Next two joints broadly fusiform, equal in length, and longer and narrower than second; the third a little broader than the fourth. Fifth segment more slender, somewhat shorter than the preceding one, fusiform, but transversely truncated at apex. Sixth segment fusiform, but widest before its middle, longer than each of the preceding joints, as wide as the fourth. Style nearly half as long as the sixth segment, its apical joint a little longer and narrower than the basal.
Segments 1-5 with a crown of strong bristles behind the middle. Sixth a little before the middle. Style with only a few hairs. Sense-cones well developed; those of the third and fourth joint reaching to the insertion of bristles at the following segment. Sixth joint on its ventral surface with a distinct sense-cone, reaching nearly to the end of the basal style-joint.

Prothorax transverse, ovate, as long as the head is wide, and considerably wider than long. Fore margin without setae, each posterior angle with two long, stout bristles, the outer a little longer than the inner one. Fore legs stout, their femora not considerably thickened; tibiae and tarsi as in *Taeniothrips longistylus*.

Pterothorax wider than prothorax, nearly as wide as long, with considerably arched sides of meso- and metathorax, distinctly constricted at the hind margin of each of these two segments. Between the insertion of fore wings a pair of long bristles directed backwards. Sutures of the sterna as in *Taeniothrips longistylus*, also the form and chaetotaxy of middle and hind legs.

Wings reaching to the middle or hind margin of seventh abdominal segment. Fore pair with long fringe and long, strong bristles. On the costa about 25; in the basal half of fore vein 9, in the distal part usually 4, but sometimes 3 or 5; one of the specimens examined has on the right fore wing 4 after a distinct, median interval, but on the left fore wing a continuous line of 15 bristles throughout the whole length of anterior vein, without an interval in the middle, and therefore about 7 bristles in the distal half! Posterior vein with 12—14 setae; scale with 5 along the fore margin, and one on the surface near base. Hind wings very little shaded with greyish, especially at apex, but with a distinct dark median vein throughout the whole length.

Abdomen somewhat broader than the pterothorax, nearly three times as long as wide, tapering to apex, which is distinctly conical, more pointed than usual in this genus. Chaetotaxy and ovipositor as in *Taeniothrips longistylus*.

**Measurements:**—Total length of antennae 0'25 mm. I joint 0'015 mm. long, 0'03 mm. wide; II. joint 0'035 mm. long, 0'25 mm. wide; III. joint 0'045 mm. long, 0'022 mm. wide; IV. joint 0'045 mm. long, 0'02 mm. wide; V joint 0'04 mm. long, 0'015 mm. wide; VI.
joint 0'05 mm. long, 0'02 mm. wide; VII. joint 0'008 mm. long, 0'006 mm. wide; VIII. joint 0'012 mm. long, 0'004 mm. wide. Head 0'12 mm. long, 0'14 mm. wide. Prothorax 0'14 mm. long, 0'18 mm. wide. Fore femora 0'11 mm. long, 0'05 mm. wide; fore tibiae (including tarsi) 0'13 mm. long, 0'04 mm. wide. Pterothorax 0'23 mm long, 0'21 mm. wide. Middle femora 0'09 mm. long, 0'04 mm. wide; middle tibiae (including tarsi) 0'12 mm. long, 0'03 mm. wide. Hind femora 0'11 mm. long, 0'04 mm. wide; hind tibiae 0'18 mm. long, 0'03 mm. wide. Length of wings (without fringe) 0'65 mm. Abdomen 0'7 mm. long, 0'25 mm. wide. Total length 1'2 — 1'4 mm.

Collected by Mr. DOCTORS v, LEEUWEN in flowers of the following plants: Melastoma malabathricum L. (No. 39; Bang Klam, Southern Siam; 30 IX 1920; together with Thrips japonicus). Canavallia enneiformis (L.) DC. No. 53: Bangkok, Siam; 9 X 1920; together with Tueniorthrips longistylus. No. 73; Ca-Na, Indo-china; 26 X 1920; together with Tueniorthris longistylus and Thrips japonicus. Desmodium umbellatum DC. (No. 80; Saigon, Indo-china; 29 X 1920).

This new species seems to come nearest to the American Ph. ehrhornii, but has a different coloration of antennae. From the African fumosus it may be distinguished at once by its much smaller size, the coloration of antennae and the smaller number of bristles on the distal part of fore vein. By its pointed abdominal apex, Ph. vitticornis calls to mind somewhat the Javanese Bregmatothrips theifloris, but differs from it by the longer style, the longer sense-cones, the paler fourth antennal segment, and the diverse length of maxillary-palpal joints. It is perhaps not impossible, that in the future vitticornis and theifloris, by a study of more material from several different localities and food-plants, may be proved to be local or biological races of one and the same species. I have thus far not had sufficient material to decide this question, and I think it therefore safer in the first place.

Fig. 3. Mouth cone of Physothrips vitticornis: a maxillary palpus of Bregmatothrips theifloris.
to describe *vitticornis* as a different species, especially too, because *theifloris* has the abdominal apex still more pointed and comes therefore near *Bregmatothrips*, whilst *vitticornis* by this character may rather be placed near *Physothrips*.

6. **Isoneurothrips parvispinus n.sp.**

   **Female.**—General colour dark brown, head and thoax a little more yellowish, abdomen darker shaded with grey. Legs yellow. The two first antennal joints of the same colour as head, the third pale yellowish; the others wanting in the unical type specimen. Fore wings clear, hyaline in the basal third, further greyish to apex.

   Head one and a half times as wide as long; cheeks arched, with some very small hairs and a somewhat stronger postocular bristle. Eyes large, black, with fine hairs between the facets, occupying somewhat more than half of the length of head. Ocelli large, with red pigment-cup, arranged nearly in a line transverse through the middle of eyes in an obtuse-angular triangle, nearly touching one another, Mouth-cone somewhat pointed, distinctly over reaching the middle of prosternum. Palpi very small, especially the labial ones, short and very thin. Maxillary palpi three-jointed, with short segments.

   Prothorax ovate, a little longer than head, one and a half times as wide as long, with broadly rounded sides; with very small anterolateral bristles, and two larger posterolateral ones on each hind angle.

   Pterothorax as wide as long, with strongly arched sides of meso- and metathorax, distinctly constricted at the hind margin of each of these two segments. Sutures of mesosternum of the form of an inverted T, with a shorter transverse line before the hind suture. Those of metasternum semi-circular, convex, backwards with a short, straight median line going backwards and two oblique ones on each side, directed towards the hind coxae.

   Middle and hind coxae rounded, the former distinctly smaller and about twice as widely separated from each other as the hind ones. Legs moderately long and stout, along their whole length set with short hairs; besides these a row of stout bristles along the inner
margin of tibiae, and especially long and stout, spine-like bristles at the end.

Wings reaching about to the ninth abdominal segment, fore pair with two continuous lines of bristles along the veins, 16 on anterior vein, 12 on posterior vein, and about 22 on costa. The bristles of hind vein nearly as long as the wing is broad in the distal half, those of fore vein a little shorter, those of costa somewhat longer.

Abdomen as wide as pterothorax, not quite three times as long as wide. Segments 2–8 on each hind angle with two long, stout, pointed bristles, about as long as the segments themselves. Ninth segment longer than each of the others, with the tenth together conical. Bristles of ninth segment very long and stout, laterally directed, as long as the segment or a little longer, three on each side; besides them two pairs of shorter, stout bristles behind one another on dorsal surface. Last segment on each side with two strong bristles, as long as those of the preceding segment; and a pair of shorter, weaker ones on ventral surface close to the ovipositor. This reaching from the base of 8th segment to apex of the last

Measurements of female:—Antennae? Head 0·09 mm. long, 0·13 mm. wide. Prothorax 0·10 mm. long, 0·15 mm. wide. Pterothorax 0·20 mm. long, 0·20 mm. wide. Middle femora 0·11 mm. long, 0·035 mm. wide; middle tibiae (including tarsi) 0·13 mm. long, 0·03 mm. wide. Hind femora 0·13 mm. long, 0·04 mm. wide; hind tibiae (including tarsi) 0·16 mm. long, 0·035 mm. wide. Length of wings (without fringe) 0·55 mm. Abdomen 0·55 mm. long, 0·20 mm. wide. Total length 0·9—1·0 mm.

Male.—General colour lemon-yellow, pterothorax somewhat tinged with brownish. Legs pale yellow. Antennae pale yellow at base, gradually shaded with grey towards the apex. Their middle joints about fusiform, widest behind the middle; 3 and 4 equal in length, 2 a little shorter, 5 still shorter, 6 longer than any of the others. Style very short, one-jointed. Wings clear, hyaline throughout their whole length; the last bristles of fore vein somewhat more distant from the preceding than the others from each other. Abdomen a little narrower than pterothorax, chaetotaxy as in the
female. No teeth-like spines on ninth segment. Penis not over-reaching the end of abdomen. Testicles bright orange yellow.

Measurements of male:—Total length of antennae 0'18 mm. I. joint 0'01 mm. long, 0'02 mm. wide; II. joint 0'03 mm. long, 0'02 mm. wide; III. joint 0'035 mm. long, 0'02 mm. wide; IV. joint 0'035 mm. long, 0'015 mm. wide; V. joint 0'025 mm. long, 0'015 mm. wide; VI joint 0'045 mm. long, 0'02 mm. wide; VII. joint 0'005 mm. long, 0'005 mm. wide. Head 0'09 mm. long, 0'13 mm. wide. Prothorax 0'10 mm. long, 0'16 mm. wide. Fore femora 0'10 mm. long, 0'04 mm. wide; fore tibiae (including tarsi) 0'14 mm. long, 0'03 mm. wide. Pterothorax 0'18 mm. long, 0'20 wide. Middle femora 0'09 mm. long, 0'035 mm. wide; middle tibiae (including tarsi) 0'14 mm. long, 0'03 mm. wide. Hind femora 0'14 mm. long, 0'035 mm. wide; hind tibiae (including tarsi) 0'18 mm. long, 0'03 mm. wide. Length of wings (without fringe) 0'54 mm. Abdomen 0'50 mm. long, 0'17 mm. wide. Total length 0'9—1'0 mm.

One male and one female, collected by Mr. Docters V. Leeuwen in flowers of Trichosanthes tricuspidata Lour (No. 52) at Bangkok (Siam), dated 9. X. 1920.

This new species approaches by the chaetotaxy of fore wings Isoneurothrips, and by the short, wide head to multispinus Bagnall (from Hawaii). But the end of middle and hind tibiae is not extended in two pin-like processes, as figured by Bagnall for multispinus (Plate xvii, fig. 20), but only with strong, spine-like, articulately inserted bristles. Further the bristles of parvispinus, especially on head and prothorax, are distinctly shorter and weaker than in multispinus.

7. Thrips japonicus Bagnall.


In place in this species with some doubt a number of females, collected by Mr. Docters v. Leeuwen in flowers of the following plants: Melastoma malabathricum L. (No. 39; Bang Klam, Southern Siam; 30. IX. 1920; together with Physothrips vitticornis). Helioteres isora L. (No. 40; Nong Chin, Southern Siam; 30. IX 1920). Ipomoea spec. (No. 44; Surasthra Dani, Southern Siam; 1. X. 1920; together with Frankliniella persetosa). Canavallia.
ensiformis (L.) DC. (No. 73; Ca-Na, Indo-china; 26. X. 1920; together with Tenuiothrips longistylus and Physothrips vitticornis).

The material before me agrees tolerably with Bagnall's description; but the size is somewhat smaller, total length about 1'0 mm. The last abdominal segment has a distinct longitudinal suture throughout its whole length, as also stated by Bagnall for the Japanese specimens.

The specimens before me agree also with Uzel's short description of his var. pullus of Thrips tabaci, but here the third antennal joint is the palest of all, in pullus the first. Specimens from onions from Java, which I would rather refer to tabaci pullus, have the whole body uniformly dark and the fore wings nearly clear.

A comparison with the other Indian species shows, that my japonicus is identical with none of them. Thrips oryzae (originally described by Williams from British India, but occurring also on rice in Java) has the body uniformly dark, the antennae shorter and stouter, and the ninth abdominal segment much longer (very characteristic for oryzae!). But the colour and chaetotaxy of fore wings is the same in both species.

Thrips florum is also very similar, but somewhat larger and uniformly dark. "Thrips magnipes" and "rhodanoviae" (Schmutz) are contracted specimens of florum, and therefore the abdomen seems darker, because its segments are somewhat telescoped.

Thrips parvus has but two bristles on distal half of fore vein, is uniformly coloured and somewhat smaller than the specimens before me.

The Japanese albiipes Bagnall, finally, seems to be very similar to the species from Further India, but has the head a little longer, and the eighth abdominal segment with a fine comb-like fringe on hind margin, entirely wanting in the material before me.

Subfamily Aptinothripinae Karny.

8. Anaphothrips floralis n.sp.

Female. Male.—General colour lemon yellow, pterothorax somewhat darker, brownish yellow. First antennal joint paler than head, nearly clear, second and third of the same colour as head; the following ones increasingly greyish, sixth and style dark grey. Fore
wings somewhat shaded with greyish, also the hind wings at base and along the median vein. Testicles bright orange red.

Head one and a half times as wide as long, with slightly arched sides. Eyes large, black, occupying more than half of the length of head. Ocelli large, with red pigment-cups, arranged in a rectangular triangle, the anterior one placed behind the fore margin of eyes, the posterior ones near their middle. No conspicuous bristles.

Antennae stout, about twice as long as head. First segment very small, about as long as wide. Second cup-shaped, broadly rounded, distinctly wider than the other joints, about as long as wide. Following segments broadly clavate; sixth fusiform, but widest near the base, the longest of all the joints, without a transverse suture. Style short, with the first joint nearly as long as the second. Bristles and sense-cones inconspicuous.

Mouth-cone conical, distinctly overreaching middle of prosternum. Maxillary palpi about half as long as the mouth-cone, with three joints subequal in length, the basal one the widest, the apical one the narrowest. Labial palpi very thin, but a little more than half as long as the maxillary ones, with an annular basal joint, and a long, narrow apical one.

Prothorax a little longer than head, one and a half times as wide as long, broadly rounded, without bristles. Pterothorax as long as wide, with arched sides of meso- and metathorax, distinctly constricted at the hind margin of each of these two segments. Sutures of mesosternum in the form of an inverted T, those of metasternum short, consisting of a transverse line, from which on each side goes a short longitudinal suture towards the hind coxae, with an obtuse angle just before reaching them.

Hind coxae twice as large as the middle ones, the distance between them only one-fourth of that between the middle coxae. All legs somewhat stout, without conspicuous bristles, except a few at the end of tibiae. Tarsi not toothed.

Wings reaching about to the eighth abdominal segment; fore pair with moderately long fringe, and very short, weak bristles; three of them on the distal half of anterior vein.
Abdomen a little broader than pterothorax, with very short, nearly abortive bristles; only those of the two last segments somewhat longer and stouter, about as long as the segments themselves. Ovipositor reaching from distal part of the seventh segment to the end of abdomen. Ninth tergit of male, near the middle, with a transverse line of three long bristles on each side, and between them, near the middle, a pair of short, dark, stout spines. Penis short, acute at apex, hardly overreaching the end of last segment.

Measurements of female:—Head 0'08 mm. long 0'12 mm. wide. Prothorax 0'10 mm. long, 0'15 mm wide. Fore femora 0'08 mm. long, 0'04 mm. wide, fore tibiae (including tarai) 0'14 mm. long, 0'03 mm. wide. Tterothorax 0'20 mm. long and wide. Middle femora 0'10 mm. long, 0'03 mm. wide; middle tibiae (including tarsi) 0'15 mm. long, 0'025 mm. wide. Hind femora 0'12 mm. long, 0'03 mm. wide; hind tibiae (including tarsi) 0'16 mm. long, 0'025 mm. wide. Length of wings (without fringe) 0'6 mm. Abdomen 0'70 mm. long, 0'24 mm. wide. Total length 1'1 mm.

Measurement of male.—Total length of antennae 0'18 mm. I. joint 0'015 mm. long, 0'015 mm. wide; II. joint 0'025 mm. long, 0'025 mm. wide; III. joint 0'03 mm. long, 0'015 mm. wide; IV. joint 0'03 mm. long, 0'02 mm. wide; V. joint 0'025 mm. long, 0'015 mm. wide; VI. joint 0'035 mm. long 0'015 mm. wide; VII. joint 0'007 mm. long, 0'006 mm. wide; VIII. joint 0'008 mm. long, 0'005 mm. wide. Length of head 0'08 mm., of prothorax 0'10 mm. Fore femora 0'08 mm. long, 0'03 mm. wide; fore tibiae (including tarsi) 0'1 mm. long, 0'025 mm. wide. Length of pterothorax 0'18 mm. Middle femora 0'08 mm. long, 0'03 mm. wide; middle tibiae (including tarsi) 0'1 mm. long, 0'025 mm. wide. Hind femora 0'10 mm. long, 0'025 mm. wide; hind tibiae (including tarsi) 0'1 mm long, 0'02 mm. wide. Length of wings (without fringe) 0'40 mm., of abdomen 0'45 mm. Total length 0'8 mm.

One female and one male, collected by Mr. Docters v. Leeuwen in flowers of Clitorea ternatea L. (No. 81, at Saigon, Indo-china, dated 30 X 1920).

It approaches, in my key, (Zeitschr. wiss. Ins.-Biol., X, p. 355 358, 1914) close to the African loennbergi, but differs from
it at once by the entire lack of prothoracic bristles. Cannot be confused with any of the other hitherto known species.

**SUBORDER TUBULIFERA HALIDAY.**

**Family Phloeothripidae UZEL.**

*Subfamily Haplothripinae KARNY.*

9. **Haplothrips soror SCHMUTZ.**


1921. PRIESNER, Treubia, II, 1, p. 6.

Two specimens collected by Mr. DOCTERS v. LEEUWEN in flowers of *Celosia argentea* L. (No. 76), at Mour Man, Indo-china, dated 26. X. 1920, together with *Frankliniella vicina*.

The species was hitherto recorded only from Ceylon.

10. **Haplothrips inquiline PRIESNER.**

1921. PRIESNER, Treubia, II, 1, p. 4, 6.

1921. KARNY, Treubia, II, 1, p. 79, 80.


Some specimens in the galls of *Austrothrips cochinchinensis* on *Hymenodictyon parviflorum* OLIVER (No. 43; Ban Klong Tahu, Southern Siam; 1. X. 1920), and in those of *Gynaikothrips leeuweni* on *Pavetta indica* L. (No. 63; native forest near Saigon, Cap. St. Jacques; 21. X. 1920), collected by Mr. DOCTERS v. LEEUWEN.

The species was hitherto recorded from Java and Celebes (Saleier).

11. **Neoheegeria mandax KARNY.**

1910. DOCTERS v. LEEUWEN-REIJNVAAN, Marcellia, IX, p 58 (without name)

1911. DOCTERS v. LEEUWEN-REIJNVAAN, Marcellia, X, p. 93 (without name).

1912. KARNY, Marcellia XI, p. 122.

1919. UICHANCO, Philipp. Journ. Sci., XIV, 5, p. 548; Plate XIV, fig. 2.

Several specimens from Krompha (Annam, ± 50 m; 23. X. 1920), collected by Mr. Docters v. Leeuwen in leaf-galls on Mallotus philippensis M. A. (No. 66; together with Eothrips laticauda), and one from a rolled leaf on ? Salacia (No. 70). In the latter the mouth-cone is typically shaped, but in the specimens from Mallotus it is somewhat shorter and more blunt than in the Javanese type specimens from Mallotus,

The species was hitherto recorded from Java and the Philippine Islands.

Subfamily Trichothripinae KARNY.

12. Austrothrips cochinchinensis n.sp. (Fig. 4).

Female. Male. General colour blackish brown, all tibiae and tarsi somewhat paler, yellowish brown. First antennal segment as dark as head, second gradually paler towards the apex. The following joints yellow, only the last a little shaded with brownish. Wings clear, hyaline.

Head one and one-fifth times as wide as long, widest across the eyes; cheeks straight, slightly converging backwards, finely gradulated, without spines. Eyes small, black, occupying one-third of the length of head, with rounded hind margin. Ocelli large, with dark pigment-cups, nearly touching one another, arranged in a rectangular triangle, the anterior one behind the fore margin of eyes, posterior ones near their middle. Postocular bristles inserted a little behind the middle of head, as far distant from cheeks as from hind margin of eyes, hyaline, at apex distinctly dilated and clavate, reaching forwards about to the middle of eyes. Dorsal surface of head with a fine, transverse striaion.

Antennae long and stout, twice as long as head, or a little more. First joints cylindrical, wider than long, at base nearly touching the fore margin of eyes; between them the fore head a little produced. Second joint cup-shaped, somewhat longer than wide, as wide as the first. The following segments nearly globular, but
distinctly constricted at base, as wide as the preceding ones, and only a very little longer than wide. Seventh joint fusiform, twice as long as wide; eighth also fusiform, as long as the seventh, but distinctly narrower.

All joints before the apex with a crown of very short, weak bristles. The terminal longitudinal row of bristles beginning a little before the middle of eighth antennal joint (cf. *Liothrips priscus*, Treubia, II, 1, p. 44) and reaching to its end.

Sense area of second antennal segment circular, placed behind the middle. Sense-cones hyaline, but long and stout, at least twice as long as the bristles, reaching nearly to the middle of the following joint; but on the third segment the sense-cone of anterior margin a little shorter, on fifth and sixth, the posterior one very short, less than half as long as that of the anterior margin.

Mouth-cone broadly rounded, reaching a little beyond the middle of prosternum. Palpi short, with an annular basal and a longer, cylindrical apical joint. Labial palpi still shorter than the maxillary ones.

Prothorax about as long as head, strongly widened posteriorly, with obtuse hind angles. Without a longitudinal furrow. All bristles considerably dilated at apex, clavate. The anterolateral ones about as long as the postocular setae, half as long as the prothorax. Anteromarginal bristles a little shorter than those of the fore angles, and a little closer to them than to the median line. Mediolateral ones as far distant from the anterolateral ones as from the posterolateral ones, about as the anteromarginal ones. Posterolateral bristles a little longer than those of the fore angles, curved backwards. Postero-romarginal setae about twice as far distant from median line as from the hind angles, short. Prosternum punctured, only on each side of mouth-cone with a small, transversely directed, smooth plate.
Fore coxae ovate having on the outer edge a long, clavate, forwardly directed bristle about equal in length to the posterolateral bristles. Fore legs short and stout; femora in both sexes a little broadened. Fore tarsus with only a very small, hardly distinguishable tooth and this only in male.

Pterothorax a little wider than prothorax, distinctly shorter than wide, with obtuse, somewhat protruding fore angles, sides of mesothorax nearly parallel, and those of metathorax arched, distinctly converging backwards. Disc of mesonotum with a fine, rhomboidal, transverse reticulation. Just before the transverse hind suture of mesosternum a short, parallel, transvers line, crossed by a longitudinal median suture, reaching forwards about to the middle of mesosternum metasternum with only two short, oblique lines, forming a right angle, but neither reaching to the tip of this angle, nor to the hind coxae.

Middle and hind coxae rounded, distinctly longer than wide; the former ones smaller and nearly twice as far distant from one another as the hind ones. Middle and hind legs moderately long and stout, with a few short hairs, but without stronger bristles. Tarsi not toothed.

Wings reaching about to the fifth abdominal segment, with long, but not dense fringe, clear, hyaline, not constricted near the middle. Fore pair with three distinctly clavate bristles at base, near the fore margin, nearly equal in length, and not as long as the wing is broad; the second a little closer to the first than to the third. Hind margin without duplicated cilia.

Abdomen scarcely as wide as the pterothorax, about three times as long as wide. First tergit with a rounded, finely reticulated plate in the middle, and a smaller one on each side; space between them finely punctured. All following segments with two stout, strongly clavate bristles near each hind angle, gradually increasing in length from base to apex; the outer one on second segment scarcely more than half as long as the segment, on seventh about as long as it; the inner ones a little shorter. Eighth segment with only one such bristle near each hind angle, a little shorter than the outer one of the preceding segment. Ninth segment with three clavate
bristles on each side, about half as long as the tube. The hind pairs of wing-retaining spines well developed, distinctly S-shaped, on segments 3—6 about two-thirds as long as the distance between their tips; on segments 2 and 7 distinctly shorter. Fore pairs nearly abortive. Tube stout, about as long as head, at base two-fifths as wide as long and twice as wide as at apex. Terminal bristles hair-like, not clavate, about half as long as the tube itself.

**Measurements of female:**—Total length of antennæ 0'30 mm. I. joint 0'02 mm. long, 0'03 mm. wide, II. joint 0'04 mm. long, 0'03 mm. wide; III. joint 0'04 mm. long, 0'03 mm. wide; IV. joint 0'04 mm. long, 0'03 mm. wide; V. joint 0'04 mm. long, 0'03 mm. wide; VI. joint 0'04 mm. long, 0'03 mm. wide; VII. joint 0'04 mm. long, 0'02 mm. wide; VIII. joint 0'04 mm. long, 0'01 mm. wide. Head 0'15 mm. long, 0'18 mm. wide. Prothorax 0'15 mm. long, 0'31 mm. wide (across fore coxae). Fore femora 0'16 mm. long, 0'05 mm. wide; fore tibiae (including tarsi) 0'17 mm. long, 0'03 mm. wide. Pterothorax 0'26 mm. long, 0'33 mm. wide. Middle femora 0'09 mm. long, 0'05 mm. wide; middle tibiae (including tarsi) 0'12 mm. long, 0'03 mm. wide. Hind femora 0'15 mm. long, 0'05 mm. wide; hind tibiae (including tarsi) 0'16 mm. long, 0'035 mm. wide. Length of wings (without fringe) 0'6 mm. Abdomen (including tube) 1'05 mm. long, 0'32 mm. wide. Length of tube 0'15 mm. width at base 0'06 mm. at apex 0'03 mm. Total length 1'2—1'6 mm.

**Measurements of male:**—Total length of antennæ 0'29 mm. I. joint 0'02 mm. long, 0'03 mm. wide; II. joint 0'04 mm. long, 0'03 mm. wide; III. joint 0'035 mm. long, 0'03 mm. wide; IV. joint 0'035 mm. long, 0'03 mm. wide; V. joint 0'04 mm. long, 0'03 mm. wide; VI. joint 0'04 mm. long, 0'025 mm. wide; VII. joint 0'04 mm. long, 0'02 mm. wide; VIII. joint 0'04 mm. long, 0'01 mm. wide. Head 0'12 mm. long, 0'15 mm. wide. Prothorax 0'14 mm. long, 0'30 mm. wide (across fore coxae). Fore femora 0'15 mm. long, 0'07 mm. wide; fore tibiae (including tarsi) 0'15 mm. long, 0'04 mm. wide. Pterothorax 0'25 mm. long, 0'32 mm. wide. Middle femora 0'10 mm. long, 0'04 mm. wide; middle tibiae (including tarsi) 0'11 mm. long, 0'03 mm. wide. Hind femora 0'13 mm. long, 0'05 mm. wide; hind tibiae (including tarsi) 0'22 mm. long, 0'035 mm. wide. Length of wings (without fringe) 0'55 mm. Abdomen
(including tube) 0'85 mm long, 0'28 mm wide. Length of tube 0'14 mm, width at base 0'06 mm, at apex 0'03 mm. Total length 1'3-1'5 mm.

Both sexes collected by Mr. Docters v. Leeuwen in leaf galls on *Hymenodictyon parviflorum* Oliver (No. 43; Ban Klang Tahu, Southern Siam; 1. X. 1920; together with *Haplothrips inquilinus*.—No. 60; native forest Tri Han near Saigon; ± 100 m; 19. X. 1920).

This species in its whole appearance and the form of last antennal segment resembles *Eothrips atavus*, but may be distinguished from it and the other *Eothrips* species at once by its somewhat wider head. By this characteristic and by the lack of duplicated cilia of fore wings it approaches the genus *Austrothrips* (see my key to the wide-headed Trichothripinae, Beitr. mal. Thys. VI; Treubia III, 1; 1922). From the only hitherto known *Austrothrips*-species, the South American *A. verae, cochinchinensis* may be distinguished by its distinctly shorter and stouter antennæ, somewhat similar to those of *Vuilletia*; but the other general characters agree better with *Austrothrips* than with the North African *Vuilletia*.

13. *Eothrips laticeps* n. sp. (Fig. 5.)

*Female. Male.—*Blackish brown; end of fore femora, fore tibiae, and of middle and hind tibiae, and all tarsi yellowish brown. Antennæ brownish yellow, first joint darker brown, second shaded with brown towards the base, seventh a very little darker than the preceding ones, eighth distinctly shaded with grey. Fore and hind wings brown on their whole surface, hind pair a little darker along their median vein.

Head as long as wide, with straight, parallel sides. Eyes small, black, occupying one third of the length of head, with somewhat rounded hind margin. Ocelli moderately large, with well developed pigment-cups, arranged in a rectangular triangle. The anterior one forwardly directed, placed on a line going through the fore margins of eyes; the posterior ones a little before the midst of the eyes. Postocular bristles inserted close to the hind margin of
eyes, forwardly directed, somewhat shorter than the eyes, stout, blunt at apex, but not clavate. Dorsal surface of head with a fine, transverse reticulation.

Antennæ, about twice as long as head, touching at base the fore margin of eyes; between them the fore head somewhat produced. First antennal joint wider than long, widest at the base. Second joint cup-shaped, a little narrower and about twice as long as the first. The three following joints broadly clavate, the fourth as wide as the second, 3 and 5 little narrower; 3 the longest of all the joints, 4 and 5 a little shorter, about as long as the second. Sixth joint nearly cylindrical, but gradually narrowed in basal half, and constricted at apex. Seventh segment fusiform, but widest near the base, transversally truncate at apex, shorter and narrower than the preceding joints. Eighth segment pin-like, bluntly conical, broadly jointed with the seventh, only a little longer than the first, and distinctly narrower than the preceding joints.

Segments 2—5 with a crown of bristles before the end, about half as long as the segments, on the second still shorter. Sixth joint in its distal half set with such bristles, 7 and 8 throughout the whole length. Median line of bristles reaching from the first third of 7 to apex of 8.

Sense area of second segment circular, placed behind its middle. Sense-cones of the following segments stout, a little curved, blunt at apex, about twice as long as the distance of their insertion from the end of their joint. Those on the anterior margin a little shorter than the posterior ones. On the fourth joint a little shorter than on 5 and 6; on 3 still shorter, the anterior abortive. Seventh joint on dorsal surface with a similar sense-cone, reaching about to the middle of eighth segment, but abortive or entirely wanting in some specimens.

Amongst the males before me, there is one male with one antenna normally developed, the other anomalous, seven-jointed.
Segments 1 - 4 normal, 5 a little shorter than usually, sixth very long, fusiform, truncate at apex. Seventh shaped like the eighth of normal antenna, but a little narrower and more pointed. Sixth joint without sense-cone; median bristle line confined to the seventh.

Mouth-cone broadly rounded, reaching hardly beyond the middle of prothorax, Maxillary palpi stout, about half as long as the mouth-cone; their basal joint as long as wide, the appical one about four times as long as wide, with long bristles at the end. Labial palpi short, as wide as the maxillary ones, and only about twice as long as wide.

Prothorax about as long as head, and nearly twice as wide (across fore coxae) as long, strongly widened backwards. Posterolateral bristles stout, about half as long as the prothorax, blunt at apex. Posteromarginal bristles more than twice as far distant from the middle line than from those of the hind angles, scarcely half as as these. Anterolateral bristles still shorter, blunt, only a very little overreaching the fore margin of prothorax. Anteromarginal ones still weaker, reduced to short hairs, about three times as far distant from each other as from the fore angles. Mediilaterial bristles entirely abortive, not conspicuous. Prosternum with a small triangular, laterally directed plate on each side of the mouth-cone, a larger rhomboidal one near each fore angle, a pair of irregularly pentagonal ones before the hind margin, and behind them a very small ovate median plate. All plates smooth, strongly chitinized, the space between them with a well expressed, dotted sculpture.

Fore coxae ovate, with a blunt forwardly-curved bristle on the outer hind angle, somewhat shorter and weaker than the posterolateral ones of prothorax. Fore femora distinctly shorter than
head, moderately enlarged, not quite half as wide as long. Tibiae stout, tarsi, not toothed.

Pterothorax wider than prothorax, somewhat shorter than wide, with blunt fore angles, sides of metathorax nearly parallel, those of metathorax arched, somewhat converging backwards. Sutures of mesosternum composed by a small, transverse, obtuse triangle, the hind margin of which formed by the hind sutures of mesosternum from each side of the triangle a very short oblique line runs laterally forward, and from its tip a similar median line not quite to the midst of mesosternum. Suture lines of metasternum similar to those of the preceding species, but a little shorter and their angle more blunt.

Middle coxae smaller than the hind ones, and about twice as far distant from each other. Middle and hind legs stout femora at base with a long, hair-like bristle on the inner margin, tibiae with a similar one at the end of outer margin. Tarsi without teeth.

Wings reaching to the seventh abdominal segment, broad, not constricted at the middle. Fore pair near the base with 4 stout, blunt bristles; three of them along the abortive longitudinal vein, the third of which a little longer than the others and a little more distant from the second than this from the first, close to the second bristle behind the vein still another similar bristle. All these bristles about half as long as the wing is broad, except the last, distal, longer bristle on vein. Hind margin before the apex with 5-8 duplicated fringe hairs.

Abdomen a very little wider than pterothorax, three times as long as wide. The median plate of first tergit large, trapezoidal, but with double S-shaped sides; the lateral pair smaller, triangular; space between them punctured. The following segments near each hind angle with two blunt, stout bristles, the inner one of which is about as long as the segments themselves, the outer one on 2-6 distinctly shorter, on 7 and 8 longer. Bristles of ninth segment long, sharply pointed, only a little shorter than the tube. Hind pair of wing-retaining spines stout, distinctly S-shaped, on segment 4 and 5 nearly as long as the distance between their tips, on 3 and 6 shorter and weaker, on 2 still shorter, on 7 nearly abortive. Fore pair hair-like, at most half as long as the spines of hind pair. Tube
a little shorter than head, stout, at base nearly half as wide as long and twice as wide as at apex. Terminal bristles hair-like, the longer ones about two-thirds of the length of tube, the shorter ones only one-third as long as the others.

**Measurements of female:**—Total length of antennae 0'38 mm. I. joint 0'03 mm. long, 0'04 mm. wide; II. joint 0'05 mm. long, 0'035 mm. wide; III. joint 0'065 mm. long, 0'03 mm. wide; IV. joint 0'06 mm. long, 0'035 mm. wide; V. joint 0'05 mm. long, 0'03 mm. wide VI. joint 0'05 mm. long, 0'03 mm. wide; VII. joint 0'045 mm. long, 0'025 mm. wide; VIII. joint 0'035 mm. long, 0'015 mm. wide. Head 0'19 mm. long, 0'19 mm. wide. Prothorax 0'20 mm. long, 0'36 mm. wide (across fore coxae). Fore femora 0'17 mm. long, 0'08 mm. wide; fore tibiae (including tarsi) 0'16 mm. long, 0'03 mm. wide. Pterothorax 0'36 mm. long, 0'41 mm. wide. Middle femora 0'13 mm. long, 0'06 mm. wide; middle tibiae (including tarsi) 0'2 mm. long. 0'04 mm. wide. Hind femora 0'22 mm. long, 0'07 mm. wide; hind tibiae (including tarsi) 0'30 mm. long, 0'05 mm. wide. Length of wings (without fringe) 0'85 mm. Abdomen (including tube) 1'3 mm. long, 0'42 mm. wide. Length of tube 0'16 mm. width at base 0'07 mm., at apex 0'04 mm. Total length 1'9-2'4 mm.

**Measurements of male:**—Total length of antennae 0'34 mm. I. joint 0'02 mm. long, 0'04 mm. wide; II. joint 0'05 mm. long, 0'03 mm. wide; III. joint 0'06 mm. long, 0'03 mm. wide; IV. joint 0'05 mm. long, 0'03 mm. wide; V. joint 0'05 mm. long, 0'025 mm. wide; VI. joint 0'045 mm. long, 0'03 mm. wide; VII. joint 0'04 mm. long, 0'025 mm. wide; VIII. joint 0'025 mm. long, 0'02 mm. wide. Head 0'18 mm. long, 0'17 mm. wide. Prothorax 0'16 mm. long, 0'32 mm. wide (across fore coxae). Fore femora 0'16 mm. long, 0'07 mm. wide; fore tibiae (including tarsi) 0'13 mm. long, 0'04 mm. wide. Pterothorax 0'30 mm. long, 0'34 mm. wide. Middle femora 0'13 mm. long, 0'05 mm. wide; middle tibiae (including tarsi) 0'14 mm. long, 0'04 mm. wide. Hind femora 0'18 mm. long, 0'05 mm. wide; hind tibiae (including tarsi) 0'24 mm. long, 0'04 mm. wide. Length of wings (without fringe) 0'7 mm. Abdomen (including tube) 1'15 mm. long, 0'37 mm. wide. Length of tube 0'16 mm. width at base 0'07 mm. at apex 0'04 mm. Total length 1'6-1'8 mm.
Collected by Mr. Docters v. Leeuwen in leaf-galls on Aporosa (No. 57; native forest near Tri Han, Saigon; + 100 m; 19 X 1920; together with Mesothrips vitripennis.—No. 69; Krompha. Annam; 23 X 1920).

This new species comes in my key (Zeitschr. wiss. Ins.—Biol., XI, p. 146–147; 1915) close to luticauda, but differs from it by the shorter and wider head, and by the fore wings uniformly brownish on their whole surface. The shape of head resembles somewhat the wide-headed Trichothripininae, especially Austrothrips, but from it laticeps may be distinguished at once by the presence of double cilia on fore wings and by their brown colour.

14. Eothrips luticauda (Karny).

1910. DOCTERS v. LEEUWEN-REIJNVAAN, Marcellia, IX, p. 58 (without name),

1911. DOCTERS v. LEEUWEN-REIJNVAAN, Marcellia, X, p. 93 (without name).

1912. KARNY; Marcellia, XI, p. 124 (Dolerothrips).


One specimen in leaf-galls on Mallotus philippensis M. A. (No. 66; Krompha, Annam; + 50 m; 23 X 1920; together with Neoheegeria mendax; leg. Docters v. Leeuwen).

This species was hitherto recorded only from Java.

15. Eothrips schouteniae n.sp.

Black. Fore tibiae and all tarsi yellowish brown. Antennae pale yellow; first segment and base of second blackish; sixth somewhat shaded with brownish; seventh and eighth joint dark, brownish black. Wings clear, hyaline, only a very little greyish along the margins and the median vein.

Head scarcely longer than wide, a little longer than prothorax. Eyes small, occupying not quite one-third of the length of head.
Postocular bristles inserted behind the hind margin of eyes, hyaline, somewhat dilated at apex, about as long as the eyes. Mouth-cone similarly shaped as in *laticeps*, but the maxillary palpi a little more slender.

Antennae twice as long as head, with a distinct narrow space between their base and the fore margin of eyes; fore head between them scarcely produced. First joint shortly cylindrical, a little wider than long. Second segment cup-shaped, a little wider than the first, and a little longer than wide. The following segments clavate, about twice as long as wide. Sixth a little narrower and shorter, nearly cylindrical, but somewhat tapering to apex and still more towards the base. Seventh joint still shorter and narrower, fusiform, but widest near the base, transversely truncate at apex. Eighth segment small, conical.

All bristles weak and short, only a little overreaching the ends of their segments. Median apical line reaching from the midst of seventh segment to the end of eighth. Sense area of second joint indistinct. Sense cones hyaline, sharply pointed at apex, nearly half as long as their segments, but those on the third considerably shorter.

Prothorax half as long as wide across fore coxae, strongly widened backwards. All bristles stout and a little dilated at apex. The posterolateral ones about half as long as the prothorax, postero-marginal bristles closely approximated to them, somewhat more than half as long as those. Anterolateral and mediolateral setae equal in length, about half as long as the postero-marginal ones or one third of the length of posterolateral bristles. The mediolateral ones as far from the latter as from the anterolateral setae.

Fore coxae ovate, rounded, with an outwards-directed bristle about as long as the postero-marginal ones of prothorax, but distinctly weaker. Fore legs moderately stout, their femora nearly as long as head; tarsi without tooth.

Pterothorax about as wide as prothorax across fore coxae, nearly as long as wide, with rounded fore angles, sides of mesothorax nearly parallel, those of metathorax slightly arched, somewhat converging posteriorly. Middle coxae twice as widely separated from each other as the hind ones. Middle and hind legs long and mo-
derately stout, with a long hair before the end of tibiae on the outer margin. Tarsi not toothed.

Wings reaching about to the middle of abdomen, nearly clear, not constricted at the middle; about 10 duplicated cilia on the hind margin of fore wings before the apex.

Abdomen somewhat wider than pterothorax, nearly three times as long as wide. Bristles somewhat dilated at apex; their number and length as in *laticeps*. Those of ninth segment but a very little dilated at apex, distinctly shorter than tube. This short and stout, about three-fifths as long as head, at base about half as wide as long and nearly twice as wide as at apex. Terminal bristles sharply pointed, hair-like, the longer ones about as long as the tube itself, the shorter ones only one third the length of the others.

*Measurements*——Total length of antennae 0'40 mm. I. joint 0'025 mm. long, 0'03 mm. wide; II. joint 0'04 mm. long, 0'035 mm. wide; III. joint 0'065 mm. long, 0'025 mm. wide; IV. joint 0'06 mm. long, 0'035 mm. wide; V. joint 0'065 mm. long, 0'03 mm. wide; VI. joint 0'06 mm. long, 0'03 mm wide; VII. joint 0'055 mm. long, 0'025 mm wide; VIII. joint 0'03 mm long, 0'01 mm. wide. Head 0'20 mm long, 0'18 mm. wide. Prothorax 0'15 mm. long, 0'33 mm. wide (across fore coxae). Fore femora 0'19 mm. long 0'07 mm. wide; fore tibiae (including tarsi) 0'25 mm. long, 0'04 mm. wide. Pterothorax 0'29 mm. long, 0.32 mm. wide. Middle femora 0'16 mm. long, 0'06 mm. wide; middle tibiae (including tarsi) 0'25 mm. long, 0.04 mm. wide. Hind femora 0'18 mm. long, 0'06 mm. wide; hind tibiae (including tarsi) 0'25 mm. long, 0'04 mm wide. Length of wings (without fringe) 3'8 mm. Abdomen (including tube) 1'10 mm. long, 0'38 mm. wide. Length of tube 0'18 mm., width at base 0'07 mm. at apex 0'04 mm. Total length 1'9 - 2'0 mm.

Two specimens collected by Dr. DOCTORS v. LEEUVEN in leaf galls on *Schoutenia ovata* Korth. (No. 67) at Krompha, Annam, together with one *Eothrips annulicornis* dated 23. X. 1920.

This new species, in the coloration and shape of antennal joints, comes between *E. cearctatus* and *laticauda*, but distinctly diverging from both, from the former especially by the great number of double fringe hairs, from the latter by the nearly clear wings.

1910. DOCTERS v. LEEUWEN-REIJNVAAN, Marcellia, IX, p. 186 (without name).


One specimen together with the preceding species, and one in leaf galls on *Loranthus pentandrus* L. (No. 79; Saigon; 29. X. 1920; together with *Eothrips crassicornis*), collected by Mr. DOCTERS v. LEEUWEN.

- This species was hitherto known only from Java.

17. *Eothrips crassicornis* (Karny).

1910. DOCTERS v. LEEUWEN-REIJNVAAN, Marcellia, IX, p. 186 (without name).

1912. KARNY, Marcellia, XI, p. 126 (*Dolerothrips*).


One specimen together with one of the preceding species, collected by Mr. DOCTERS v. LEEUWEN in leaf galls on *Loranthus pentandrus* L. (Saigon).

Further distribution: Java.

18. *Eothrips hyalopterus* n.sp. (Fig. 6).

Female. Male.—Black, fore tibiae and all tarsi yellowish brown. First antennal joint blackish brown, second brown, paler towards the apex, the following ones yellow, the eighth somewhat shaded with brown. Wings clear, hyaline, but brown at extreme base.
Head a very little longer than wide, with granulated, nearly straight and parallel sides. Eyes large, with rounded hind margins, occupying nearly half of the length of head. Posterior ocelli placed before the middle of inner margin of eyes, the anterior one directed forwards. Postocular bristles inserted close behind the middle of head, sharply pointed, about half as long as the eyes. Behind them a short, spine-like bristle on each cheek, not quite half as long as the postocular ones. Mouth-cone broadly rounded, reaching hardly beyond the midst of prosternum.

Antennae twice as long as head, with a distinct narrow space between their insertion and the fore margin of eyes, fore head between them very little produced. First joint considerably shorter than wide at base. Second segment cup-shaped, nearly as wide as the first, somewhat longer than wide. The following joint about one and a half times as long as wide, broadly clavate, nearly equal in length and width. Sixth joint distinctly narrower than the preceding ones, subcylindrical, truncate at apex, constricted towards the base. Seventh joint fusiform, longer and narrower than any of the preceding segments, about three times as long as wide, transversely truncate at apex. Eighth joint the narrowest of all, a little shorter than the middle segments, conical, but somewhat constricted at base.

All bristles short and weak. Sense area of the second segment close behind its middle. Sense cones hyaline, shorter than half the length of their joints, those of posterior margin a little longer than the anterior ones. Sense cones of sixth segment shorter than the others, the posterior still shorter that the anterior one. Seventh segment with no conspicuous sense, cone.
There is amongst the material before me one female with an anomalous antenna of very remarkable shape. The three basal joints shaped as usual, the fourth very long, apparently representing two joints entirely grown together, distinctly constricted at middle, with a sense cone before this constriction and another on each side before the end. This curiously shaped joint is followed by only one very small, fusiform apical segment.

Prothorax somewhat shorter than head, twice as wide (across fore coxae) as long. Bristles weak and short, sharply pointed. The posterolateral ones not quite half as long as prothorax, posteromarginal setae scarcely half as long as the former ones. Anterolateral bristles still shorter and weaker, directed forwards, mediolateral ones still shorter, hair-like, inserted in the midst between those of fore and hind angles. Anteromarginal setae not conspicuous. Fore femora about as long as head, in both sexes a little more than half as wide as long. Tarsi (except the apical claw) without teeth.

Pterothorax a little wider than prothorax across fore coxae, nearly as long as wide, with protruding fore angles, sides of meso- and metathorax arched and converging backwards. Sutures of mesosternum form a small rectangular triangle, defined backwards by the hind margin of mesosternum, with the right angle directed forwards and going off from it a short median line. Sutures of metasternum consisting of two oblique lines, forming a right angle with each other, but neither reaching to the hind coxae, nor to the tip of the angle. Hind coxae somewhat more approximated than the middle ones. Middle and hind legs moderately long and stout. Tarsi not toothed.

Wings clear, hyaline, at extreme base brown, not constricted at the middle, reaching to the sixth abdominal segment. Bristles at base of fore pair very weak and short, hind margin with 15–20 duplicated cilia.

Abdomen somewhat wider than pterothorax, about three times as long as wide. All bristles short and weak, pointed at apex. Those of segments 7–9 somewhat longer, nearly as long as the ninth segment. Sides of eighth segment in basal half nearly parallel, then abruptly strongly converging from middle to apex. Tube a little
shorter than head, with strongly converging sides; its width at base
about two-fifths of its length, and nearly three times its width at apex.
Terminal bristles very short and weak, not quite one-third as long as
the tube itself.

Measurements:—Total length of antennae 0·37 mm. I. joint
0·02 mm. long, 0·35 mm. wide; II. joint 0·04 mm. long, 0·03 mm.
wide; III. joint 0·05 mm. long, 0·03 mm. wide; IV. joint 0·055 mm.
long, 0·035 mm. wide; V. joint 0·05 mm. long, 0·03 mm. wide; VI.
joint 0·055 mm. long, 0·025 mm. wide; VII. joint 0·06 mm. long, 0·20
mm. wide; VIII. joint 0·045 mm. long, 0·015 mm. wide. Head 0·20
mm. long, 0·18 mm. wide. Prothorax 0·16 mm. long, 0·31 mm. wide
(across fore coxae). Fore femora 0·20 mm. long, 0·11 mm. wide;
fore tibiae (including tarsi) 0·17 mm. long, 0·05 mm. wide. Pterotho-
rax 0·30 mm. long, 0·33 mm. wide. Middle femora 0·15 mm. long,
0·05 mm. wide; middle tibiae (including tarsi) 0·20 mm. long, 0·05
mm. wide. Hind femora 0·21 mm. long, 0·07 mm. wide; hind tibiae
(including tarsi) 0·28 mm. long, 0·05 mm. wide. Length of wings
(without fringe) 1·0 mm. Abdomen (including tube) 1·25 mm. long,
0·38 mm. wide. Length of tube 0·18 mm., width at base 0·07 mm.,
at apex 0·025 mm. Total length (female, male) 1·7—2·2 mm.

This species was collected by Mr. Docters v. Leeuw en in a
leaf gall on ?? Hymenodictyon parviflorum Oliver (No. 74) at Vinh
Huo (Indochina), dated 26. X. 1920.

Differs from all similar species (taurus, nervissequus seticornis
and decipiens) by its very weak bristles, the clear, hyaline wings, and
the great number of double fringe-hairs.

19. Chelaeothrips annamensis Karny.


I have already described this very remarkable new genus in
the paper mentioned above. Collected by Mr. Docters V.
Leeuw en in a leaf gall on an undetermined plant (No. 68) at
Subfamily Cryptothripinae Karny.

20. Androthrips melastomae Zimmermann.


I have suggested in Treubia I, 4. p. 281, that the so-called "Androthrips melastomae" from different food plants may represent probably different species. And the more material of Androthrips I receive, the more I find this supposition confirmed. But because Androthrips is generally rather rare, I have not yet obtained sufficient material to define these species satisfactorily. Zimmermann has described the species from Chavica densa and Melastoma polyanthum, stating that the tibiae were yellow. In the Further Indian material before me, there is one specimen from Melastoma malabathricum L. (No. 42) having the middle and hind tibiae brown, collected by Mr. Docters V. Leeuwen at Klong Chang, Siam, dated 1. X. 1920 (together with Mesothrips jordani and Gynaikothrips chavicae); further two specimens from Ficus benjamina L. (No. 48); Bangkok; 3. X. 1920; leg. Docters v. Leeuwen together with Gynaikothrips suzeli and G. sp.—No. 78; Saigon; 28. X. 1920; leg. Docters v. Leeuwen together with Gynaikothrips suzeli, Mesothrips jordani and Leptothrips constrictus). These two specimens from Ficus have all tibiae yellow and the antennal joints considerably narrower than the specimen from Melastoma. I hope to get in time more material, and to be able to decide these questions exactly.

Androthrips melastomae was hitherto known from Java and Celebes (Saleier).


Representing a new genus already described in the above mentioned publication. Collected by Mr. Docters v. Leeuwen in leaf galls on Dipterocarpus alatus Roxb. (No. 49; 7. X. 1920.—No. 54; 9. X. 1920) at Bangkok, Siam, together with Gynaikothrips siamensis.
22. Leptothrips constrictus KARNY.

1912. KARNY, Marcellia, XI, p. 150.

1922. KARNY, Beitr. mal. Thys., VII.—Treubia, III, 1. (with list of literature).

In leaf galls on Ficus retusa L. (No. 51; Bangkok; 9. X. 1920; together with Gynaikothrips uzeli) and F. benjamina L. (No. 78; Saigon; 28. X. 1920; together with Mesothrips jordani, Gynaikothrips uzeli and Androthrips melastomae), collected by Mr. DOCTERS v. LEEUWEN.

It is not impossible, that constrictus may be proved at a future time to be only a micromerous from of Mesothrips jordani, likely the f. debilis of M. pyetes or the smaller form of Haplothrips brazcatus & and Thaumatothrips froggatti.

Further distribution: Java, Celebes.

23. Gynaikothrips fuscipes n.sp.

Female. Male.—Black. Fore tibiae dark brown at base, gradually paler towards the apex. All tarsi yellowish brown. First antennal joint and base of second black; second segment gradually paler towards the apex. The following joints pale lemon yellow, sixth greyish before the apex, seventh in the distal half. Eighth joint entirely brownish grey. Wings (except extreme base) clear, hyaline.

Head one and one-fifth times as long as wide; cheeks nearly straight, distinctly converging from eyes to hind margin, finely granulated and set with a few short hairs. Eyes moderately large, occupying about one-third of the length of head. Posterior ocelli placed close to the inner margin of eyes before their middle, anterior one directed forwards. Postocular bristles inserted close behind the hind margin of eyes, blunt, very slightly dilated at extreme apex, not quite half as long as eyes. Mouth cone reaching a little across the middle of prosternum, with short palpi. The maxillary ones not quite half as long as mouth cone, with an annular basal and a narrow, cylindrical apical joint.

Antennae nearly twice as long as head, inserted close to the fore margin of eyes; fore head between them scarcely produced.
First joint wider than long; second one cup-shaped, as wide as the first, and about one and a half times as long as wide. The following joints clavate, the third narrower than the preceding one, about three times as long as wide. Segment 4 a little shorter and wider than 3. Joints 5-8 still shorter than the fourth, equal in length, gradually diminishing in width; 7 and 8 fusiform, the latter distinctly constricted at base, not broadly jointed with the preceding one. All bristles weak and short; the longitudinal apical line with 3 bristles before the apex of seventh joint, then interrupted at base of eighth and beginning again a little before the middle of apical joint. Sense cones inconspicuous, hardly longer than the bristles, about one-fourth of the length of their joints.

Prothorax shorter than head, distinctly widened backwards, across fore coxae about twice as wide as long. Posterolateral bristles curved backwards, blunt at apex, nearly half as long as prothorax. Posteromarginal setae straight, inserted not far from the hind angles, about two-thirds as long as the posterolateral ones, at apex shaped as the postocular bristles. Mediolateral and anterolateral ones of the same shape, but scarcely half as long as those of the hind angles. Anterolateral bristles inserted somewhat far behind the fore angles; anteromarginal ones still shorter and weaker, inserted before and a little inwards from the anterolateral setae.

Fore coxae rounded, with a bristle of about the same shape and length as the mediolateral ones. Femora shorter than head, about three times as long as wide. Tarsi not toothed.

Pterothorax a little wider than the prothorax across fore coxae, about as long as wide, with rounded fore angles, and nearly straight sides somewhat converging backwards. Sutures of meso- and metasternum as in *Eothrips hyalopterus*. Hind coxae larger and considerably more approximated to one another than the middle ones. Middle and hind legs moderately stout, with a long hair on the outer margin before the end of tibiae. Tarsi without teeth.

Wings reaching about to the sixth or seventh abdominal segment, not constricted at the middle, brown at extreme base, further on entirely clear, hyaline. Fore pair along the abortive basal vein with three bristles, about half as long as the wing is wide, and a very little dilated at apex. Bristle 1 inserted on the vein, 2 and 3
behind the vein, second closer to the first than to the third. Hind margin with about 20 double fringe-hairs.

Abdomen a little narrower than pterothorax, about four times as long as wide. Bristles hyaline, blunt at apex, nearly as long as the segments themselves. Those of the ninth segment sharply pointed, nearly as long as the tube. This distinctly shorter than head, about three times as long as wide at base, with straight, backwards converging sides; at apex about half as wide as at base. Terminal bristles hair-like, sharply pointed, the longer ones a little shorter than the tube itself, the shorter scarcely half as long as the others.

**Measurements of female:**—Total length of antennae 0'48 mm. I. joint 0'025 mm. long, 0'035 mm. wide; II. joint 0'05 mm. long, 0'035 mm. wide; III. joint 0'08 mm. long, 0'025 mm. wide; IV. joint 0'07 mm. long, 0'035 mm. wide; V. joint 0'065 mm. long, 0'035 mm. wide; VI. joint 0'065 mm. long, 0'025 mm. wide; VII. joint 0'065 mm. long, 0'02 mm. wide; VIII. joint 0065 mm. long 0'01 mm. wide. Head 0'25 mm. long, 0'20 mm. wide. Prothorax 0'18 mm. long, 0'25 mm. wide (across fore coxae.) Fore femora 0'22 mm. long, 0'07 mm. wide; fore tibiae (including tarsi) 0'24 mm. long, 0'04 mm. wide. Pterothorax 0'35 mm. long, 0'37 mm. wide. Middle femora 0'15 mm. long, 0'05 mm. wide; middle tibiae (including tarsi) 0'17 mm. long, 0'04 mm. wide. Hind femora 0'21 mm. long, 0'05 mm. wide; hind tibiae (including tarsi) 0'26 mm. long, 0'04 mm. wide. Length of wings (without fringe) 0'95 mm. Abdomen (including tube) 1'4 mm. long, 0'36 mm. wide. Length of tube 0'22 mm. width at base 0'08 mm. at apex 0'04 mm. Total length 2'1–2'3 mm.

**Measurements of male:**—Total length of antennae 0'39 mm. I. joint 0'015 mm. long, 0'025 mm. wide; II. joint 004 mm. long, 0'025 mm. wide; III. joint 0'06 mm. long, 0'02 mm. wide; IV. joint 0'06 mm. long, 0'03 mm. wide; V. joint 0'055 mm. long, 0'025 mm. wide; VI. joint 0'055 mm. long, 0'02 mm. wide; VII. joint 0'055 mm. long, 0'015 mm. wide; VIII. joint 0'055 mm. long, 0'01 mm. wide. Head 0'21 mm. long, 0'17 mm. wide. Prothorax 0'13 mm. long, 0'25 mm. wide (across fore coxae.) Fore femora 0'17 mm. long, 0'06 mm. wide; fore tibiae (including tarsi) 0'18 mm. long, 0'035
mm. wide. Pterothorax 0'30 mm. long, 0'28 mm. wide. Middle femora 0'14 mm. long, 0'04 mm. wide; middle tibiae (including tarsi) 0'15 mm. long, 0'04 mm. wide. Hind femora 0'19 mm. long, 0'04 mm. wide; hind tibiae (including tarsi) 0'20 mm. long, 0'035 mm. wide. Length of wings (without fringe) 0'8 mm. Abdomen (including tube) 0'9 mm. long, 0'23 mm. wide. Length of tube 0'15 mm. width at base 0'05 mm. at apex 0'03 mm. Total length 1'5–1'7 mm.

Collected by Mr. Docters v. Leeuwen between the hairs of petioles on Dipterocarpus sp. (No. 62) at Saigon, Cape St. Jacques, dated 21. X. 1920.

This species forms with G. longicornis and the African G. ebneri a peculiar group, characterized by the short head and the relatively long antennae, which is somewhat intermediate between Gynaikothrips and Eothrips but may rather be placed to the former genus. G. fuscipes differs from longicornis by its dark middle and hind tibiae, from ebneri by the clear wings furnished with duplicated cilia. Of the other Gynaikothrips-species it reminds one somewhat of adusticornis and claripennis, but may be distinguished from them at once by the very characteristic shape of the last antennal joint and by the shorter head.

24. Gynaikothrips daetymon KARNY.

1922. KARNY, Beitr. mal. Thya., VIII.-Treubia III, 1.

In the leaf galls of Leeuwenia aculeatrix on Eugenia sp. (No. 77), collected by Mr. Docters v. Leeuwen at Saigon, Cochin-china, dated 28. X. 1920.

25. Gynaikothrips siamensis KARNY.


In leaf galls on Dipterocarpus alatus Roxb. (No. 49; 7. X. 1920.-No. 54; 9. X. 1920), collected by Mr. Docters v. Leeuwen at Bangkok, Siam, together with Coryphotrips trochiceps.
26. Gynaikothrips primitivus *n.sp.* (Fig. 7).

*Female.*-*Male.*- General colour as in *G. fuscipes*, but the second antennal segment a very little paler at apex; joints 3-5 lemon yellow; somewhat shaded with grey before the apex; sixth segment dark blackish brown in the apical half, 7 and 8 entirely blackish. Wings brown at extreme base, further on their whole surface shaded with greyish, especially along the margins.

Head one and a half times as long as wide, somewhat constricted at the hind margin of eyes, cheeks finely granulated and set with a few short hairs, very little arched, converging backwards. Eyes large, occupying one-third of the length of head. Postocular bristles stout, straight, sharply pointed at apex, inserted close behind the hind margin of eyes, reaching forward not to the middle of eyes. Mouth cone broadly rounded, reaching hardly to the middle of prosternum.

Antennae one and two-thirds times as long as head, inserted very near the fore margin of head; between them the fore head scarcely produced. First joint nearly cylindrical, widest at base, somewhat wider than long. Second joint cup-shaped, as wide as the first, somewhat longer than wide. The following segments clavate, about two and a half times as long as wide, a little narrower than 2, sixth a little shorter and narrow than the preceding ones. Seventh and eighth joint fusiform, the former some what shorter and narrower than 6; the eighth narrower and a little longer than 7, distinctly constricted at base, not broadly united with the preceding joint.
First segment on the inner side before the end with a short, stout bristle. The following segments with a crown of short bristles before the end. Sense area of second joint placed close before the apical margin. All sense cones short, hyaline, somewhat curved. Seventh segment in distal half with some short, weak bristles, eighth with a median longitudinal line of such beginning before the middle of this segment and reaching to its tip.

Prothorax two-thirds as long as head, strongly widened posteriorly, across fore coxae not quite twice as wide as long. Bristles stout, sharply pointed; the posterolateral and postermarginal ones about half as long as prothorax, mediolateral ones a little shorter. Anterolateral and anteromarginal bristles not visible. Fore coxae rounded, with a stout, pointed bristle, about half as long as the posterolateral ones. Fore femora distinctly shorter than head, somewhat dilated, twice as long as wide. Fore tarsi without tooth.

Pterothorax a little wider than prothorax across fore coxae, scarcely longer than wide, with rounded fore angles, sides of meso- and metathorax very slightly arched, nearly parallel. Sutures of meso-and metasternum much as in Eothrips hyalopterus, but the mesosternal triangle more acute, and the metasternal angle divided by a backwardly directed, median line. Middle coxae smaller than the hind ones, and nearly twice as widely separated from each other. Middle and hind legs moderately long and stout; tarsi not toothed.

Wings reaching about to the seventh abdominal segment, not constricted at the middle, somewhat infumate. Fore pair with three sharply pointed bristles at base near the fore margin, the second of them a little farther from the third than from the first, equal in length, about half as long as the wings is broad. Hind margin before apex with about 16 duplicated cilia.

Abdomen about as wide as pterothorax, more than three times as long as wide. All bristles dark, very long and stout, sharply pointed at apex. Even the first segment with a stout, laterally or forwards directed bristle. Those of segments 2.—4 not quite as long as this, those of 5.—8. longer than their segments themselves. Bristles of ninth segment as long as the tube or a little longer. Tube short and stout, about two-thirds of the length of head, with straight, distinctly converging sides, at base not quite half
as wide as long and a little more than twice as wide as at apex. The longer terminal bristles stout at base, hair-like in distal half, nearly as long as the tube; the shorter ones hair-like, not quite one-third of the length of the others.

**Measurements:**—Total length of antennae 0·51 mm. I. joint 0·03 mm. long, 0·04 mm. wide; II. joint 0·05 mm. long, 0·04 mm. wide; III. joint 0·085 mm. long, 0·035 mm. wide; IV. joint 0·08 mm. long, 0·035 mm. wide; V. joint 0·075 mm. long, 0·035 mm. wide; VI. joint 0·07 mm. long, 0·03 mm. wide; VII. joint 0·06 mm. long, 0·025 mm. wide; VIII. joint 0·065 mm. long, 0·015 mm. wide. Head 0·30 mm. long, 0·21 mm. wide. Prothorax 0·20 mm. long, 0·36 mm. wide (across fore coxae). Fore femora 0·24 mm. long, 0·12 mm. wide; fore tibiae (including tarsi) 0·23 mm. long, 0·06 mm. wide. Pterothorax 0·41 mm. long, 0·39 mm. wide. Middle femora 0·19 mm. long, 0·08 mm. wide; middle tibiae (including tarsi) 0·23 mm. long, 0·05 wide. Hind femora 0·24 mm. long, 0·08 mm. wide; hind tibiae (including tarsi) 0·25 mm. long, 0·06 mm. wide. Length of wings (without fringe) 1·15 mm. Abdomen (including tube) 1·3 mm. long, 0·4 mm. wide. Length of tube 0·21 mm. width at base 0·09 mm. at apex 0·04 mm. Total length 2·0—2·7 mm.

Mr. Docters v. Leeuwen collected this interesting species at Dalat, Annam (± 1500 m; 23. X. 1920) in leaf-gall on ?? Symlocos (No. 71), together with Gynaikothrips adusticornis.

The length and fusiform shape of the last antennal joint is a very remarkable and primitive character of primitivus, which separates it at once from all similar species (adusticornis, lividicornis, simillimus and leeuenii), and suggests G. fuscipes; but the latter has the head considerably shorter than primitivus.

27. **Gynaikothrips leeuenii** KARNY.

Collected by Mr. Docters v. Leeuwen in leaf galls on *Pavetta indica* L. (No. 63), in native forest near Saigon, Cape St. Jacques, dated 21. X. 1920, together with *Haplothrips inquilinus*. One of the specimens before me has a small, curved foretarsal tooth, but otherwise not differing from the others.

Further distribution: Java and Celebes (Salcier).

28. *Gynaikothrips chavicæ* ZIMMERMANN.


1910. DOCTERS v. LEEUWEN-REIJNVAAN, Marcellia, IX, p. 54 (without name).


1912. KARNY, Marcellia, XI, p. 131.


1919. DAMMERMAN, Landbouwdierkunde, p. 154.

1919. UICHANCO, Philipp. Journ. Sci., XIV, 5, p. 548; Pl. XV, fig. 7.

Some specimens collected by Mr. Docters v. Leeuwen in leaf galls on *Melastoma malabathricum* L. (No. 42) at Klong Chang, Siam, together with many *Mesothrips jordani* and one *Androthrips melastomae*, dated 1. X. 1920.

Further distribution: Java, Sumatra, Philippine Islands, Celebes.
29. **Gynaikothrips maximus** _n.sp._

*Female.*—General colour as in _G. primitivus_, but the third antennal joint not shaded with grey, 4-6 a little less than in that species. Wings greyish, especially at base, and darker along the median longitudinal line.

Head nearly one and one-third times as long as wide, cheeks very finely granulated and set with a few very short hairs, converging backwards and somewhat constricted before the hind margin. Eyes large, occupying about one third of the length of head. Postocular bristles inserted in the middle of sides of head, sharply pointed, somewhat shorter than the eyes, not quite reaching to their middle Mouth-cone broadly rounded, reaching about to the middle of prosternum.

Antennae one and five-sixths times as long as head; fore head between them hardly wider than the space between their outer margin and the eyes. First joint truncate conical, a little more than half as long as wide at base. Second joint nearly cylindrical, constricted at base, distinctly narrower than the preceding one and nearly twice as long as wide. The following ones clavate, about as wide as the second and one and a half times as long, two and a half times as long as wide. Seventh joint fusiform, truncate at apex, distinctly narrower than the preceding ones, nearly three times as long as wide. Eighth segment conical, broadly jointed with seventh, a little more than half as long and wide as this.

First joint with a short bristle on inner margin. Segments 2-5, with a crown of very short, hair-like bristles just before their middle and a second of longer and stouter ones before apex. Sixth joint in distal half, and seventh and eighth nearly throughout their whole length, set with bristles,

Sense area of second joint circular, very small, placed close before the apical margin. Sense cones slender, sharply pointed, somewhat curved, cn segment 3 and 4 about as long as the bristles of apical crown, not quite half as long as their segments. Sense cones of fifth joint reaching to the middle of sixth, sense cone of the latter considerably over reaching the middle of seventh segment.
Prothorax three-fourths as long as head, strongly widened backwards, across fore coxae twice as wide as long. Posterolateral and postesomarginal bristles stout and sharply pointed, about half as long as prothorax. Mediolateral setae inserted in the middle of prothoracic sides, stout, sharply pointed and angularly curved at apex, about half as long as those of hind angles. Anterolateral bristles short and stout, not longer than the mediolateral ones, somewhat blunt at apex. Coxal bristle straight and stout, half as long as the posterolateral ones, rather pointed at apex. Fore legs moderately long and slender, their femora somewhat shorter than the head, and nearly three times as long as wide. Tarsi not toothed.

Pterothorax somewhat wider than prothorax across fore coxae, a little longer than wide, with rounded fore angles, and arched sides of meso- and metathorax. Sutures of mesosternum as in Eothrips laticeps, those of metasternum as in E. hyalopterus. Middle and hind legs long, set with short hairs along both margins and with some longer, stouter bristles before the end of tibiae. Tarsi without teeth.

Wings not constricted in the middle, infumate, especially along the median line, reaching about to the base of seventh abdominal segment. Fore pair at base near the fore margin with three long, stout, sharply pointed, equidistant bristles, about as long as the wing is broad. Hind margin before the apex with 18 double fringe-hairs.

Abdomen a little wider than pterothorax, four and a half times as long as wide. All bristles dark, stout, sharply pointed at apex, on segments 2-4 a little shorter than the segments themselves, on 5-8 somewhat longer, on ninth shorter than the tube. Wing-retaining spines well developed, distinctly S-shaped, the posterior ones on the fourth segment fully as long as the distance between their tips, on the sixth already distinctly shorter. Tube stout, as long as the head, three times as long as wide at base; at apex half as wide as at base. Terminal bristles as in G. primitivus.

Measurements of female:—Total length of antennae 0.55 mm. I. joint 0'03 mm. long, 0'05 mm. wide; II. joint 0'06 mm. long, 0'035 mm. wide; III, joint 0'095 mm. long, 0'035 mm. wide; IV. joint 0'10 mm. long, 0'04 mm. wide; V. joint 0'09 mm. long, 0'04 mm.
wide; VI. joint 0'08 mm. long, 0'035 mm. wide; VII. joint 0'065 mm. long, 0'025 mm. wide; VIII. joint 0'035 mm. long, 0'15 mm. wide. Head 0'30 mm. long, 0'24 mm. wide. Prothorax 0'22 mm. long, 0'45 mm. wide (across fore coxae). Fore femora 0'28 mm. long, 0'10 mm. wide; fore tibiae (including tarsi) 0'30 mm. long 0'06 mm. wide. Pterothorax 0'50 mm. long, 0'48 mm. wide. Middle femora 0'27 mm. long 0'07 mm. wide; middle tibiae (including tarsi) 0'29 mm. long, 0'05 mm. wide. Hind femora 0'32 mm. long, 0'09 mm. wide; hind tibiae (including tarsi) 0'38 mm. long 0'06 mm. wide. Length of wings (without fringe) 1'35 mm. Abdomen (including tube) 2'3 mm. long, 0'52 mm. wide. Length of tube 0'30 mm., width at base 0'10 mm., at apex 0'05 mm. Total length 2'7-3'6 mm.

In leaf galls on an undetermined plant (No. 72) collected by Mr. Docters v. Leeuwen at Dalat Lang Bien, Indochina, ±1500 m. dated 25. X. 1920.

This new species comes nearest to G. tristis, convolvens and cognatus, but differs from these at once by its distinctly larger size, from tristis moreover by the darker end of antennae, the longer and more slender tube and the greater number of duplicated cilia, from convolvens by the stouter antennal joints and the different length and shape of sense cones, from cognatus by the wings not uniformly infumate, but darker along the median line.

30. Gynaikothrips rectigenis n.sp.

Female:—General colour brownish black, fore tibiae and all tarsi brownish yellow. First antennal joint as dark as body, second also as dark at base, but gradually paler towards the apex. The following joints uniformly pale lemon yellow, sixth a little darker towards the apex, seventh shaded with grey, eighth a little darker, brownish grey. Wings coloured as in the preceding species.

Head nearly one and a half times as wide; cheeks straight, nearly parallel, finely granulated and set with some very short hairs. Eyes large, black, occupying somewhat more than one-third of the length of head, with rounded hind margin. Ocelli arranged in a rectangular triangle; the anterior one between the insertion of antennae directed forwards, the posterior ones touching the inner-margin of eyes distinctly before its middle. Postocular bristles short
and stout, a little dilated at apex, not reaching to the hind margin of eyes; the distance between their insertion and the margin of eyes distinctly more than half the length of eyes.

Antennae about one and a half times as long as head, inserted close to the fore margin of eyes. First joint nearly cylindrical, distinctly wider than long. Second segment cup-shaped, as wide as the first and somewhat longer than wide. The following joints a little narrower, somewhat more than twice as long as wide, about equal in length and width, only the fourth one a little longer and wider than the others. Third joint distinctly clavate, 4–6 more rounded, nearly fusiform, but widest behind the middle. Seventh joint fusiform, widest before its middle, distinctly narrower than the preceding ones, and twice as long as wide. Eighth segment conical, broadly jointed with the seventh, about half as wide as this, and nearly three times as long as wide.

Chaetotaxy of antennae as in the preceding species; the median, apical bristle line reaching from middle of seventh to apex of eighth joint. Sense area of second segment transversely ovate, placed close behind its middle. Sense cones similar to the preceding species, those on fifth and sixth joint joint more slender, but not distinctly longer than on 3 and 4; sense cones of fifth segment not reaching to the middle of sixth, those of the latter exactly to middle of seventh.

Front before the base of mouth cone with a pair of short bristles. Labrum triangular, sharply pointed, reaching nearly to the hind margin of prosternum, and distinctly overreaching the rounded labium. Maxillary palpi long and slender, about half as long as mouth cone, with a short basal and a cylindrical apical joint, about six times as long as wide. Labial palpi scarcely half as long as the maxillary ones, reaching from the end of labium to tip of labrum.

Prothorax about two-thirds as long as head, across fore coxae nearly twice as wide as long. All bristles dark, stout, somewhat dilated at apex. The posterolateral ones nearly half as long as prothorax; posteromarginal bristles of the same length, from the middle line twice as far distant as from the outer setae. Anteromarginal bristles half as long as those, inserted in the midst between
the median line and the fore angles. Anterolateral bristles still shorter, somewhat removed backwards from the fore margin. Mediolateral setae a little longer than the anteromarginal ones, twice as far distant from the hind as from the fore angles.

Prosternum with a distinct, dotted sculpture, except on the following smooth, strongly chitinized plates: one narrow rhomboidal, longitudinally placed plate near each fore angle, one very small triangular plate on each side of mouth cone, a pair of larger, irregularly trapezoidal plates before the hind margin and a small, transversely ovate plate behind them in the middle line. Fore coxae broadly rounded, their bristle stout, a little dilated at apex, but not quite half as long as the posterolateral ones. Fore femora hardly as long as prothorax, full half as wide as long, along the outer margin set with some short hairs. Fore tibiae long and stout, tarsi not toothed.

Pterothorax distinctly wider than prothorax across fore coxae, as long as wide, with rounded fore angles, and somewhat arched sides. Sutures of meso- and metasternum, and the middle and hind legs as in the preceding species.

Wings reaching to the seventh abdominal segment, not constricted at the middle, coloured as in *G. maximus*; fore pair with three equidistant bristles along the abortive basal vein, a little dilated at apex, and more than half as long as the wing is wide. Hind margin with 10-12 duplicated fringe-hairs.

Abdomen nearly as wide as pterothorax, not quite four times as long as wide. Bristles stout, dilated at apex, those of the first segment reaching nearly to the midst of second. Segments 2-6 with the bristles more than half as long as the segments themselves. The outer setae of segment 7 and 8 blunt, not distinctly dilated at apex, about as long as their segments. Bristles of ninth segment sharply pointed, a little shorter than tube. The posterior wing retaining spines well developed, distinctly S-shaped; on segments 4 and 5 fully as long as the distance between their tips, on 3 somewhat shorter, on 2 still shorter, about half as long as this distance. Tube about three-fourths as long as head, with straight, backwards converging sides, at base not quite half as wide as long, and a little more than twice as wide as at apex. Terminal bristles hair-like, the
longer ones about half as long as the tube, the shorter ones half as long as the others.

Measurement of female:—Total length of antennae 0'45 mm. I. joint 0'03 mm. long, 0'04 mm. wide; II. joint 0'05 mm. long, 0'04 mm. wide; III. joint 0'07 mm. long, 0'03 mm. wide; IV. joint 0'075 mm. long, 0'035 mm. wide; V. joint 0'07 mm. long, 0'03 mm. wide; VI. joint 0'07 mm. long, 0'03 mm. wide; VII. joint 0'05 mm. long, 0'025 mm. wide; VIII. joint 0'035 mm. long, 0'018 mm. wide. Head 0'29 mm. long, 0'20 mm. wide. Prothorax 0'20 mm. long, 0'38 mm. wide (across fore coxae). Fore femora 0'19 mm. long, 0'10 mm. wide; fore tibiae (including tarsi) 0'23 mm. long, 0'05 mm. wide. Pterothorax 0'43 mm. long and wide. Middle femora 0'20 mm. long, 0'06 mm. wide; middle tibiae (including tarsi) 0'29 mm. long, 0'04 mm. wide. Hind femora 0'25 mm. long, 0'07 mm. wide; hind tibiae (including tarsi) 0'32 mm. long, 0'04 mm. wide. Length of wings (without fringe) 1'05 mm. Abdomen (including tube) 1'5 mm. long, 0'41 mm. wide. Length of tube 0'22 mm., width at base 0'09 mm., at apex 0'04 mm. Total length 2'0-2'4 mm.

Three specimens collected by Mr. Docters v. Leeuwen in leaf galls on Vernonia elaeagnifolia D. C. (No. 45) at Tachoi, Southern Siam, dated 1. X. 1920.

This species comes nearest to G. longiceps, but has the sides of head more parallel and the antennae much slenderer. The shape of head suggests somewhat the Ceylonese G. watsoni, but this has a different coloration of antennae.


I refer to this species, with some doubt, one specimen from Ficus, which should perhaps rather represent a separate new species in the vicinity of longiceps and convolvvens. I am not able to decide this from the single, somewhat damaged specimen.
Collected by Mr. Docters v. Leeuwen in a leaf gall of *Ficus benjamina* L. (No. 48) at Bangkok (3. X. 1923), together with *Gynaikothrips useli* and one *Androthrips melastomae*. Distribution of *G. longiceps*: Java.

32. **Gynaikothrips adusticornis** KARNY.


One specimen in a leaf gall on *?? Symplocos* (No. 71) together with *Gynaikothrips primitivus*, collected by Mr. Docters v. Leeuwen at Dalat, Annam (±1500 m.); 23. X. 1920.

The species was hitherto only recorded from Java.

33. **Gynaikothrips lividicornis** KARNY.


Collected by Mr. Docters v. Leeuwen in a leaf gall on *Rhodamnia trinervia* Bl. (No. 65) at Saigon, Cape St. Jacques, dated 25. X. 1920.

The species was originally described from Celebes (*Kalao Foa* and Bonerate).

34. **Gynaikothrips claripennis** KARNY.


Collected by Mr. Docters v. Leeuwen in leaf galls on an undetermined plant (No. 41) at Patalung, Southern Siam (30. IX. 1920) and on *Salacia* (No. 59) near Saigon (native forest Tri Han; 19. X. 1920).

Further distribution: Java.
35. **Gynaikothrips uzeli** ZIMMERMANN.

(Mesothrips) p. 13 (Gynaikothrips).

1922. KARNY, Beitr. mal. Thys., VII,—Treubia, III, 1, (with
list of synonymy and literature).

This common and widely distributed species was collected by
Mr. DOCTERS v. LEEUWEN in Further India on Ficus retusa L. at
Bangkok (9. X. 1920; No. 50, together with Gigantothrips elegans
and Mesothrips jordani on old leaf galls,—No. 51, together
with one Leptothrips constrictus in young leaf galls); and on
Ficus benjamina L. at Bangkok (No. 48; 3. X. 1920; together
with one Gynaikothrips sp. and one Androthrips melastomae) and
at Saigon (No. 55; 17. X. 1920.—No. 78; 28. X. 1920, together with
Androthrips melastomae, Leptothrips constrictus and Mesothrips-
jordani.)

Further distribution: Java Algeria, Canary Islands, Cuba,
PortoRico, Florida.

36. **Mesothrips jordani** ZIMMERMANN.

Northumberland, N. S., III, 2, p. 12.
1913. KARNY AND DOCTERS v. LEEUWEN-REIJNVAAN,
1916. KARNY AND DOCTERS v. LEEUWEN-REIJNVAAN,
Zeitschr. wiss. Ins.—Biol., XII, p. 130.

Collected by Mr. DOCTERS v. LEEUWEN in leaf galls on Melas-
toma malabathricum L. (No. 42; at Klong Chang, Siam; 1. X. 1920;
together with Gynaikothrips chavicae and one Androthrips melas-
tomae), on Ficus retusa L. (No. 50; at Bangkok; 9. X. 1920;
together with Gigantothrips elegans and Gynaikothrips uzeli), and
on Ficus benjamina L. (No. 78; at Saigon; 28. X. 1920; together
with Leptothrips constrictus, Androthrips melastomae and Gyna-
kothrips uzeli).

Was hitherto known only from Java.
37. *Mesothrips ustulatus* n.sp.

**Female. Male.**—General colour yellowish brown. Head dark brown, gradually somewhat paler backwards. Abdomen gradually darker backwards, the last segments brownish black. Legs brownish yellow, but the middle and hind tibiae considerably darker than the femora. First and second antennal segment greyish brown, the latter gradually yellowish towards the apex. The following joints brownish yellow, the fourth a very little, fifth distinctly shaded with grey in distal half, sixth segment yellowish in basal third, further greyish brown, seventh and eighth entirely dark greyish brown. Wings clear, hyaline, a very little yellowish at extreme base and indistinctly shaded with grey in distal part along the margins.

Head about one and a half times as long as wide; cheeks converging backwards and distinctly constricted at base, set with some very stout bristles. Eyes moderately large, occupying about one third of the length of head, with rounded hind margin. Ocelli very large, with distinct pigment-cups, nearly touching one another, arranged in a rectangular triangle; the posterior ones touching the inner margin of eyes about at its midst. Postocular bristles sharply pointed, about as long as the eyes, not quite twice as long as the space between their insertion and the hind margin of eyes. Dorsal surface of head smooth.

Antennae about one and a half times as long as head, inserted very near the fore margin of eyes; fore head between them somewhat produced. First segment cylindrical, wider than long. Second segment cup-shaped, somewhat narrower than the first, not quite twice as long as wide. Third segment clavate, as wide as the first, twice as long as wide. The following segments nearly fusiform, but widest behind their middle, gradually diminishing in length and width. Seventh segment cylindrical, narrowed towards the base, half as wide as the third, more than twice as long as wide. Eighth joint cylindrical in basal half, bluntly conical at apex, two-thirds as long and wide as the preceding one.

Terminal bristles of antennal joints nearly half as long as the segments themselves; sixth joint set with bristles in the distal half,
the following ones nearly throughout their whole length. Median bristle line in the apical third of seventh segment, than interrupted at base of eighth, further reaching to apex of the latter.

Sense area of second segment small, transversely ovate, placed distinctly behind the middle. Sense cones about as long as the terminal bristles, slender, sharply pointed at apex, that of seventh segment a little overreaching the middle of apical joint.

Mouth cone broadly rounded, not reaching to the middle of prosternum. Maxillary palpi cylindrical, about half as long as the mouth cone, with a short basal and a long, cylindrical apical joint. Labial palpi a little narrower than the maxillary ones, very short, nearly abortive.

Prothorax about as long as head (in the megalomerous form) or distinctly shorter (in the micromerous form), widened backwards, across fore coxae about one and a half times as wide as long. All bristles sharply pointed. Those of hind angles not quite half as long as the prothorax, the posteromarginal ones distinctly longer; their insertion about twice as far distant from the middle of hind margin as from the posterolateral bristles. Mediolateral setae only a little shorter than those of hind angles, a little close to these than to the anterolateral bristles. These very short, hair-like, hardly as long as the distance of their insertion from the fore margin of prothorax. Anteromarginal bristles not distinguishable. Prosternum indistinctly dotted, without well-defined smooth plates.

Fore coxae longitudinally ovate, their bristles stout, sharply pointed, about half as long as the posterolateral ones. By the shape of fore legs there may be distinguished — similarly as in *M. pyctes*— two forms of this species. One has the fore femora one and a half times as long as head, and the fore tarsi armed with a sharp tooth-like processus, nearly as long as the tibia is wide; in the other form the fore femora are distinctly smaller, not quite as long as head, and the fore-tarsal tooth hardly half as long as the tibial is wide.

Pterothorax a very little wider than prothorax across fore coxae, not quite as long as wide, with rounded fore angles and somewhat arched sides converging backwards. Middle coxae distinctly smaller than the hind ones and about twice as far distant from each other. Middle and hind legs stout; with short hairs along their
margins and some stouter bristles at the end of tibiae. Tarsi without teeth.

Wings reaching about to the seventh abdominal segment, a little constricted at their middle; fore pair at base near the fore margin with three equidistant, sharply pointed bristles, gradually increasing in length, the third about one and a half times as long as the wing is wide. Hind margin with about 10 double cilia before the apex.

Abdomen slender, somewhat narrower than pterothorax, not quite five times as long as wide. All bristles stout, sharply pointed, on segments 2-7 about as long as the segments themselves, on 8 distinctly shorter. Bristles of ninth segment nearly as long as the tube. Wing-retaining spines well developed, slender, distinctly S-shaped. The distance between the tips of posterior ones on segments 3-6 not fully one and a half times as long as the spines themselves; spines on 2 and 7 distinctly shorter. The fore pair on each segment only a little shorter, but distinctly thinner than the posterior ones. Tube about three-fourths as long as head, with straight sides converging backwards, about two and a half times as long as wide at base, at apex nearly half as wide as at base. The longer terminal bristles stout at base, hair-like at apex, about two-thirds as long as tube; the shorter ones hair-like, about one third of the length of the others.

Measurements of megalomerous form (female, male):—
Total length of antennae 0'52 mm. I. joint 0'03 mm. long, 0'045 mm. wide; II. joint 0'06 mm. long, 0'035 mm. wide; III. joint 0'09 mm. long, 0'045 mm. wide; IV. joint 0'085 mm. long, 0'045 mm. wide; V. joint 0'08 mm. long, 0'037 mm. wide; VI. joint 0'07 mm. long, 0'03 mm. wide; VII. joint 0'06 mm. long, 0'023 mm. wide; VIII. joint 0'04 mm. long, 0'013 mm. wide. Head 0'34 mm. long, 0'21 mm. wide. Prothorax 0'34 mm. long, 0'48 mm. wide (across fore coxae.) Fore femora 0'52 mm. long, 0'22 mm. wide; fore tibiae (including tarsi) 0'28 mm. long, 0'08 mm. wide. Pterothorax 0'45 mm. long, 0'50 mm. wide. Middle femora 0'22 mm. long, 0'08 mm. wide; middle tibiae (including tarsi) 0'25 mm. long, 0'06 mm. wide. Hind femora 0'32 mm. long, 0'09 mm. wide; hind tibiae (including tarsi) 0'28 mm. long, 0'07 mm. wide. Length of wings (without fringe)
1·3 mm. Abdomen (including tube) 1·85 mm. long, 0·4 mm. wide. Length of tube 0·27 mm. width at base 0·10 mm. at apex 0·04 mm. Total length 2·4—3·1 mm.

Measurements of micromerous form (female, male):—
Total length of antennae 0·39 mm. I. joint 0·025 mm. long, 0·035 mm. wide; II. joint 0·05 mm. long, 0·03 mm. wide; III joint 0·06 mm. long, 0·035 mm. wide; IV. joint 0·06 mm. long, 0·035 mm. wide; V. joint 0·06 mm. long, 0·032 mm. wide; VI. joint 0·055 mm. long, 0·025 mm. wide; VII. joint 0·05 mm. long, 0·023 mm. wide; VIII. joint 0·035 mm. long, 0·015 mm. wide. Head 0·27 mm. long, 0·18 mm. wide. Prothorax 0·20 mm. long, 0·32 mm. wide (across fore coxae). Fore femora 0·25 mm. long, 0·12 mm. wide; fore tibiae (including tarsi) 0·18 mm. long, 0·06 mm. wide. Pterothorax 0·30 mm. long, 0·34 mm. wide. Middle femora 0·15 mm. long, 0·06 mm. wide; middle tibiae (including tarsi) 0·15 mm. long, 0·04 mm. wide. Hind femora 0·23 mm. long, 0·07 mm. wide; hind tibiae (including tarsi) 0·30 mm. long, 0·05 mm. wide. Length of wings (without fringe) 1· mm. Abdomen (including tube) 1·3 mm. long, 0·27 mm. wide. Length of tube 0·19 mm., width at base 0·07 mm., at apex 0·035 mm. Total length 2·1—2·6 mm.

This species was found by Mr. Docters v. Leeuwen in leaf galls on Memecylon sp. (No. 64), at Saigon, Cape St. Jacobs, dated 21. X. 1920.

Mesothrips ustulatus is very similar to jordani in its whole appearance, but directly distinguished by its very characteristic colour, especially of antennae. Even in entirely black specimens of jordani the apical joints of antennae are always considerably paler than in ustulatus.

38. Mesothrips vitripennis n. s.p.

General colour dark brown. Fore tibiae and all tarsi brownish yellow.
Antennae coloured as in the preceding species. Wings clear, hyaline, pale yellow only at extreme base.

Head one and one-third times as long as wide; cheeks arched, converging backwards, constricted at base, set with a few very short spines. Eyes, ocelli and postocular bristles similar to those of the
preceding species, but the hind margin of eyes nearly truncate, and the bristles inserted close behind it. Mouth-cone rounded at apex, reaching about to the middle of prosternum. Palpi as in ustulatus.

Antennae about one and two-thirds times as long as head, inserted close to the fore margin of eyes, fore head between them a little produced. Shape and chaetotaxy of joints much as in ustulatus; but the third and fourth joint equal in length and width, and the sixth as wide as the fifth; sense cones somewhat smaller than in the preceding species.

Prothorax nearly as long as head, across fore coxae not quite twice as wide as long. All bristles stout, pointed at apex. The posterolateral ones hardly half as long as prothorax, posteromarginal setae a little shorter. Anterolateral bristles a little more than half as long as these of hind angles, mediolateral one of the same length, inserted in the middle between the antero- and posterolateral setae. Anteromarginal bristles only a little shorter and weaker than those of the fore angles, as far distant from them as from the middle line. Prosternum as in Eothrips laticeps.

Fore coxal bristle about two-thirds as long as the posterolateral ones, stout, sharply pointed at apex. Behind them a few very short bristles. Fore femora a little longer than head, about half as wide as long. Fore tarsus with a long, somewhat curved, sharply pointed tooth.

Pterothorax a little narrower than prothorax across fore coxae, as long as wide, with somewhat protruding fore angles and arched sides converging backwards. Sutures of meso- and metasternum similar to those of Eothrips laticeps, but the median, forwardly-directed suture-angle on both segments acute. Middle and hind legs as in ustulatus.

Wings reaching about to the sixth abdominal segment, similar to those of the preceding species, but the third basal bristle hardly as long as the wing is wide, more distant from the second than this from the first. Hind margin with 8–12 duplicated fringe-hairs.

Abdomen as in ustulatus, but the bristles of ninth segment and tube a little shorter. Wing-retaining spines as in the preceding species, but both pairs still more curved, especially before the apex.
Tube as in *ustulatus*, but only a little more than twice as long as wide at base.

**Measurements:**—Total length of antennae 0'43 mm. I joint 0'025 mm. long, 0'04 mm. wide; II. joint 0'05 mm. long, 0'035 mm. wide; III. joint 0'08 mm. long, 0'04 mm. wide; IV. joint 0'08 mm. long, 0'04 mm. wide; V. joint 0'065 mm. long, 0'03 mm. wide; VI. joint 0.055 mm. long, 0'03 mm. wide; VII. joint 0'05 mm. long, 0'025 mm. wide; VIII. joint 0.03 mm. long, 0'01 mm. wide. Head 0'26 mm. long, 0'20 mm. wide. Prothorax 0'24 mm. long 0'42 mm. wide (across fore coxae). Fore femora 0'29 mm. long, 0'14 mm. wide; fore tibiae (including tarsi) 0'30 mm. long, 0'05 mm. wide. Pterothorax 0'40 mm. long and wide. Middle femora 0'26 mm. long, 0'07 mm. wide; middle tibiae (including tarsi) 0'26 mm. long, 0'05 mm. wide. Hind femora 0'29 mm. long, 0'08 mm. wide; hind tibiae (including tarsi) 0'35 mm. long, 0'06 mm. wide. Length of wings (without fringe) 0'9 mm. Abdomen (including tube) 1'7 mm. long, 0'34 mm. wide. Length of tube 0'20 mm., width at best 0'09 mm., at apex 0'04 mm. Total length 2'1-2'7 mm.

Collected by Mr. Docters v. Leeuwen in leaf galls on *Aporosa* (No. 57), together with *Eothrips laticeps*, at Saigon (native forest Tri Han),+100 mm., dated 19. X. 1920.

Comes in my species key (Zeitschr. wiss. Ins.-Biol., XII, p. 138-131; 1916) nearest to *pyctes*, but differs by its somewhat smaller size and its clear wings. Diverging from the preceding species by the uniform colour of body, shorter head and especially the chaetotaxy of prothorax, from *australis* Hood by the clear wings and from *alluaudii* Vuillet (Madagascar) by the arched cheeks, the smaller number of double cilia and the much shorter tube.

**Subfamily Macrothripinae Karny.**

39. **Dinothrips sumatrensis Bagnall.**


One male of this common and widely distributed, bark-inhabiting species collected by Mr. Docters v. Leeuwen in a railway-car near Banksut, Siam (No. 47), dated 2. X. 1920.

**Family Idolothripidae** Bagnall.


*Gigantothrips elegans* and *G. gracilis*.


I have united here **Zimmermann’s elegans** and **Bagnall’s gracilis**. The latter was described in 1908 from three specimens from Siam, when **Bagnall** was not yet acquainted with **Zimmermann’s** paper. This author said then: “Tube..........twice as long as the head.” In 1910 he recorded the same species (“*gracilis*”) from Java with the remark: “The head is..........more than one-half the length of the tube.” Evidently **Bagnall** supposed the length of tube to be not absolutely constant. But in 1916, when he also received material of **Zimmermann’s elegans**, he used the length of tube as specific character: “the tube..........in *gracilis* about as long as the abdominal segments 7–8” (should be 9) “together, and in *elegans* about 0,75 the length of these segments.” But this character is somewhat variable, and in the material before me there are specimens with a tube one and a half times as long as head, others with
it twice as long, and all possible intermediate forms between these. The comparison of tube length with the length of the preceding segments, as used by Bagnall, is further not useful, because then the relative length is dependent not only on the length of tube, but also on the more or less contracted state of abdomen. Bagnall further makes gracilis larger than elegans. This is not really so: Bagnall (1908) gave for gracilis the length 5·2–6·0 mm.; for elegans, Zimmermann gives 5·5–5·6 mm. It was not to be expected that two so slightly diverging forms, in the same galls on the same plant ("Waringin tree") and from the same localities (Java), should belong to two different species.

Collected by Mr. Docters v. Leeuwen on old leaf galls on Ficus retusa L. (No. 50) at Bangkok (9. X. 1920), together with Gynaikothrips uzeli and one Mesothrips jordani.

Hitherto known from Java, Philippine Islands and Siam.

Family Hystricothripidae Karna.y.

41. Leeuwenia aculeatrix Karna.y.


In leaf galls on Eugenia sp. (No. 77), collected by Mr. Docters v. Leeuwen at Saigon (28. X. 1920), together with Gynaiko-thrips daetymon. The extraordinary long spines along the whole tube distinguish it easily from the other Leeuwenia's.
À Former President.

It is with the greatest regret that we have to record the death of Dr. Oscar Frankfurter, Ph. D., who for many years was the President of the Siam Society. He was elected in January 1906, and most worthily held that office for a longer period than any other of our Presidents. He died in Hamburg on the 1st October this year after a short illness, in the 71st year of his age. Dr. Frankfurter was born in Hamburg on the 23rd February, 1852, and was educated at the Universities of Göttingen and Berlin and took the degree of Ph. D. He then studied Eastern Languages at Oxford, and joined the Siamese government service in 1884. He was employed in various posts, including those of Chief Secretary in the General Adviser's Office, and Adviser in the Foreign Office, until the year 1905, when he received the appointment of Chief Librarian of the National Library, Bangkok, which post he occupied until the declaration of war by Siam in 1917.

Dr. Frankfurter was a sound scholar, and one of the kindliest of men: he was one of the most valued and regular contributors to the Journal of the Society, and held the respect of all who knew him. His favorite motto was the saying attributed to Heraclitus, *panta rhei kai ouden menei*, but his memory will remain deep in the hearts of those to whom he was guide, philosopher and friend.

On hearing of his death the Council of the Society addressed the following letter of condolence to his widow:

**THE SIAM SOCIETY,**

**Bangkok,**

**December 15th, 1922.**

**DEAR MRS. FRANKFURTER,**

The Siam Society has learned with deep sorrow of the death of Doctor Frankfurter and, at the unanimous request of the Council and Members, I write to offer you our heartfelt condolences in your sad affliction.

The Doctor will always live in the memory of the Society as the most enthusiastic of its original founders and as the foremost of the small and devoted band by whom the Society was kept in being during a time when its existence was threatened.
Those of us who enjoyed the privilege of association with your husband through the long period of his presidency of the Society, deplore his death as that of an old and valued friend, and, remembering his many endearing qualities, can sympathise with you in your bereavement.

We trust that the knowledge of the respect and esteem in which the Doctor was held by us all, may bring you some small degree of comfort at this time of your great sorrow.

Believe me, Dear Mrs. Frankfurter,
Yours very truly,
W. A. Graham,
President,
The Siam Society.

Dr. Frankfurter's contributions to the Journal of this Society include the following articles:—

—King Mongkut.

—in memoriam Geheimrat Bastian.

—Secret Writing in Siamese.

Vol. IV, Part 1, (1907).—Siamese Missions to Ceylon in the 18th Century.
—The Romanizing of Siamese.


—Some Remarks on Kaempfer's Description of Siam 1690.

Vol. VII, Part 2, (1911).—The Late King Chulalongkorn.


His other publications comprised the following:—

Handbook of Pāli, being an elementary grammar, a chrestomathy and a glossary.—London and Edinburgh, 1883.

Ein siamesischer Eulenspiegel: die Erlebnisse des Sri Thamonxai.—T'oung-Pao, July 1894, pp. 234–259.

Die böse Sieben.—T'oung-Pao, December 1894, pp. 393–397.

Translation into English of a sermon preached by Somdet Phra Vanarat on April 19, 1895, on the occasion of the demise of H. R. H. Prince Chow Fa Maha Vahirunhis.


Die rechtlichen und wirtschaftlichen Verhältnisse in Siam.—Berlin, 1896.


Elements of Siamese Grammar.—Bangkok and Leipzig, 1900.
Siam.—The East of Asia magazine, 1902, pt. 2, pp. 115–121.
Chapters V. (Siam from an historical standpoint), VI. (Language of Siam), VII. (Religion of Siam), in A. Cecil Carter's The Kingdom of Siam, New York, London, 1904.

A proposed change in the Siamese era Chulasakarat 1,000 (A.D. 1638).—Theeg-Pao, March 1907, pp. 99–104.

Chapters on Buddhism (pp. 207–214), and on the National Library (pp. 248-251) in Twentieth Century Impressions of Siam 1908.
Design on Cover to the Address.
The 60th Anniversary of the Birth of H. R. H.
Prince Damrong Rajanubhab, Vice Patron
of the Siam Society.

The official celebration of the completion of the "Great Cycle" of 60 years in the life of our highly respected Vice-Patron, H. R. H. Prince Damrong Rajanubhab, took place on November 13th, 1922 and the three succeeding days at His Royal Highness' residence Varadis Palace, Bangkok. The Siam Society took the opportunity of presenting His Royal Highness with an address of congratulation on the happy occasion, and also in grateful recognition of the continual interest which H. R. H. has shown in the Society ever since he became its Vice-Patron—which is since its foundation eighteen years ago.

All the members of the Council then in Bangkok and about fifty of the members, were received by H. R. H, on Wednesday November 15th, at the Varadis Palace, at 3.45 p.m. when Mr. W. A. Graham, the President, made the presentation and read the address, which was as follows:—

"To His Royal Highness Prince Damrong Rajanubhab.

"May it please Your Royal Highness,

"On this happy occasion when the celebration of the sixtieth anniversary of the Birthday of Your Royal Highness is taking place, the Members of the Siam Society have great pleasure in approaching Your Royal Highness with this address, and in joining their earnest and most sincere congratulations to those which are now being offered to Your Royal Highness by your innumerable friends and admirers.

"The Members of the Siam Society have long recognised the fact that Your Royal Highness has been one of the principal mainstays of the Society ever since, at the time of its foundation, you were pleased to honour it by becoming its Vice-Patron; and the Society rejoices in this opportunity to give expression to the feelings of gratitude and esteem by which it is actuated towards you."
"As the kindly Adviser and friend of the Society, as a constant contributor to the Journal and as the guide of others who have been freely encouraged to draw upon the inexhaustible reservoir of your knowledge in the course of their studies, Your Royal Highness has conferred benefits upon the Society, the importance of which it is impossible to magnify.

"The Society is proud of its long association with one, who, as the historian of his father-land is strengthening the real foundation of that true patriotism now daily growing amongst the people, and the Society trusts that the ties of this association may continue, and be drawn ever closer in the long and felicitous years of health, happiness and work that the Society fervently prays may lie before Your Royal Highness."

In his reply, the Prince said that he did not feel worthy of such an honour, but that he had to yield to the majority which seemed to be of a different opinion. The beautiful address, he assured them, would always he kept by himself and his descendants as a precious souvenir. He added that his interest in the Siam Society was due to three reasons:—In the first place the Society had since its foundation received the patronage of both the late King and His present Majesty. Secondly, his interest in historical research made him in sympathy with the aims of the Society, and thirdly he felt that all members of the Society were true friends of Siam.

In conclusion he wished all prosperity to the Society and expressed the hope that more Siamese would become interested in its work.

The address—of which two photographs are shown herewith—was designed and executed by the Arts and Crafts School. The case containing it is a stiff card-board portfolio covered in maroon-coloured leather. The front of the case is covered with a beautiful design in silver—the border and field being of pierced silver of a—foliated pattern interspersed with allegorical figures in repoussé. The centre contains two conventional "tevedas" upholding a lotus flower bearing H. R. H.'s monogram with a label underneath bearing
To
His Royal Highness
Prince Damrong Rajanubhab.

This is a special occasion when the celebration of the sixtieth anniversary of the founding of your Royal Highness is taking place. The Members of the Society are glad to offer you this welcome Address and to extend their congratulations and sincere wishes for your continued success and welfare. This Address is now being offered to Your Royal Highness as a token of our esteem and affection.

The members of the Society acknowledge the fact that Your Royal Highness has been one of the principal motivators of the Society from the very beginning of its foundation. You were always present at its inception, and the Society takes this opportunity to express its gratitude to you for your untiring efforts and support by which it is possible to continue.

As the principal Advisor and friend of the Society, you have been a constant contributor to its Journal and as the guide to others who have been greatly encouraged to develop their knowledge and skills. Your Royal Highness has underscored the importance of education and research, and it is impossible to overestimate your efforts.

The Society is proud of the long association with您, as the historian of the Fatherland, in laying the foundation of that true patriotism, now daily growing amongst the people, and the Society prays that this bond of association may continue and be drawn ever closer in the long and arduous years of health, happiness, and work that the Society fervently prays may lie before Your Royal Highness.

The Address.
the B. E. dates 2405-2465. Lower down appears the head of a dog denoting the year of H. R. H.'s birth. This is supported on the right by the badge of the Ministry of the Interior and on the left by that of the Royal Library. At the bottom is another label with the words, in Siamese, "Presented by the Siam Society." The whole design in burnished silver on the rich red background of leather is highly effective, and is a remarkable specimen of the skilled craftsmanship of the Arts and Crafts School.

The address itself is engrossed upon hand made Siamese paper (kradat khoï) and printed in old English characters—the title and capitals being illuminated by hand. Bordering the address is a beautiful ornamental design in gold, containing seven miniature paintings of ancient temples in various parts of the country associated with His Royal Highness's travels and researches.

The signatures of the Princes and high Government officials connected with the Society and those of the Council, appear below the address, and the following two pages contain the names of more than one hundred other members of the Society.