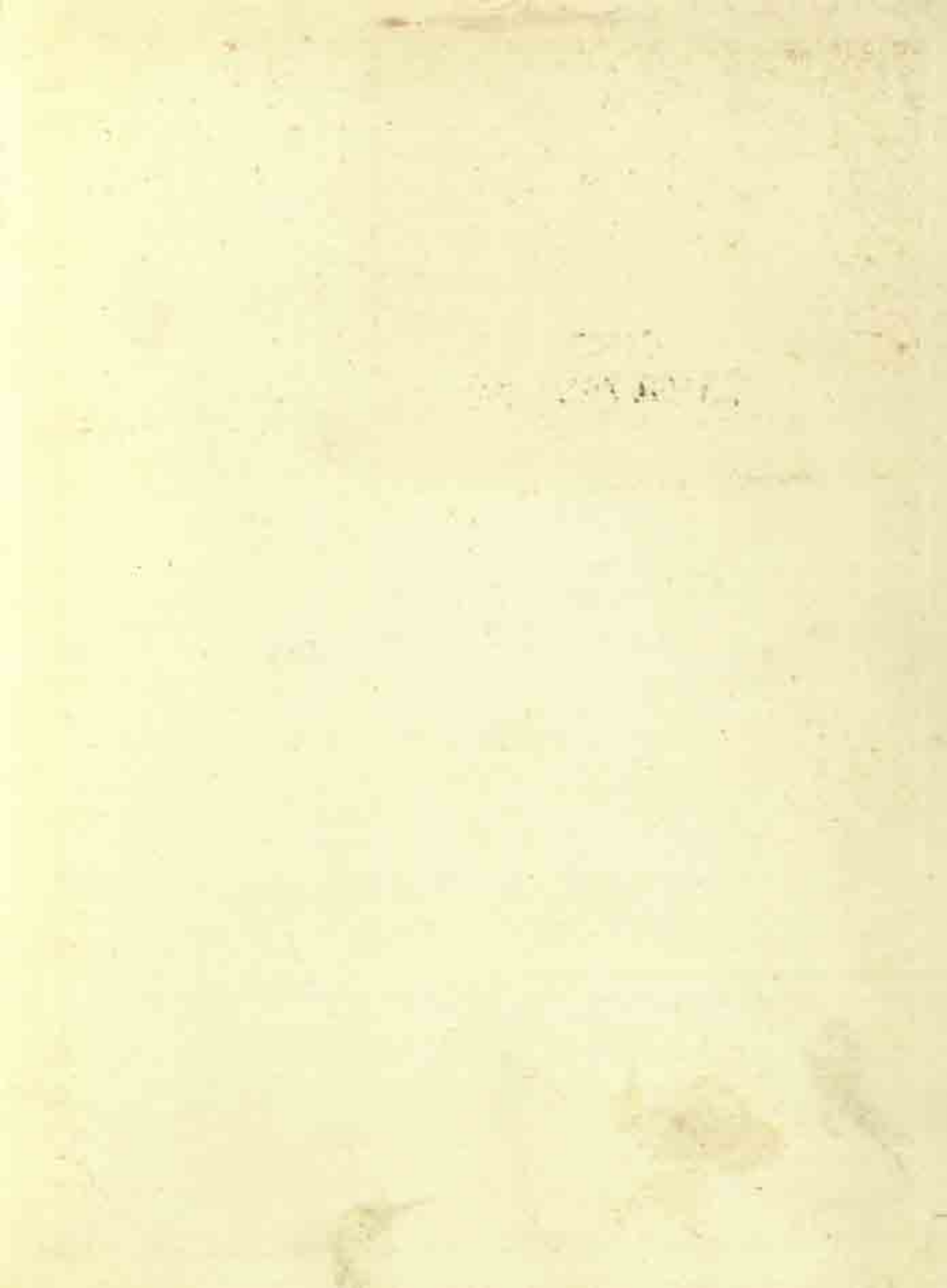


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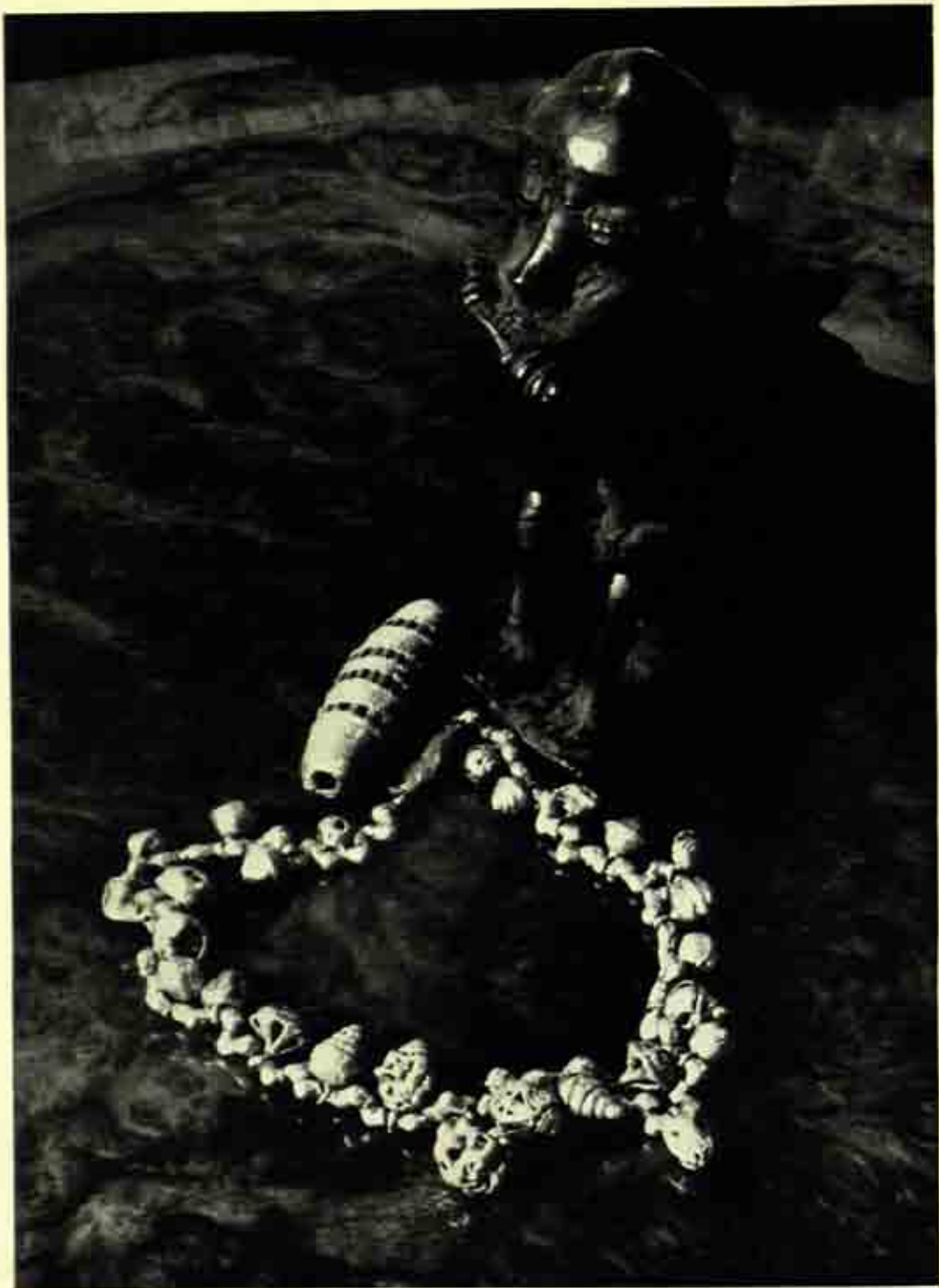
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The Book of Necklaces



AFRICAN GOLD COAST

The natives of the Gold Coast were taught by the Portuguese in the 16th century to cast by the "waste wax" method. All their gold work is cast, which they do very skilfully, as can be seen from the fine work of the large bead. The pendants on the necklace are fecundity charms representing seeds and shells. These are traditional, and the necklace might be of any age from the 16th to the late 18th century. A bright red bloom in the depths of Gold Coast work is typical, and is probably the result of colouring with a boiling solution of bark and fruit-acid, such as the Indian jewellers formerly employed.

Bharatiya Sahitya Bhavan, Delhi. Rs 21/6/- Date 10/8/53.

The Book of NECKLACES

by 390.

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ARTHUR BARKER

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All of which shows how kind a place the world can be.

For Yemaiel

Necklaces of the Stone Ages

Once Upon a Time

WE believe that the universe, endless in time and space, in time received our earth, to revolve in orderliness through loneliness. On its surface inexplicable teeming life progressed, to culminate in Man, standing upright, his feet on the spinning globe, his head pointing to the stars.

In what strange twilight did Man create the first necklace? Was it that he collected attractive objects, through whose natural or accidental perforations fantasy beckoned to him to thread them on plant tendril, on animal sinew, on a hair of his own unshorn head? We can only know that a first necklace was made, a primal artifact.

Man stood with the necklace stretched between his fists, and shouted to the frosted stars for joy in life which could contain beauty of his own making. In a thin wail the shout echoed back from a sky glittering green with cold, and all around the ice of the Fourth Glaciation creaked as it crept nearer. Man remembered that time had been when out of the empty skies flaming-eyed destruction had rattled by on leathery wings, swooping in all-destroying pounce. If such terror came again could he escape who now was threatened by trampling animals stampeding from dark forests, fleeing as he too must before the ever-encroaching ice? But life, which could create beauty, was precious and dare not perish. Alone stood Man, defiant, the necklace stretched before his loins, and danger, cold, and hunger put out their hands to snatch his treasure.

Man remembered Woman. From the back of the cave her vast curves gleamed through the haze. Fear could not cross the protection of her arms; in her body was warmth, from her great breasts unceasing milk would flow, from her thighs generations would spring for ever. To her he would go. He would lay the necklace upon her throat, to crown her bountiful, all-nourishing breasts. He would draw the necklace round her neck and she would bend before him, and her meek head would be twice enclosed, by the circle of his arms, by the circle of his necklace. So he would tether her, and she would know that she must stay with him.

Then Man laughed beneath the sky, for together he and Woman could make life and beauty safe.

Necklaces of the Late Palæolithic Age and the Neolithic Age

Plate 1

THE ice floes retreated, the virgin earth was uncovered to the victorious sun. Climatic amelioration encouraged prehistoric animals to roam new feeding grounds, and following them came men, brave hunters of tremendous quarries, brave thinkers in tremendous void.

The hazards of survival obliged palæolithic men to make full use of their capabilities. They were successful hunters and fishermen; with stone, flint, and bone they were dexterous craftsmen. As modellers and carvers and mural painters they were astonishing and authentic artists. As thinkers they founded the hope and belief that for the spirit of man there is life beyond this world, and they buried with the corpse the possessions desirable in the world to come. Amongst the treasures from which the dead would not wish to be parted necklaces occur.

No trace of the material on which these necklaces were strung has survived. We cannot know whether twined fibres, leather or fishskin thonging, or animal gut was used. The exact arrangements of the units has to be surmised. Some necklaces were elaborate, some had but a single item on a string. Some had a natural surface beauty, and others could have been tinted with ochreous earth mixed with animal fat, but in their advanced age palæolithic necklaces appear dull and chalky. They were made of any permanent material which had either a natural hole or which could conveniently be bored, such as fossil sponges, fish vertebrae, birds' legs, shells, shell-discs, or the teeth and claws of animals. Primitive hunting peoples of to-day decorate themselves with teeth and claws in the belief that these have the double amuletic power of conferring on the human the strength and cunning of the dead animal whilst protecting the wearer from these same qualities in the living animal. Shells represent feminine sex and serve as fecundity charms.

Men of the Old Stone Age did not pierce shells at the apex, where the whorl is closest, but through the thinner nacreous deposit near the mouth. The difficulty they experienced in grinding through a healthy animal tooth in order to make a necklace ornament is shown by the spread of the hole, which is many times wider than the eventual perforation. Sometimes this trouble was evaded by notching the sides of the tooth to accommodate the stringing. Yet teeth

used as spacers in necklaces having multiple rows were even pierced at several levels for the various strings, and in an exuberance of achievement the jeweller might attempt a few lines of incised pattern. Mammoth hunters carved ivory beads and engraved pendant discs with circular designs. At Predmost,¹ in the family grave of Solutrian hunters, the men, women, and children all wore ivory necklaces.

A necklace revealing capacity for absolute design was made of two rows of oblong fish vertebrae spaced by trebly pierced deer teeth, with a basal row of shells whose spirals made a formal scallop edging. It was found on the skeleton of an Aurignacian² boy, buried with a girl, who had no necklace, and a man who wore one of fish vertebrae and incised canine teeth of the red deer.

An Arts and Crafts Exhibition held in the New Stone Age would have been interesting, for during this epoch pottery and weaving were invented, and the stone objects, ground and polished by new methods, disclosed line and finish of sheer beauty. But the display of jewellery would have been disappointing. At the beginning of the Early Bronze Age, when the Stone culture had not yet been displaced, the Neolithic Sanctuary at Hal Tarxien in Malta was used as a depository for cinerary urns, in which the personal ornaments were necklaces of shells, of fish vertebrae, of birds' legs decorated with banded incisions, of pumice stone, and of a black stone. By rubbing pebbles, little cylinders were made, which could be notched all round at close intervals, forming discs to be chipped off by a sharp blow on a flint wedge. These thin discs were pierced through from one side, that side being polished, and as many as six thousand were used for a necklace. Pendants were of slate and whetstone, of crabs' legs, and of clay, in which material the more remarkable were shaped as a bird or as tiny one-handed jars. These necklaces do not show an advance on the Old Stone Age comparable with neolithic man's general achievement, which was amongst the most formative that mankind has experienced, and included the discovery that the supply of food is better ensured by growing it than by roaming after it. Through the invention of agriculture men were able to establish village communities, with an interchange of ideas and a centralized culture. Communal settlement led both to convenience in travelling and to a reason for so doing. Trade routes were trodden in, along which necessities and luxuries passed, and down these routes, from settlement to settlement, civilization strode.

¹ Czechoslovakia. This grave, 18,000-17,000 B.C., was lined with the shoulder- and jaw-bones of mammoths.

² This burial, in a cave near Monaco, was made in the lonely centuries between 25,000 and 18,000 B.C.

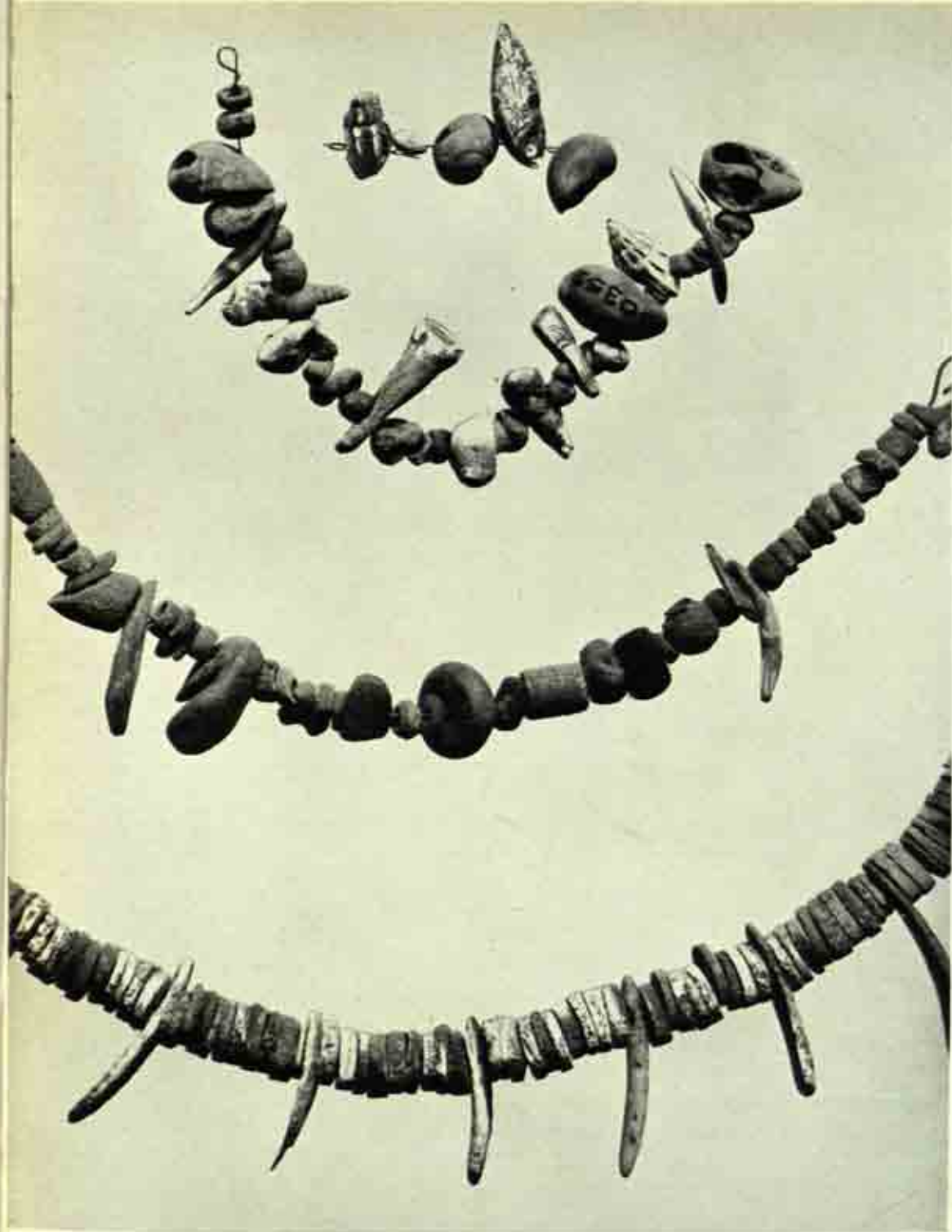


PLATE I

LATE PALÆOLITHIC: AURIGNATION. 25000-18000 B.C.

(In the Museum, St. Germain-en-Laye.)

Necklaces of shell, pebble, and teeth, found in France. The four shells at the top are the oldest; the lowest necklace, of brown and white shell, the least ancient.

Such teeth as that on the extreme right of the third row were everywhere used by early man. In Palestine they were apparently strung alternately with narrow tubular shells. Opinions differ as to whether they had other than decorative significance.

Photograph, Charles Harault.



PLATE 2A.

SUMERIAN. About 3500 B.C.

(Head, in the University of Pennsylvania Museum, Philadelphia, modelled by Katharine Woolley.)

Choker necklace of gold and lapis lazuli.
Beads of gold, lapis lazuli, and cornelian.

Photograph, British Museum.

PLATE 2B.

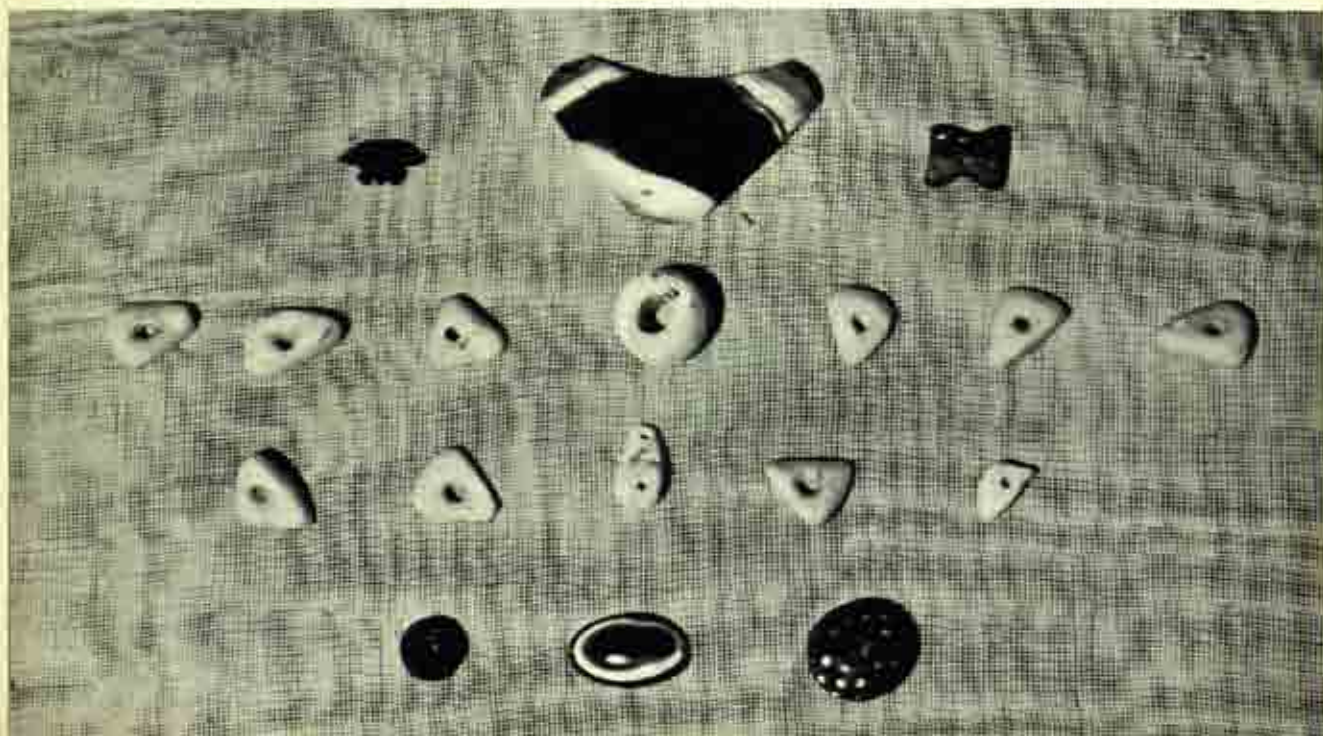
MISCELLANEOUS BEADS OF THE
4TH MILLENIUM B.C.

In the centre of the top row a leach bead,
on the right a lapis-lazuli bead inlaid
with white shell.

Two rows of white shell beads.

In the bottom row a lapis-lazuli disc,
an eye bead, and a lapis-lazuli bead inlaid
with white shell.

Photograph, William Clowdell.



Necklaces of the Chalcolithic Age of the
Middle East

All Mother

FROM the Indus to the Mediterranean, and throughout the lands north of the Mediterranean to Britain, votive figurines of the Mother Goddess have been found. These almost invariably wear at least one necklace, even if indicated only by a casual line of paint or crude clay strip or pellets. The necklaces may be "chokers," worn round the throat, or "dallies," long enough to dally between the breasts: they may be representations of beads, of goldwork, or of chains. A carving in her honour, found in a cist at Bellhay, Oise, consists only of three necklaces above her two breasts.

The cult of the Mother Goddess developed within the matriarchal system. In an inheritance from the Palæolithic Age she united the chalcolithic world in one inspiration. We have for so long given to the Inexpressible a male aspect, calling upon God as our Father, that it is now difficult for us seriously to accept that from the Stone Ages, through protohistory and into historic times, the Inexpressible was presented in a female aspect, addressed as Mother, and that concurrently with this view rights were vested in women. Long after masculine ascendancy had been ceded to men and to gods the imploring eyes of suffering humanity were still raised to the Great Mother.

As crucifixes were later set by the roadside where many people passed, so reminders of the Mother Goddess were placed in public places. Her stone stood outside the gate of the second city of Troy; in Jerusalem it was northward of the gate of the altar of the inner court of the Temple.¹ She was sculpturally represented in many ways. She was set out in flat clay as though cut out of cardboard, with a head which was merely an extended neck; she was modelled in relief with a beaked face. She was shown without legs as emerging from the ground, or with snakes to emphasize her chthonic aspect; with uranic doves as an inspirer; with exaggerated hips as a potent bearer of children; with large breasts as a nourisher; with arms extended to disclose her as a giver and receiver; with arms raised or outstretched as a protector in life, or offering lotus or poppy flowers as a protector in death; with the attributes of both sexes as One who is All. Practically always she wears a necklace, which she sometimes holds with one hand, but the significance of this gesture is now lost. She is female energy, the eternal productive principle, united with the eternal male principle, but superior. Never married, she creates for herself by immaculate conception the companion by whom she conceives all life.

As she ruled the hopes of many hearts she was addressed by many names.

¹ For a condemnation of Mother Goddess and Sun worship see Ezekiel viii. Possibly antisemitism was founded in the resentment caused by the ruthless fight of the Hebrew prophets to set their conception of God above beloved and accepted cults, which were established over immense areas outside Palestine.

Her first ineffable name has passed beyond our ear: we know her as Istar, ruling with Anat, Semiramis with Ninyas, Tanit with her son, Ashtoreth with Tammuz, Kybele with Atys, as Artemis, and as Rhea. In the lands of the Indus the name of her partner, who was lord of the beasts, meant "red": amongst the Hebrews the male partner was also lord of the beasts, and his name, Adam, also means "red."

The semitic mind resents the idea of feminine dominion. There are matriarchal vestiges in the early biblical histories,¹ but Hebrew inclination was always away from matriarchy. In the first account of creation in Genesis, male and female are equal; in the second version Eve remains the Mother of all Living, and it is significant that it was she, and not the Lord of the Beasts, who was intimate with the chthonian serpent. But equigeniture is taken from her, and in place of the vulva so proudly drawn on primitive statuettes she must wear an eclipsing figleaf.

Eve, and the Daughters of Eve, have fallen. But in one matter women have a strangely persistent instinct, unbreakable through all the centuries. Men may periodically emulate her, and she may choose individually to exert or ignore her knowledge, but every woman knows that hers is the right to the wearing of jewellery.

Whence comes this? Does the display of jewellery indicate a quite forgotten allegiance, or some deeply hidden longing for the tender understanding, the never-withheld comfort of the Lady of Ladies, who herself so seldom appeared without the panoply of a necklace? Necklaces, universally signifying power and beauty, were her prerogative, and had ritual importance. Jars laid in the foundation deposits of her temples were shaped with breasts instead of with spouts, through which ceremonial libations, as of all-nourishing milk, were poured. And as they bore her breasts so around their necks the jars were painted or modelled with decorations of ordinary necklaces. For, except in Cyprus where she wore below the necklace a strange sexual pendant, her ornaments, as her clothes, were such as every woman wore.

The mother hangs a daisy-chain round the darling neck of her child: the father, about to "give this woman in marriage," presents his daughter with a conventional string of pearls. The Mayor puts on his chain of office, and the knight the insignial collar. The lover brings an offering to adorn the beautiful neck of his beloved, and the woman rejoices in a lovely possession. Then from afar, across the haze of long centuries, through a mist of incense, the Great Mother stretches out her protecting arms to bless those who have never heard of her, and the glory of her ornaments brightens their tired eyes. For the past was once the present, and is ever in the present.

¹ In the early histories of Sarah, Leah, and Dinah, but the later quarrels of Saul and David, Solomon and Adonijah are concerned with the patrilineal and matrilineal rights to the throne. In a state of matriarchy all rights are vested in women, but in a state of matriarchal rights no other power than the claim to inheritance necessarily belongs to women.

Necklaces of the Sumerians

Plates 2a and 2b

BY 4000 B.C. the cities of the Euphrates and Indus valleys were places of high culture with relatively large populations. They had international trade relations, and it was now possible for the jewellers to use other materials than those which could be found locally.

In no other archaic land was silver so freely used as in Sumer. With lead, it was obtained from Afghanistan. Gold was brought from the mines of Nubia, or from the bed of the Indus river. Lapis lazuli was supplied through Persia from the Pamirs, cornelian and agate from the Persian Gulf. Thus, though none of these materials were indigenous to the pastoral delta of the Euphrates, wealthy Sumerians were able to wear necklaces of gold, cornelian, and lapis lazuli, whose colours combine with great beauty. Gold and silver were not used together in jewellery, but an admixture of coloured stones was usual. The technique of gold soldering was already known both to the Sumerians and to the people of the Indus: in this, Asia was two thousand years in advance of north and west Europe.

At first only women wore beads, generally but a few on the string, but later some men and all women wore them in profusion. They were of crystal, agate, sard, and soapstone, of haematite the hardest of stones, or marble and pebble, of shell, of glazed frit and of faience, of lead, of gold beaten remarkably thin, of lapis lazuli, and of synthetic lapis lazuli made from file powderings. Some were in the natural form of the material, some in geometric shapes of great variety, sometimes spheroid and sometimes flat.

Leach beads, requiring great patience and skill in manufacture, were presumably either worn alone as an important pendant or used as the central plaque of a necklace. They are flat triangular plates of agate, cut with the striations arranged horizontally. The point of the triangle hung downward, and the breadth of the plaque was cut in a concave curve following the line of the throat. The string passed along this broadest plane, and the drilling followed the curve, a technical feat which could daunt a modern craftsman. Another form of agate bead was shaped as an eye, the layers of colour in the stone being arranged to indicate the iris. Eye beads were considered to be auspicious and were sometimes faked, with artificially arranged layers.

The inlaying of lapis lazuli beads with white shell was a purely Sumerian technique, to be found nowhere else. Another example of Sumerian originality

is in the necklaces formed from intersecting triangles of alternating lapis lazuli and gold. These necklaces were the first to be designed in a repeat pattern of contrasting colour and material, and the idea was carried out in two different ways. By one method plaques were made from rows of little beads arranged in the maximum to minimum numbers necessary to produce a triangle. The displacement of these small beads during soldering presented a complication too difficult for the jewellers, and the results are untidy. The coloured triangles were composed of minute discs of cornelian and lapis lazuli strung in alternate lines. This colour mixture was not attempted in the more frequent necklaces made of ridged triangular plates, for to make these horizontal ridges in a material as hard as cornelian would require much labour, while lapis lazuli is a soft stone, easily carved. The ridges in the hollow gold plaques were made by pressing the metal over rods, and the contiguous edges were overlapped and soldered together at the narrow apex of the triangle. The stringing was easily passed through the hollow gold, but the lapis lazuli plates had to be drilled. These necklaces were worn either at the base of the throat or on the collar of the jacket. Pendants on necklaces were also repeated in contrasting materials, the fruit or leaf or formal drop being alternately of stone or of gold.

The Sumerians could make gold wire, probably swaging into the round the sheet-metal strips¹ and stretching the ductile metal to the required thickness. With this they made raised helical ornaments of built-up spirals; and further, by soldering two such together, base to base, achieved gold bicone beads. Flat coils they confronted like antennae, which motive reappears in Bronze Age Denmark.

The biblical Sarah was a Sumerian matriarch married to the wealthy son of a sculptor from Ur, with whom she took part in the second great Semitic immigration into the Near East. She had travelled far westward from Sumer, but her social importance as a matriarch caused her to be received by Pharaoh. Doubtless she appeared before him in the aristocratic finery of her own land, wearing a black ceremonial wig decorated with precious ornaments and large lunate earrings, and a woollen dress embroidered with beads and shell rings. Against the scarlet of her jacket hung from throat to waist row upon row of gold and of lapis lazuli beads, gleaming in the sunlight, bluer than the sky. Small wonder that when Pharaoh beheld her, "a fair woman to look upon," he wished to make her his wife.

¹ Compare "They did beat the gold into thin plates, and cut it into wires." Exodus xxxix, 3.

Necklaces of the Indus Valley

Plate 3

AS the waters of the Indus rolled down to the Arabian Sea they flowed over sheep-skins laid in the shallows. Gentle faces framed in jellybag caps hung over the water, striving to see what grains of river gold had been meshed in the thick wool. In this way the Indus people trapped the beautiful metal,¹ which they used in great abundance. Silver they valued little, but they made use of electrum.

Near the lower reaches of the great river stood Chenhu-Daro, from 3000 B.C. a town of jewellers and toymakers,² whose wares were exported as far afield as Sumer, Egypt, and Troy. The chief industry was bead making, and it must be realized that before the invention of coinage such attractive and conveniently transported objects as beads were of great service in bartering and had economic importance. It was worth while to fetch amazonite perhaps from even so great a distance as South Africa, or jade from North Burma. Agate, calcedony, lapis lazuli, turquoise, onyx, quartz, and marbles were more easily obtained.

The beadmakers of Chenhu-Daro were highly skilled. They knew how to solder gold and silver, though the workers in copper could only rivet. They could make hollow beads from sheetmetal, or solid beads by casting, and they had a predilection for a highly polished surface and geometric decoration.

Owing to its situation the town was more than once flooded by the river, and much material in various stages of work has been excavated from the deposited detritus. In the making of stone beads the nodule was, when its nature permitted, split along the longer axes to produce a roughly squared rod. This was struck off with a copper tool into the required length, flaked longitudinally into shape, and rubbed smooth with a hone. It is suspected that a type of lathe was used for finishing. When the ends had been flattened a rough patch was produced with a flake of flint, which had a splintering rather than a cutting effect, enabling a drill to bite without slipping. The drills were of black or brown chert, from an inch to an inch and a half long, with

¹ Other archaic gold-washers also used this method, from which the legend of the Golden Fleece is thought to have originated.

² Toys included carts of a type still in use in India and a bird whistle exactly similar in form to those made of plastic in modern European manufacture.

a small depression in the head to hold the fine abrasive and water necessary for cutting.¹

The beadmakers had some chemical knowledge. They made faience from silica and flax, and coloured it artificially. By heating cornelian they turned its golden brown to a splendid deep red, and by boiling crystal in soda with copper at a temperature sufficient to fuse the surface they gave it an icy glitter with traces of turquoise blue. They glazed soapstone and from it made beads of such incredibly small dimensions that the very handling of them in manufacture seems miraculous, while the drilling is so fine ² that it is difficult to imagine on what they could have been threaded. But they could also produce cornelian beads four inches long, drilling this hard material from either end with absolute precision.³

The Indus beadmakers invented the process by which the elaborately decorated beads known as "etched cornelians" were produced. Such beads were exported to Sumer, where they occur in the earliest graves of Ur: examples found in Syria and Russia range from 300 B.C. to A.D. 1300, and the technique has been practised in India until recently. The patterns, geometrical in archaic examples, were applied in strong alkali, and the cornelian was heated between layers of charcoal to fix the pattern in a permanent white line. Sometimes the alkali induced so great a change in the material that unequal expansion caused the whitened portions to flake away, leaving grooves which give the appearance of etching.

The people of the Indus were not belligerent, but during the sixteenth or fifteen century B.C., when Babylon was invaded by the Kassites, Egypt by the Hyskos, and Mesopotamia by the Ayrians, the great civilization of the Indus Valley ended dramatically. Invasion overwhelmed the unprepared and inadequately defended prosperous cities, and with them perished Chenhu-Daro, innocent little town of beads and little toys.

¹ An experiment carried out for the Boston Museum of Fine Arts with one of these drills, used in a bow drill with fine emery, produced a cutting depth of 1 mm. in twenty minutes. Primitive New Zealanders drill the local nephrite with a flint splinter attached to a stick which they rotate between their palms.

² In California a successful attempt to reproduce the minute hole of some ancient American beads was made in slate by drilling with a cactus spine. Soapstone, as its name implies, is very soft.

³ Referring to such long beads excavated in Sumer, Dr. Ernest Mackay said, "I am inclined to the view that these beads were obtained from India, for no unfinished specimens have yet been found in Sumer, though unfinished beads of other types are well known there." *Journal of the American Oriental Society*, March 1937, vol. 57.

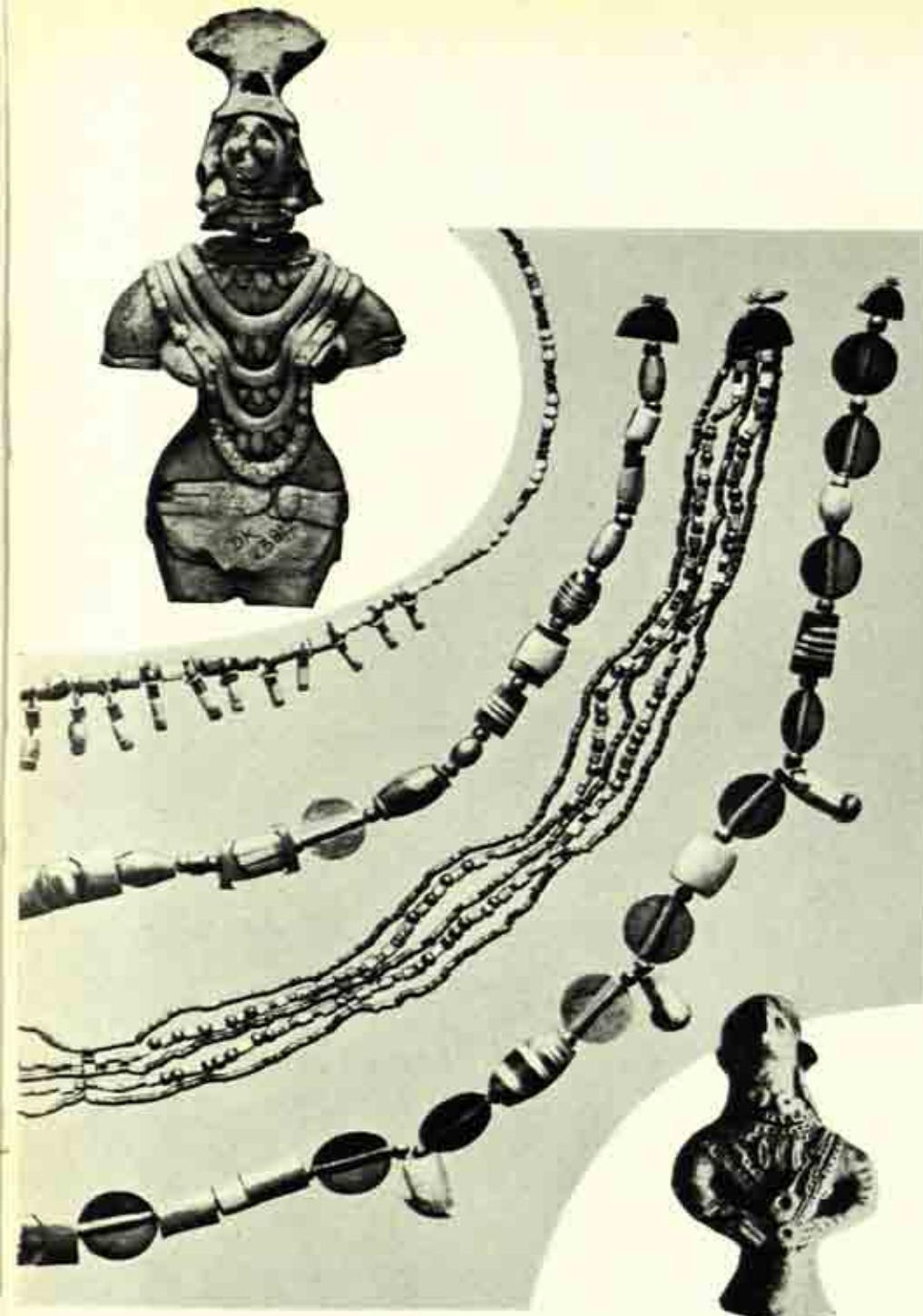


PLATE 3

INDUS VALLEY

Copyright Government of India, by permission of Arthur Probsthain. Photographed from Mohenjo-Daro and the Indus Civilization, ed. Sir John Marshall, 1922, 1927.

Two Mother Goddess figurines, one with ten, the other with seven, necklaces.

(1) Minute gold beads, with soapstone beads now white but with traces of blue glaze remaining. The pendants are glazed sky blue, and their threading loops of gold wire are soldered to the lower gold caps.

(2) Semi-precious stone beads of jasper, cornelian, etc., some with gold caps. The heavy caps of the bead on the extreme left, and the small round beads between the stone beads are of cast gold. The semi-elliptical terminal shows no sign of solder, and may have been raised as a dome which was afterwards flattened. The flat gold bead, as those on the lowest necklace, was made of two discs soldered together.

Similar beads, perhaps imported, have been found at Troy. Trojan jewellers constituted a special class and were trained in Asiatic Schools. Beads made in the same manner but with the circle cut down to a diamond occur in Sumer: a triangular shape had an irresistible appeal for the Sumerians.

(3) Five rows of minute cylindrical glazed soapstone beads, with cylindrical and round gold beads, gold spacers, and a gold terminal plate.

(4) Onyx, agate, green felspar, and turquoise beads, carefully selected for their colour as well as for the regularity of their markings, which Dr. Mackay believed to have been artificially produced. The large and small gold beads are as described above. The domed caps of the pendants have small loops within. Similar ornaments have been found in Turkestan, and in bronze in Early Bronze Age deposits in Hungary and at Hallstatt.

Photograph, R. B. Fleming & Co. Ltd.

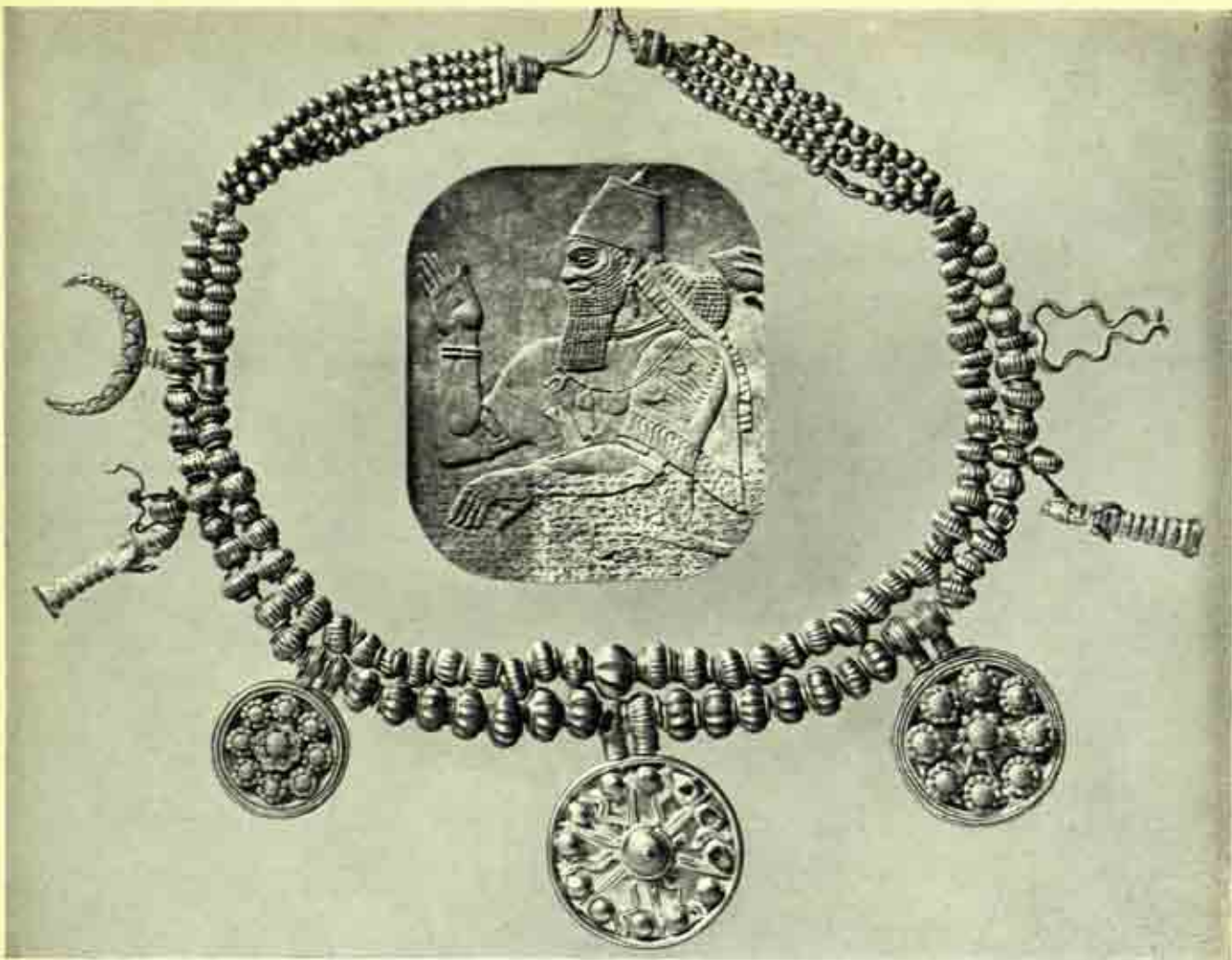


PLATE 4

BABYLON

Photograph by the kindness of Dr. C. K. Wilkinson.

(In the Metropolitan Museum, New York.)

Gold amuletic necklace credited to the 1st Dynasty of Isin, about 2100 B.C., but perhaps composite and not all of one period. Found in a jar with seals probably of the 1st Dynasty of Babylon. The use of granulation, which originated in Sumer, has been brought to perfection. The rosettes of the Mother Goddess still survive in Iraqi and Yemenite decoration, and the wheel of Shamash is found in modern Yemenite jewellery.

Photograph, Metropolitan Museum, New York.

(In the British Museum.)

Inset, a king bearing offerings, wearing such a necklace. From a wall carving from Nimrud, about 880 B.C.,

Photograph, British Museum.

Necklaces of the Bronze and Iron Ages
of Babylon, Assyria, and Egypt

Necklaces of the Babylonians and Assyrians

Plate 4

FROM Babylon the silting Euphrates bore away to the Persian Gulf rich cargoes of merchandise. By caravan routes to Babylon wares were brought from Egypt and Syria, Asia Minor, and the Black Sea. Life held out lavish offerings of comfort, only to spill the proffered blessings before they could be grasped. If the roads to Babylon could sing with the swaying bells of the packmules and burdened camels they could ring with the rattle of chariots and the hooves of the newly broken warhorse. From Egypt in the south-west, from Assyria in the north-east, contending powers, struggling for political ascendancy, raised the gritty desert dust, and as it settled it was shuffled by hopeless prisoners of war and deportees, going to eat out their souls under the pitiless Egyptian sun, coming to weep out their eyes by the sliding grey waters of Babylon.

If the Babylonians could not live at ease in this world neither did they expect easy happiness in the world to come. Men in the nursery of life had leant upon the Mother; husbandmen tending the springing wheat were assured by the love of the Mother and the life-light of the sun; but the Babylonians were amazed, finding themselves in a labyrinth, and they clasped any hand which might point the way. Around them gods and demons multiplied, and an encroachment of devils strongly conditioned all security. Therefore, on the monuments of Babylon, and later of Assyria, the Priest-kings are shown wearing protective necklaces.

These were not simple amulets of shells and claws and lucky eye stones, but sophisticated symbols of the multiple protection invoked. The rosettes of the Mother, the wheel of Shamash the sun travelling the heavens, the crescent of the moon, the lightning of Adad, are together slung across the breasts of royal personages appearing ceremonially. The units of these gold amulets were made by pressure in slate moulds, some of which even provided the granular decoration. Gold beads were also so made, the two halves to be soldered together.

Semi-precious stone beads were worn at choker length, and were of jasper, crystal, haematite, and of lapis lazuli brought from Badakhshan.¹ The typical

¹ This district was still being mined for lapis lazuli in the fifteenth century A.D. "There was again another great lord at this festival, and he was governor in the name of Timur at the city of Aquivi, which is in the country where the lapis lazuli comes from, and in the rock that gives this stone they also find sapphires. This city lies rather to the southward of Badakhshan." *Embassy to Tamerlane, 1405-1406*. Ruy Gonzalez de Clavijo. Ed. Guy le Strange. London, 1928, p. 274.

Babylonian shape is a cube with chamfered corners, while the true Assyrian bead is a cylinder tapered at either end. Necklaces were usually arranged with a round bead alternating with these shapes. One or two simple chokers might be worn together, but the multiple necklaces which had two or three rows between the spacers were worn alone. Necklaces were tied at the back of the neck, with the strings falling between the shoulder-blades in ornamental tassels.

On the Assyrian wall sculptures from Nimrud¹ it is evident that necklaces indicated rank. Of the choker necklaces the king frequently wears two, royal attendants one, and with the exception of musicians, employees none. Only the king and the gods wear the fertile pomegranate bead. Only the king and the Mother Goddess wear the necklaces of gold plaques across their breasts. Assur-Nasir-Pal wears but one, with the symbols of the gods: Istar wears two, one directly below the other so that the decorations of rosettes intermingle. In one scene the Goddess stands before the Tree of Life and herself makes an offering of a necklace. In the Babylonian epic when she in mercy descended to the Underworld she was stripped of an article of clothing at each of the seven gates through which she had to pass, and thus her blue necklace was taken from her. After the Flood, when order was restored, amidst great rejoicings she received her necklace.

The Flood waters have swirled away, and the frail rainbow, the eternal bridge of the mercy of the Father, offers for ever its path of love. The solicitude of the Mother has been forgotten, but in the Near East to this day one blue bead, as from her necklace, defends the wearer from the evil eye.

¹ In the British Museum.

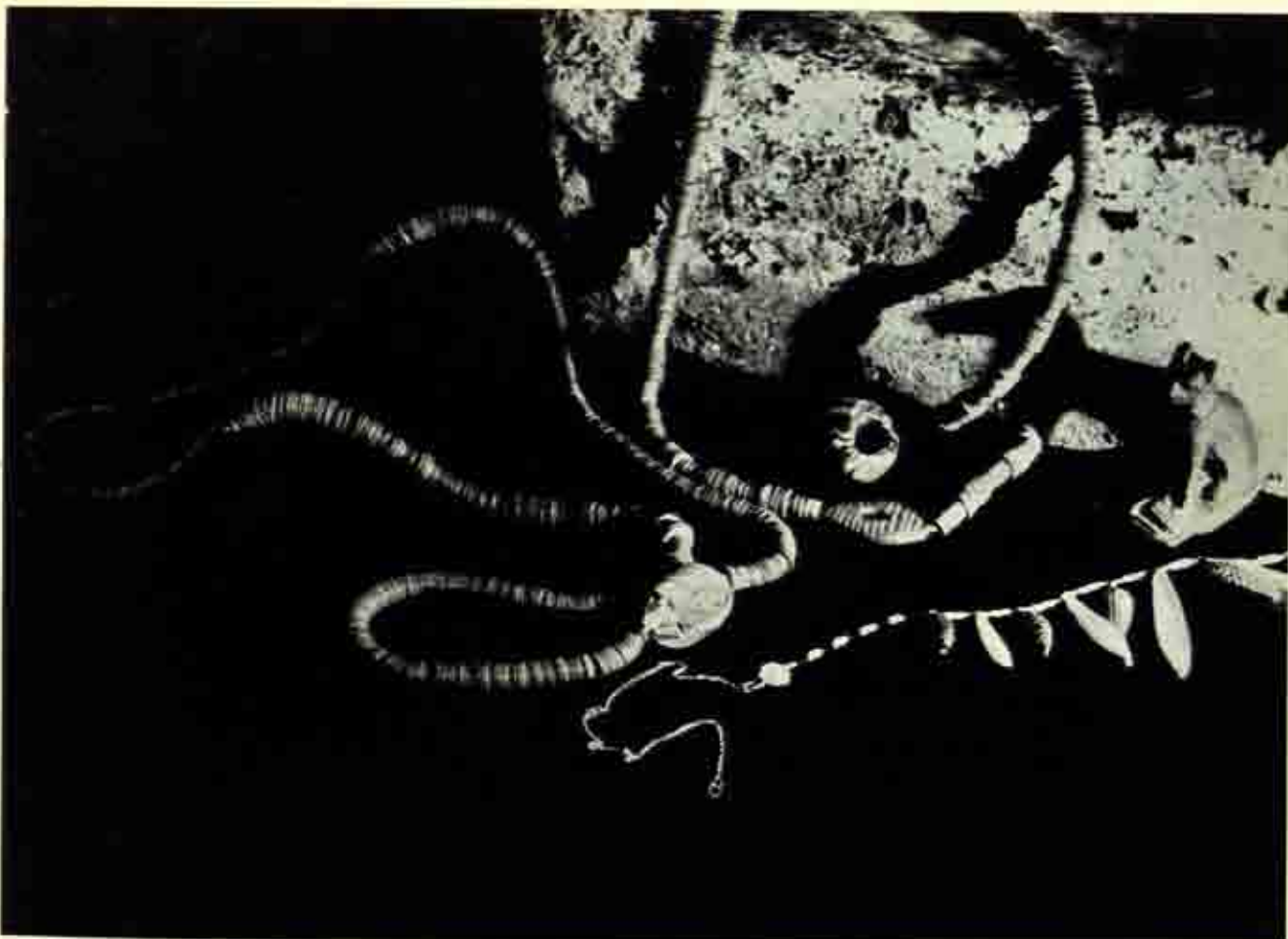


PLATE 3

EGYPTIAN, 18TH DYNASTY.

From Tel el Amana, about 1270 B.C.

Two strings of fine blue-glass roundels, one with a ribbed blue-glass bead, the other with a scarab which would not have been so used at Tel el Amana. The faience fruit and lotus buds on a modern chain on the right hand of the photograph come from a broad collar: the loop for the threads of the next row can be seen at the tips of the fruit.

(The large striped head near the ribbed bead is Ptolemaic, of red and yellow glass.)



PLATE 6

EGYPT, 18TH DYNASTY.

(Cameo Corner.)

Poppy-head beads in jasper and cornelian. All the units of the necklace on the left are of stone: the necklace on the right is of gold beads with cornelian poppy-heads.

The necklace in the lower left-hand corner is of faience with gold flies.

The stringing of such necklaces is arbitrary.

Necklaces of the Egyptians

Plates 3, 6, 7a and 7b

UPWARD, onward from the south, through the Fortunate Lands, the Nile bore to the Mediterranean the centuries of Egyptian culture. Always the dwellers on the river banks were skilled and industrious manual workers. The gifted artificers of flint made shell and stone necklaces: their immediate successors strung highly valued meteoritic iron with gold. From the time when beads were made by pressing gold foil over shells in imitative improvement on primitive achievement Egyptian jewellers poured out their work century after century, eventually in overwhelming quantity. They were members of the independent middle class, and at Thebes had expensive burials, foreshadowing with reality happiness in the Underworld. They early invented a blowpipe, using a reed tipped with clay which they called "Causing metal to swim," and gold was so usual for necklaces that the hieroglyph for the metal was a drawing of a collar of beads. By the Twelfth Dynasty¹ they could mould gold foil, burnishing the metal over the model; could make gold chain; and could cast metal by the "cire perdue" process, in which the wax model is melted out of the casing, thereby leaving a mould to be used once, but destroying the model. Only on work decorated with granulation did they fail to impress their intensely national stamp. Work in strip wire outline was typical of this period.

Now was invented a necklace-fastening in place of the hitherto simply knotted strings. It was made of two plaques shaped as a knot, interlocking by means of a ridge on the lower plaque, which slid along a groove in the underside of the upper plaque until the two parts coincided in outline. The threads of the necklace passed into the back of the plaques, where hollows received the knots. The arrangement was such that the greater the weight of the necklace the more firmly did the two parts pull against each other.

However it was neither their technical skill nor ingenuity which distinguished the jewellers of the Twelfth Dynasty, but rather their ability to present purity and strength through economy in line and material, an austerity won by men who stepped open-eyed towards eternity. No other people have been so

¹ The Eleventh to the Thirteenth Dynasties, 3005-2112 B.C. The Seventeenth to the Twentieth Dynasties, 1758-1102 B.C.

preoccupied with life in another world as the Egyptians, nor forced their spirituality into such a rigid convention, but in the work of the Twelfth and Eighteenth Dynasties the spirit could not be shackled. Greatness is offered to us on a tiny dish of beauty.

The work of the Eighteenth Dynasty was less exact and refined than that of the Twelfth. Stamping was now known, and chasing, repoussé, and filigree. Semi-precious stones were shaped as inlay, and fitted with a coloured glass paste to fill any interstices. Cornelian or red jasper necklaces with radiating units of bottle-shaped poppy heads are of this period. Precious beads were arranged in blocks of colour with an exquisite and unequalled taste. Golden brown cornelian and cornflower-blue lapis lazuli were picked out with turquoise, amethyst with cornelian or green felspar, glowing cornelian with the sombre garnet, garnet with glowing gold. Indus Valley beads were first shaped and then drilled, but Egyptian beads were bored first, and then the block of material was strung on a string and shaped by pulling to and fro in a groove cut in abrasive material.

Faience beads were produced in incredibly large quantities. They were moulded around threads which could be burnt away after the bead had dried, so leaving a clear hole. Long beads of a shell thinness were rolled between finger and thumb on the thread. The glaze was made of crushed quartz mixed with lime, potash, and carbonate of soda. This frit was ground under water and applied as a fine powder, as enamels are to-day, and fired with flux. The depth of penetration and the shade of colour depended upon the degree of heat used. The early glazes were not heated long enough to soak into the porous body, and left potholes. By the Twelfth Dynasty the glaze was thin and hard, and the blue ground could be decorated with designs in manganese black. The most familiar faience beads are the straight tubes about half an inch long, which are excavated in great quantity. They are strung up for sale as necklaces, but they would never have been so worn, for they were made for the bead nets with which mummies were covered. Tubular beads for necklaces were segmented, and were either manufactured by moulding or by rolling the warm paste on a ridged surface. Amulets were made in faience as well as in the more precious materials, and over two hundred and fifty patterns for faience pendants are known, either from surviving examples or from the red pottery moulds in which they were pressed.

From the sixteenth century B.C. glass free from lead was made from crushed quartz and wood ash alkali. It was fused in earthenware pans, which were afterwards broken away, as was the scum which hardened on top of the glass. It was never moulded but was worked as a paste mass which, by rolling under a metal bar, was turned into conveniently handled rods. At Tel-el-Amana, city of Akhnaton's ideals, a clear glass was made of especially vivid blue. The earliest glass beads had been black and white, but now beads were blue, violet,

light blue, green, yellow, red, milk white, clear white, and black.¹ Behind these gay colours, in a cold sunshine where the air is clear with grief, stands Akhnaton, heretic king of Egypt, loneliest man on earth. For he was set apart in immense loneliness of spirit to be the first conceiver of monotheism, and he who has companioned with the One nevermore to two can come. The double crown of Upper and Lower Egypt upon his brow but served to press deeper the crown of thorns which he was destined to wear, and when his thirty years of life were run his vision and his ideals also fled. In his search for truth, perhaps because he needed the comfort of realism, he encouraged naturalism in place of convention in art. He who saw behind the stars of Heaven the single majesty of God saw amongst the glories of the earth the manifold tenderness of his Lord. Instead of idle amulets he offered necklaces of moulded faience daisies, lotus flowers, thistles, petals and leaves and buds, bunches of grapes, oranges and lemons, all lovely in their pleading that nothing is too little for love's acceptance. This innocence is essentially his: in all the long history of jewellery we do not meet again such a simple beauty in such simple material. In her tomb his little daughter wore a necklace of lotus flowers and lemons, and on the broad collar of his queen daisy flowers and white lotus buds drooped over bands of cornelian, turquoise, and lapis lazuli.

The Egyptian broad collar is always splendid, whether made of faience or of precious material, and its use persisted through every period. The arrangement was a net of multiple rows, sometimes each differing in colour, and ending with pendants held in a radiating axis by a final row of intervening small beads. From early times broad collars were a usual reward bestowed by the pharaohs,² the distribution being in public from a balcony of the palace. A worthy man might receive "the gold of honour" more than once in his life. Collars had also a ritual significance, and in Temple usage were offered by the pharaoh to the god. Sixteen named varieties are known, made of semi-precious, faience, and glass beads, of gold, silver, or electrum, or of cloisonné inlay of semi-precious stones. Under Graeco-Roman influence collars of flowers, seeds, and beads sewn on papyrus backing were presented to guests at banquets.

Ordinarily the rows of a broad collar continued all round the neck, but those worn by the pharaohs, and by the gods on their statues, ended on the shoulders, where the multiple strands were gathered into flat plates. It was the prerogative of Pharaoh to wear the Usekh collar whose plates were shaped as outward-looking hawk's heads. In the Eighteenth Dynasty large amuletic

¹ Quartz mixed with lime, potash, and carbonate of copper, produced the familiar blue glaze for faience and was used for glass. With a trace of iron it was apple green, with manganese a purple blue, milk white with tin, and red with cupreous oxide. With this oxide the Saxons, but not the Egyptians, could also obtain orange.

² "And Pharaoh took his ring from his hand and put it upon Joseph's hand . . . and put a gold chain about his neck, and he made him to ride in the second chariot which he had, and they cried before him 'Bow the knee.'" Genesis xli, 42, 43.

Usekh models in sheet gold were placed on the chest of a mummy, to exert a helpful influence on the freeing of the spirit from the mummy wrappings on its arrival in the Underworld. When the collar did not continue beyond the shoulders the whole weight was at the front, and to prevent the ornament from slipping forward a counterpoise was hung from the strings down the back of the neck. There were two types of counterpoise, the Menat and the Ma'nkhat, both being made of the same materials as the necklace accompanied. The Menat was especially associated with Hathor, signifying physical pleasure and well-being, and therefore an amuletic model was often placed under the neck of a mummy. Perhaps the little models of necklaces, whose significance and function remains unknown, were also connected with Hathor.

Necklaces of the Mediterranean Bronze
and Iron Ages, and Later

Necklaces of the Minoan and Mycenæan Civilizations

Plates 8, 9a, 9b and 9c

BUTTERFLIES floated over fields of snowy lilies. Black-tressed maidens, white as the butterflies, light as the butterflies, sported with sunburnt youths idling beside their boats, and hand in hand they watched the octopus and nautilus sail past the star-flecked strand. Thus lay Minoan Crete "in the midst of the wine-dark ocean, fair and rich, with the waters all around," and surely those who were allotted a lifespan there entered into a blessing. All beauty was theirs, and comfort, too: gratefully they thanked their Mother, who alone cherished them.

The Minoans were merchant sailors and were familiar with Libyan culture from the north coast of Africa, with Egypt, and with the Hittite civilization of Asia Minor. Yet their representational art had no sympathy with the heavy conventions accepted by their neighbours. Minoan art arrived too soon and is poised for flight: no other people were then ready to share in the sense of eager movement and of atmosphere with which European culture was founded in Crete.

The Minoans were famed as metal workers and gem engravers, and the gold and ivory workers were established in the north-east corner of the Palace¹ of Knossos. Both men and women wore necklaces. Women wore from one to five strings of round or fluted beads and pendant flowers, and men wore one or two chokers according to rank. From the east, south, and north, lapis lazuli, ivory, and amber were imported for the bead-makers: one Minoan amber bead crossed Europe and was eventually buried in a Wessex barrow, doubtless treasured as possessing ancient amuletic power from afar.

For gold the jewellers invented a new type of necklace, using repeating or intersecting decorated plaques, backed and mounted on low walls through which the strings passed. The decorations were embossed in soapstone moulds, and were of naturalistic motifs, such as the royal lily and the sacral ivyleaf, flowers, leaves, and pomegranates, owls, bulls, and negro-heads, shells and nautili.

¹ In protohistoric society skilled artificers were appreciated. Those who understood the new invention, bronze, were especially valued. Tubal-Cain was the legendary "instructor of every artificer in brass and iron," and in historic times in the Near East the desert metal worker wore a distinguishing Mark of Cain, like a Tau cross, on his forehead.

The Minoans and the Greeks were famous sailors, yet both used military and not naval motifs for necklaces: the Minoans based repeat units on their flexible leather shields, and the Greeks tasselled their fringes with tiny spearheads.

About 1400 B.C. Minoan civilization was destroyed by invasion. Gone was the beauty, and the comfort fled. The more resilient of the islanders sailed away, eventually to settle on the southern coast of Palestine, and being known there as the "Strangers," the "Philistines," by an ironic fate became synonymous with the basest attitude to art.

The overthrowing of the Minoans whilst they were still producing thoughtful artists and intrepid sailors must have been an astonishing disaster. Sea power passed to the Phœnicians in the Levant, and cultural tradition to the Mycenæans¹ on the Ægean coast.

The chief characteristic of Mycenæan jewellery, as of the Minoan, was embossed design, and necklaces were made fully in the Minoan style. Other influences to which the Mycenæans were exposed show in a necklace with repeating pendants of little hands holding a breast,² inspired by Phœnician devotion to their Mother Goddess, and in the stampings of Egyptian cowries strung between lengths of coiled round wire,³ which were either intended to give the effect of Egyptian segmented beads or were refined examples of Bronze Age coiled bronze beads. Sometimes instead of a flat backing two stampings were soldered together, so that each side of the plaque resembled the other. Sometimes to prevent fraying by the sharp edge of the thin metal a little ring was soldered as a thickening round the hole receiving the thread. Rectangular beads were made with slightly concave surfaces, one side being carved in intaglio. Such engraved beads were probably very costly, and were strung with semi-precious beads to make the required necklace length. Glass imitations of these gems were moulded.

In all their art the Mycenæans were much attracted by the spiral. Handsome chains were made by flatly coiling either end of a length of gold wire, pushing the coils side by side so that their backs met and the intervening uncoiled length of wire was forced into a loop. Each following link was slipped through and under the preceding loop, the coils on either side making two continuous borders. The flat coils could not be pulled through the loop, and such chains could be made without soldering. A bronze chain of such links, each enormously enlarged to at least a couple of inches, and joined by plain connecting units instead of being introduced each into the next,⁴ was found in a Danish bog where it

¹ The loveliness of Helen, a Mycenæan matriarch in whom was vested a claim to the Spartan throne, shines upon us yet. The Trojan War, avenging the abduction of this heiress by a prince of Asia Minor, opened in 1194 B.C.

² In the British Museum.

³ Ibid.

⁴ In the National Museum, Copenhagen.

had been placed as a votive offering. The motif had crossed Europe without changing its function.

About 1100 B.C. the pressure of the invading Dorians drove the Mycenæans to settle on the coast of Ionia. The coming of people with iron weapons had confounded those equipped only with bronze, and with the advent of the Iron Age, darkness curtained the golden Ægean. When this was lifted Artemis was revealed, blessing with the promise of all that Europe was to be.

Necklaces of East and West: Phœnicia and Iberia

Plates 10, 11a and 11b

FROM their North Syrian littoral¹ the merchants of Phœnicia shrewdly snatched the trident of the fallen Minoans. At home their cities straddled the trade routes from Africa and Asia; now sea power enabled them to establish Mediterranean trading posts and a colony at Carthage, and by passing through the Straits of Gibraltar to the silver district of the Guadalquivir² to become overlords of the Iberians and masters of the richest metal mines in Spain. If they were prepared to venture onto the edge of the ocean where "sea mists settle, blocking out the clouds . . . the cliffs are swathed in mists, the air oppressed, the days . . . dark and dewy as the night,"³ they could reach the Tin Isles and the amber-bearing mouth of the Elbe, thus deflecting to the sea route the Baltic overland trade. No commodity played more active a part in establishing European civilization than amber, and tin was a necessity in the manufacture of bronze. The Assyrians obtained it from India, but the Phœnicians sought it in the west. Their bronze foundries at Sidon were pre-eminent, and the town was the headquarters of the flourishing silverware and jewellery trades.

The eclectic jewellers, working under the influence of Assyrian, Egyptian, and Ægean styles, knew how to solder and to chase, and used coarse granulation, filigree, and piercing, decorating with a forthright effect. The gold and silver they used was beaten so thin that beads were lined with white clay, and they eked out the metal by interspersing beads and pendants of home-made glass. The globular Etruscan bullæ they reproduced as flat circular plaques, or circles interrupted at the bottom by an intruding nick, with a thickened edge and a small flattened central projection. Tubular pendants, hung from one end, were intended to contain a charm pricked on thin folded metal sheet. Glass or metal crescents, symbol of Ashtoreth in lunar aspect, were worn by women, children, and animals.⁴

¹ "Another city by the sea is called a haven, D'ar (Tyre) is its name. Water is carried into it by boats. It is richer in fish than in sand." *Papyrus of Anastasi* 1.

² The river was believed to have its source in a silver spring, and boats returning from thence were reputed to have anchors of the precious metal.

³ *The Maritimes Sailing Book*, written 530 B.C., by a Greek sailor.

⁴ Compare "And Gideon arose, and slew Zabal and Zalmunna, and took away the ornaments that were on their camels' necks." Judges viii, 21. By this despoiling Gideon insulted the Goddess of the enemy.

The Crusaders returned to Europe with oriental trappings on their warhorses. Custom has rendered it unremarkable that twentieth-century English carthorses should display Ashtoreth's crescent.

As the sands of the Phœnician coast have an exceptional silica content great glass industries were founded,¹ and the trade in glass beads was enormous. Wire-wrapped beads were made by drawing hot glass round a rod and fusing the join. The seam is often visible, or a little knob shows where the surplus molten glass was pulled away. Cane beads were made by fusing together layers of diversely coloured glass to form a tube which could be pulled out on the rod to the desired thickness and broken off at the desired length. By grinding away the shoulders the various layers of colour could be exposed in a chevron pattern. Short lengths of fine cane could be pushed into the semi-molten foundation of a wrapped bead, showing in a spot decoration the multicoloured rings of the transverse section of the cane. Crumbs of semi-molten coloured glass could also be inserted, either flush with the surface of the bead or projecting. Wavy, ogee, scallop, and zigzag patterns in contrasting colour were dragged on the surface with a wire, or a marbled effect was obtained by kneading together various pastes. Beads with convex or concave flutes, or knobbed decoration, were moulded.

The situation of the rich Phœnician towns on trade routes both nourished them and ultimately caused their downfall. Ezekiel uttered a prophetic warning. His contemporary description of Nebuchadnezzar's might was not exaggerated, and his magnificent account of the connections and ramifications of Phœnician trade was equally well informed.²

The fall of Tyre³ obliged the Phœnicians to abandon their distant Iberian colony, and the Carthaginians hastily took charge, for at a time when minting was becoming general the silver trade was of immense value. Behind the Iberians the Spanish peninsular was inhabited by Celts, and in front of them lay the Mediterranean, bringing its eastern culture. From these two virile sources Iberian necklaces evolved. Most are Phœnico-Punic in style, sometimes with Greek influence in decorative detail. The models were imported but the manufacture was Iberian, and the Phœnician methods requiring the more difficult processes of granulation, filigree, and piercing, were gradually abandoned. The Iberians also wore torcs, a Celtic rather than a Mediterranean ornament, although they were worn in Greece in the fourth century B.C. Torcs are rigid necklaces, not linked or flexible as are chains or threaded units. Iberian twisted torcs were made of strands of silver sheet carefully fitted over iron wires, which were thickened at the centre front and gradually tapered to an opening at the back. The silver sheaths were rolled to overlap, and the slight and regular lengthwise facets from the hammer used in fitting are visible, but any solder-line is hidden by fine twisted wire serving as a decoration in the troughs of the large twisted strands. The tapering wires merged into a loop, through which either a cord was passed for tying at the back of the neck, or by which the torc was attached

¹ Until recently Arabs at Hebron made square glass beads by the old methods.

² Ezekiel xxvi, xxvii, xxviii.

³ In 572 B.C. after thirteen years of siege.

to the clothes at the shoulder. A jar with such torcs wound round its neck was found at Jaen.

A very elegant torc from the Cordova Treasure ¹ is a circle of one strand of silver-covered wire, swelling slightly to hold two beads at the shoulder, and eventually ending in large horned biconoid terminals, bent outwards so that they should lie parallel with the collarbones. This bend caused a loop in the circular strand just before the terminals, and these loops were clasped with hooks from a bicone, decorated as are the terminals with chased wedge shapes and bands of strokes. Such simple chasing is typically Iberian, the curved horned bicone typically Celtic. On this torc the bicones are hollow, joined up one side, and to project them accurately from the sheetmetal involved an elementary knowledge of geometry and the use of compasses.

Nothing is known of Iberian religion save that it was chthonic and associated with healing. All the statues known as "priestesses" wear three necklaces, which must have had ritual significance. Statues similar in detail are found in Sicily and the Near East. The most easterly example ² wears six rows of beads progressively increasing in size. On a terracotta from Sicily ³ a row of Phœnician bullæ hangs above two rows of vertical pendants, of which the first is interrupted by a centrally hung crescent, and the second worn almost at the waist. The Lady of Elché ⁴ wears two necklaces of beads with pendants of amphoræ, and one with semi-elliptical bullæ edged with beaded wire. The High Priestess from the Serro de los Santos ⁵ has on her breast three twisted torcs, and at waist level a necklace of vertical pendants. Another priestess ⁶ wears a twisted torc, and a necklace with pendants of the horned moon and rayed sun. The High Priestess was carved in the spirit of archaic Greek art of 500 B.C., while the decoration of a triton-tailed monster and a Medusa head on the dress of the second priestess is Roman in style. Apparently, at least in ritual, the fashion of Iberian necklaces did not change in five hundred years.

¹ In the British Museum. This Treasure was buried for safe hiding during Teutonic invasion, 105-103 B.C.

² In the Museum, Aleppo. From the ruins of Mari, 2000 B.C. The vase held by the goddess has a perforation leading to the back of the statue, through which a flow of miraculous water could be forced.

³ In the British Museum.

⁴ In the Louvre, Paris.

⁵ In the National Museum, Madrid. See Plate No. 112.

⁶ In the National Museum, Madrid.

Necklaces of the Etruscans

Plates 12, 13

IT is reputed that in the ninth century B.C. a famine caused the Lydians to draw lots, by whose cast half the population sailed away from Asia Minor. Before this desperate resource they had tried to rise superior to the famine by eating only on alternate days and by distracting themselves with ball games, with dice said to have been invented for this purpose, and with the music of trumpets. Two and a half centuries later, and still addicted to these amusements which they eventually bequeathed to the Romans, they had established independent cities throughout Etruria. Lack of unity caused them to fall before Roman organization, but not until their passionate feeling for beauty had disclosed to the world an art strange and spiritual.

"The river Pactolus flows through the middle of the Sardis market, carrying down gold dust from Mount Tmolus." Asia Minor was rich in minerals, and the Lydians were skilled bronze workers. They found Etruria desirable for settlement, since there were iron mines on the Island of Elba and tin and copper beds on the mainland, with great forests to feed smelting furnaces. Possibly reports of the newly acquired metal deposits attracted the further immigration of skilled workers, for even the Greeks acknowledged the superior accomplishment of the Etruscans. The "gold-tunicked Lydians" in their valleys were a conservative people with a very strong feeling for jewellery. By the seventh century B.C. the Etruscans were without equal in the ancient world as jewellers. Their work requires the eye of faith, for often it is so fine that it cannot really be seen, and if the eye can see it can scarcely credit what it beholds. In the mastery of difficult technique and the acceptance of limitations they showed great discipline, but the easy uninterrupted flow of their extravert line from its material base out into eternity is the gift of a free spirit.

Always a new manifestation of art springs from an older source. From Asia Minor the Etruscans were familiar with oriental methods, and although their early work has Mycenaean elements the outstanding characteristic of Etruscan jewellery is the use of granulation, ornamentation with minute raised balls of metal. Such decoration is to be seen on the Babylonian necklace of Plate 4: the Kassites had used it, and the Persians: the Sixth Dynasty Egyptians had combined it with a cut-away background. Sometimes a comparable effect of light and shade had been obtained by making depressed dots, or by raising dots from the back of the metal, throwing up the surface in a tiny hill sloping from

its apex. In true granulation very minute round balls, affecting with their tiny shadows the surface play of light, are applied in a definite arrangement to the background. They are made by melting specks of metal of a selected size, so that the metal flows into identical spheroids, cooling with a slightly flattened base. The Etruscans evolved effective pattern by contrasting polished background and granulated surface, but sometimes used too small grains, with a resulting dusty appearance through the loss of sufficient high light and shade. For each piece of work they used thousands of granules, of a fineness not attempted by other workers, all equally graded, and so accurately affixed that no trace of solder shows. It is not known by what method they did this grading, nor whether they used a chemically suspended solder, or were able by carbon absorption to fuse together the surfaces of the body of the work and of the granules without causing damage. As in all soldering, the heat had to be distributed so that the smaller parts did not melt while the larger portions were being raised to a similar temperature. Pliny's attempt to explain "*chrysocola*" is not understandable. Signor Castellani, a nineteenth-century A.D. jeweller who was at much pains to reproduce classical goldwork, stated in his memoir that "it was only in a remote corner of the Marches of Saint Angelo in Vado, far from every centre of civilization, that we found still in use some of the processes employed by the Etruscans. In substituting arseniates for borax as solvents, and reducing the solder to an impalpable file-dust, we obtained results of a sufficiently satisfactory nature. . . . Nevertheless we are convinced that the ancients had some special chemical process for fixing their strings of small grains, of which we are ignorant." Mr. Littledale, experimenting in the present century, successfully achieved very fine work by making the grains in charcoal and fusing them with a paste of copper hydrate and seccotine instead of with solder.

In the British Museum is a collection of early Greek goldwork of the seventh century B.C. found at Kameiris on the Island of Rhodes. Much of this is oriental in motif and decorated with true or imitative granulation. But it includes in two portions a necklace strap, made of five chains interwoven, on which are riveted at regular intervals five rosettes decorated with granulation, and which ends in stampings of lions' heads, surmounted with cheniers through which a ribbon passed for tying. This strap is of such exquisitely small units that the very handling of them in linking shows skill, but the split rivets which secure the finely decorated rosettes are bent back behind the strap in a very crude manner, and the riveting of the end plates is scarcely better. Chains had been made from chalcolithic times in Sumer and Egypt by taking a tiny joined circle of wire, squeezing it into an oblong, and bending this into the double shape of a U, through whose looped horns the next unit was threaded. More elaborate square chains were made by inserting similar links at right angles to the first series. It is not remarkable that by expanding this method of interlinking a flat strap was evolved, but it is very strange that when the hitherto universal arrangement of

necklace units assembled by threading is replaced by the woven strap we receive the idea already fully considered, with decorations and terminals. The type was to be further developed by the fringes added by the Etruscans and Greeks, but of the earlier stages of its evolution before the Rhodian example no traces have survived.

The other objects in the Kameiris Treasure resemble in technique and inspiration goldwork from Aidin¹ in Asia Minor. It is known that the Lydians were in Ephesus before the Ionian Greeks, and that the settlement of Etruria was protracted. One may speculate whether transmigrating Lydians tarried in Rhodes, for by the sixth century Etruscan jewellers were making elaborate use of the Rhodian strap, adding wide fringes of looped intersecting chains, from which, as also in the intervening spaces, hung stamped and granulated pendants of sirens, river gods, rosettes, lotus flowers, stone or paste scarabs, and amber. Amongst these Asiatic and Egyptian motifs the European acorn now appears.² From the Greeks the Etruscans learnt to engrave gems, but always carved a beaded border around their intaglii. Such relatively heavy gems, which were usually in cornelian or onyx, do not appear to advantage amongst the delicate chains of a necklace fringe.

An Etruscan contribution to jewellery is the bulla, a hollow convex amulet case, made of two discs of which the upper at least is domed and may be richly chased. These pendants were usually circular but were sometimes heart-shaped, or in the form of fat decorated vases or heads of river gods. They were edged with a swaged beaded wire, and hung on the neck chain from a chenier loop which was almost invariably divided by a centre line of decoration and protectively edged. These edges were usually sloped inwards from the top, which small detail of angle adds much to the beauty of the whole bulla. Sometimes in the place of the chenier two wire loops were soldered, the space between them being filled by the thumb-piece of a removable stopper for the hollow bulla. As such stoppered bullæ have been found to contain mastic remains they were possibly amuletic only in their decoration, and were intended to be filled with nard, giving off an agreeable perfume when warmed in wear. Usually these pendants were hung on the neck chain, but they were also worn on the upper arm. As their function was to ward off evil they were often decorated with Gorgoneia, or with the masks of fierce animals. Actual claws, teeth, or tusks of animals, or the little flint arrowheads scattered by early man, might be added, mounted in beautiful collars of waved looped filigree. Charms enclosed might be magical formulæ pricked on folded gold leaf, or a collection of significantly coloured threads.

¹ In the Louvre.

² In 1950 the University of Pennsylvania excavated at Yassihuyuk Gordian the tumulus grave of a young Phrygian girl, in which were found a Lydian gold bracelet, and acorn pendants from a gold necklace of the mid-sixth century B.C.

Bullæ were so distinctly Etruscan in origin that when they were adopted by the Romans they were known as "Etruscan gold." They were worn by generals in triumph to avert envy, by domestic pets, and by free-born Roman boys and girls until the age of puberty, when they were offered respectively to Hercules and Juno.

During the sixth century the Etruscans were in alliance with the Phœnicians. Some of the beautiful engravings on the backs of Etruscan bronze mirrors show the circular Phœnician pendants worn with Etruscan bullæ in a row across the front opening of twisted torcs. Both men and women wore bullæ, and the mirror-back drawings also show both men and women wearing necklaces with pendants of phalli and vulvæ, drawn with a freedom to which the jewellers did not presume in their stylized models. The central ornament of one actual double-phallic necklace includes a palæolithic arrowhead:¹ great desperation must have spurred so intense an appeal for help.

What were these Etruscans, with their sense of moving line, with their patience as of watchers of eternity? Their frescoes show their delight in colour and in pattern and in the flow of air around them. Their sculptures show their joy in delicate physical touch, which was not a relish of the body but a release of the spirit, and their smiling faces look back at us with a deep modesty, which before it had experienced had already found the way to purity, and so could pass through knowledge with innocence. Surely no other people have ever been so alluring and so elusive.

¹ In the Louvre.

Necklaces of the Greeks

Plates 14a and 14b

AS the Dark Ages passed from the Aegean the Greeks on the Ionian coast became aware that the inland Lydians behind them were exploiting gold and silver mines and had a minted coinage. The Greeks stirred: they founded trading posts up to the Black Sea, exchanging Mediterranean oil, wine, and jewellery, for salt and corn from the lands beyond the Bosphorus. From South Russia they learnt to add to gold crimson garnets and white, green, and blue enamel, but their inherent simplicity precluded the use of colour in any but minute proportion, and only the jewellers of the Greek isles used enamel.

When Pericles, in the fifth century B.C., wished to establish Athens as the Educator of Hellas, his opponents retorted that the city was "like a woman, decking herself with trinkets." For the Greeks, materially poor and aesthetically austere, tolerated no jewellery for men's use, and all that we see was worn by women.¹ Woman's place was in the home: she was not allowed to appear at parties, and that Etruscan women did so was considered scandalous. Did Sophrosne, the golden mean which guided Greek behaviour, the nothing-too-much, permit women to come to breakfast wearing necklaces, or did they have to wait until the appearance of a casual wanderer at the family hearth sanctioned dressing-up? Like the women of other countries they wore jewellery in the grave, sometimes funerary models too frail and sparing of the precious metal for the wear and tear of use, or even made in gilt terracotta.

In life they wore beads, necklaces, and chains. The beads, decorated with geometrical patterns in minute and accurately soldered granules, were made of economically thin gold, which had to be supported. Jewellers' instructions run, "Let golden apples be filled with wax: let golden apples be full of earth."

Necklaces were either the woven strap or made of thin sheetmetal units threaded through cheniers at the back. Although not seen in wear, the cheniers were often decorated with swaged grooves, while the wire from which the pendants swung might be carved. Yet these links were usually concealed by little discs, sometimes enamelled. Each little petal of a minute flower would be dimpled by a punch, the wire of each little stamen thickened with a tiny head. Rosettes were built up of one delicate layer upon another, and all edged with a wire to give strength, or to hold enamel if it were used. No detail was too small

¹ Pericles, dying, ruefully showed a friend an amulet which the women of the household had hung round his neck, indicating with a shake of the head to what folly he had been brought.

to engage the jeweller's attention: only in the riveting of the terminal plaques to the strap there was carelessness. Technically the most remarkable feat of the Greek jewellers was their skill in producing a wire for chain or for filigree fine as an eyelash. If ever there was fairy gold it is here, and with the beauty of its colour it is impossible really to look at it and still to feel that it is merely metal. It is the very "sweetness of slow-dropping honey."

Once the ordering of the units is mastered the linking of a necklace strap is a mechanical trick. The Greek strap may be of from three to seven rows, but is so miraculously fine and so closely woven that it appears not as a repetition of an even link but suspended movement. The ends were secured by palmette plaques, on the back of which, and projecting beyond the tip, were soldered loops for the threading of a cord. Sometimes a hook-and-eye fastening was linked to the loops, agreeing in decorative motif with the fine filigree¹ and granulation on the palmette plaques. It was not the Etruscan fashion to add such elaborate fastenings.

Sometimes modelled discs were fixed at intervals along the strap, beneath which hung loops and tassels of chains. There was always some decoration below the strap, suspended by tiny loops passing through the links of the lower edge. If there were more than one row of pendants the lower rows were hung from looped chains. The pendants were small cast or stamped figures of animals, monsters, cupids or goddesses, invariably hung from the head, and modelled with considerable naturalism despite the tiny scale. The Greeks were of the opinion that "charm goes with the little." Some of the simpler fringes have plain drops so closely resembling grain that one may suspect some hovering remembrance of prophylactic ornaments worn during ancient agricultural rites. At the time of the victories of Alexander the Great spearheads, like beech-nuts, were popular fringes. These victories encouraged the use of precious stones, which were now obtainable from the East.²

Greek chains were always very fine and closely woven. Some were made of figure-of-eight links, twisted at the centre to form loops at right angles as in the modern bath chain. U links were so tightly arranged that a bead could slide over their smooth surface to adjust the length of the chain, whose ends, passing through the bead, were headed by hanging tassels of beads, or flowers, or buds. The excrescences on these bunched terminals caused such chains to be known as "seaweed jewellery." By the third century B.C. chains ended in elaborate animal heads, each carefully modelled in two pieces to be soldered together, with enamelled or tiny garnet eyes, and with collars decorated with palmette

¹ Classical filigree is not open work as in more modern usage, but traces the decoration in a very fine flowing line by soldering down a wire.

² "When the shrine of Delphi was looted by the Phocian tyrants then it was that gold blazed up amongst the Greeks, and silver came romping home. And later, when Alexander the Greatest brought away the treasures from Asia, then indeed rose the sun of wealth with far-flung might, as Pindar would say." *The Gastronomer, Athenaeus.*

and spiral designs in fine filigree. The heads were usually of goats, lions, or bulls, with the hook or eye projecting below the muzzle. Degenerate hellenistic chains were made by passing a wire through a short length of chenier and bending a loop at either end, through which the next link was passed. The chenier units were eventually discarded in favour of tiny gold or glass reels.

The Greeks dreaded lest in the midst of life they might be afflicted by Hubris, the insolence which breeds sin and which the gods will punish. Looking at the exquisite refinement and unfailing perfection of their goldwork we see even in tiny things that humility may lift a man to heights. The creators of this beauty lived, as we do, under economic constraint and stress of wars. Through the echoing hollows of time we hear the voice of Athens: "Our constitution is named a democracy, because it is in the hands not of the few but of the many. . . . The bravest are surely those who have the clearest vision of what is before them, glory and danger alike, and yet notwithstanding go out to meet it."

Necklaces of the Romans

Plate 15

"Be sure, Stratippocles, thou art very childish for one of thy age and courage."
Epidicus. Plautus.

OVER the traffic on the long road back to Rome, above the tramp of cohorts, the clang of the engineers, and the voice of the law-givers, sounds the plaintive piping of the despairing wryneck, calling "Io, Io," as it lies bound to the Wheel for the moonlit love-rite. The Romans were the immediate heirs to both the Etruscans and the Greeks, but theirs was a coarser spirit: as is the spirit so is the work of man's hand. No daphne-scented air wafts from Roman gold as from the Grecian, no sense of life eternal flows from it as from the Etruscan, no warm pulsing breath swells beneath its surface. Here is honest, but flat, weight, and the unimaginative work of men who have much other business on their hands.

Jewellery was popular.¹ The three imperial centres of jewellery-making were Rome, Alexandria, and Antioch. The Greek predilection for modelled work and the use of the human figure as a decorative motif lingered in Alexandria. Abstract forms, introducing the Parthian granule-dripping cusps, hinges with pearl-headed rivets, and the Syrian carbuncle, were the Antioch fashion. Each centre made its contribution to Roman jewellery and was influenced by the others.

The first century B.C. Asian conquests of Pompeus Magnus augmented the supply of precious stones. Plasma and carbuncles, and amethyst prophylactic against drunkenness, were cut *en cabochon*, and opaque stones such as cornelian, sard, or onyx as truncated cones or flat with a chamfered edge. Chains of sapphires and pearls, emerald in its natural crystal, and plasma, were linked on looped wire in the hellenistic way. Mounted stones were also linked into necklaces, in box settings with filed claws to hold a slippery cabochon stone, or with the broad flat border known as a "roman setting," and interspersed with handsome flat units of such motifs as the knot of Hercules or ornamental axheads. In the third century were added the wide pierced frames, carved and scalloped, which are the Roman jeweller's best contribution.

¹ "But by Jove! what would you have said, Brutus, had you seen the gold which the women wear on their feet. We may indeed allow women to wear gold on their arms, and on every one of their fingers, on their necks, in their ears and their curls. Let them have chains crossed over their waists, and have ponderous jewels set out in gold hanging from their necks so that they may be conscious of wearing them even in their sleep: but should we therefore permit them to wear it on their feet?"
Pliny xxxiii.

The Romans deserved better than they received from their jewellers, who debased all inherited forms and supplied little imagination. The work was coarse: chasing and granulation and woven chainwork were giant imitations of the earlier models. The hooks and eyes of necklaces were utilitarian bendings and windings of wire; the links of simple chains in plain or beaded wire, figure-of-eight or loop-in-loop, were widely separated.

But the Roman citizen's idea of a necklace was not of an ornament but essentially as a safeguard for an amulet, and were not the Romans associated with everlasting achievement the array of amuletic pendants would be unbearable in its appeal for life's mercy. Above the invocations intoned by a religious and tolerant people sounds the shrill wail of the poor wryneck. To confer dignity on human existence and to protect it with civilization, the Romans were willing to face any enemy, to endure any climate. These brave, grave people did not flinch, but they pleaded where they could for help, and the pretty little gold ornaments were seriously intended to attract favourable influence or to turn away harm.

Ashtoreth's moon, solidly made and often with her rosette in large granules, was very popular, especially as a birthday gift, and more than one example might be worn on a chain. The symbol of any deity claimed personal help: when the cult of Isis and Seraphis swept across the Empire from Alexandria in the third century stampings of their busts were worn together, and when the later emperors claimed a "Presence" the gold coin, or a coin-impression portrait, of the reigning emperor was worn in a handsome pierced frame.

Pendants of a winged phallus were expected to induce virility, and the charming little models of sandals were probably associated with erotic cults, as were the similar little slippers worn by secret societies of the Italian Renaissance. Coral, on account of its life-signifying colour and the ease with which it could be carved, was required for phallic and feca amulets, but was exported on so wholesale a scale to the North European barbarians in exchange for amber, or to the Orient in exchange for silks and precious stones, as to debar home consumption and almost to strip the Mediterranean coral beds. Red enamel replaced coral for inlay in North European bronze, but the Romans, though making glass pastes and glass beads, did not understand the art of enamelling.

Orphic appeals to chthonic deities, or Gnostic directions to the soul seeking resurrection, were enclosed in metal cases to hang on neck chains. They were not suspended vertically, as the Phœnician charm cases had been hung, but horizontally, often from two loops, an arrangement still usual for amulet cases in the Near and Middle East. The cases were cylindrical, six-sided or of open wire network, and the charm was introduced from the end.

The thin gold discs, stamped with a central eye from which radiated in a wheel or cross miscellaneous symbols of the gods and representations of domestic implements, resemble in arrangement and symbolism the terracotta moulds

used for making the cakes offered to Artemis.¹ The wheel or cross connects them with ritual cakes offered far earlier to propitiate the spirits of the hearth, possibly from neolithic practices to feed the defunct of the family who were buried there. These little disc amulets must have entreated very ancient power.

Amuletic Wheels of Love, pendant, or linked into the fastening of chains, were usually made of beaded wire, but with varying numbers and shapes of the decorative spokes.² The real wheel was made of wood, and in rites descended from the Greeks was used for the crucifixion of a wryneck. The unceasing cry of the tortured bird invoked onomatopoeically *Io*, the chief attendant of *Juno*, often merged into her personality as patroness of marriage, and potent to ease the yearning heart.

Cry, wryneck! The citizens of Rome are born free, but who is not sorrow's slave? Straight run the Roman roads, but where can the way through life be found? Cry, wild wryneck, across the moon-flooded marshes: who, having loved, is not for love's sake bound?

¹ When the spring moon had just passed the full, these cakes were placed at crossroads, surrounded by candles. In England cross-bearing buns are still eaten in the spring, not at teatime when cakes are usual, but at breakfast on Good Friday, at the time of the Pascal moon.

² In inheritance from the Romans this motif was used on the obverse of British coins, where the bird on the reverse eventually itself became confused into a whirling wheel-form. One decorative shape of the wheel survived for inclusion in Anglo-Saxon art.

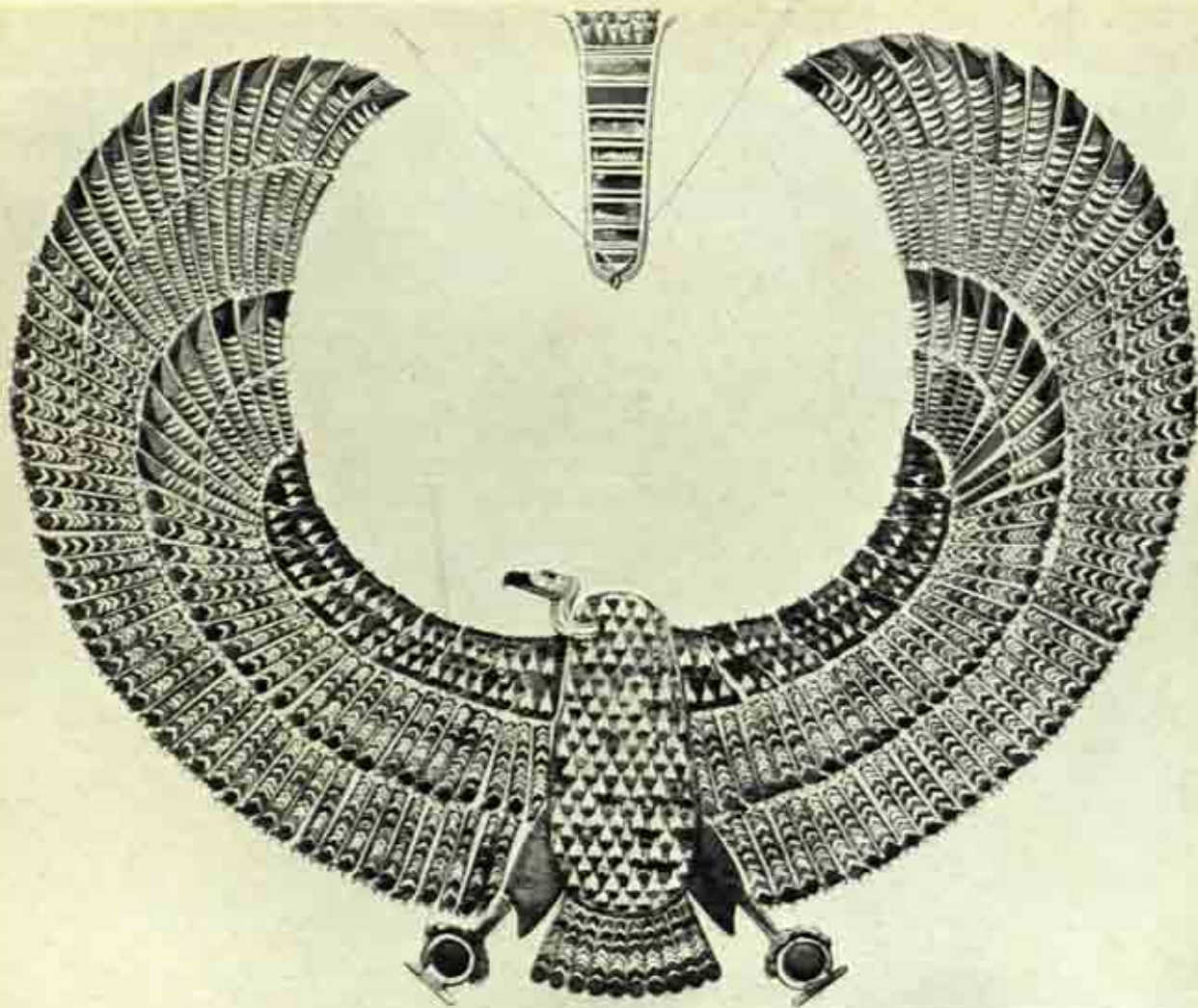


PLATE 7A

EGYPTIAN, 18th DYNASTY.

(In the Cairo Museum.)

Broad collar and Ma'nkhet of Tutankhamen, from his tomb. Gold, with semi-precious stone inlay, about 1350 B.C.

The culminating glory of broad collars is in the series found in this tomb.

Photograph, Griffith Institute, Ashmolean Museum.

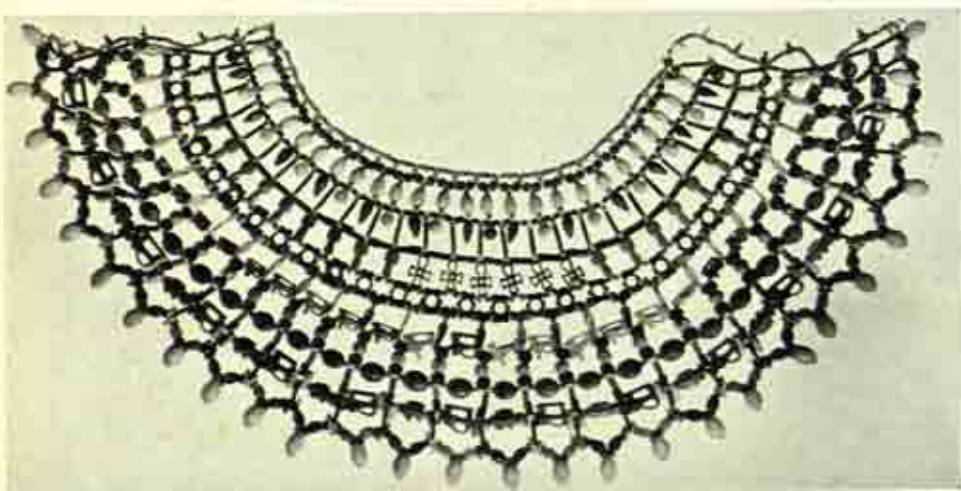


PLATE 7B

Present whereabouts not specified. Before the Second World War in the Egyptian Department of the State Museum, Berlin, but not there now.

Broad collar of a Queen of Meroë. Gold and semi-precious stones. About 1 A.D.

Photograph, State Museum, Berlin.



PLATE 8

MINOAN CRÈTE

(In the Ashmolean Museum, Oxford.)

The procession Prince, in the fresco from the Palace of Knossos. The Priest-King wears a similar lily necklace, which probably represents an Order.

Photograph, Ashmolean Museum.

(In the Herakleion Museum, Crete. Photograph through the courtesy of the Ephor of Antiques, Dr. N. Platon.)

Necklace of papyrus flowers, in hollow gold, stamped.

Photograph, E. M. Andopolak.

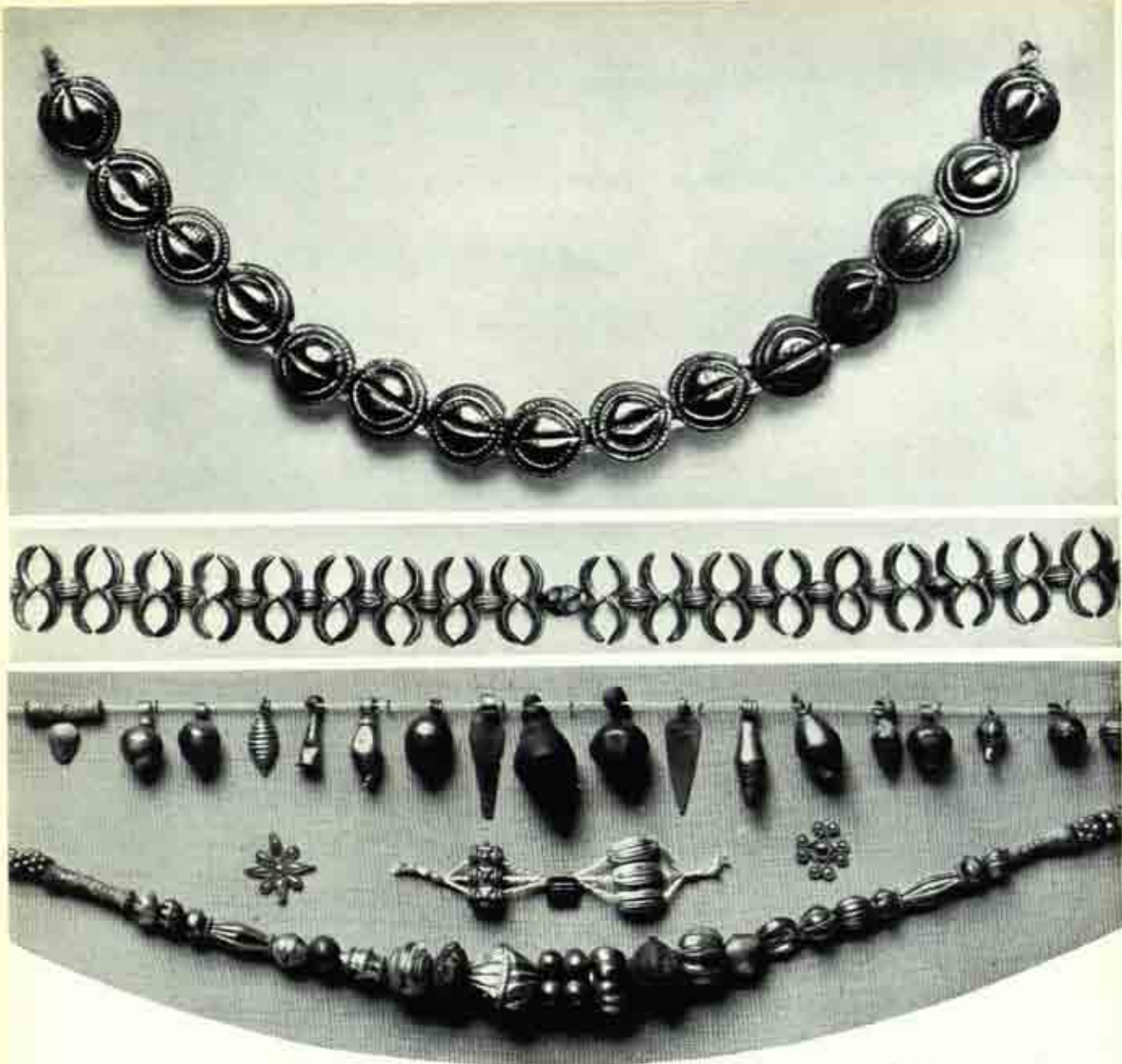


PLATE 9

MYCENÆAN. 1200-1000 B.C.

(Both in the British Museum.)

(A) From Cyprus.

(B) Late Mycenaean.

(C) PRIMITIVE GREEK. End of the 8th century B.C.

(In the British Museum.)

Beads and pendants from Ephesus.

Photographs, The British Museum.



PLATE 10

PHENICIAN, 6th century B.C.

(In the British Museum.)

Glass pendants, and beads with various decoration, marbled, spot, and zigzag. Such beads are found over a wide area of the Near East and Mediterranean basin.

Photograph, British Museum.



PLATE 11A

IBERIAN

(In the National Museum of Spain, Madrid.)

The "High Priestess" from the Cerro de los Santos, wearing three twisted torcs, and at waist level a necklace of such large vertical pendants as are shown in the photograph of the necklaces from Alisida.

The Iberians were more heavily clothed than other Mediterranean women. They shared the Minoan passion for a small waist, and were publicly measured once a year with a belt whose buckle fastened in the manner of the Egyptian necklace snaps.

PLATE 11B

(In the National Museum of Spain, Madrid.)

The three gold necklaces of the Treasure of Alisida. The units of the lower necklace are not all shown, and include pendant balls pierced and decorated with curved motifs in granulation, snake heads also granulated, Carthaginian pendants of the crescent and setting sun of Tanit and her son, and tubular containers for charms, plain and hexagonal. Two of the latter have stoppers of hawks' heads under solar discs, of Egyptian inspiration. Sometimes such stoppers had Grecian ram's heads. The stoppers and body of these containers were kept together by a slight squeezing-in of the metal.

Photograph, The National Museum, Madrid.

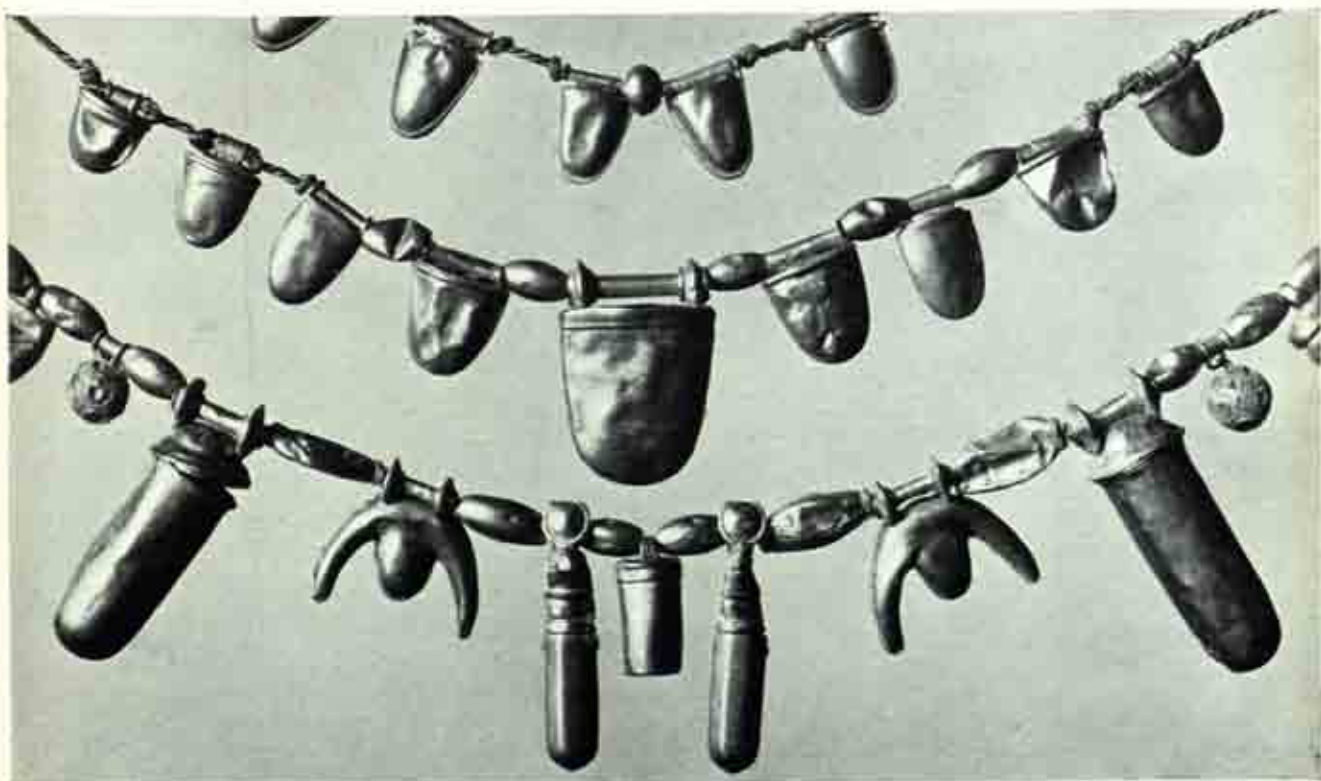




PLATE 12

ETRUSCAN

(In the British Museum.)

Photograph by the kindness of the Keeper, Mr. Bernard Ashmole.

(1) On a woven chain, between lenticular bulks with chased and stippled borders of wave pattern, the head of a river god. Late Etruscan work is curiously large. From Tarquini, 5th century B.C.

(2) On a woven chain, a satyr's head, decorated with fine granulation. Notice the extravert lines of the beard, which, although a geometrical zigzag, yet eddy into space. From Cervetti, 6th to 5th century B.C.

(3) A woven strap necklace, with pendants of granulated lotus flowers and buds and acorns, and of rosettes with granulated centres. This photograph was taken from the back of the necklace, and shows the refinement of work which would be hidden in wear. The strap ends in decorated collars with loops for ribbons. From Cervetti, 6th to 5th century B.C.



PLATE 13

ETRUSCAN

(In the Museo Archeologico di Firenze.)

(1) Gold necklace of fluted beads and plaques hung from long ribbed cheniers and stamped with heads wearing Harbor locks. From Verulonia.

Photograph, the Museo Archeologico di Firenze.

(In the Metropolitan Museum, New York.)

(2) Gold necklace with clasp of stamped sirens, with pendants of glass paste and stampings of women's heads and alternating heads of satyrs and river gods.

From Vulci, late 6th century. The warrior in the companion tomb wore the ring with Silenus heads mentioned in the notes to Plate No. 26.

Photograph, The Metropolitan Museum, New York.



PLATE 14A

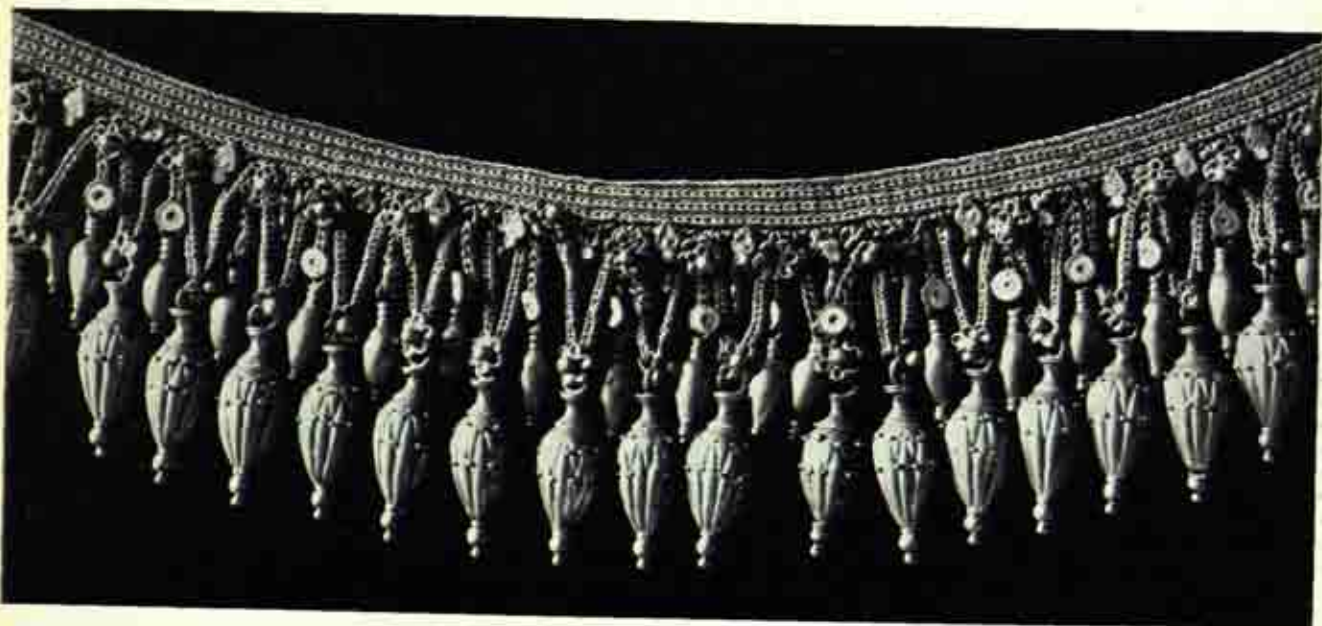


PLATE 14B

GREEK. All of the 4th century B.C.

(Both in the Ashmolean Museum, Oxford.)

Two necklaces, gold and silvergilt, from the Crimea.

Photograph, The Ashmolean Museum.

(In the British Museum.)

Gross enlargement of necklace from Melos. The actual width of the necklace is one inch. The leaves between the rosettes next to the strap, and the discs on the shorter chains, are enamelled pale green.

Photograph, British Museum.



PLATE 15

GREEK AND ROMAN

(Cameo Corner.)

Lying against a piece of lava from Vesuvius enclosing beads, a Roman chain with lion-head clasps and garnet beads, with a medallion of Minerva, all of the 3rd century A.D. In the centre a Roman cameo of The Lucky Boy, in a gold frame. On the left an early bead, possibly Mycenaean, with very fine filigree decoration, and perhaps intended to be filled with nard. Beads of this form and decoration, not made to open and much coarser in execution, were made in the 2nd century A.D. in Denmark, where the type may have been introduced through Roman or Celtic influence.

A Roman chain with a collection of charms :

- | | |
|---|--|
| (1) A Roman amulet case of the 2nd or 3rd century A.D. | (5) A frog on a shell. |
| (2) A Roman plasma bead. | (6) A Greek head. |
| (3) A Roman medallion of Silene, 2nd century A.D. | (7) A Roman medallion with a female figure, 2nd century A.D. |
| (4) A Greek head, from a necklace, with a gold reel on the connecting link. | (8) A pearl. |
| | (9) A Roman bust of Artemis, 3rd century A.D. |

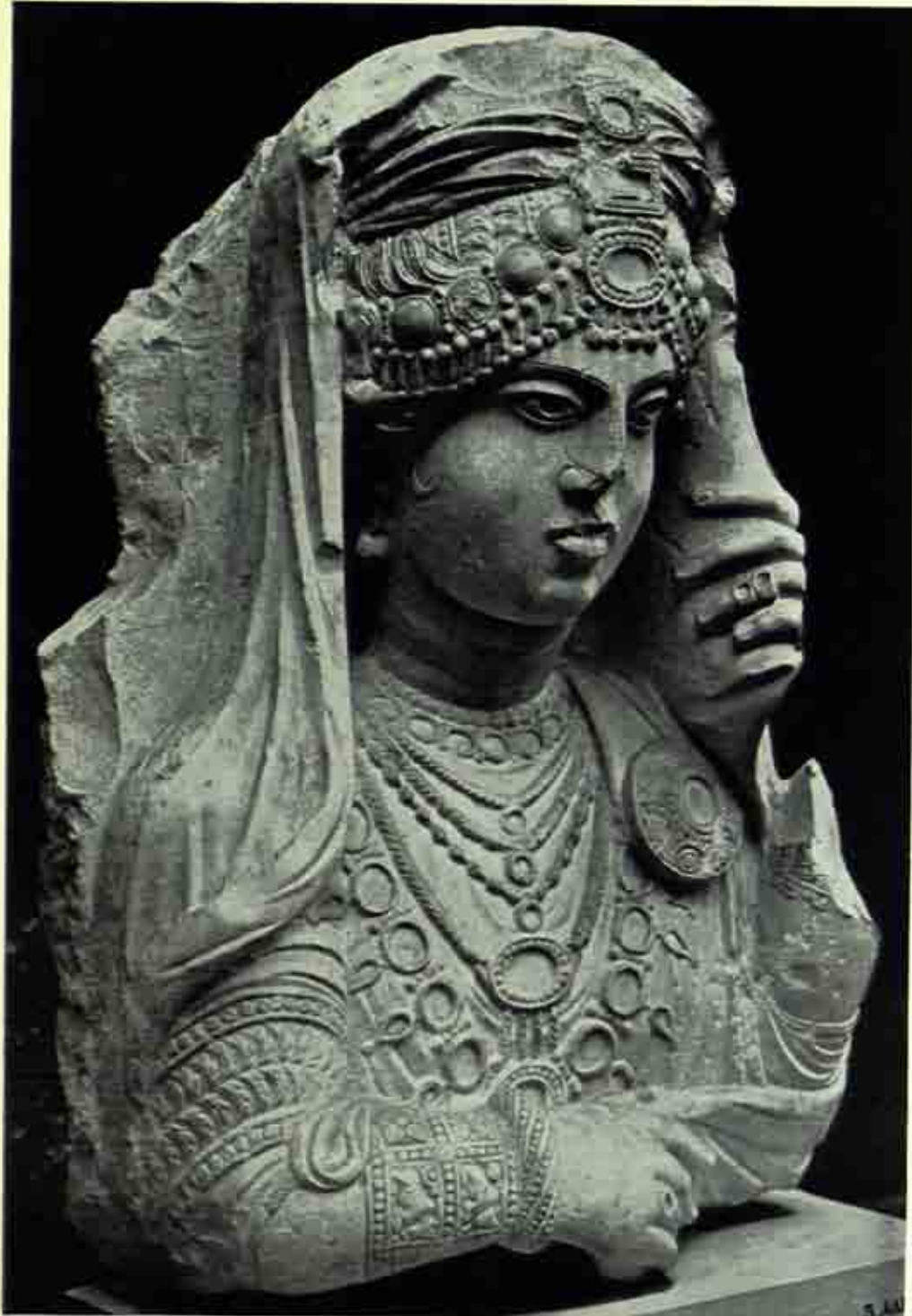


PLATE 16

PALMYRA

3rd century A.D.

(Funerary bust in the Ny Carlsberg Glyptothek, Copenhagen.)

The jewellery on this limestone carving shows traces of painted colour. The settings are deeply carved, with a firm edge and probably originally contained glass gems.)

The seven necklaces represented would be :

- (1) of pearls ;
- (2) and (7) of precious stones, probably carbuncles, in settings hinged with pearl-headed rivets ;
- (3) a crescent of Ashtoreth on a gold chain ;
- (4) a crescent of Ashtoreth on a gold chain linked with emeralds in their natural crystal form
- (5) a crescent of Ashtoreth on a linked chain of, probably, emeralds and pale sapphires ;
- (6) a gold chain supporting, probably, an onyx. (There is a similar setting with an onyx in the British Museum.)

Photograph, The Ny Carlsberg Glyptothek.



PLATE 17

BYZANTINE

6th century A.D.

(In the Metropolitan Museum, New York.)

Gold necklace, probably of Syrian workmanship, found in Cyprus.

The length of the chain obviates a fastening, but a Wheel of Love arranged as a Cross of Redemption decorates the back. In front the chain becomes a simple loop-in-loop to pass through beads resembling amulet cases,

typical of Syrian work of the 6th and 7th centuries. They are decorated, as are the pendants, with a chased Syriac surface. The almond shape of the leaves is Middle Eastern, the amphorae have travelled from Greece to 1st-century Parthia and back, the soft-ended cross is purely Byzantine.

Photograph, The Metropolitan Museum, New York.

(In the Walters Art Gallery, Baltimore.)

Roman Wheel of Love fastening, from a 3rd-century gold chain supporting a medallion with busts of Isis and Serapis.

Photograph, Walters Art Gallery.

(In the British Museum.)

Links of a Roman necklace, gold set with amethyst and plasma. A similar 3rd-century necklace is in the Museum at Lyons.

Photograph, British Museum.

Vase pendant from a 2nd-century Roman-Syrian necklet.

Photograph, William Churchill.



PLATE 18

RUSSIAN

(Cameo Corner.)

Necklaces, in the Byzantine tradition, were an important feature of peasant gala costume.

17th-century chain of filigree silver, with cast silver cross.

17th-century necklet of cast silver and silvergilt, with black enamel, and set with carbuncles. The links of the strap are decorated in front with Roman Wheels, and at the back with engraved designs of wolves, and indecipherable inscriptions under a cross.

18th-century Caucasian silver and niello decorations and religious medallions on a ribbon.



PLATE 19

HISPANO-MOORISH, 13th century

(In the Wernher Collection, Luton Hoo.)

Beads and pendants in gold.

The smaller oval beads and the six-sided drops are of open filigree. All the pendants are decorated with applied wire scrollwork, and on some small enamels are set. The three larger oval beads and the four cylindrical beads are of sheet gold, decorated with formal patterns and pierced with a cutting punch.

Compare the shapes of the pendants with the turquoise-decorated units of the Balkan necklace on Plate 20, and the cylindrical beads with the beads without provenance on Plate 21.

Photograph, Wernher Collection.

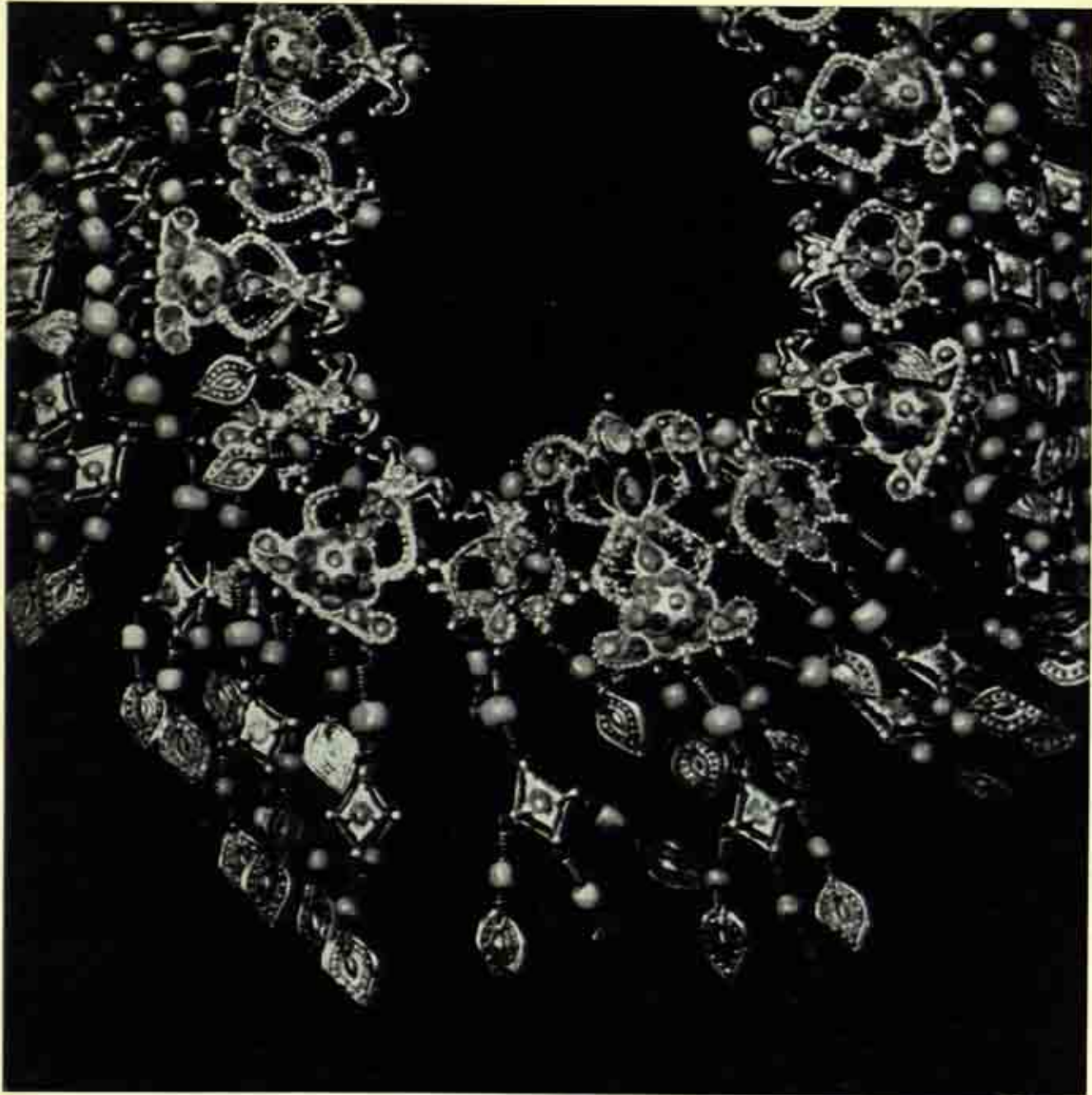


PLATE 20

BALKAN, perhaps 17th century

(Cameo Corner.)

This peasant necklace is based on Byzantine and Middle Eastern motifs. The shapes of the units should be compared with the Hispano-Moresque pendants on Plate 19. The scattered stones and use of turquoise and the bird protomai are of Middle Eastern inspiration. The attitude of the birds, and the use of coral and of 'independent eyes' in the fringe, has apotropaic intention.



PLATE 21

Late 16th or Early 17th century

(Cameo Corner.)

Beads of unknown provenance, of Hispano-Moorish type. The enamel is in the same style as that on the 17th-century Russian ikon.

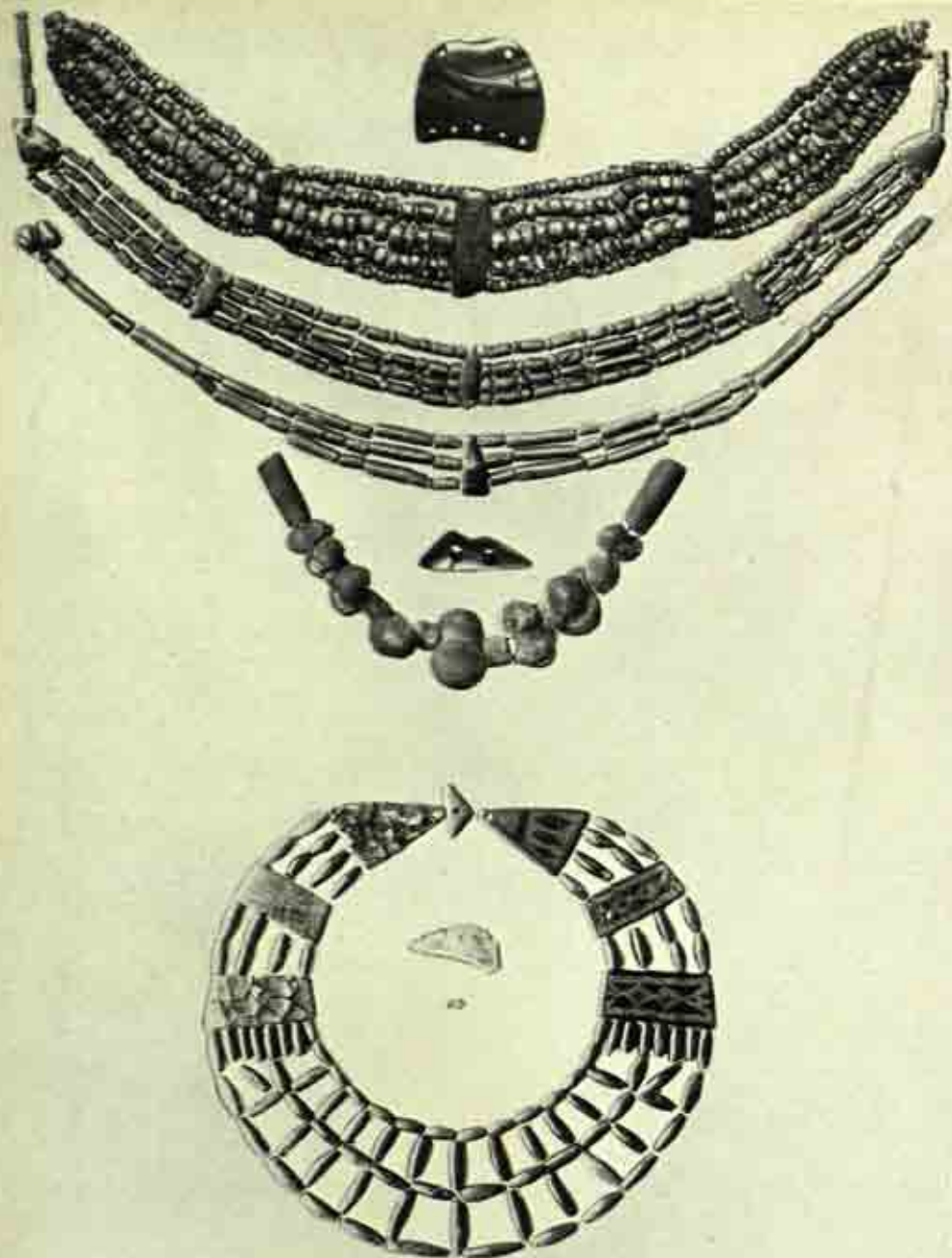


PLATE 22

NORTH EUROPEAN NEOLITHIC AND EARLY BRONZE AGES

During this period the two contributions of the vegetable kingdom to jewellery came into use. Both are from trees, amber being a fossilized gum, and jet fossilized wood.

(In the National Museum, Copenhagen.)

Neolithic amber beads from Denmark. The stringing is conjectural. The large beads on the lowest string are shaped as knob hammers.

Photograph, The National Museum, Copenhagen.

(In the National Museum of Antiquities of Scotland, Edinburgh.)

Jet necklace from Mount Stuart, Bute. Probably the punctuated patterns on such necklaces were emphasized by a coloured filling. The complicated perforations of the spacers of this necklace resemble those of amber spacers from Central Europe and Greece.

Photograph, National Museum of Scotland.

Necklaces of the Ladies of Palmyra

Plate 16

PALMYRA, on the western edge of the Syrian Desert, was one of the farthest-flung Roman imperial dependencies. Situated in the hellenized Near East, backed by Rome and faced by the Orient, from which the influence of the Chinese Han empire extended to Western Turkestan, it was ideally situated as a trading centre. For Eastern trade the sea route was still more hazardous than the overland, and the Palmyrene militia¹ escorted the merchant caravans across the desert by tracks not exposed to the skirmishes of Rome and Persia.

There was a guild of gold and silver workers in Palmyra. They based their work on Syrian models and exported it to the Western world through Sidon, but the Palmyrenes themselves were their good customers. Necklaces were not worn prior to the mid-second century A.D., but during the following hundred years no women have so delighted in them, or worn so many simultaneously with all-convincing dignity, as did these desert citizens.

The necklace worn at the base of the throat was usually of pearls or of small beads, but might be an elaborately threaded strap of beads standing against the neck. A series of chains followed, graded in length to prevent any obscuring of the pendant amulets. The lowest, largest, and most impressive necklace was of semi-precious stones mounted in round, oval, or trapezoidal settings hinged together with pearl-headed rivets in the Syrian manner. Beads might be round, oval, knobbed, or keeled, made of semi-precious stones, faience, or glass with feathered decoration. As protection against the evil eye the Roman crescent had an enormous vogue.

The Director of the Museum of the American School of Archaeology in Beirut has said² "Custom and tradition die hard in the East, and on visiting the womenfolk of a notable of Palmyra (in 1948) I found my hostesses arrayed in an astonishing wealth of jewellery, mostly of gold. Each wore two or three necklaces, and one of these, of considerable length, was composed of large gold coins of Hungary."

¹ The Roman military command stationed a contingent of these Near Eastern troops on Hadrian's Wall in the cold and misty European North, where they must have pined for their golden desert sands and sun, and have found the women of Brocton Age Britain most uncouth.

² *Iraq* xi, part 2, 1949. Jewellery of Palmyra and its significance. D. Mackay.

Necklaces of the Byzantine Empire

Plates 17 and 18

TO the west of the Western Roman Empire lay barbarian lands; to the east of the Eastern Roman Empire stretched ancient civilizations. When the Western Roman Empire collapsed, the weight of influence inclined naturally towards the Eastern Empire. The city of Byzantium, destined first to shelter European culture from barbarians and finally to defend it from infidels, grew great in beauty. "Into her harbours sailed expectantly the vessels of the world's trade, and the winds conspired to bring merchandise to enrich her citizens."¹

Byzantine society, composed of diverse and contradictory elements from the east and west, was necessarily very highly organized. Of the elaborate guilds, that of Gold and Silver Workers was the second in importance, yielding pride of place only to the notaries. Jewellers had their premises in Zeuxippus, the vast Palace workshop, but there was no imperial monopoly of craftsmen, and work differs little whether made in Byzantium, Russia, Cyprus, or Sicily. During the seventh century the ravages of controversy and financial depression drove many jewellers westward, where the barbarian kingdoms of the Lombards and Franks were glad to employ them.² Although the other great cities, of Alexandria and Antioch, must also have produced the jewellery fashionable in the Byzantine Empire, very few necklaces have survived. Countless pieces of real beauty and of empirical display must have perished in the looting of Constantinople by the Fourth Crusaders in 1204, when pearls and gems were scattered over the pavements of the City of the World's Desire.

Inspiration came to the jewellers from many sources. Christian symbolism was vital. The Roman and Hellenistic world had made a direct legacy of their classical forms, while the Syrian and semitic contribution was the broken light of intricate surface pattern. It is not known when, or where,³ cloisonné enamelling was invented, but the jewellers of Byzantium were the first to use

¹ Paul the Silentiary, ii, 232.

² In Frankish economy goldsmiths were tied workers, but their wergild was more than that of an ordinary labourer. The Burgundians valued a skilled goldworker at a rate considerably higher than that of some freemen. The Frankish kings had Palace workshops, as had the newly founded Islamic Dynasty at Damascus. Imperial diplomatic gifts to these courts from the Zeuxippus workshops were publicly exhibited by the admiring recipients.

³ In the Far East cloisonné enamels were called Fa-lan, a corruption of Fo-lang or Fo-lin, the Chinese name for Byzantium.

NECKLACES OF THE BYZANTINE EMPIRE

it on a scale large enough to compete with stones as a colour medium, surpassing gems in sombre magnificence and adding a literary content. From all over the Near East zoomorphic motifs were gathered, such as confronted lions from Ur as well as from Mycenae, peacocks from North Persia, Hittite double-headed eagles from Asia Minor. These motifs, in a pure Byzantine concept, survived in the jewellery of the Balkans and South Russia until the nineteenth century. So did the use of niello, a lead sulphide mixture treated as enamel for a *champlevé* inlay of dark metallic grey.¹ In Byzantine usage *pailletons* of gold and silver were included in the cavity with the niello, to make effective contrast. The style in which high settings for small precious stones rise like mountain peaks from a wire-decorated plain had been received by Byzantium from the contemporary Scythians, and was also handed on to the Balkans.

At first the jewellery of the Eastern Empire did not differ from that of the Western. Round, woven chains were not to be distinguished from Roman except in the definite arrangement of the spokes of a Wheel of Love as a Christian Cross, or in the use of Byzantine coins instead of Roman, with perhaps more emphasis on the pierced frames. But two types of necklaces evolved, one being almost entirely of roughly shaped cabochon precious stones, and the other of richly chased gold. The broad fringed collars represented on the consular ivory portraits, or worn by the Empress Theodora and one of her ladies in the sixth century mosaic at Ravenna, were jewelled, and these important necklaces probably indicated rank. In this style a reversion to linked units was curiously made in the very arrangement by which threaded units had been abandoned. In place of the classical woven strap alternating pearls and precious stones were linked on gold wire: the chains of the fringe were replaced by intersecting lengths of straight wire, and from these hung precious beads instead of the stamped modelled ornaments. Such a necklace might be of pearls and emeralds with pendant amethysts and sapphires,² and although the beautiful skill and honest work of the Etruscans and Greeks is avoided the effect is of immediate splendour.

The goldsmiths shared in the Byzantine feeling for both a frontal and processional presentation in art. Gold necklaces were in general so long that in wear the drooping ornaments hung perpendicularly on the chest. It can be seen from the necklace on Plate 17 that the arrangement of a large cross in the centre, with the ornaments on either side bigger than the outer units, is reminiscent of the mosaics of Christ in glory, flanked with the figures of the Emperor and Empress somewhat larger than their processing attendants. The links of this necklace are of late Roman pattern, but whereas the Roman jeweller would have

¹ Niello was used by the Egyptians of the Seventeenth Dynasty, the Romans, Merovingians, and the Anglo-Saxons. Its composition of silver, lead, copper, and sulphur are given in Pliny xxxiii, 46, and Theophilus' *Schedula diversarum artium*, iii, 28. Niello decoration is typical of modern Caucasian tourist souvenirs.

² In the National Museum, Palermo.

arranged them in alternating pairs, the Byzantine jeweller made them follow one another. Progression is still evident in the eleventh- and twelfth-century enamelled necklaces from South Russia,¹ where gold discs, hinged together, are successively decorated with the Tree of Life and with a bird looking to alternate sides, a chain at the back lengthening the whole sufficiently to cause in wear the birds to look out from parallel rows of trees.

¹ Formerly in the Pierpoint Morgan Collection. There are fifteen discs in each complete necklace. Two fragments of a necklace, each of three discs, are in the Metropolitan Museum.

Necklaces of the Moors in Spain

Plates 19, 20 and 21

ISLAM originated as an ideal. It rapidly obtained political power beyond its original sphere, its homeland adherents considering themselves superior to its foreign converts, and its party funds being forcibly acquired, first from fellow citizens unwilling to accept its tenets, and finally by conquest. Those outside its enlarging domains viewed its teaching and encroachment with horror. A modern parallel has been achieved. Because of the lack of education in its founders, Arabic art was originally eclectic, and jewellery was inspired by Byzantine work, but as the style passed along the north coast of Africa into Spain it acquired unmistakable character.

Owing to the light weight of the sheetmetal used, and the natural fragility of open filigree, Hispano-Moorish jewellery has not often survived in a good enough state to present its original effect. The pendants of necklaces, whether made in the sheet or of filigree, were built on supporting sides which may be as much as a quarter of an inch deep, and which follow the shape of the thin plates of the back and front but cannot sustain the whole extent of the plaques. Inadvertent crushing strongly disturbs the surface play of light, and when a sombre enamel rests on filigree which has been accidentally depressed the involuntary impression of overwhelming weight placed on overburdened fragility is distressing. Necklaces were of short length, presumably to avoid the risk of being crushed in wear.

Such cylindrical beads as those shown in the outer necklace on Plate 18, with pierced filigree decoration and coronets of built-up filigree beads, are the prototype of the beads on Plate 21, which are decorated with rather freer patterns of dark-green and white enamel in cloisons of twisted wire, often with bands of garnets at either end of the cylinder, beneath the coronets. In museums they are ascribed to a varying provenance, perhaps from Hungary, Venice, or Greece, and now Albania is the most favoured region. They are probably of the late sixteenth or early seventeenth century.

The shapes of Hispano-Moorish necklace pendants are usually Byzantine. But the four filigree plaques with enamel centres of a fourteenth-century necklace¹ are formed as the Hand of Fatimah, considered a most powerful amulet

In the Metropolitan Museum, New York.

by Arabs,¹ yet strangely combined with a circular cog-edged central pendant in the same style, inscribed "Ave Maria gracia plena." Let us hope that the doe-eyed lady for whom this necklace was made found happiness in the Paradise of one or other Patroness.

¹ Fatimah the Weaver, the "bright blooming" (a name of Venus), "the clean maid" (Virgin, still so called after childbearing), was one of the four women considered perfect by Muhammed. She was his daughter, married to his cousin. Her hand symbolizes in the thumb the Prophet, herself in the first finger, her husband and two sons in the remaining fingers. It also represents the religion of Islam and its fundamental duties: to keep the Fast of Ramadan, to go on pilgrimage to Mecca, to give alms, to destroy unbelievers, and strictly and regularly to perform the prescribed ablutions.

Necklaces of the North European Neolithic,
Bronze, and Iron Ages

Necklaces of the North European Neolithic and Early Bronze Ages

Plate 22

THE slow retreat of the icecaps of the last glacial period retarded men in the northern lands. The stages of the Old and New Stone Ages, of the Bronze and the Iron, followed in the same sequence as in the south, but at different periods and rates of development. Had it not been that the southern peoples coveted the beautiful and mysterious electric fossil gum spewed up by the northern seas northern development would have been yet later. When amber went south, civilization came north.

Along the mouth of the Elbe and the coasts of Jutland and the southern shores of the Baltic the supply of amber was prolific. This resinous substance is easily shaped and pierced, and neolithic men made full use of it for their own adornment and for offerings. Thousands of beads were placed in clay urns and buried in bogs between 2500 and 2300 B.C. It is too clumsy a material for really small work, but the beads may be of any length from a quarter of an inch to two inches. Usually the shape is cylindrical, quickly obtained by rubbing the amber lump in a grooved stone, or the beads are short lengths sliced from a cylinder. Sometimes the segments were economically cut as a wedge, the wide side being more fully curved than the narrow, so that when threaded the beads were automatically assembled in a circle.

As they had no metal deposits the northerners were obliged long to remain with stone implements only, but the southern traders were anxious to barter bronze for amber. No longer could the now too precious amber be used for home consumption. It passed across Europe by two routes to the Adriatic, and along the Rhine and the Rhone. These journeys entailed great hardships, but, as along all trade routes, commodities other than for trade were carried, and luxuries from the south served as models for northern civilization. The poorer hunting and herding communities had to be satisfied with old-fashioned shell necklaces, amber, and the glass beads introduced at this time from the south, but the women of the platform villages on the Swiss lakes were overladen with the new bronze jewellery.

On the westward route from the great bronze industries of the Lower Danube towards British tin, a necklace has been found¹ of four segmented beads

¹ At Esloo, in the Drenthe Province of Holland.

of Egyptian faience, twenty-five beads of tin, and fourteen of Jutish amber. Imported blue glass beads and the faience beads of Tel-el-Amarna¹ have been excavated in thirty-six Wessex graves. Irish gold copies of segmented faience beads are found as far eastward as the Middle Rhineland. The Egyptian faience bead production was at its peak about 1600 B.C. and between the Early and Middle Bronze Ages these beads were circulating widely in the Danube basin. Usually those found in Europe have a very large perforation. In Scotland star-shaped beads of greyish faience occur, such as are found in no other land.

Multiple rows of amber beads had long been strung with spacers in Denmark. That such valuable necklaces should have been sent to the south is to be expected: whether an Egyptian broad collar could ever have gone north is now known, but formal amber collars now developed. The beads, in varying numbers of strings, were threaded between oblong trapezoidal plaques, these plaques being larger, and the number of the intervening rows of beads greater, as they approached the front. Modern necklaces of such an arrangement are still worn on the Baltic amber coast. In Britain ancient amber necklaces are not excavated farther north than Wiltshire, and the amber is of a red variety only. In one barrow thirteen gold beads and a thousand amber were found.² One amber collar³ of two hundred oval and spherical beads had eight graduated flat rectangular plaques only a quarter of an inch thick, yet successfully drilled right across at five levels.

Similar necklaces, but made of jet, occur as far north as Ross-shire, south as Cambridgeshire, and west as Caernarvonshire. They are found in cist burials, ranging from association with flint implements to an iron blade, and always with food vessels. The plaques of these necklaces vary in size from one to four inches. Careful observation during excavation has made reconstruction possible, but the position of many beads remains conjectural. The number of the intervening rows of beads is determined by the drillings in the plaques, and may be as great as nine, but sometimes the beads were arranged not in rows but as a net. Sometimes narrow spacers held the rows apart, and a triangular bead served as a toggle between the back plates. The beads were carefully polished, as were the ends and exterior faces of the plaques, and decoration was punctuated in geometric designs.

In the better necklaces all drillings were made right across the broad plates, or led from the side into these transverse channels, sometimes even through a curve: in others the top and bottom row were drilled right across, while intervening drillings were made from the side to come obliquely and immediately to the back surface of the plaque at a short distance from the edge. Out of these short channels strings could cross above the back surface, to re-enter the plaque at the farther edge.

¹ 1380-1350 B.C.

² Found at Lake. See *Archæologia*, xliii, 315.

³ Found at Upton Lovel.

The stringing also was ingenious. The threads might enter the rearmost plaque from the side to the back through one hole, be carried across, divided, and threaded through two holes at the farther side; the two strands could, by division, now take four rows of beads, enter the next plaque through two holes, emerge through two transverse and two short drillings, and divide to accommodate eight rows. Arrangements of uneven, and of odd with even numbers, were also made.

Possibly associated with these necklaces are the gold lunulae, whose actual function is not proven. They were made in Ireland between 1000 and 500 B.C., and from thence passed across Brittany and France to Central Europe. These crescentric gold plates were decorated with chased or punctulated ornament towards the back, whence the thin gold sheet tapered away to a thickening hammered out into two small square plates at right angles to the lunate plaque. Their general outline, and the position and appearance of the decoration, so resembles that of the jet necklaces that it has been thought that they are neck ornaments based on these necklaces. But the little back plates approach each other so nearly that it would be impossible to introduce the neck of the wearer without seriously buckling the thin plaque, the metal of which has been hammered to stretch it to its utmost extent. They could have been ritual halos, or simply associated with moon worship, being contemporary with gold sun discs. Conversely, the handsome amber or jet necklaces could have been reserved for ritual occasions.

These important necklaces were worn both by men and by women. They would appear to greater advantage worn against the throat rather than on the rough wool of homespun garments, and perhaps they were so worn, for the North European climate of the period was moist and warm and did not deteriorate until the Early Iron Age.

Necklaces of the North European Bronze and Early Iron Ages

Plate 23

THE invention of the woven strap, superseding necklaces of threaded units, had occurred in the East Mediterranean area at least by the seventh century B.C. The other form of necklace dispensing with threaded or linked units, the solid penannular, known as a torc, also first appeared in the Near East. These "ingot" torcs were simply incomplete circles of thick wire whose ends were hammered flat and bent back into loops, and they proved to be a convenient form for transporting the metal.¹ Identical torcs of the same period have been found in the Egypto-Syrian trading station at Byblos and in Danubian Europe, and the fashion for such neck ornaments spread all over Europe in an inexhaustible variety of shape and decoration. At first they were a woman's ornament, and magnificent examples have been found in offerings to the Mother Goddess, but in later usage they indicated male rank and achievement.

The Byblos type dates from about 1800 B.C. and was displaced by a wide, sometimes highly curved, crescentic gorget, worn between 1500 and 1100 B.C. At this time flat torcs with funicular decoration were introduced, the ends being hammered thin and pierced for tying at the back. This was elaborated into the wearing of two or three² such circlelets together, each circle being progressively larger in circumference, and the twists of the decoration running in alternate direction on each layer: the circlelets were riveted to an openwork plate, which rested against the nape of the neck and completed the full circle of the torc. An Irish gold example³ of this type is further embellished with cup-shaped flowers projecting from the middle circlelet.

Silver torcs of square twisted wire, with forged nail-head terminals were worn in Persia: bronze torcs were made in Europe of square wire twisted, with the ends rolled back, leaving an intervenient space. In Ireland, where the plentiful indigenous gold was used instead of bronze, the soft metal was wound in flat strips round a temporary wire, and the resultant flowing ribbon hooked together. Flat torcs, not twisted, were decorated with incised parallel lines in

¹ The *manilla* bronze currency in use in Southern Nigeria until the beginning of the present century was torc-shaped, and the units were carried linked into each other.

² A late example in the Berlin Museum could accommodate fourteen rings.

³ In the British Museum.

triangular basketry, concentric circles, or spirals. Any of these narrow torcs might be used to carry the open finger-sized gold rings known as "ring money."

With the developing understanding of working bronze simple torcs were cast, to be followed by the casting of elaborate varieties, requiring undercutting. The solid twist of a cast torc was sometimes filed down, to present a wide base for a beaded line along the whole length of the imitation torsion. This decoration is deceptively simple: if it was applied with a treble-beaded punch it would require one man to strike and another to hold the work. One can scarcely appreciate sufficiently the banal achievement of these early metallurgists, men taught only by experience, who, thinking in their crude unsheltered workshops, could conceive of metal as a searching line, in movement and in growth, producing objects whose beauty arrests when the usage has become archaic. Through the northern mists the godly figures of Weyland Smith and Thor the Hammerer loom in the glow of forge-fire, reminding us of the respect which was shown to men who could work bronze and forge runes. In museums we see their work covered with the dark patina acquired in long burial, but in use the bright metal would have shone from the rub of wear or have been kept gleaming with the mild acid of vinegar.

In the Late Bronze Age, between 800 and 400 B.C., torcs were designed with fantasy, especially in Denmark where the creative impulse, so long disciplined by stonework, had emerged into a triumphant use of metal. The ends of twisted torcs had already been hammered out into flat eye-shaped plates which narrowed off into modest hooks: now from these plates lengths of round wire, ending in antithetic coils, rose like antennæ to the height of two or three inches, necessitating the wearing of this ornament against the back of the neck. Two such, so abnormally large as to make their weight impossible for wearing,¹ were found in a Danish bog-offering. Other enormous votive torcs, of the Early Iron Age in Jutland and North Germany, were shaped as crowns, the peaked walls being an inch thick, hinged at the back, and fastened at the front with a steeple-headed hinge-pin.

A type in torsion was made by soldering together at their narrow troughs two V-shaped strips of metal, and with great skill twisting the four flanges in even coils. The Irish, not knowing how to solder, were astonishingly able to reproduce this four-flanged twist by filing the whole length of a heavy square wire. A further development in twisting bronze was the arresting of the torsion by gripping one flange with the tongs while twisting the metal on either side to the left and the right respectively for a few turns, checking the torsion again, and continuing the twist in reversed directions. Five to seven such checks might be introduced into a torc, throwing out the metal in graceful lips amidst the rhythmic line and lights and underhung shadows of the turns. At the back the metal merged into round wires bent to hook together.

¹ In the National Museum, Copenhagen. Found with the linked chain mentioned on page 34.

The loveliest of bronze torcs, requiring the greatest virtuosity, were made with checked torsion of three twisted strips, an arrangement resulting in deep troughs and overhanging edges, a waving series of ridges having the urge of a tendril stretching to the sun. The vitality of the Late Bronze Age torcs can hardly be contained even by the baroque forms employed, yet when decoration was used, no attempt was made to escape the rigid limits of the geometric lineal design schematized in the New Stone Age, which continued in use through the Bronze and the Early Iron Age.¹

Although the first great centre of Iron Age culture, that of Hallstatt in the Austrian Tyrol, may not have been originally Celtic, the principal propagators of the new metal were the Celts, an active and artistic people who spread across Europe to the west, and eastward into Asia Minor. Whilst it was still rare, iron was occasionally used for personal ornaments, but it did not displace bronze for this purpose, nor did the fashion for torcs and for amber and glass beads change. The band of sheetmetal standing parallel to the neck, decorated lengthwise with two or three incised lines and ending in a very long filed-down hook, was a Hallstatt introduction, and a typical torc form was half-round in section and segmented. The wearing of engraved bronze bells hanging from a plain round torc was a new fashion,² and so was the addition of pendant glass rings and of cast bronze phallic figurines. Torcs of a narrow round wire ending in a large ball with triquetral decoration are the simple precursors of the La Tène³ buffer torcs.

¹ "There is something about lines and circles that fits easily into the rules of our brain." *Doubt and Certainty in Science*, J. Z. Young, 1951.

² The usage could have been apotropaic, from the supposition that evil spirits were unable to seize a soul across the note of a bell. For this reason the Hebrew High Priest wore bells on the robe of the ephod at the dangerous moment of crossing the threshold of the Holy of Holies, and the passing bell is still tolled at funerals.

³ Called after the type-station on Lake Neuchâtel, Switzerland.

Necklaces of the Celts

Plates 24 and 25

FROM 500 B.C. till the first century A.D. the La Tène culture produced beautiful and characteristic work, homogenous and highly skilled, out of a background of movement, disorganization, indigestible victories, and unpalatable defeats. The economic expansion of the Bronze Age had been checked by the disastrous climatic changes of the Early Iron Age. Ruined farming communities and the flooded-out Lake Dwellers struggled for resettlement, and from the Eurasian steppes was felt the first ominous pressure of whole nations on the move. The Mediterranean peoples remained in the sun, but it was too late now to take the example of the Dorians, iron-bearing and perhaps connected with Hallstatt, and to follow them down to the south. An attempted entry of the Celts into Italy was frustrated by the Etruscans.

The Celts occupied the middle lands across Europe, linking together greater areas than they could defend. Their habit of wearing a torc was so general that to their Roman enemies the description "torc-bearing" was synonymous with "barbarian,"¹ but they wore this decoration for utilitarian as well as ornamental purposes, tucking the ends of their multicoloured cloak into the neck-ring when they wished to move freely.

The metalworkers used motifs from Etruscan, Greek, and Scythian cultures, but their art appeared mysteriously fully evolved in one triumphant discarding of the ancient geometric regulations. The short straight line gave way to flowing curves, and linear design to plastic swellings. Circles enclosed comma and eye-shaped leaves; curved bicones swung into triskeles, to waltz amidst carnival streamers of broken-backed curves, tendrils, and asymmetrical triquetrals; the characteristic "fish-bladder" puffed itself up to threaten a mock explosion; and from loops and circles made incarnate gremlin faces peered upon the mischief wrought in the geometric lines. Whereas in the Bronze Age torc shapes had been informal and the decoration rigid, the La Tène shapes are formal and the decoration free. This revolution against established thought was accomplished by tribesmen harassed by internecine quarrels and Roman encroachment.

Celtic torcs were either large enough to admit the head of the wearer or

¹ In 361 B.C. Titus Manlius, "without offering the body of the prostrate foe any other indignity, despoiled it of the torc, which, although smeared with blood, he threw around his neck" (Livy vii, 10). He was consequently nicknamed *Torquatus*. The torc-bearing effigies of soldiers on Late Roman monuments show that the custom was generally adopted.

sufficiently flexible so to do: they were hinged at the back, whilst fitting together in front with a tenon and mortise: or a section, furnished at either end with a tenon, might be removable from the mortise-fitted remainder of the circle. The removable portion usually, though not invariably, contained the front decoration which could hide the signs of the opening. The placing of the decoration was sometimes trinal, in pierced projections from the circle or in moulded motifs on the actual ring, but the typical La Tène arrangement is frontal, with thistle-headed or buffer terminals, or contiguous graded discs,¹ or a combination of terminal and disc. The thistle-head terminal sometimes had a posterior swelling, or a series of bead-like protuberances followed the circle towards the collar-bone. Both buffer and thistle-head might be capped with a concave disc while the terminals remained apart, or they might be conjoined. In gold both types of terminals were built up of annular sections, the fine decorations being stamped in a die while the sectional strips were still flat. The swelling approach to the front of the torc was similarly stamped, then joined to the back portion in a long cone. The stamped motives included S forms, stars, leaves, tendrils, and the interesting Celtic transformation of the Greek palmette.

Gold torcs, being hollow, were loaded, sometimes with lead. The soft metal of a narrow gold torc was occasionally tied in a knot, signifying a charm.² Bronze torcs were cast solid and, like the lead-loaded gold, were frequently very heavy. Decoration was not always carried round the cast circle, and the underside might be left flat. Occasionally a departure was made from strictly controlled form, to burst into a baroque rhythm not becoming to the massive material. The most beautiful torcs were decorated with rosettes or button discs of coral, with the cast ornament emphasized by red enamel. The Celts scarcely used amber, whose golden hue probably did not provide a sufficient contrast to gold or bright bronze, but these colour-loving people were great importers of red Mediterranean coral. From the third century B.C. they were able to use red enamel: after their decline enamelling was only practised in Britain, and was no more used in the western continental lands until Romanesque art brought it from Byzantium.

The Celts were eventually subjugated by the Romans,³ or crushed by the incoming migratory nations. Those who were able to join kindred tribes in Britain and Ireland retained their entity awhile, and their art entered its last

¹ On a pathetic example in the Zurich Museum the decoration of graded discs is now lopsided, having been cut down to fit the young neck of a little girl, from whose grave at Audelfingen it was excavated.

² There is an example in the British Museum.

³ "Caesar, being convinced that his lenity was known to all men, and being under no fears of being thought to act severely from a natural cruelty, and perceiving that there would be no end to his troubles if several states should attempt to rebel in like manner and in different places, resolved to deter others by inflicting an exemplary punishment on these. Accordingly he cut off the hands of those who had borne arms against him. Their lives he spared, that the punishment of their rebellion might be the more conspicuous." *Continuation of Caesar's Gallic War*, *asc.* Hirtius xlii.

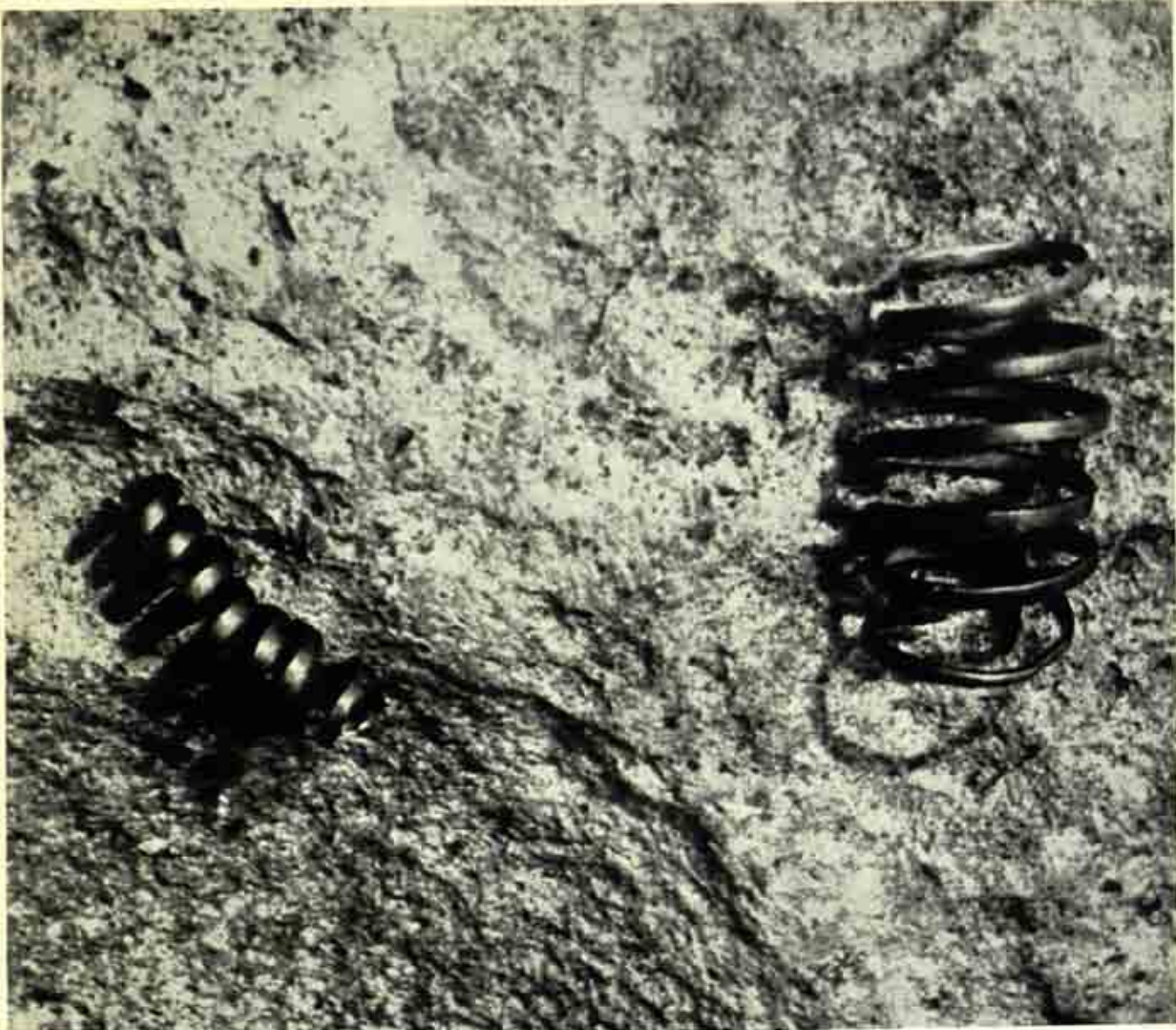


PLATE 23

BRONZE AGE

(By courtesy of Mrs. Bennett.)

(On a contemporary stone dish from Trei Caeri.)

Two large beads of coiled bronze. Compare these with the silver beads on the third necklace on Plate 27.

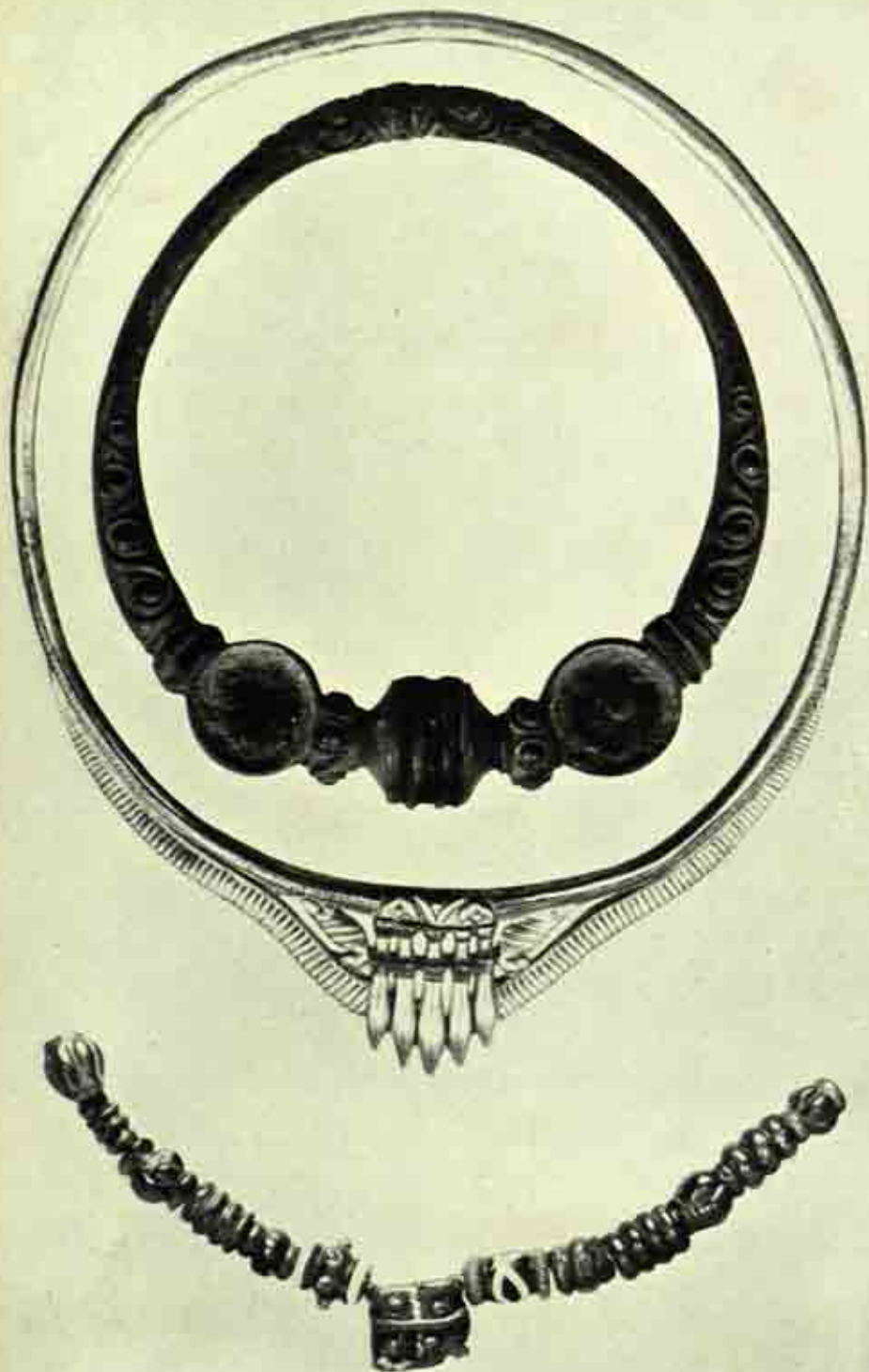


PLATE 24

Early CELTIC, late 3rd or 4th century A.C., Photographs from casts in the Ashmolean Museum.

(In the Museum, Darmstadt.)

A woman's cast bronze torc. The tenon catches are behind the circular matrices: the small dark spot on the collar below the scroll on the left-hand side of the photograph is a securing pin. A small peg to hold the coral discs remains in the centre of each matrix, but the coral has disappeared. Traces of red enamel remain in the grooves of the thistle-heads and on the knobs. Notice the little face at the back of the ring.

(In the Museum für Vor-und-Frühgeschichte, Berlin.)

Chieftain's torc, in the orientalizing style, of hollow gold filled with putty. This torc has strong affinities with the bracelet mentioned in the notes to Plate 26.

LATE CELTIC

(In the Ashmolean Museum.)

Blue-glass beads with yellow decoration. From North Ireland.

Photographs, Ashmolean Museum.

phase with distinctive north-western and south-eastern developments. The northern style, which was introduced into Ireland, used thin plastic motifs arranged either symmetrically or asymmetrically, made by casting, repoussé, or stamping, and sometimes associated with fine incised pattern. A magnificent specimen is the first-century B.C. torc from Broighter,¹ a large gold tubular circle supported by an iron lining, having buffer terminals, one of which turns to allow the locking of a tenon and mortise. There was originally some hinging at the centre back, but of this portion nothing remains. Asymmetric scrolls, stamped in relief, curl gracefully across delicately and accurately marked curves, compass-produced in close hatching. The highest relief, in small protruding coils, was added in separate stampings, secured by flanges inside the tube before the metal was joined up. In this motif we meet on the edge of Europe the helix first encountered in Sumer.

The southern style in Britain is characterized by bold scroll patterns executed in narrow flowing relief or in a firm chased outline, while the background shapes, counter to the pattern, are emphasized by a chased or engraved basketry of short threefold weave.

In neck-rings of twisted wire, either coiled or twisted in multiple strands, lay the final evolution of the torc, in which form it continued in international use until the tenth century.

¹ In the National Museum of Ireland, Dublin.

Necklaces of the Dark Ages

Plates 26, 27 and 28

WHEN autochthonous food gatherers roamed a scarcely inhabited earth then was the entire population of Europe migratory, but the mass movements which had their peaks in the third and fifth centuries A.D. disturbed an age-old economy of static communities. From these surging invasions came double distress, fear shrinking before loss and oppression, and the sickened horror of wandering peoples who could not establish a resting-place.

The great marches had begun in the sixth century B.C. when the Goths had descended from Scandinavia towards the Black Sea. In the second century A.D. the Vandals zigzagged across Europe on their way to the north coast of Africa; in the fourth century the Huns appeared from the Asiatic steppes; in the fifth century the Ostrogoths reached Italy and the Visigoths Greece. All Europe was involved in these stupendous journeys, made not only by fighting men but by whole nations, travelling in wagons drawn by edible cattle. Everything settled was rent asunder, and the eventual eclipse of order and learning put out the light of Europe.

The only memorial the migrants have left is in their jewellery: only from the established Merovingians, Anglo Saxons, and Vikings have we other legacies. But the jewellery of the Dark Ages shows that, poor though was the contribution, the barbarians brought into Europe Asiatic trends, and spread across the less wealthy North the considerable gold with which first the Roman emperors of the West and then of the East bought their peace. Medallions in Late Roman frames were highly prized as meritorious decorations. Even in the late sixth century the Franks were proud to display such pendants. Gold coins and cast copies were mounted as bractæ or framed in verroterie.

It was from the Sarmatians and the Parthians, between the Caspian Sea and the Vistula, that the migrants learnt the art of verroterie cloisonné, the inlaying of formally shaped garnets in gold cloisons, whose edges trace a fine bright lineal pattern against the inlaid background. It is the culmination of the one-plane frontal scheme, already understood in the eastern-inspired Byzantine workshops, and to be brought to its full possibility by the Anglo-Saxons. The technique reappeared in the nineteenth century in Scotch inlaid pebble jewellery. A splendid verroterie gorget was found in Roumania in the Treasure of Petrossa, buried in the late fourth century before the advancing Huns. This type of work was carried across Europe, more metal and less inlay being used as the distance

increased from the oriental sources of the garnet. In the great Rhône glassworks the Egypto-Roman technique of millefiore glass was practised, and in shades of blue was used as an easily available and beautiful contrast to the red stone inlay. From the Rhône and local glassworks the barbarians were supplied with the strings of beads they loved, in unglazed plain or variegated pastes, and in the turquoise-green melon forms associated with provincial Roman settlements.

The decorative use of ornamental beasts was acquired from the Scythians, north of the Black Sea. They had a peculiar arrangement for the limbs of animals, and a formal petal-shaped decoration for the ears, hooves, and flanks. The eye-like effect, leading a casual glance to infer a head where is in fact the rump, was the more emphasized when the beaded wire cloison enclosed a carbuncle or turquoise, and is the origin of the independent eyes surrounded by dots which occur amongst the convolutions of zoomorphic interlaced design. Such independent eyes form the motif of the fringe of the Balkan necklace on Plate 20. Beside the Scythian animals a Persian type, originating from guilloche serpents, was also brought across Europe to be interlaced in Frankish, Irish, and Scandinavian art.

The Germanic Iron Age in Scandinavia was exceedingly rich in gold. A new type of torc was made of two segments, each nearly three-quarters of a complete circle, whose ends were soldered together in front to intersect with a lunate effect, or were arranged to overlap and were bound together with gold wire. The heavy front portions were decorated with punched designs leaving a flowing pattern, while the metal at the back of the neck tapered in a permanent closure. But the glory of Scandinavian gold is in the five magnificent collars, of which two are illustrated on Plate 26. Whoever made these collars had been in contact with people who understood the art of the Scythians, the Celts, and the Etruscans.

The first of the migrants to establish a cultured hegemony were the Franks. Upon their tight vari-coloured tunics, under their green mantles with crimson borders, they wore strings of long glass beads with much bright yellow on a pompeian red ground. Their verroterie brooches and their silver-inlaid iron buckles are familiar, but no necklaces other than beads seem to have survived. That they prized such is evident from the record in *Beowulf* of the struggle for the gold and gem necklace worn by Hygelac on his historically attested expedition against the Franks in 516, or the story of Queen Fredegund and Princess Rigunth.¹

"One day her mother said to her 'Why dost thou set thyself against me, o my daughter? Here are possessions of thy father which I have under my control; take them and do with them as seemeth good to thee.' She then went into her treasure room and opened a chest full of necklets and precious ornaments, for a long time taking out one thing after another, and handing them to her

¹ *The History of the Franks*, Gregory, Bishop of Tours, trans. O. M. Dalton 1927, Vol. II, ix, 39.

daughter who stood by. At last she said 'I am weary; put thou in thy hand and take out what thou mayest find.' Riginth put her arm into the chest to take out more things, when her mother seized the lid and forced it down upon her neck. She bore upon it with all her strength, until the edge of the chest beneath pressed the girl's throat so hard that her eyes seemed about to start from her head. Then one of the maids who was in the place cried out as loud as she could, 'Help! Help! My mistress is being suffocated by her mother.' The attendants outside, who were waiting for their coming forth, broke into the small chamber and brought out the girl, whom they thus delivered from immediate death." Thus there was nearly one neck less.

In the mid-fifth century the Angles, Saxons, and Jutes, marauding from the continent, established themselves in post-Roman Britain. The Jutish epic of Beowulf is full of references to torcs, showing the importance attached to these ornaments. Beowulf himself was rewarded with "the finest collar that ever I heard tell of in the world," and when he returned from Denmark he courteously gave to the Geatish queen "the necklace, the rare wrought ornament which Wealhtheow, the prince's daughter, gave him: . . . ever after that jewel-giving was her breast adorned."

Anglo-Saxon jewellers ranked with the most highly skilled in Europe, and their standard of work was impeccable. In common with continental workers they could prepare and inlay garnets in verroterie, cast bronze, gild by burnishing the precious metal into the substance of silver or bronze, use niello, and solder. They had a predisposition for polychromatic and interlaced design derived from Frankish and northern impulses. No necklaces have been found in any way comparable to the regal jewels of Sutton Hoo or the many superb round brooches. There is not another such inlaid bead¹ as that shown on Plate 27, and it may have been worn as a single ornament, as was sometimes the case with a prized bead, but the insets at either end suggest neighbouring units. Another unique bead is a gold cylinder nearly three-quarters of an inch long, longitudinally grooved, and beaded at either end.² Typical Anglo-Saxon metal beads, such as those in the early seventh-century Desborough necklace,³ are wire-coiled bicones: in the Brassington Moor necklace they function as the loops of the pendant single carbuncles.⁴ These carbuncles are backed with chequered foil, to reflect light into their depths. The Saxons also foiled the slices of garnet in their cloisonné work, obtaining through the thin stones the effect of a hatched background for enamel. The Romans, not being enamellers, had not thought of so treating carbuncles, but in many ways their work evidently instructed the makers of the Anglo-Saxon necklaces. The eight carbuncles of the Desborough necklace hang by grooved cheniers, each flanked by a barrel bead and alternating with Roman-inspired circular gold bosses with a beaded border.

¹ In the Ashmolean Museum, Oxford.

² In the British Museum, London.

³ In the Mortimer Museum, Hull.

⁴ In the Public Museum, Sheffield. See Plate 27.

Glass beads on Anglo-Saxon necklaces are also frequently of Roman derivation, or actual beads from the earlier occupation. The home-made polychrome, or deep blue, beads were popular, but the most valued, the beautiful large carinated amethysts, were antiques of Egyptian origin which had been introduced either by trade or as tribal loot acquired in crossing Europe. When a full string of these could be assembled the beads were carefully matched and graded: even one bead was the crowning pride of a more ordinary string. Amber was not worn as a complete necklace, but again a few beads, or even one, might be included as of especial value in a string of glass beads. Amber had prophylactic virtue, and was not only worn by women. It was probably harvested on the East Anglian coast.

Coins and bractæ, both genuine and spurious, were mounted as pendants, the coins sometimes in garnet frames. As chains¹ were not used for necklaces such pendants were threaded with beads. On the Sarre necklace² of coarse orange, green, red, and white glass beads are four pendants, all barbarous copies of seventh-century Byzantine and Frankish coins, while the central pendant is a gold-mounted circular slice of Rhône millefiore glass in powder blue, red, and white. Coins were imitated by casting, but the distorted human and zoomorphic motifs and interlaced designs used for bractæ were stamped in the thin metal.

These complicated designs have affinities with Viking work, both on account of common continental and oriental derivatives and because Irish gold had long drawn the Norwegians to Britain. The Scandinavian countries were the most stable in Europe: they were not situated so as to face the oncoming migrations, and as they had been outside the Roman orbit, Imperial disasters only entailed loss of trade. Rather it was that the energy generated by the confusion of Europe flowed into the north, to discharge in the fierce Viking raids. Terror was universally felt before these men who "wept neither for their sins nor for their dead": nevertheless they were an æsthetic people who valued "their jewels and their best property, and their saddles beautiful and foreign, their gold and their silver, their beautifully woven cloth of all kinds and colours, and silk, pleasing and variegated, both scarlet and green, and all sorts of cloth in like manner." Gold was still plentiful, but silver was now considered to be the precious metal in the north. Viking torcs were of twisted wire of double or multiple strands, whose ends were soldered together and forged into a tapering link, or soldered to flat plates filed down to end in small hooks. Silver beads and pendants were large, and decorated with plaits of fine wire, laid down in

¹ The Saxons knew, of course, how to make chains, and in figure-of-eight loop used them to attach the locking pins of the two clasps from the Sutton Hoo ship burial of the seventh century. These lovely clasps, now in the British Museum, are, with their faultless inlay and use of covered cells in the borders, the most accomplished pieces of verroterie extant.

² In the British Museum. This necklace was found in Kent, but might well have been assembled on the continent.

elaborate interlacings of slack ropes. Bractæ were made from eastern coins or forged copies, the Cufic originals having passed through the Viking settlements in South Russia. In the mid-Viking period work was based on classical models. Round woven chains were even fixed in long tubular decorated ends finishing in a reptile's head such as the Romans had made in the fourth century, but the lacertine Roman terminals were transformed into veritable northern dragons. The Vikings could take, but with their strong personality they gave back full measure.

Necklaces of the Middle Ages



PLATE 25

Late CELTIC, 1st
century B.C.

(In the British Museum.)

The Snettisham torc,
made of electrum,
ploughed up in 1951.

The terminals were made in sections, very neatly soldered, with the highest relief made separately. They closely resemble one found, without any other portions of the torc, at Cairnmuir, and now in the National Museum of Antiquities of Scotland.

Photograph, British Museum.

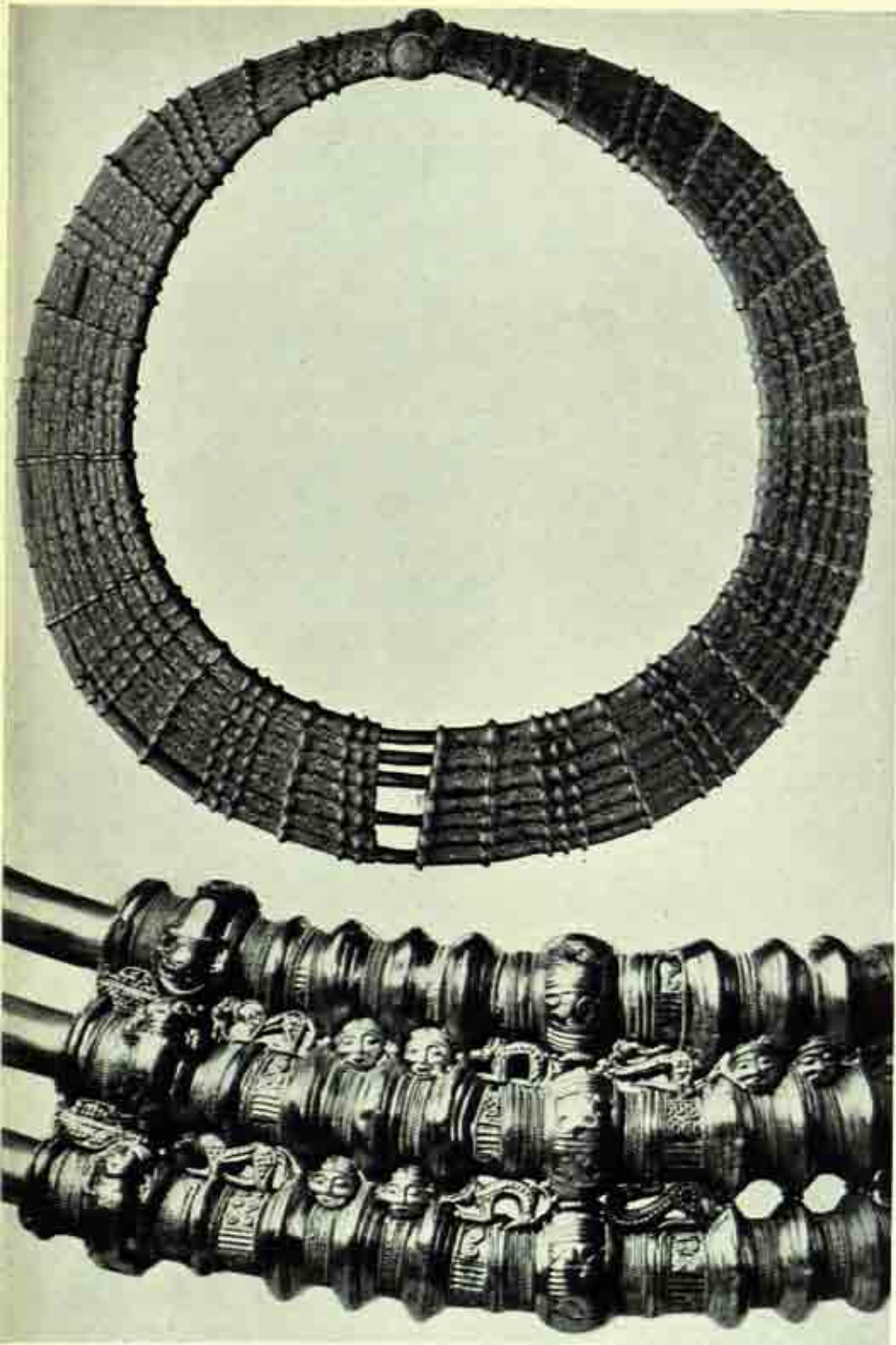


PLATE 26

SCANDINAVIAN GOLD COLLARS, probably 4th century A.C.

(In the State Historical Museum, Stockholm. A third collar, of five rows, is also in this museum.)

Two gold collars from West Gotland, one of seven, and one of three, rows. Hinged at the back, and sloped to rest against the nape of the neck, and closing by means of intruding rods. Five examples of these collars are known, all found in Scandinavia. Their form, steeply sloping all round, is unique, but their decoration is inspired by Scythian, Etruscan, and Celtic art. The long animals on the top collar, only to be seen in the photograph through a magnifying glass, are comparable with a bone carving, now in the Berlin Museum für Vor- und Frühgeschichte, from the Taman Peninsula, and are of direct Scythian derivation. So is the decoration on the flanks of the animals, clearly shown on the enlarged detail of the lower collar: the "eye" effect is easily seen on the animal next to the gaps caused by the missing masks.

The position of the animals and masks and the type of face are Celtic, and occur on a bracelet from Rodenbach in the orientalizing style which the Celts received from the Scythians and Persians in the 5th and 4th centuries A.C. These masks are also to be found, bearded, on a ring from Rodenbach which is a Celtic copy of a 5th-century Etruscan ring from Vulci, now in the Metropolitan Museum, New York. The waved filigree is also an Etruscan characteristic.

Thus these northern collars show influence from the south to the north of Europe, and from the Middle East to the west of Europe.

Photographs, State Historical Museum, Stockholm.

THE DARK AGES

(1) 5th century.

(In the Walters Art Gallery, Baltimore.)

Ostrogothic gold and garnet beads. Such polygonal beads, but larger, formed the decoration on Ostrogothic ear rings.

Photograph, Walters Art Gallery.

(2) 4th-6th century.

(In the University Collection of Antiquities, Oslo.)

The fragmentary necklace is of gilt bronze, decorated with stamped circles, punctuations, and "chip carved" crosses.

(3) Silver necklace with coiled wire beads (see Plate 23), and pendants decorated with stamped concentric rings, zig-zag, triangular, and guilloché motifs. The Goths had ruled the old Greek colonies on the Black Sea, where they learnt to use these Near Eastern motifs with classical restraint. The migrants were able to spread this acquired culture farther north than the Romans had been able to do.

Photograph, University Collection, Oslo.

(4) Late 9th century.

(In the Ashmolean Museum, Oxford.)

Fragment of a Wend necklace from Gotland, decorated with chased interlaced birds with gripping hands. These units are of bronze sheet bent round, leaving an open joint at the back, and are pierced through the sides for threading. A complete necklace of such radiating units is very handsome.

Photograph, Ashmolean Museum.

(5) 6th or 7th century.

(In the Ashmolean Museum.)

Anglo-Saxon bead, made in two parts, with verroteric inlay of garnets and lapis lazuli.

Photograph, Ashmolean Museum.

(6) 7th century.

(In the Public Museum, Sheffield.)

Anglo-Saxon gold and carbuncle necklace, from Brassington Moor.

Photograph, Public Museum, Sheffield.

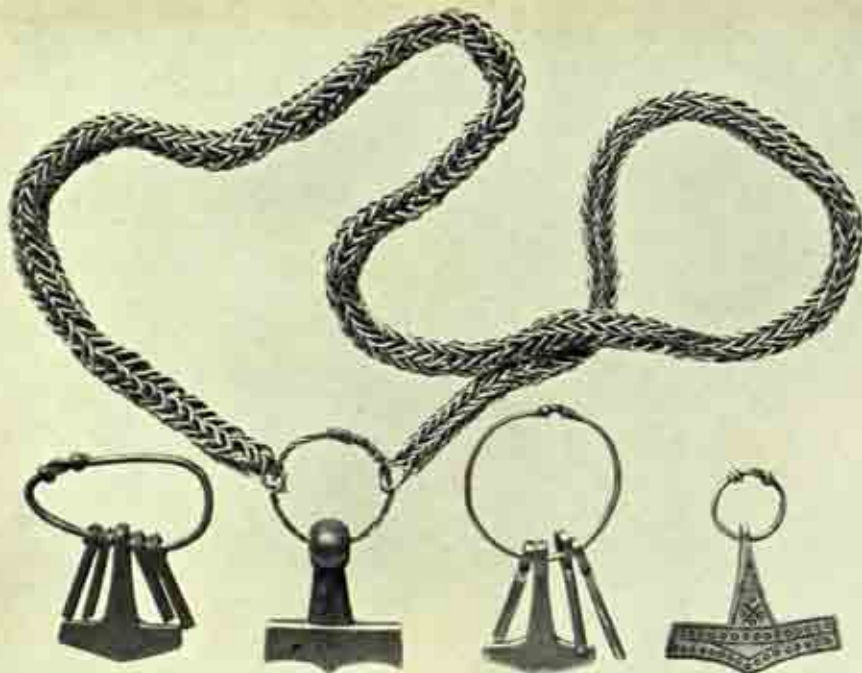


PLATE 28

THE DARK AGES

(1) 10th century

(In the National Museum, Copenhagen.)
Viking silver Hammer of Thor pendants, and a square chain of Mediterranean type, of two sets of U links interwoven.
Photograph, National Museum, Copenhagen.

On the left:

(2) 2nd century

Photograph by the kindness of Dr. O Klindt-Jensen.

(In the National Museum, Copenhagen.)
Electrum Beads and pendants, made in Denmark but of Eastern inspiration.

For the centre beads see note to Plate 15.

Compare the pendants with the Syrian vase inset to Plate 17. Similar pendants are found in Norway and Sweden. The filigree technique was probably introduced into Denmark from Roman or Celtic culture in the late years of the 1st century A.C.

Photograph, National Museum, Copenhagen.

(3) On the right: 10th century.

(In the National Historical Museum, Stockholm.)

Silver pendants from a Viking necklace, found with plaques decorated with "slack rope" interlacings in plaited wire.

Photograph, National Historical Museum, Stockholm.

Necklaces of the Early Middle Ages

Plate 29

THROUGHOUT the Dark Ages the flickering by-pass of learning was sheltered only by the Church. Men who wished to train their brains rather than their sword-hand were obliged to turn cleric, and with their intelligence offer the consolation of religion to a miserable world. As the power of the Church increased, the claims of Heaven and Hell intensified the stress of Man's burden. The tension was released in cathedral building, beginning in Normandy and beautifying all western Europe.¹ The furnishing of the shrines and altars of these great edifices deflected money from private spending. Skilled craftsmen had no need of patronage, having work in plenty for the glory of God, nor would wealthy citizens spend upon ornaments for their temporal body money which could support a chantry for the health of their immortal souls. In increasing numbers men and women renounced the world, to seek God through the Church.

Compensation had to be found for a society whose most delicately nurtured women and most intelligent men were segregated under sterile conditions. Women were wedded to Christ and lived in communities: men were incorporated in the Church, the Bride of Christ, and their chivalrous instincts directed to the Virgin. The Immaculate Conception occupied the thought of the Schoolmen until the premise that "the Word was made flesh" was accepted as conception through the chaste ear of the Virgin.² Maryology demanded that women, whose heads were in any case already covered with a wimple, should keep their ears firmly hidden to indicate innate modesty, and in emulation of the Virgin's purity. To this day no one sees the side of a nun's head, and it is obvious when

¹ In 1115 a Norman abbot writing to the monks of Tutbury in England described what was happening. "Princes, powerful and wealthy men, men of noble birth, proud and beautiful women, bent their necks to the yoke of the carts which carried stones, wood, wine, corn, oil, lime, everything necessary for the church and the support of those working at it. One saw as many as a thousand people, men and women, attached to the reins drawing a wagon, so heavy was its burden, and a profound silence reigned amongst the crowd pressing forward with difficulty in the emotion which filled their hearts. To the carts there were yoked even old men bent under the weight of their years, and children tied to the reins had no need to stoop—they would march upright under the traces. When they have reached the church they arrange the wagons about it like a spiritual camp, and during the whole of the following night the army of the Lord keeps watch with psalms and canticles." *Quoted An Introduction to Medieval Europe*, J. W. Thompson and E. N. Johnson. Allen & Unwin, 1938.

² In many early paintings the uranic dove flies down a ray of glory leading from the mouth of God at the top of the picture to the Virgin's ear. In a painting by the Master of the Life of the Virgin in the Alte Pinakothek, Munich, a miniature Christ slides on his cross down the ray.

considering her medieval costume that the closely covered neck does not invite the wearing of a necklace.

Through the eleventh, twelfth, and thirteenth centuries, from Mother Church tender eyes were turned towards sorrowing humanity : not now of the Mother Goddess but of the Mother of God. Beads she had, but worn upon the wrists or the thigh of her followers and not upon the breast.

For the only time since men had gathered and strung shells and stones, necklaces were not worn.

Necklaces of the Late Middle Ages

Plate 30

IN the mid-fourteenth century the Black Death swept from Asia over Europe, reducing the population by more than a half. To those who escaped it was sweet to be alive: Heaven had taken its share, and a depopulated earth remained to press its claims. The harsh discipline of the scholastic cell gave place to the fierce discipline of courtly love. Hell's flames receded, and women and men advanced each to the other, meeting in a world of tremulous blossom. Women's ears were still covered, but they could hear the words of polite sweetness addressed to them. Now dresses were cut low and necklaces were worn again; now both men and women wore chains and jewelled collars.

It was the knightly practice to hide in anonymity behind a cognizance known to the initiated. The ostentatious livery collars were an outcome of this modesty, the badge being translated into the necklace, such as the Plantaganet broompods worn by Richard II of England¹ or the broompods of the *Ordre du Cosse de Genêt* of his contemporary Charles V of France. Of the collars of the Orders of Chivalry the most famous are that of the English Garter, displaying enamelled red roses linked with gold knots of two tasselled garter cords, and the Burgundian *Toison d'Or* with its pendant golden fleece. The courtesy of the private livery collar was international, and was extended to friends of either sex besides being the sign of a retainer, and was also offered *ex-voto* to the Church. These necklaces were always considered to be a distinction² and the usage has survived in the collars of the Orders of Chivalry, of judges, and of some other officials. The sixteenth-century mayoral collar of London with its enamelled Tudor roses, and the early chains of one or two other Corporations are exceptional, but since the nineteenth century the English habit is for all mayors to wear a chain of office.

During the English Wars of the Roses the collar of York exhibited the rose and sun in splendour of that House, with a pendant lion enamelled white.³

¹ See the late fourteenth-century Wilton dyptich in the National Gallery, London. Richard received from Charles as a wedding present the collar of the French Order. This necklace is mentioned in a petition of 1423 as having been pawned by Henry VI. (*Rolls of Parliament* 1432, 2 Henry IV, 213-237.)

² By sumptuary edict of 1563 the lower classes were forbidden to wear gold or silver chains.

³ Both Sir John Donne and his lady wear splendid Yorkist collars in their portrait painted by Memling (1430-1494) now in the National Gallery, London. In the same room hangs a portrait by Petrus Christus (1442-1472) of a man wearing an elaborate chain of large round links, and idly running through his fingers a gold chain of 5s simply linked.

The S collar of the House of Lancaster was first used by John of Gaunt. If the S stands for Sanctus or Salvator it may be that the original collar is mentioned in his will: "Je ly devise un fermail d'or del veil manere et escript les noms de Dieu en chascun part de icel fermail, la quel ma treshonoré dame et miere la Roigne . . . me donna." Perhaps the sparkling initial in an open Book of Hours, or a lettre moresque on an imported Spanish tablecloth of Saracenic silk, led her to the mysterious S, whose meaning is now unknown. Henry IV, whose motto was "Soverayne," was much attached to the S collar. In 1391 he had one made "cum XXII literis de S." In 1397 Herman Goldsmith provided a collar "cum esset et floribus de Soveigne vous de moy," the forget-me-not. Before his accession in 1399 Henry ordered a "coler of gold with seventeen letters of S after the manner of feathers with scrolls and scriptures [inscriptions] in the same with a swan in the turet [trefoil link]," the swan being the badge of his wife. He also required Christopher Tildesley, goldsmith of London, to make him a "collar of gold worked with the word Soveigne and the letters S and X, enamelled and garnished with nine large pearls, twelve large diamonds, eight balases, and eight sapphires." The effigy at Spratton of Sir John Swinford, a follower of John of Gaunt who died in 1371, shows the earliest example both of the collar and of its use as a livery, but as such it came into general fashion amongst the adherents of the Lancastrian cause. The usual early S collar was of gilt letters sewn on a backing of green silk or leather, joined in front by a moulded open trefoil from which a ring might hang. Later the letters were linked, and yet later, under the union of the two Houses, were embellished with the Tudor portcullis and a pendant rose and reserved for legal dignitaries.¹

A great wealth of valuable stones was used for jewellery, as even for clothing, armour, and domestic plate. As far as the cut and resultant depth of the stones were concerned there was no reason for the high collets employed, which were purely a decorative development. No doubt many of the precious gems were originally spread over Europe from the sack of Constantinople, but they were more than once the loot of war.² For the first time since the end of the Roman Empire the European stock of bullion was enlarged, for by his slave trade the *Infante* Henry the Navigator opened up the Ivory and Gold Coasts. The great luxury of the Gothic florescence had a root in the African jungle.

Two jewelled necklaces played a part in the fate of England, being pawned by Henry V before Agincourt, and by Henry VI to raise money for his wars. One was the Riche Coler, "a pesane, otherwise cleped a coler, of gold enclosed besaunde wyth VIII antelopes, garnished wyth XX grete perles and garnysed

¹ See the portraits of Sir Thomas More by Holbein.

² Thus a contemporary of the Black Prince's raid on Southern France in 1355 wrote: "You must know that this was, before, one of the fat countries of the world. The English and the Gascons found the country full and gay, the rooms furnished with carpets and draperies, the caskets and chests full of beautiful jewels. But nothing was safe from these robbers." Quoted in *A Student's History of England*, S. R. Gardiner, 1894.

in the myddes of the pusane wyth V bales (rubies) whereof IIII bien of entail 'sware, and one bales VI' square. IIII gret perles standyn 'abowen the floures betwix the said bales, also VIII crowns of gold, in yche of the saide crownes ys set II grete dyamaundes poynted.'"¹ This was Italian work, the "pesane" having been made at Pisa. It had formerly belonged to Richard II. Henry VI mortgaged it for his wedding in 1445, but could never redeem it.

The second necklace was the Ikylyngton Coler, named after a former treasurer. It was "a pusan of gold, gernysshed with IIII rubies, IIII grete sapurs, XXXII grete perles and LIII other perles."² This resembles in scheme a collar worn by Henry V, in which, in the centre of each oblong gold plaque, a ruby was mounted in a high lobed four-claw setting and surrounded by Gothic bracken fronds, whose tendrils clasped at each rounded corner a pearl, giving four great pearls to each gem as in the Ikylyngton Coler. An indenture made the 9th of February 1441, mentions with some brooches "a pesane of gold called Ikylyngton Coler. This maketh mind that thise jewels were lent to the mariage of my Lord of Strafford's douzter."³ It is pleasant to imagine that the presence of the young king, then aged nineteen, also graced this wintry wedding.

Very few medieval necklaces have survived, their weight of precious metal and lavish use of gems leading to their destruction when funds failed or fashion changed. One which still exists⁴ is in the form of a circular trough edged with milled wire, a typical jewellery formula for late fifteenth-century south German work. The four sections of this necklace are linked at the front and at the sides by double links of plain round wire, while at the centre back there is a hinge. Superimposed within the trough a spray of Gothic vineleaves and grapes curve round their stem. These units are all from one mould, but arranged to flow in a reversed direction on either side of the neck. From the front hangs, by two short chains of oblong rectangular links, a sad Saint George, stolidly setting about the destruction of a dragon closely related to a seahorse. This was a man's necklace and would have lain upon the chest, but such necklaces of stiff concave sections were also made short as chokers or long enough to follow the edge of the low-cut feminine bodice.

Both delicate and heavy chains were worn by men and by women, often more than one at a time or with a jewelled collar. At first women wore them at the throat and across the shoulders, but presently they were lengthened until they hung within the bodice. As the ends could not be seen there is no knowing whether a pendant was concealed, but the chain was not usually drawn together between the breasts as though by the weight of an ornament. It was spaced to lie across the nipples as if a simple line following the shoulder edges of the bodice

¹ *Antient Kalendars and Inventories*, ed. Sir Francis Palgrave, Vol. II, p. 137. London, 1836.

² *Antient Kalendars*, op. cit., Vol. III, p. 379.

³ *Ibid.*

⁴ See *Der Schatz des Freiherren Karl von Rothschild, Meisterwerke alter Goldschmiedekunst aus dem 14-16 Jahrhundert*, F. Luthmer, Frankfurt a/M, 1885.

was intended, whereas the sexual attraction of this arrangement must have been understood.¹ Red or black cord was frequently so worn.

Chains varied in size, from those of the finest closely woven rectangular units to those of huge² round links in elaborate moulded wire with an outer beaded decoration. Equally large oval links were made of a band of sheetmetal joined and squeezed out of the round, both ends of the oval being pulled flat in an outward direction and the parallel top and bottom being pushed inwards to give a flowing ribbon effect as link followed link. The arrangement of the units of a chain was sometimes very elaborate, and might produce a point in front for the hanging of a *pent-à-col*. These pendants were set with gems and pearls, were often cruciform, and their shape could usually be contained within a square. More than one might be worn simultaneously: Edward IV³ of England was wont to wear four strings of pearls one below the other, displaying six or nine pendants. Amongst his mistresses was the lovely wife of a Lombard Street jeweller. She also wore pearls, two strings, with a Gothic necklace of pierced circular plaques and a pearl-set pendant.⁴ Alas, poor lady, her pearls were taken from her, and with only the beauty which God gave, she had to walk through the streets of London wrapped in a sheet, on a charge of witchcraft.

A religious pendant which was popular throughout the fifteenth century was the Tau Cross, worn singly or with many on a necklace, and sometimes with a tiny pendant bell. At the siege of Terouenne in 1519 the nobility of England wore gold chains hung with bells. When the energy rising to the Renaissance engendered a sense of personal value initial letters, either enamelled black or of plain gold and hung with pearl drops, were worn as pendants from a necklace or as the links of a chain. Personal initials might be worn by the individual concerned, or in courtesy by another. In the early sixteenth century such initials, either singly or sentimentally entwined, were executed in juxtaposed table diamonds, as was the Sacred Monogram. The setting of these irregular stones is as skilful as any that can be produced in precise modern work.

Although so much Renaissance jewellery was eventually made in Germany, the new style was slow in gaining acceptance there, and Gothic jewellery long remained in use. The elder Cranach,⁵ being himself a jeweller as well as a painter, enjoyed painting the heavy chains and the stiff chokers, with plaques sometimes decorated with foliage and gems, sometimes only with high-set jewels. That

¹ Havelock Ellis (*Sexual Selection in Man. Studies in the Psychology of Sex*. Footnote to p. 160, Vol. I. Random House Edition) says that "in the Indian statues of Buddha, Vishnu, goddesses, etc., the necklace always covers the nipples, a sexually attractive ornament being thus at the same time the guardian of the orifices of the body." This practice, to be observed on statues of the ninth to the eleventh centuries A.D., laid the necklace over the left nipple, to curve just below the groin.

² Heavy chains were conveniently portable in time of trouble. When Sir Thomas Gresham, founder of the Royal Exchange, died in 1579 almost all his wealth was found in his house in this form.

³ 1442-1483. He granted a Common Seal to the Worshipful Company of Goldsmiths.

⁴ See the portraits of Jane Shore at Eton College and King's College, Cambridge.

⁵ 1472-1553.

worn by his Judith¹ and probably made to his own design, has, besides elaborate leaves and settings, curled drum-ended decorations hanging over the top from the inside of the choker, while pearls swing from the bottom edge. In effigy on her late fifteenth-century tomb at Norbury, Lady Fitzherbert wears a narrow decorated choker high up her neck, so that the pendant hangs between her bare collarbones and touches the close neckline of her dress. From such expensive necklaces were derived the high collars of braided galloon or of gold tissue sewn with pearls, edged with lace or with fur, and supporting pendants hung with pearls.

Van der Goes² was a somewhat earlier painter-jeweller. In the Portinari triptych,³ which he painted for the agent in Bruges of the Medici family, he portrayed upon the right wing the wife and daughters of the donor. He painted round the neck of one girl a double row of pearls spaced by enamelled beads, having a triangular pendant set with rubies and with a drop pearl, and when about 1473 he was commissioned to paint the portrait of Margaret of Denmark, Queen of Scotland,⁴ he used the same necklace. Perhaps like Holbein, who also designed jewellery, he kept a set of jewels for studio use.

Maria Portinari, the Florentine mother in this Flanders triptych, wore a splendid necklace of roses enamelled red, white, and blue, and set with a ruby, a pearl, and a sapphire. In 1489 Machardo, Henry VII's King at Arms, was sent to Spain in the embassy soliciting the hand of Catherine of Aragon for Henry, Prince of Wales. He reported that the magnificent jewels of the Queen of Spain differed at each interview, and that she had a rich gold necklace composed of enamelled white and red roses adorned with jewels. Meanwhile in England, Henry VII, always generous with beauty, had presented the Prince with "a collar wt rede roses and white enameld, with pauncies with wyres of pynnes,"⁵ so that he might greet the Princess with a gift. The great explorations of Fernando Diaz, Da Gama, and Columbus were enlarging the world, but the international fashion in important necklaces shows that Europe was shrinking.

¹ In the Staatsgalerie, Stuttgart.

² 1440-1482.

³ In the Uffizi Gallery, Florence.

⁴ In Holyrood.

⁵ Pauncies: not pansies, but pensées, mottos. Pansies were used to signify thoughts in the chains worn by the English courtiers at the Field of the Cloth of Gold, the device being pansies with friars' knots, to indicate "Think on Francis," the French King. The effect of the ubiquitous great chains on this glittering occasion can be imagined.



PLATE 29

THE ANNUNCIATION AND IMMACULATE CONCEPTION

Tympanum of the North Door of the Lady Chapel, Würzburg.

Photograph, Bildarchiv Foto Marburg, 24856.

Gaude virgo mater Christi
 Quae per aurem concepisti
 Gabriele nuntio.
 XII cent. hymn.



PLATE 30

THE LATE MIDDLE
AGES

(In the Württemberg-
ische Staats-galerie,
Stuttgart.)

Lucas Cranach: Por-
trait of a Distinguished
Lady.

From her pearl-sewn collar she wears a pent-à-col medallion, half hidden by her slip. Five pendants on a chain are spaced by acorn links, four of the pendants being set with stones, and the fifth including a cameo. The form of these pendants could each be contained within a square.

From a chain reaching to her waist she wears a carved heart surrounded with pearls. From the enormous chain on her shoulders hang two portraits: one, in a pearl frame, of herself wearing the chain from which the heart hangs, and the other surrounded by the inscription "Johanes Fredericus Dux Sax."

Photograph, Staats-galerie, Stuttgart.

Necklaces of the Chalcolithic Age
of Central America

Necklaces of the Mayas

Plate 31a and 31b

WHEN the primeval ice drew in to its eternal northern limit, hunting men crossed the frozen Bering Strait. From near the Arctic circle they stood on land stretching nearly to the Antarctic, and nowhere on this continent were there other men. Thus America received its population, which was to spread and prosper, and to be augmented by brave voyagers of the mid Pacific, until great chalcolithic civilizations grew up around the bridge of the north and south land-masses, along the coast and in the lovely valleys of Peru, in Colombia and Panama, in Honduras and Yucatan, and beyond the Valley of Mexico. The strangeness of the brilliant Andean, Isthmian, and Mexican art makes no concessions, and the alienating blood rites belong to a chalcolithic complex.¹ A religious sense supported the patience of craftsmen working with inadequate tools, and the intellectual achievement of the artists and mathematicians.

The people who reached the highest culture were the Mayas, whose classical period was contemporary with the advance of the Huns into Europe. They inhabited the lowlands of Guatemala, south-east Mexico, and west Honduras, and, unlike their neighbours, had only small metal resources. Most of their jewellery was made of jadeite, a volcanic mineral differing chemically from Asian jade. Only one example of early period goldwork has been found, a portion of a bell-drop from a necklace, skilfully cast with thin walls. Later Mayas were most expert gold beaters, pounding the nugget to a surprising thinness between boulders. With this fine leaf they covered clay beads, securing it with stucco so that no sign of a surface join remained. A surviving carving shows a knee-length necklace resembling the sheetgold teardrop links of later Aztec chains, and ending in a handsome horizontal decoration closely paralleled in a repoussé gold pectoral from Ecuador,² but no such splendid Maya goldwork now exists. Beads of hollow gold, red and white shell, obsidian, lava, amazonite glittering with silica, pyrites, turquoise, and jadeite, show how rich and various were the necklaces. Shell was cut into discoidal and straight radiating units, or as repeated

¹ Abraham, in another chalcolithic time and place, found nothing abhorrent in his God requiring him to make a human sacrifice of a close relation.

² The carved stele is at Palenque. The gold, from La Tola Island, Esmeraldas, is in the University of Pennsylvania Museum, Philadelphia. Ecuador jewellers received at first hand artistic impulses from Central America.

little pendant figures. When using stones, advantage was taken of natural cleavage or of pebble form: fracture, cutting by the friction of an abrasive applied on hard wood or a leather thong, chipping with a stone tool, and patient grinding, were the methods available to the Maya lapidary. The conical borings of beads were triturated with sharp quartz sand in hollow bone drills, and were often very large, extracting a slightly tapered core which could be sliced and drilled to make more beads. The hole might be carried through a bead, or through a narrow peak at the back of an irregularly shaped stone, or might enter through the thickness of the material to emerge at the back as acutely as possible. Spherical beads were pounded into shape, and the peck-marks ground away. If a form required the cutting away of an especially richly coloured portion of the jadeite the precious green might be reserved frankly as an excrescence. Finish, finally obtained by endless polishing with a cane, was often carried to a high brilliancy, though the back of the work was not always brought to such perfection. Single or multiple decorative grooves round the ends of beads were made by abrasive on a string or stick: on a suitably broad surface circles were produced with a hollow drill. Ixtubtun was the especial goddess of the stone carvers, and those who served her earned for humanity her divine compassion: this belief, beside the anticipating vision of the creator, made possible their long endurance. Time trod with heavy steps past the Maya craftsman, and with dreaming eyes he watched it go.

Single strings of beads were worn at any length from a choker at the base of the throat to a row which reached the ankle, and all had a compensating length of beads hanging down the back. The centre beads on the very long strings might be as big as a tennis ball, and the total weight must have been prodigious. Enormously long beads, drilled throughout, were the lower front units of collars of five rows of straight beads, arranged so that the units of each descending row were longer than on the row above. Round beads were threaded at the angles of the segments thus obtained. In other such collars these round beads were replaced by ornaments which appear to be models of the Maya "bar of authority" or square sceptre, each little rod on the necklace ending, as do the sceptres, in carved heads, and lying diagonally across the straight lines of the basal rows. The labour of drilling such beads must have been formidable, and one may recall that the Maupes River Indians of Brazil were prepared to spend the work of two lives in drilling for their chiefs the long bead of crystalline white quartz which, worn transversely across the breast, was the symbol of authority. The boring of these beads is supposed to have been effected with sand and water and the flexible pointed leaf-shoot of the large wild plantain.

When collars were made of a sufficiency of rows of plain long or round beads to reach the edge of the shoulder a fringe of drops was added to the final string. Further ornaments for these collars, and worn also on a single string of beads, were medallions in high relief of animal masks, surrounded by radiating

borders with obtruding ornament at the sides and bottom. Beside the more usual feline masks the leaf-nosed bat and even human features were represented, all symbolizing gods. These medallions appear on representations of gods, priests, knights, and persons richly attired, and were evidently a significant distinction.

Necklaces of the Aztecs

Plates 32 and 33

TO the tragedy of the inevitability of death the Aztecs added the tragedy of the necessity for death, in atonement for mankind's sins and as a reward for divine beneficence. We can clearly see the fierce Aztec warrior, his clothes sewn with gold ornaments,¹ elegantly carrying a bunch of sweet-scented flowers, penitentially lacerating himself, and partaking of the body and blood of the sacrificial victim. But it is difficult for understanding to come near to him. The intensity of Aztec feeling, the complexity of thought, the swiftness of Aztec plastic rhythm, part us from him even as we gaze.

The jewellers believed that their Toltec neighbours had been taught from Heaven, and from them they derived their own understanding of the craft. Because of the potential beauty in gold its theft was a serious offence: the thief was sacrificed to Our Lord the Flayed One, whose dried skin was considered to be the colour of the metal. The precious metal workers, famed from their centre at Atzacapotzalco, had four patron deities, of whom the chief goddess wore beads of rock crystal behind which blue feathers were stuck.² The lapidaries knew of no naturally blue translucent stone. In their centre at Xochimilco, under the patronage of their Goddess "She of the Red Butterfly," they worked in rock crystal, amethyst, emerald, and garnet, cutting the material with emery and a copper tool, scraping it with a cutting flint, piercing it with drills of hollow copper, and polishing with bamboo. Turquoise of good colour was reserved for votive purposes, but beads were made from the poorer quality, and from jadeite, and also from other less beautiful material. Men of proved valour and martial experience wore wide necklaces of skin with pendant ornaments of many white shells. Jadeite beads, sometimes of the most brilliant green, were decorated with elaborate designs, or carved as faces or as whole figures of men and beasts. A piece of good colour and the size of a man's palm was valued at two loads of gold.

The Aztecs had no conception of coinage, and prized gold for its inherent beauty. "In order to get the gold they had to go to the bottom of the (river) water and fill their hands with sand in which they searched for the grains, which

¹ Compare the Near Eastern Bronze Age habit. "Ye daughters of Israel, weep over Saul, who clothed you in scarlet with other delights, who put on ornaments of gold upon your apparel." II Samuel i, 24. The Lydians especially delighted in this fashion, and were known as the "Gold-tunicked."

² Montezuma's labret was a crystal tube containing a blue feather.

they kept in their mouths. These Indians melted the gold in a crucible in whatever place they find it, making use of cane reeds as bellows."¹

It is clear from contemporary accounts that, in the conquest of Mexico, Spanish beads played a part with Spanish brains and brawn. Bernal Diaz del Castillo was in the preliminary expedition which in 1518 sailed along the coast seeking gold, and he was present when the Indians "presented some golden jewels . . . in the shape of ducks like those in Castille, and other jewels had lizards, and three necklaces of hollow beads. . . . And they said 'Colua Colua, Mejico Mejico,' but," says Diaz, "we did not know what their Colua or Mexico could be. Captain Juan de Grijalva thanked them, and gave them a necklace of beads."²

From Tabasco the Spaniards got a necklace of gold beads with a very well-made frog³ amongst them, and another necklace of the same kind with a little lion of gold. Also a woman's necklace of twelve pieces, each with twenty-four jewelled pendants, and hollow gold beads, round clay beads covered with very thin gold coating, and wooden beads gilt by burnishing gold dust into their surface. All these were exchanged for "oddments of sordid price," including two thousand green glass beads which the Indians much appreciated, and a hundred necklaces of many-coloured beads. When the expedition was equipped the adventurers had paid two pesos for each string of green trade beads.⁴

The Indians took the foreign beads of unknown glass to their king, Montezuma, with news of the white strangers who had arrived in mysterious sailing boats. "Montezuma summoned the most confidential of his chieftains and communicated to them the news which had arrived, and showed them the glass beads which the messengers had brought, and said, 'It seems to me that they are precious stones: take great care of them in the wardrobe that none of them be lost, and if any are lost those who have charge of the wardrobe will have to pay.' One year hence, in the year 1513/Rabbit, those who were on guard saw ships on the sea."⁵

Diaz was in one of the approaching caravels with Cortes, and reports that before their force came to Mexico City Montezuma "had sent orders to his governors that if we should arrive in their neighbourhood with our ships that they should barter gold for our beads, especially the green beads which are something like their chalchihuites (jadeite) which they value as highly as emeralds."⁶

¹ Account of Juan Diaz, chaplain to Captain Juan de Grijalva.

² *Discovery and Conquest of Mexico 1517-1521*, Bernal Diaz del Castillo, trans. A. P. Maudsley, Chapter VIII, p. 67. 1928.

³ Symbol of the Rain God.

⁴ *The Anonymous Conquistador. Narrative of Some Things of New Spain*. Trans. M. H. Saville. The Cortes Society, New York. 1917.

⁵ *Historia General de las Cosas de Nueva Espana*. Fray Bernardino de Shagun, Bustamante edition, Book XII, Chapter 3. Shagun received his account of the Conquest from Aztecs. The date derives from the Aztec calendar.

⁶ *Discovery and Conquest*, op. cit., Chapter IX, p. 69.

When Cortes and Montezuma met, Diaz noticed "that Cortes offered him his right hand and Montezuma did not wish to take it, but he did give his hand to Cortes and then Cortes brought out a necklace, which he had ready to hand, made of glass stones . . . called Margaritas, which have within them many patterns of diverse colours. These were strung on a cord of gold and with musk so that it should have a sweet scent,¹ and he placed it round the neck of the Great Montezuma, and when he had so placed it he was going to embrace him, but those great princes who accompanied Montezuma held back Cortes by the arm so that he should not embrace him, for they considered it an indignity."²

Then "they took us to lodge. . . . As soon as we arrived and entered into the great court the Great Montezuma took our Captain by the hand . . . and he had at hand a very rich necklace made of golden crabs, a marvellous piece of work, and Montezuma himself placed it round the neck of our Captain, and greatly astonished his own captains by the great honour that he was bestowing on him. So this was our lucky and daring entry into the great city of Tenochlitan Mexico on the 8th day of November, the year of our Saviour Jesus Christ, 1519."³

Cortes went up to the huge and accursed Temple that was so high, and stood in a reek of sacrificial blood⁴ before the gigantic figure of the God of War, carved with stone tools and covered all over with precious stones. It had around its neck "a necklace of some Indian faces and other things like hearts of Indians, the former made of gold and the latter of silver, with many precious blue stones."⁵ This statue was eventually hurled by the Spaniards down the steep flight of the Temple ascent and broken to pieces, but a surviving statue of the Snake Goddess⁶ wears a necklace of human hands, palms displayed, alternating with hearts, and having as a central ornament a large skull. This necklace, with the restful plane of the palms, the outer fringe of fingers, and the alternating inner focus on the strings of the hearts, is schematically thoughtful, but nothing can give it modern appeal. Such works should, however, be considered with the lack of horror currently granted to a crucifix.

Montezuma's golden treasure was so great that in order to ship it on the small contemporary boats returning to Spain it had to be melted down, which task tragically occupied the Aztec jewellers three days. Many of the Spaniards

¹ In the inventories made between 1556 and 1569 of the jewels of Mary Queen of Scots are items of filigree beads for scent and perfumed neckbands with pendant gold vases filled with scent. Such are to be seen on Spanish effigies.

² *The True History of the Conquest of New Spain*. Bernal Diaz del Castillo. Trans. A. P. Maudsley. Vol. II, p. 41. Hakluyt Society. 1910.

³ *Ibid.*

⁴ With great courage, priest-surrounded in the very sanctuary, Cortes, a modern man, suggested that a statue of the Virgin should displace the gods who had to be fed on human hearts. Montezuma, a pre-Bronze Age man, replied, "We consider them to be very good, for they give us health and rains and good seed times and seasons and as many victories as we desire, and we are obliged to worship them and make sacrifices, and I pray you not to say another word to their dishonour."

⁵ *The True History*, op. cit., Vol. II, p. 78.

⁶ In the Museo Nacional, Mexico City.



PLATE 31A

THE MAYA CULTURE

(By the kindness of Dr. E. M. Shook and the Carnegie Institute of Washington.)

Jade necklace, long antedating the Maya Classic period, excavated by Dr. Shook at the ruins of Kaminaljuyu, Guatemala.

Photograph, Dr. E. M. Shook.

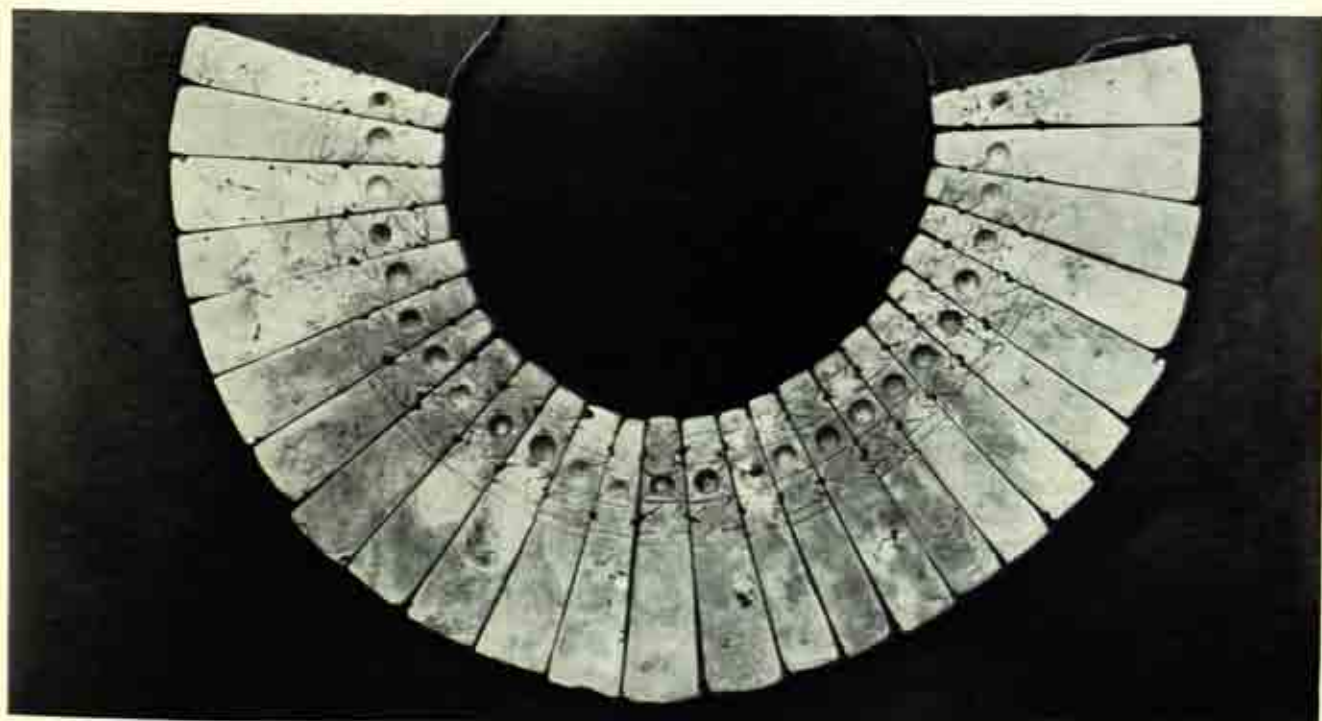


PLATE 31B

(By the kindness of Dr. E. K. Burnett and the Museum of the American Indian, Heye Foundation.)

Necklace of shell pendants, the pendants 2½ inches, from the Nilua River Valley, Honduras.

Photograph, Museum of the American Indian, New York.



(In the Peabody Museum of Archaeology and Ethnology, Harvard University.)
The gold casting was made by thecire perdu process, and the quartz was shaped for use in this pendant.



(In the Wernher Collection, Luton, Hoo.)
This pendant forms a whistle, the mouthpiece being in the tail, and the vent-hole behind the head. Pendants sometimes included toothpicks.

PLATE 32

VARIATIONS ON ONE IDEA

Both these pendants represent figures with heads of gold and bodies made from one piece of semi-precious mineral. That on the left is a Central American pre-Conquest dragon-god, with a milky quartz body. It was excavated on the Sitio Conte, Coclé, where pendants of golden-headed crocodile-gods with emerald bodies were also found, but the granulated technique indicates that it was made in the Province of Esmeraldas, Ecuador. The winged mermaid on the right, with a gold head, enamelled wings, and baroque pearl body, is early 17th century German.



(From Plate XIII.)

"They paint in this month a man as one who stretches something with a cord, in order to indicate that the gods thus stretch and sustain the machine of the world, so that the great violence of the winds may not destroy it."



(From Plate XIV.)

This figure, holding an incense bag, probably represents a priest. Priests wore tobacco pouches on their shoulders. Both Mayan and Aztec ritual demanded penitential laceration of the tongue.

No surviving Aztec gold necklaces are known, but these illustrations from a Mexican manuscript, c. 1585, show double necklaces of blue heads with gold bell pendants.

(By the kindness of Professor G. E. Hutchinson and Dr. D. Rudnick.)

Illustrations from the *Tovar Calendar*, reproduced in the *Memoirs of the Connecticut Academy of Arts and Sciences*, Vol. XI, 1951, by George Kubler and Charles Gibson.



PLATE 33

CENTRAL MEXICAN

Miscellaneous jadeite and amazonite beads. The jaguar head bead is Toltec, 11th century, and originally had inlaid cornelian eyes. The dark green carved bead in the foreground is Mayan, the little cast-metal figure near it a Chibcha ornament from Colombia.



PLATE 34

AUSTRIAN, 16th century

(In the Walters Art Gallery, Baltimore.)

Renaissance necklace of enamelled gold, set with pearls, diamonds, and other precious stones.

Photograph, Walters Art Gallery.

employed these jewellers to turn their share of the booty into the heavy, personally portable gold chains then so fashionable in Europe.

At the breaking-up of the treasure Cortes reserved some of the finest pieces to be sent intact to Charles V of Spain. These were seen in Valladolid by Peter Martyr, who describes "two chains of gold, whereof one contained VIII links in the which were set two hundred three score and two fair and clear red stones, and yet no rubies: furthermore one hundred and four score and three green stones and yet no emeralds. Nevertheless they are in like estimation with them as the other are with us. At the edge of this chain there hang XXVII golden bells, having between every one of them four jewels of precious stones enclosed in gold, at every one of the which hang certain spangles of gold.

"The other chain consisteth only of four golden links, bent round about with one hundred and two red stones, and a hundred three score and twelve green stones, with XXVI golden bells curiously wrought and placed in cunning order. In the very midst of the chain are ten great precious stones enclosed in gold, at the which also hang a hundred golden pendants of cunning workmanship. . . . I do not marvel at gold and precious stones, but am in manner astonished to see the workmanship excel the substance."¹

The Proctors of New Spain also sent to His Majesty a "colar of mellons consisting of thirtytwo pieces of green stones, made so that they seem to issue from the flower, the flowers and stalk being of gold with the cord on which they are put." They also sent necklaces of turtles,² weasel heads, snail and clam shells, butterflies,³ eagles with pendants on the tail,⁴ and heads of men with pendants.

Of all those wonders sent to Europe and there placed on public display no specimen has since escaped the melting pot. Nevertheless the Central American jewellers may have given more to Europe than bullion. The Spaniards sent home from Darien gold pendants having a ring for suspension at the back, and shaped as frogs, lizards, crocodiles, birds, monkeys, and zoomorphic beasts. Neither have any of these survived, but it is possible to know their appearance from such pieces as a pendant insect of gold with a body of pebble quartz⁵ and a lacertine gold pendant set with a large flat emerald in its back,⁶ both from Coclé, Panama. Such fierce jewels, cast in gold and quite foreign to European formula, must yet be the prototype of the splendid non-architectural pendant jewels of the High Renaissance, such as mermaids half of enamelled gold, half of baroque pearls, or gold parrots with glowing emerald breasts. These elaborate

¹ *De Orbe Novo*, Peter Martyr.

² A non-Aztec necklace of gold carapaces fringed with bells is in the Museo Nacional, Mexico City.

³ Symbol of the soul.

⁴ Probably "falling eagles," the symbol of the setting sun. There is an example in the Museo Nacional, Mexico City.

⁵ In the Peabody Museum, Harvard University.

⁶ In the Pennsylvania Museum, University of Philadelphia.

pendants suddenly appear fully developed in Europe, and were long especially popular in Spain. The first gold was sent by Vasco Nuñez de Bilbao from Panama in 1514, and the splendid European jewels date from about the mid-sixteenth century. Sophisticated and balanced, superb in beauty and technique, they nestled on the rich Genoa velvets, but it may be that their real home was upon the heart of an Ancient Central American.

Necklaces of the Modern World

Necklaces of the High Renaissance and the Seventeenth Century

Plates 34 to 41

THE exultant jewels of the Renaissance have a decorative intensity above all others, an abounding sense of being created in their pink and white and pearly splendour to be at one with human warmth, trembling with hope, a scaffolding for ambition. Nor is this fortuitous, for their makers worked under the most ideal conditions that jewellers have ever experienced. Joy in knowledge, possessed, recovered, or sought, is the signet of the Renaissance, and nothing so goes to the head as knowledge. Men were beckoned by their own personality across the ever-receding horizon of their enlarging world, and could not be held as tied workers, nor contained in ecclesiastical workshops, nor controlled by guilds. Artists exploring their craft and craftsmen emerging as artists together freed themselves from artisan status, and art and craft were not divided. The jewellers' workshop was an integral part of the great studio establishments: many of the successful artists served there during their apprenticeship, and some were children of the trade. Jewellers whose decorations were taken from the bench to reappear on a canvas splashing with colour, and whose problems of proportion and placing were those of architects and sculptors, could feel as their breath quivered from the blowpipe across the flaming charcoal that they and their work were part of very life.

Their output was enormous. In Florence alone there were more than forty jewellers' shops, while Nuremberg and Augsburg had their whole existence in the craft of the jewellers and silversmiths. Yet the demand for luxuriant beauty was as great. So revolutionary was the jewellery of the Renaissance that to it was sacrificed the out-moded Gothic work; so characteristic was it, and so organic its development, that though its inheritors felt its influence they could not carry it further.

By the end of the fifteenth century western Europe had become one complex. Both in receiving and in giving Italy led in thought and art. Italian jewellers were visited by foreign artists, and themselves sought foreign experience. Cellini left Italy for several years, and in his "castle of Little Nello," which faced the Louvre across the Seine, he employed Delaune, one of the most famous of French jewellers. French and Spanish jewellers worked in England, French and Italian jewellers settled in Spain. Dürer, descended from jewellers on both sides

of the family and himself trained in the workshop, after his return from Italy issued engraved designs for the use of German jewellers which, with those of other Little Masters, contributed to the establishment of South Germany as the centre of the jewellery trade, displacing Venice and Antwerp. The output of the South German and Hungarian gold mines was increased, and the merchants of Augsburg and Nuremberg imported quantities of precious stones from the East. Work produced under such international freedom had no national characteristics, and it is virtually impossible to decide from which country an unauthenticated Renaissance jewel originates. Only the use of a fleur-de-lis as a subsidiary decoration may proclaim a necklace as French rather than Italian.

The generosity with which the jewellers gave themselves to life was so exuberant that, although they were most disciplined in their technique, their emotion could not be limited by form or plane. The basic shape of a unit was formal and clear, but was interrupted by divergencies, by broken curves, by tiny balls of enamelled colour, or the fling of little leaves and swelling sprays. With the use of superimposed layers of plates, each pierced *à jour* and arranged so that its elements did not obscure those behind, and by assembling these layers with a central rivet whose head was the high pyramidal setting of a precious stone, design in depth was produced. To depth and form colour was added in the contrasting materials of hard stones, fragile enamel, and the tender sheen of pearls. The content of the work was also emotional, revealing through religious and amorous symbols that the makers valued the experiences they had seized from life.

With such elaborate built-up work it was necessary for the jeweller to understand the design at all stages, and boxwood models were prepared. As the scheme of a necklace was almost always of two units, each alternating with the other, the two models in their various parts could be reproduced by casting as many sections as necessary. So varied and so vital was the design that there is no impression of mass-produced repetition. Behind the smaller unit a flattened wire was soldered, whose free ends curled back to make the loop which linked into the larger unit. If the necklace had a pendant it was *en suite*, though more elaborate than the other units, and in common with the wonderful pendants which were worn from the neck or the waist on a chain or ribbon, it was designed in oblong, with the weight of decoration at the base although the focus of decoration was central. It is peculiar that, whereas in other forms of jewellery the underside was treated as carefully as the front, often no care was spent on the back of a necklace. Although the neglect was practical, since necklaces were worn over heavy material, it is rightly a shock to find the back of the work not enamelled, not relieved of filemarks, the ends of the fine wires which hold the pearls roughly twisted together, or the central rivet crudely spread. For the front no detail was too small to receive attention, and an especial charm derives from the tiny beaded enamelled discs which cap, both above and below, the

inevitable pendant pearls. Even the method by which these pearls were hung was exceptionally careful, for in order to have the suspensory ring in a thick metal the wire was not threaded from the bottom of the pearl upwards and then looped, as is the usual method with a completely drilled pearl, but the thick wire of the loop was filed down and split, to make a peg which could be passed through the pearl and bent back outside the lip of the hole. A tiny wedge, frilled and ending in a granule, was forced up between the split peg as a neat cover.

The enamellers had taste and a full palate: they did not make the mistake of covering the entire surface of the metal, and with refined judgment they contrasted the brilliance of gold and of translucent colour with opaque white, and relieved black with little designs painted in gold-leaf. The enamel was *champlevé*, either laid in shallow beds prepared with a round-backed scorer, or in very deeply cut thin-walled cells. Figures in the round were also enamelled.

There were three methods of making these minute sculptures. They might be modelled in wax and cast: they might be chased from sheetmetal on pitch, the technique favoured by Cellini: or the sheetmetal might be pressed, first with wooden and then with metal chasing tools, over a basemetal casting, which was the manner of Caradosso's work, whose contemporary fame for *minuterie* was greater than Cellini's. The best surviving necklace in this work is a south German example,¹ whose eleven larger plaques portray, in very tiny but lively enamelled reliefs, scenes from the Passion and Crucifixion, while the pendant displays the emblems of the Passion.

The splendid effect of this, as of other Renaissance necklaces, is out of all proportion to its weight in precious metal. Nevertheless jewellery was so lavishly worn that sumptuary laws were frequently enacted to enforce economy in the use of gold. The Venetians, who were especially fond of display, were obliged to satisfy themselves with filigree necklaces whose fantastic fineness left a sufficient weight of metal available for other jewellery while yet complying with regulations. The wire was as finely drawn as that of ancient Greece, but the exquisite units were adequately strengthened by enamel. Like the Spaniards, the Venetians had a predilection for black enamel, but they had the taste to realize that this was too sombre for such delicate filigree, and used the bright pink and blue favoured by Sicilian jewellers. A hundred years later the Swiss made silver filigree necklaces which, although coarser, have an affinity with the fairy Venetian pieces: their filigree is decorated with ribbons and rosettes in black or dark-blue enamel relieved with white dots.

Cabochoon stones of some size, and large baroque pearls, were reserved for zoomorphic and one-figure pendants. Otherwise the jewellers seldom had the opportunity to mount a big stone,² but they used the colour of their small

¹ In the Louvre, Adolph Rothchild Bequest.

² When the Pope wanted a big diamond set in a morse the designers had difficulties due to inexperience in incorporating such a large stone.

table-cut gems effectively, presenting the stones in low box settings framed with a frill of tiny enamelled granules, or in high square pyramidal settings which were a simplification of the lobed Gothic settings. Stones were mounted in their settings on black wax, and were it not for this adhesive material many settings would have lost their precious content, for the pyramids were so exactly trimmed and polished that scarcely a sufficiency of metal was left to retain the stone. It was illegal to fake by tinting the colour of any stone except a diamond. With modern insistence on the display of large, flawless, and clear-set stones it is difficult to respect the pride of Renaissance jewellers in their ability to improve with a backing of paint the small diamonds they used. Although the natural octahedral diamond crystal had occasionally been used in European jewellery since the time of the Romans its use as an artificially cut stone dates only from 1475,¹ and as yet entailed little more than the trimming of the natural shape and the flattening of its points, so that it still could not scintillate. The use of triangular chips of diamonds was, however, amongst the happiest of Renaissance ideas. The jewellers also had an effective advantage over modern workers in that it was not required that stones should match or be of standard shape. Opals, from the Hungarian mines, were now included amongst gem stones, and carved coral from Florence and Trapani.

During the late Renaissance there was a gradual change in the arrangement of stones, which had been symmetrically spaced in a balance of colour. Now gems of one kind were set contiguously in rows or groups. This tendency, appearing when European jewellery had reached its apogee, seemed to be a natural growth, yet through such usage stones proved to be parasitic, destroying the golden edifice.

A necessary result of an arrangement of uninterrupted stones as a necklace was that linking, with its essential spacing, had to be discarded and a return made to threaded units, for the modern method of hiding links in the side of the settings had not then been invented. Cheniers to take the threads were soldered across the backs of the settings, and sometimes covered with a pad of white enamel painted with pink and black designs. These necklaces only went half-way round the neck, and ended in loops for the ribbons. As the whole decoration lay in the stones, without a display of surrounding goldwork, the effect is light. This influenced chains, and very slight pretty necklets were made with enamelled links of leaves and flowers,² for there was a revival in the use of representational foliage, neglected since the Gothic eclipse.

The decline of the Renaissance style can be traced in the handsome Spanish jewellery of the late seventeenth century. The *à jour* scrolls of flowers and leaves are on one plane, and carved but not enamelled. One side of the high

¹ The method of cutting was invented by Louis de Berghem of Bruges.

² The London Museum contains a collection of these chains from a jeweller's hoard excavated in the city. Translucent green and opaque white were the dominant enamels used.



PLATE 55

SOUTH GERMAN, 16th century

(Cameo Corner.)

Renaissance necklace of gold enamelled white, set with pearls and diamonds.



PLATE 36

SOUTH ITALIAN, 17th century

(Cameo Corner.)

Gold necklace, enamelled in white, black, and turquoise blue. Set with an emerald, pearls, and red and green paste.

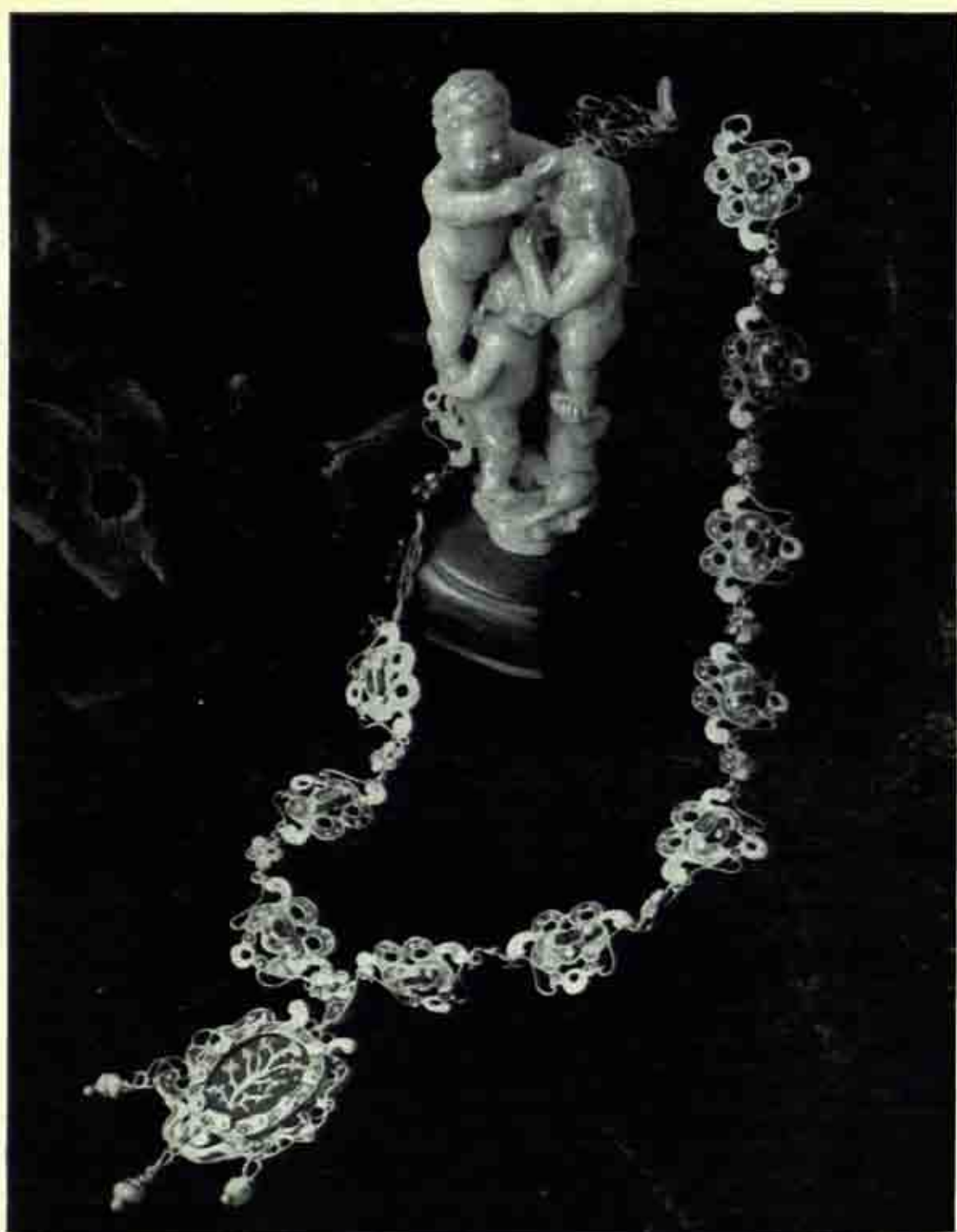


PLATE 37

SICILIAN, 17th century
(Cameo Corner.)

Gold necklace, enamelled in green, white, and blue, set with rubies and pearls.

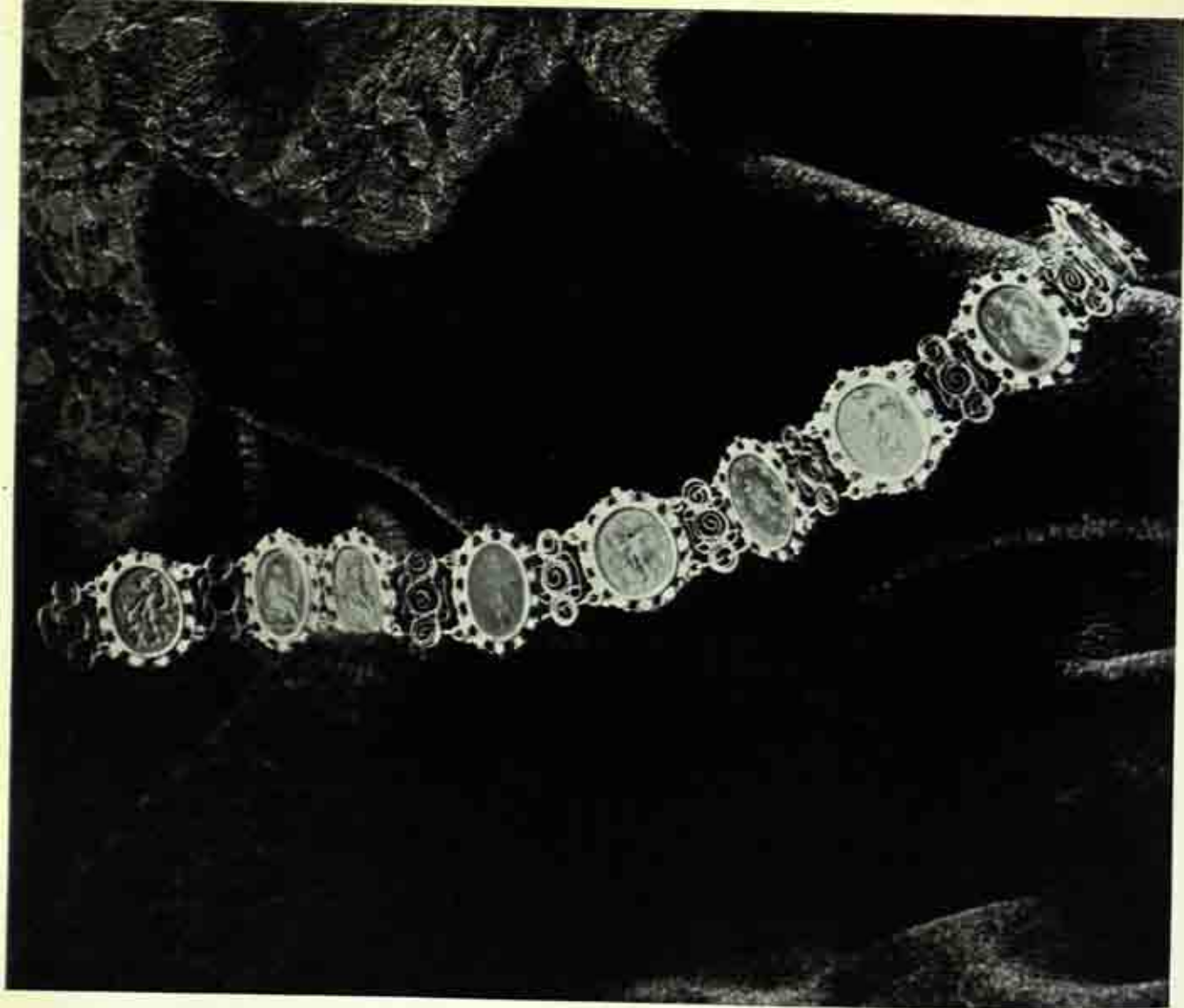


PLATE 38

ITALIAN, 17th century

(Cameo Corner.)

Venetian necklace of contemporary cornelian and lapis-lazuli intagli, in frames enamelled black and white, with filigree links interspersed. Such sprawling filigree is typical of Adriatic work. The necklace ends in loops for ribbons.



PLATE 39

ENGLISH
17th century

(Cameo Corner.)

Seventeenth-century necklaces are rare, and this necklace has been made up from a collection of pieces. The backs, shown on the right-hand side of the

photograph, are cushioned with white enamel painted with pink and black designs. The enamel covers cheneviers, through which the strings are threaded, drawing the settings together to present an uninterrupted line of crystals. The large octagonal paste, the crystal bow, and the cluster used as a snap, all have painted enamel backs.

The enamel back and the scalloped base of the collets are typical of Stuart jewellery.



PLATE 40

Beginning of the 18th century

(Cameo Corner.)

English paste necklace. The larger pastes are foiled with red, and are held in the base-metal mounts by fine serrations. The smaller pastes are held by claws at each corner. Notice the square effect of English paste. The units are joined by threads passing through cheniers behind the mounts, and the necklace was fastened by ribbons through the terminal loops.

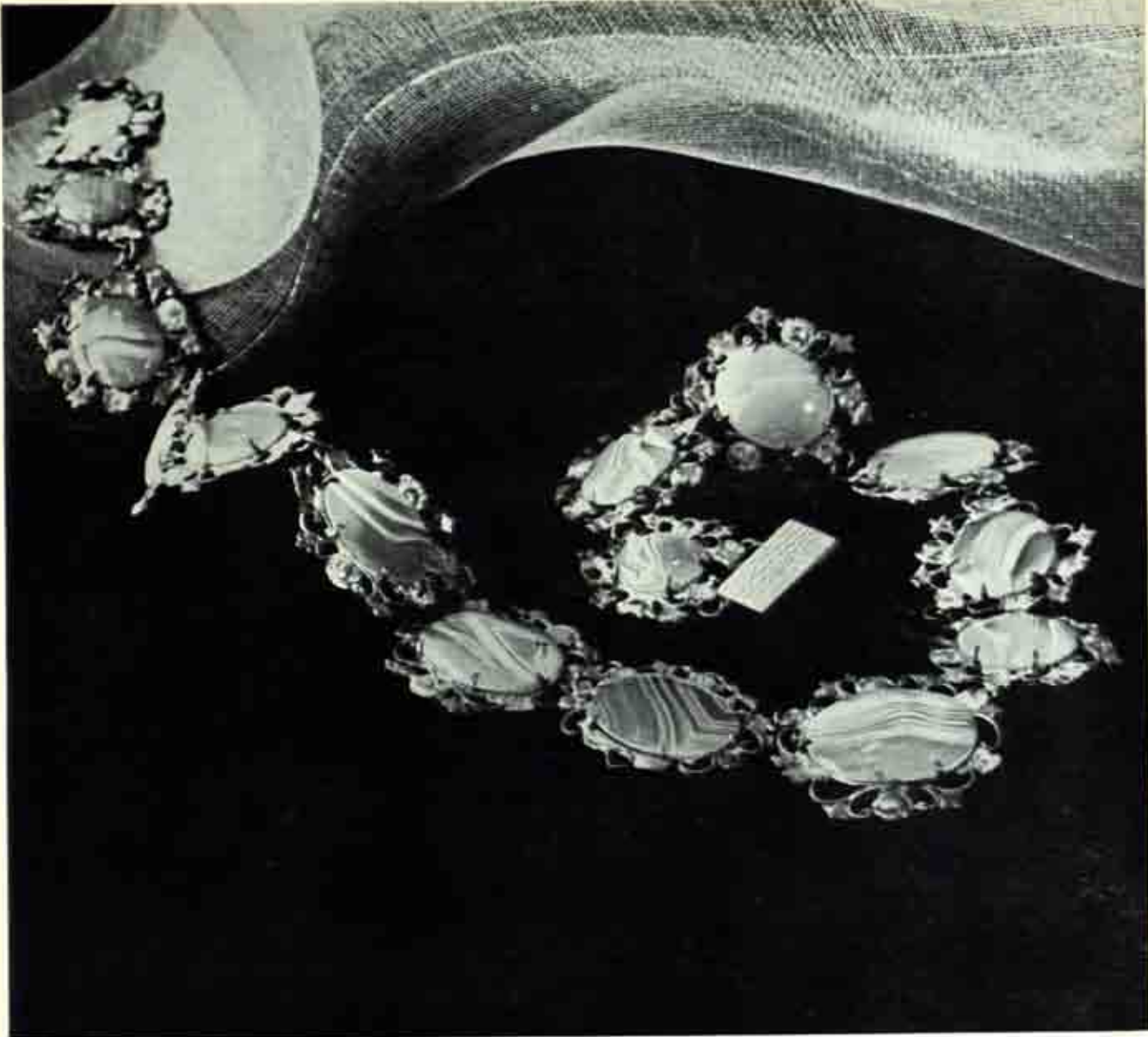


PLATE 41

ENGLISH, Late 17th century

(Cameo Corner.)

This is not a unique necklace, but although all the examples of these necklaces exactly resemble each other they are rare. The stones are always thin grey agates, held by scanty claws in base-metal settings, whose *à four* borders are not enamelled but painted in white, pink, and blue. They are both the lowest descendants of the Renaissance enamelled jewels and the first of the modern elegant, but valueless, costume jewellery. Perhaps they were made as fairings, or for the stage.

The rectangular pinchbeck snap shown in the photograph at the end of the necklace did not originally belong to it, for it would have finished in loops for ribbons.

The thin claws holding the stones are an English invention. They first appear in the light 17th-century chains with units enamelled and set with small stones. They were used again in 18th-century base-metal and small garnet jewellery intended for the theatre, from which the stones are apt to drop out, and in cheap Early Victorian imitation paste. In the 20th century they reappear in good class jewellery in platinum, the hardness of which metal makes it possible to reduce them to almost invisible proportions.



PLATE 42
INDIAN, 17th century
(Cameo Corner.)

Moghul inlaid jade.

This work was only made at Delhi. The plaques, mounted on a cord of gold thread, are of grey "mutton-fat" jade, against which the colour of the gold, emerald, and ruby inlay shows effectively. The shapes of the plaques are Turanian, and are used as far east as China. These necklaces are prophylactic against palpitation of the heart.



PLATE 45

INDIAN, 18th century

(Cameo Corner.)

(1) A "Ram Navami-ka-kantha" in Aimer enamel.

On one side the Feet of Krishna, as worshipped at Nathdwara in Meywar, presented in red translucent enamel on an opaque white ground, with a border of translucent green and opaque lavender.

On the other side translucent red flowers on an opaque white ground, surrounding a red medallion bearing the words Sri Nath (Holy Lord).

(2) Plaques of Jeypur enamel, of white lilies on a translucent red ground, threaded with pearls.

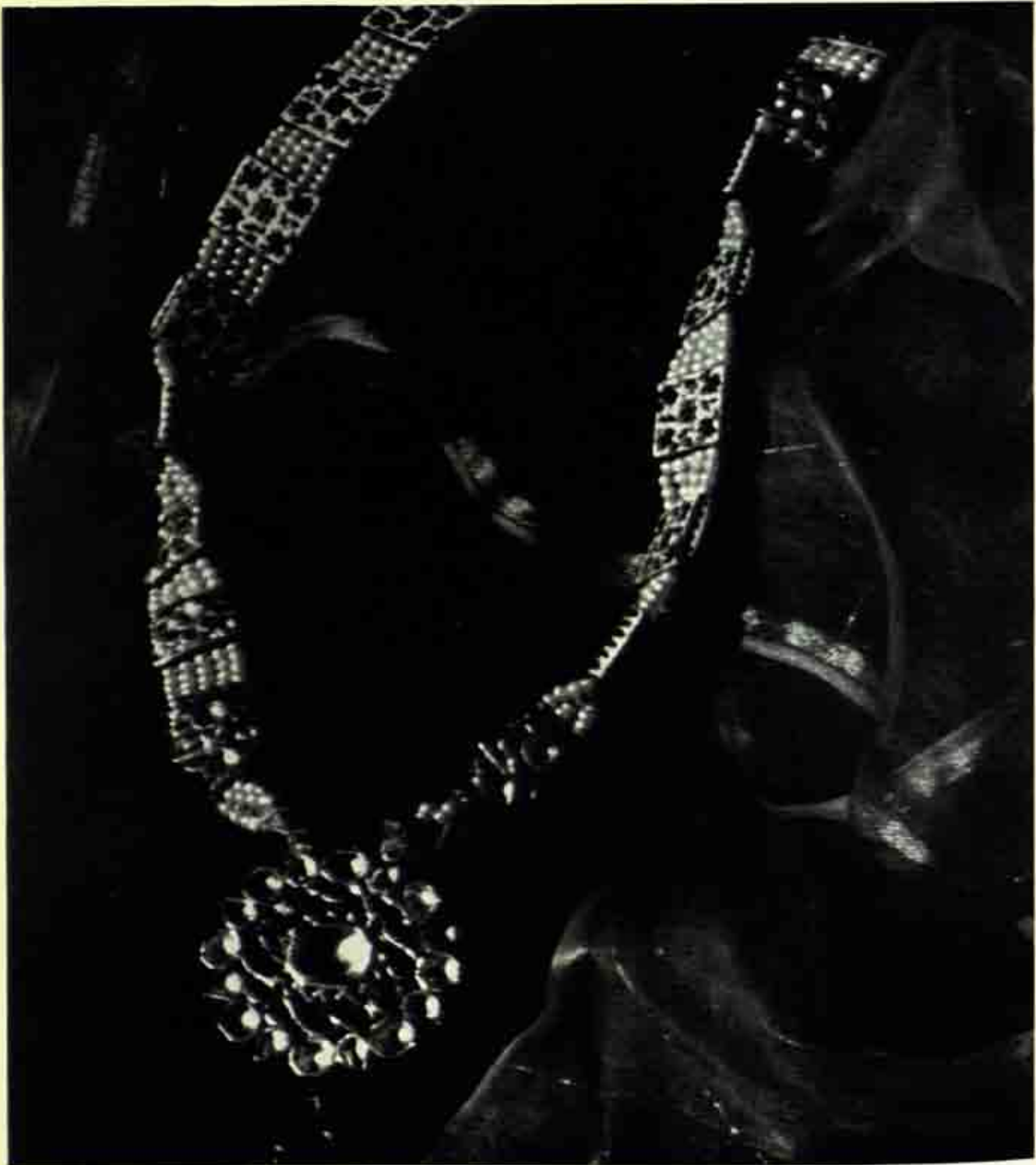


PLATE 44

INDIAN, 18th century

(Cameo Corner.)

Pendant and plaques set with thin diamonds: on the reverse Jaipur enamels of flowers in translucent red on an opaque white ground. Strung with pearls.



PLATE 45

INDIAN

(Cameo Corner.)

(1) Babul, or Thorn Work beads.

These beads represent the seeds of the sweet-scented acacia, and are an astonishing technical achievement. The balls are completely covered with tiny points, each soldered separately base beside base. This is possible because the minute points are of better quality metal than the relatively large globe, and are therefore removed from the threat of premature melting during soldering.

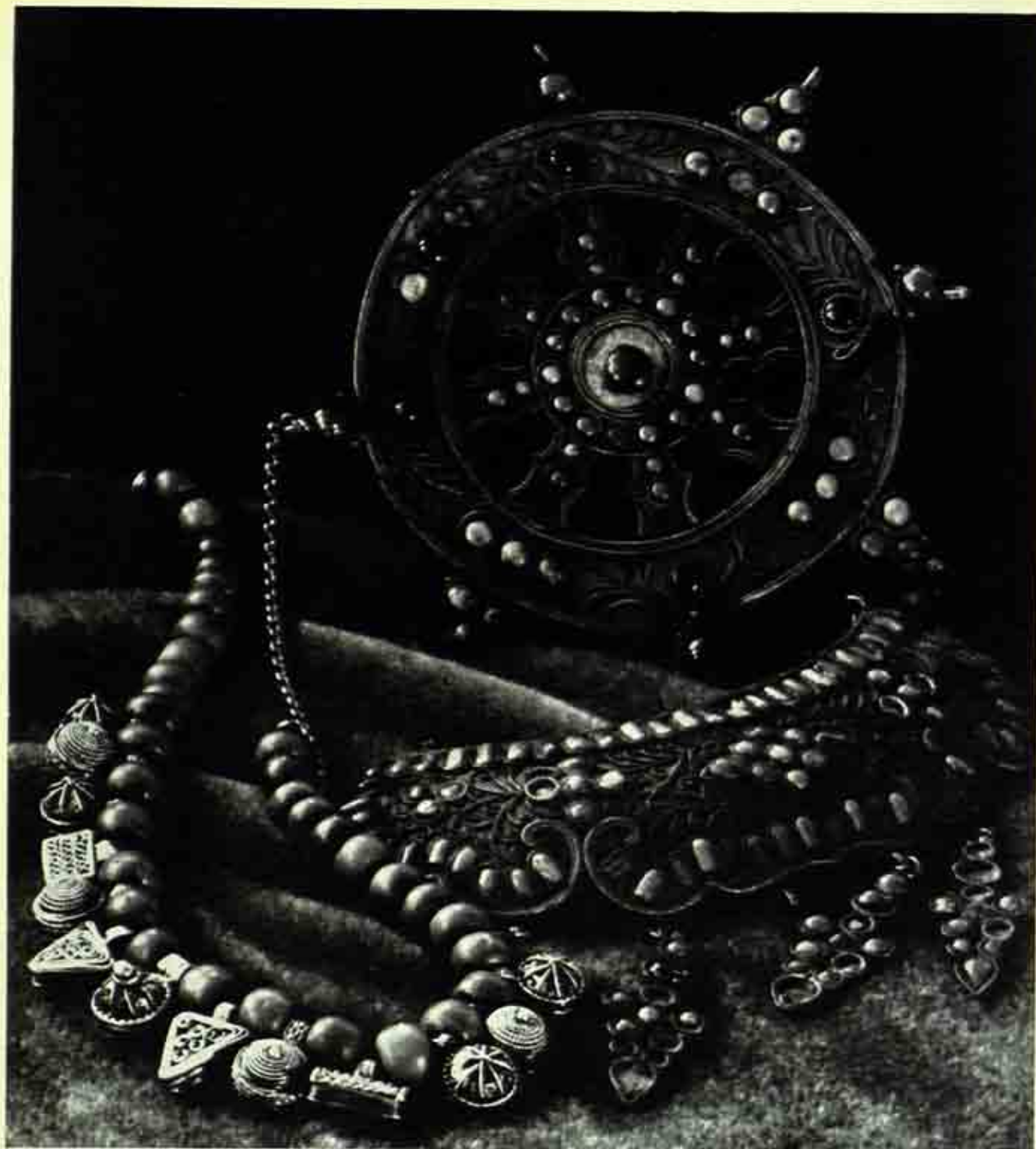


PLATE 46

TIBETAN

(Cameo Corner.)

(The large circular ornament belongs to the toilet set of tweezers, etc., worn on the breast, and is not part of a necklace.)

The necklace on the left is modern, of filigree silver units strung with red coral, which has always been greatly appreciated in Tibet. The silver chenier loops and beaded borders, and the waved filigree of the fourth unit on the left, are reminiscent of Classical work.

On the right is an 18th-century peasant gorget of silver, set with coral and turquoise. It tied round the neck with strings. It represents the Face of Kanchenjunga, the steep heights where the gods reside, and which is the aspiration of the human soul.



PLATE 47

Early 19th century

Burmese necklace of gold-chased plaques set with rubies. In place of the chains it was probably originally linked with strings of pearls.
Malayan chain of silvergilt discs, both sides of the links alike.



PLATE 48

FRENCH OR ENGLISH, 18th century

(Cameo Corner.)

Paste, mounted in silver, with rosettes of red gold in the long links.



PLATE 49

GARNET NECKLACES

(Cameo Corner.)

- (1) Garnets in gold plain box settings, close in style to the 17th-century settings backed with enamel cushions. English, beginning of the 18th century.
- (2) Garnets in silver, the backs of the settings convex. There should probably be a bow in garnets between the necklace and the drop. Such bows on necklaces derive from the jewelled bow made fashionable as a breast ornament by Madame de Sévigné and named after her. The necklace has loops for ribbons. English, second quarter of the 18th century.
- (3) Garnets in gold settings with black enamel, fastening with a snap behind one of the stones. Swiss, mid-19th century.



PLATE 50

The end of the 18th century

(Cameo Corner.)

- (1) The contemporary sard-onyx cameos mounted in gold express the current interest in classicism. French.
- (2) A sautoir of filigree and burnished gold, with light blue enamel borders. French or Swiss.
- (3) The settings of the double-cabochon cornelians are enameled royal blue, and the small links of knots are enameled dark red. English.

square settings is extended into a curling frond. At the base of the settings leans a band of little serrations in place of the tiny enamelled balls of former days. In Portuguese work this serrated edge is so tightly indented as to look uncomfortably sharp. The spikey *à jour* eighteenth-century silver necklaces of the French and Flemish peasants, often with the dove of the Holy Ghost or a cross as a hinged pendant, and with diamond sparks mounted in high conical settings edged with milled wire, are also impoverished descendants of the Renaissance glory.

As men as well as women wore jewelled chains, and women frequently wore three necklaces simultaneously, the supply must have been very great, yet few examples have survived. One destructive reason would be the complete change of style which shortly took place: another may have been the fashion, when the use of pearls as beads was first accepted at the end of the sixteenth century, of wearing a few jewelled enamelled units between loops and strings of pearls. To facilitate enamelling all the elements of a Renaissance necklace were separate, and were assembled without further soldering. It would be a simple matter to extract some of the splendid units for use with pearls, and once a necklace is dispersed it is undone indeed.

In the seventeenth century, as if it were felt that beauty could not be carried beyond the attainments of the Renaissance jewellers, a revulsion set in. Pearls, even big false pearls, worn as chokers or looped with ribbon bows across the bosom, were the only necklaces desired. Pierced goldwork could not conveniently be worn with the lace and flimsy materials now fashionable, through the folds of which only the flash of massed gems was effective. To meet these demands such intrepid jewellers as Sir John Chardin and Sir John Tavernier set sail for Persia and India.

Necklaces of the Indians

Plates 42 to 47

FROM the third century B.C. the balustrade of the stupa of Bharhut gleamed in sunlight and moonlight, the icy white petals of its carved flowers dripping necklaces upon the steps below. Women passing with devotional offerings of rice and rancid butter saw represented in frozen curves the ornaments lying warm upon their breasts, a thousand lines of seed pearls folded over and gathered into plaques, multiple strings of round beads whose centre ornaments, like a flight of steps, were long square-cut blocks of emerald, and dual pendants of the divided Triratna, symbol of the Triple All-Supreme.

Jewellery was always esteemed in India. A hundred years before the stupa was built the visitor Megasthenes¹ had been impressed by the simple life and rich gold jewellery of the people, and the intervening centuries have not changed these characteristics. But Indian design has been affected by invasion and trade. North Indian work has been influenced by Assyria, ancient and modern Persia, China, and hellenistic Greece: the Western Provinces by ancient Greece and Rome, by Arabia, Holland, and Portugal. The Babylonian Tree of Life, the classical strap, fringe, and terminal plates, bractæ, amulet cases, and melon beads, the twisted torc, and Dutch filigree, all acquired Indian idiom without losing their identity.

Gold jewellery has been too frequently remade, and is seldom prior to the eighteenth century. Older examples can be found in silver, and in the brass necklaces which alone were formerly permitted to low-caste women. Jewellery was made in happy circumstances in the palace workshops of the rajahs and Moghul emperors; otherwise until recently most work was done under primitive conditions by itinerant craftsmen, who nevertheless had the great skill required for working in metal of such surprising thinness as they used. When a design was prepared for chasing, the paper was laid on a soft pad, upon whose yielding surface the pencil could impress the paper, showing, when turned round, the design in the relief which would finally be obtained in metal. The metal, too, would be of paper thinness, and when worked and made up had to be supported

¹ Megasthenes found that the Indian gold was mined by ants, who placed it in heaps on the surface of the ground and furiously avenged any attempt at theft. (Fragment XL of the *Indika* of Megasthenes.) Herodotus gives an earlier account of these ants. More recent authorities believe that these ants were Tibetan miners.

with a loading of lac, which also helped to hold the stones in their settings. These were usually cabochon rubies and emeralds, jagoons as substitutes for diamonds, uncut diamonds of some size but sliced very thin,¹ rose diamonds, and pearls. The great Golconda diamond mines were opened in the sixteenth century, emeralds were brought from Mount Zabane in the Red Sea, and pearls from the coast of Arabia Felix.²

Nature has a prominent place in the designs for necklaces. In the Western Ghats and in Madras Presidency torcs twisted from creeper and rattan are still worn, beads cut from hollow grass stems, and necklaces of chipped and knotted grass whose designs show clearly that on them is based much of the traditional gold and silver work. Plant derivatives have a perennial charm, even when the leaves and buds and seeds are over-decorated in sharp Indian chasing. Many forms which appear to be softened geometric shapes really represent seeds and flowers: thus the lightly fluted spikes, headed with a rosette or a flat disc, which radiate from Trinchinopoly necklaces are traditionally buds of jasmine. It is possible that everywhere a long-forgotten evocative purpose underlies necklaces, which in Europe would have caused them naturally to belong to the fertile Mother Goddess.

The tying of the Thali, or marriage necklace, had as integral a part in the Hindu marriage ceremony as the giving of the ring in the Christian ritual, but is now replaced by an exchange of garlands. Examples vary in different parts of India, but usually the necklace had some floral units. Its essentials were the talisman cases containing Sanscrit texts, which lay one on each collarbone of the wearer, and the central phallic emblem which varied with sect or race. Sect was indicated by a device at the back of this pendant, while the front might be decorated with the Tree of Life, the symbols of the sun and moon, or the rosette discs of these luminaries. The other units would be flowers, fruit, seeds, or ritual objects, chased or set with precious stones. The thalis of Coastal Malabar and South Canara were of stiff bars elaborately built up with motifs of wire, granules, or pailons of burnished sheetmetal, with a rosette and bud hanging from each bar. Whatever form the units might take they were invariably threaded, with the strings for the necessary tying ending in tassels.

Although the style of work has long remained static the Indians have always been excellent enamellers. The secret of the Rajputana quasi-enamel has been lost. The background was of coloured glass, red and blue from Rutlam and the more popular green from Pertgarh. Elaborate little hunting scenes were etched

¹ "When the miners see a stone in which there is a flaw of some size they usually clean it; that is to say, split it, at which they are much more accomplished than we are. These are the stones which we call thin, which make a great show." *Travels in India*, Sir John Tavernier. Book II, xv, p. 44. O.U.P. 1925.

² "According to the testimony of some ancient authors, who were not well instructed in these matters, it was commonly believed that the pearl originates from the dew of heaven. But the oyster does not stir from the bottom of the sea, where the dew cannot penetrate. . . . (Pearls) are produced in the oyster in the same manner as eggs are in a fowl." Sir John Tavernier, *op. cit.*, xxi, p. 91.

on the glass, perhaps with hydrofluoric acid, and filled in with gold dust or goldleaf. These charming miniatures were linked as necklaces for Europeans.

Lucknow and Multan enamel is still made, a coarse *champlevé* of opaque dark and light blue and yellow on silver, and a crude dark green and blue at Kangra. The necklaces are of enamelled plaques hung by a square chamfered loop from a silver chain. Modern work in the best tradition comes from Jaipur, where the enamellers are now reduced to the members of five families but are all descended from Sheikh artists brought from Lahore to be established in the great workshop of the Moghul emperors. The raw enamel is made by Muhammadan workers who do not attempt to use it, and the Sheikh enamellers cannot make it. Their designs were traditionally taken from the tiled walls of the Moghul Palace. On an opaque white ground birds flutter amongst flowers and leaves executed in a most brilliant red. Of all enamelled colours, red is the most difficult to fire successfully: the Delhi red is often brownish, but that of Jaipur is unsurpassed. The necklace plaques are usually squares enamelled on all sides, threaded between rows of pearls. Delhi plaques are only enamelled at the back and sides, the square being filled with lac and the front set with *pavé* stones, including corals and half-pearls.

The luxury of the Moghul court was as great as that of European royalty, and curiously the efforts of the seventeenth-century European jewellers to obtain precious stones for European trade also established a flow of important stones and pearls from Europe back to the East,¹ while at home, pastes and imitation pearls were used as from necessity.²

¹ Sir Thomas Rowe thought that "fine jewels ought not always to be taken to Europe, but rather from Europe to Asia as I have done, because both precious stones and pearls are esteemed there very highly when they have unusual beauty. . . . All the kings and greatest nobles of Asia pay much better than do people in Europe, not only for pearls but for all kinds of jewels when they are out of the common run." *Embassy of Sir Thomas Rowe to the Court of the Great Moghul, 1615-1619*. Ed. Sir W. Foster, Hakluyt Society, Vol. II, xx, pp. 87, 89.

He recommended sending "pearls, anie great well bought: rubies, so high in colour and faire. The Tower, I am perswaded, could furnish you with many great olde stones that are useless." Advise from Sir Thomas Rowe of Goodes and Presents for Surratt, 1617. *Calendar of State Papers (East Indies)*, March 1618.

² "Since the secret has been found of imitating pearls so well, fine ones have been sent back from Europe to Asia, and are now so rare that one hardly sees good beautiful ones in France."

"Above all pastes had such a prodigious vogue that for some time women, finding them cheaper, wore nothing but these." *Traité des Pierres Precieuses*, Pouget Fils. Paris. 1762. Pp. 19 and 21.

Necklaces of the Eighteenth, Nineteenth, and Early Twentieth Centuries

Plates 48 to 62

THE fifteenth and sixteenth centuries had shown that the world was for the ordinary adventurer and learning for the ordinary man. By the end of the seventeenth century a middle class had established itself, intending to be privileged but expecting to work, secure in sufficient wealth and sufficient learning, and claiming by right of culture a share in the refinements of life. Delicate jewels, manufactured slowly for wear in idleness, did not meet the demands of a wider public. The aristocracy had had time for daylight masques out of doors, and had danced in ballrooms facing the setting sun. The more industrious middle class took their pleasures in the evenings: rooms were better lit and jewellery had to be effective by artificial light and in competition with soft materials.

At the end of the seventeenth century, and for the first few years in the next, an ideal jewellery was made in England, strong, refined, and thoughtful. Interlaced initials in fine twisted wire, or minute enamelled symbols of love or death, were laid on a tiny plait of hair under austere cut crystal. Early examples were sometimes framed with half-pearls or garnets, and the backs enamelled with painted designs. Later examples often have a dated inscription, engraved in the beautiful flowing letters of early eighteenth-century penmanship. In this style slides and snaps were made to be worn on a neck ribbon, and in these pieces are to be found the first examples of the springing tongue snap now in general use. These unpretentious personal jewels, with their clinging initials, their cupids and skeletons, follow the initials and momento mori jewels of the Renaissance, but are social documents. They were inspired by that sense of right living and awareness of Heaven which could make the founding of St. Paul's Cathedral and of the Royal Society contemporary with a licentious society, and which could survive the Georgian debauchery and industrial cruelty which were to follow.

Handsome necklaces were made in large oval pastes, foiled and mounted singly in base metal. These lay against the throat and were tied with ribbons at the back of the neck. In the earlier examples the units might be supplied with links at the sides of the ovals, through which the strings passed behind the settings, or the stringing was carried across through cheniers: eventually such

necklaces were linked by chain. The earlier pastes were faceted behind as well as in front, in the manner of the double-rose drops which had recently been used in sprays for the hair, and were held in their settings by scanty claws. Later the edges of the settings were serrated with very fine teeth, easily pressed against the frangible edge of the glass. These inch-wide pastes were coloured aquamarine, blue, peacock blue, pink, purple, and red.

The massing of gems, which has persisted until to-day, followed logically on the lines of juxtaposed stones, and the settings were arranged so that the least possible metal showed at the front. The earlier necklaces of this kind were usually in silver. Around the stones it was cut away as much as safety permitted, but for strength tiny points were left. The backs of the settings were closed, in soft concave curves, for the modern fashion of clear setting was not introduced until the nineteenth century. Necklaces of clustered chrysoprase were especially popular in Portugal, and of garnets, and later of topaz and amethyst, in England. The Venetian invention in 1746 of the "brilliant" cut for diamonds made them especially suitable for artificial lighting and therefore especially desirable. They were backed with gold but mounted in silver, as it was considered that the white stones looked larger in white metal. Platinum, which does not tarnish, is now used for this reason.

The most famous of diamond necklaces was that made in 1785 by Boehmer and Bassage for sale to Marie Antoinette. Carlyle's description of this tragic necklace is also a period gem.

"What a princely ornament it was. A row of seventeen glorious diamonds, as large almost as filberts, encircle, not too tightly, the neck, a first time. Looser, gracefully fastened thrice to these, a three-wreathed festoon, and pendants enough (simple pear-shaped, multiple star-shaped, or clustering amorphous) encircle it, enwreath it, a second time. Loosest of all, softly flowing round from behind in priceless catenary, rush down two broad threefold rows; seem to knot themselves, round a very Queen of Diamonds, on the bosom; then rush on, again separated, as if there were length in plenty; the very tassels of them were a fortune for some men. And now, lastly, two other inexpressible threefold rows, also with their tassels, will, when the necklace is on and clasped, unite themselves behind into a doubly inexpressible sixfold row; and so stream down, together or asunder, over the hind-neck, we may fancy, like lambent Zodiacal or Aurora-Borealis fire. All this on a neck of snow, slight-tinged with rose-bloom, and within it royal life."¹

The matching of the stones for this commercial necklace ruined the jewellers. They did not wish to follow the Queen's advice that they should break it up again, and she was wise enough to know that the times would not permit the deflecting to a necklace of money destined for the navy. The necklace disappeared: the jewellers claimed that the Queen had asked for it, and pressed

¹ *The Diamond Necklace*, T. Carlyle.

for their money, but she denied having received it. Whoever may have stolen the necklace, the scandal was never forgotten, and the glittering line of diamonds was one more reason for finally laying the grey blade of the guillotine upon her neck.

France was the arbiter of taste in the eighteenth century, and even before the Revolution the mock return to Nature and the *fêtes-champêtres* had displaced precious stones for wear by day. Marcasites were cut and polished to give the effect of rose diamonds, and followed the designs of the silver-mounted diamond and paste necklaces, with girandole pendants and earrings *en suite*. Still simpler necklaces were made with tiny marcasite posies riveted through ovals of enamel or coloured glass, which were framed in marcasite and linked together. Eggshell mother-of-pearl domes were also so mounted. The marcasite was set as though it were a precious stone, but when the taste was revived in the mid-nineteenth century the mineral, brought from the Isle of Elba or from South America, was then set in the drilled matrices invented at the end of the eighteenth century for *paré* half-pearls.

Cut steel, with rose-faceted points riveted to the background, was even brighter than marcasite, and a wholesale trade was established in England. Faceted and fancifully shaped beads, with very minute faceted beads and fine split-rings, were used for necklaces with the Wedgwood fictile beads and cameos, whose soft blue and white was enhanced by the shining metal. These cameos but expressed the interest in classical art inspiring the struggle against rococo frivolity, but they helped to introduce other inexpensive material into jewellery, such as cornelians and moss agates, which were mounted in slight gold necklets. Necklaces and sautoir chains, in very thin and therefore necessarily hard and not high grade gold, were made with repeating links whose variety lay in the contrast of plain and burnished gold and the use of enamel. Often two or three different chains were looped one below another in a necklet, to be united by oval enamelled plaques. They were the work of the chatelaine makers, who had always obtained their effects through their skill as goldsmiths and enamellers, resisting the use of gems. Taste was still refined, and the repetitive units which could be mass-produced required as much individual handling as had those of the Renaissance, and as much skill, but the fervour of beauty was missing. Precision in technique and primness in design had driven away exuberant delight in loveliness.

The imperial parallel of the First Empire, following the Revolutionary admiration for the Roman civic virtues, heightened the fashion for classicism in France. Jewellery was not designed on ancient models but had to suggest familiarity with the antique mode. The Empress Josephine's necklace was of twelve genuine antique sard-onyx intaglii, but framed with brilliants and linked by repeated gold swags hung with pearls. A characteristic of jewellery of this period is the use of milled wire, especially as a rim between the stones and the settings.

The fall of Napoleon and the rise of industrialism brought a revulsion from classicism. The manufacturing families now joining the professional class had had no æsthetic education, and taste inclined sharply towards naturalism and sentimentality, in sympathy with the Romantic Revival.

Very pretty necklaces still in formal design were made at this time, in beautifully executed gold filigree of graduated helices and granules surrounding pale stones, notably pink topaz. Perhaps the delicate granulated effect of these necklaces inspired the virginal seed pearl jewellery of about 1840, which was an entirely original innovation, and the best the Romantic period produced. Such necklaces were usually floral, sometimes with the units linked by multiple rows of complicated threading, suggesting the chatelaine chains. The graded seed pearls were bound by white horsehair or fine gut to cut-out shapes of mother-of-pearl. By varying the size of the pearls, using larger pearls whose lustre made a focus amongst the tiny seeds, and by laying one encrusted shell layer upon another, elaborate results were obtained with the simple unvarying material. This pure jewellery is almost contemporary with the meretricious "Gothic" designed by Froment Meurice in France and Pugin in England.

Now tragedy overtook jewellery. It was no longer to be a vehicle for beauty, but an opportunity for material parade and a sign of respectability, indicating in this, as in other periods, where spiritual allegiance lay. The first motive led to an insistence on value and on increased production, the second to a multiplication of styles and materials, acceptable and available to all tastes. Great prosperity restored gold to favour and it was used fully displayed, with a curiously fat and opulent effect. Sentiment found charm in wearing the hair of a dear one plaited as a round cord, linked by decorated cheniers when the length of hair could reach no farther. Although the prophylactic purpose to which coral had been put in earlier ages would have horrified Victorian mammas it was considered to be the innocent decoration for children: every fortunate little girl possessed coral or amber beads. Pearls were for the pure debutante, jet and black glass for the bereaved, a gold cross and chain for the confirmed Christian, and a flexible inch-wide silver necklace, fastening with a large bolt-ring, supported the oval locket which modestly hid the early photograph or curled lock of hair. Often a precious stone in the front of these lockets was in a new type of setting, cut as a star. With the close of the century came exhaustion. Necklaces were aridly designed with daisy and trefoil units in *parti* diamonds or pearls radially arranged, sometimes with the axes emphasized by stems of knife-edge wire.

All the work of the nineteenth century had been well made, and with great invention, but without a feeling for loveliness. The good taste of such jewellers as Novissimo and Giuliano, who were excellent enamellers, was exceptional. Giuliano made original chains whose links were short bars of square twisted gold wire enamelled black or white in the twists with painted dots. His use of black and white was exquisite. The initials of his signature are always to be found



PLATE 51

FRENCH, Late 18th century
(Cameo Corner.)

Said to have belonged to Marie Antoinette. Necklace with gold and white enamelled links and enamelled portraits. The subjects are: at the back, unknown; on the left, Mme de Parabere, Princess de Lamballe; centre, Mme. Elizabeth, drop, Marie Antoinette; on the right, Henriette d'Angleterre, Mme. du Barry.

Photograph, William Churchill.



PLATE 52

ITALIAN, Early 19th century

(Cameo Corner.)

The discovery of Pompeii in 1755 led to a classical revival and the institution of the Grand Tour, which prepared the way for the affected classicism of the Napoleonic First Empire.

(1) The small Empire necklace is of Italian manufacture for the French market. The tiny cameos are in thin shell, set from the front with a beading slipped between the edge of the frame and of the delicate cameo, to avoid the pressure of ordinary setting. The pearls of the border are threaded on fine wire.

(2) The larger necklace, with stone cameos, was made about 1840.



PLATE 53

GERMAN, 19th century

(Cameo Corner.)

Cast-iron necklaces of the 1830 Gothic revival.

The factory for iron jewellery had been opened in Berlin in 1804, in a time of financial depression, to encourage thrift. In the anti-Napoleonic revolt of 1813 this factory manufactured the newly instituted Iron Crosses. The earliest work was exquisite, yet in view of the German mentality of a hundred years later one may wonder whether this choice of black iron for decorating women was not symptomatic.



PLATE 54

ENGLISH, 19th century

(Cameo Corner.)

(1) Early Victorian gold snake necklace. The head is set with diamonds and a large ruby and with ruby eyes, the body with turquoise. By Storr and Mortimer of New Bond Street. About 1840.

(2) Mid-Victorian necklet of flexible chain, with three turquoise-blue enameled pendants, each with a diamond star and border of half pearls. By Parkes of Vigo Street. About 1868.



PLATE 55

ENGLISH, Mid-19th century

(Cameo Corner.)

Chrysoprase and stamped gold. The display is opulent, the weight of metal used relatively small.



PLATE 56

Mid-19th century

(Cameo Corner.)

On the left the stamped gold necklace, set with carbuncles, if not inspired is at least homogeneous; with the tasteless necklace on the right no attempt was made to reconcile the mass-produced links with the settings of the foiled amethysts.

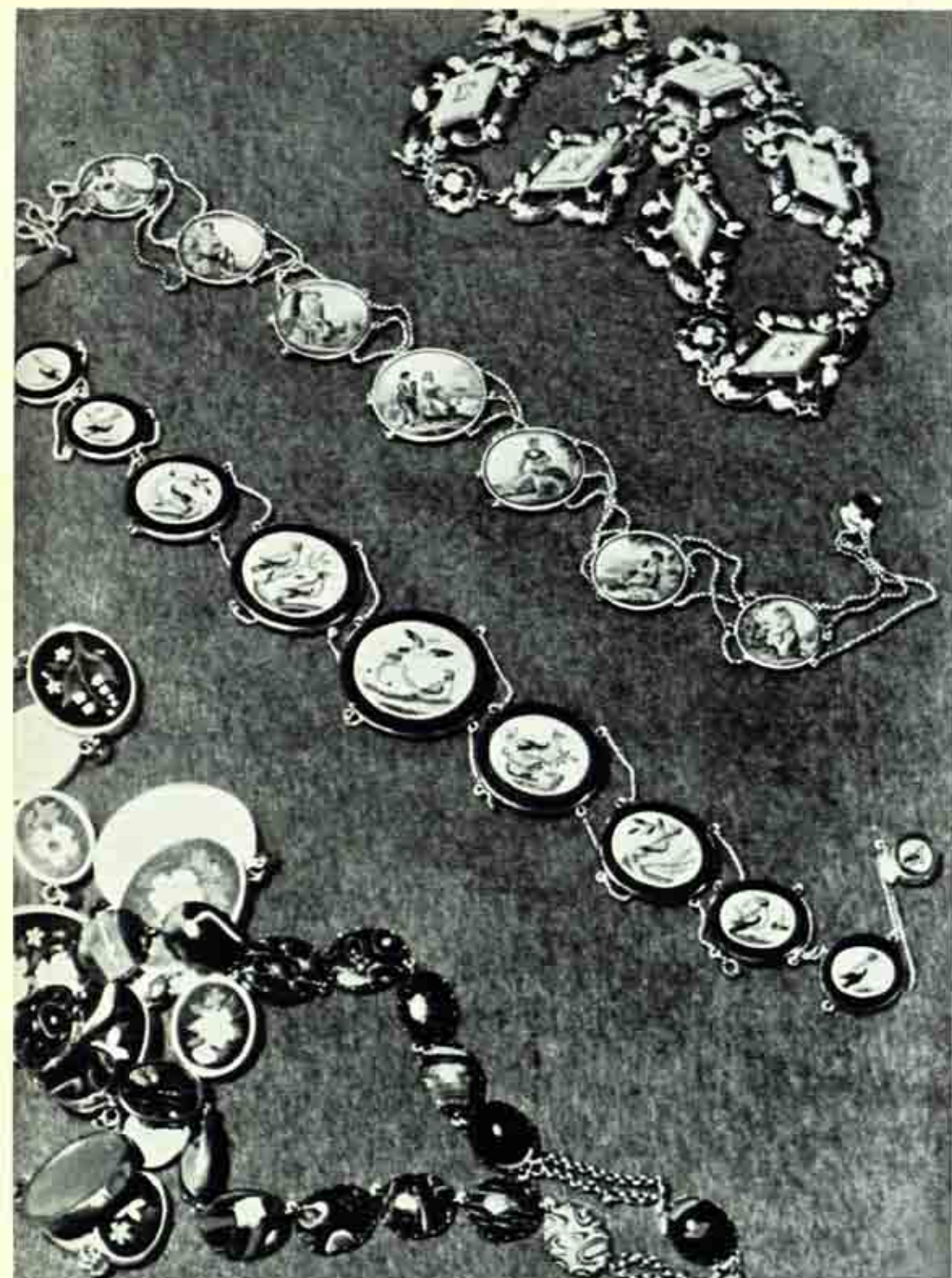


PLATE 57

Mid-19th century
(Cameo Corner.)

The necklace at the top right-hand corner is of stamped Pinchbeck, a metal counterfeiting gold, with painted enamel. Swiss, about 1840.

The two diagonal necklaces are of fine Roman mosaic, of which the lower set are framed in moulded glass. Such necklaces, with units joined as a chain-gang, are "en esclavage." Italian, about 1840.

The half-hidden necklace on the left-hand of the photograph is of Florentine mosaic, of stained marbles inlaid in black marble. Italian, about 1850.

The millefiore glass necklace is also Italian.

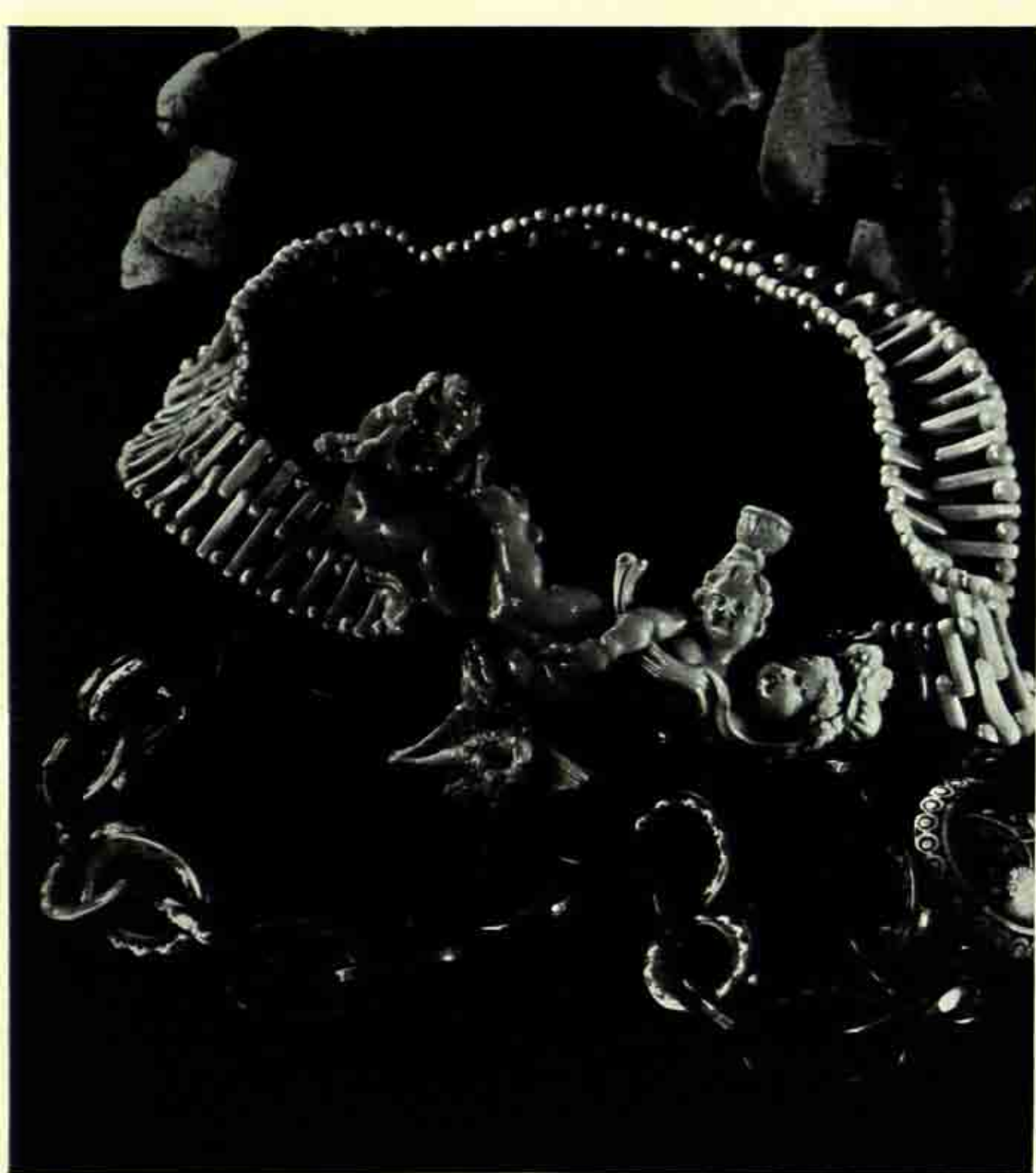


PLATE 58

ITALIAN, Mid-19th century

(Cameo Corner.)

(1) The collar, of red coral, has an unusually fine carving as a clasp. It is not often that such a large piece of coral as was here required is obtainable.

(2) The chain lying in front is of tortoise-shell with gold decoration. For this work a superficial film of the shell was liquefied by heat, into which the thin gold ornament was pressed under a metal plate.

Both about 1860.



PLATE 59

ITALIAN, 19th century

(Cameo Corner.)

"Italian Archaeological Jewellery," by Castellani.

A reproduction of, or in the style of, Etruscan gold bullæ. The Castellani signature of linked C's is to be seen on the back of the bullæ, between the loops. The hook fastening is typical of work by Castellani and of his colleague Giuliano. Though splendidly executed the reproductions have a compact hardness foreign to the originals.



PLATE 60

The 20th century Revival

(By the kindness of Miss Kanty Cooper.)

(1) Necklace by Henry Wilson, in silver, with sprays of leaves and flowers, set with a ruby and stick coral. In wear the coral would hang downwards.

(By the kindness of Francis Cooper, Esq.)

(2) Neckles by J. Paul Cooper, in gold, set with green beryls, sapphires, pale rubies, and pearls.

(3) Necklace by J. Paul Cooper, filigree in green gold, with white enamel flowers and translucent red enamel pomegranates. The back of the necklace is enamelled green.

Photograph, William Churchill.



PLATE 61

Early 20th century

(Cameo Corner.)

Necklace of fish, cast solid in gold, and enamelled alternately red and green.

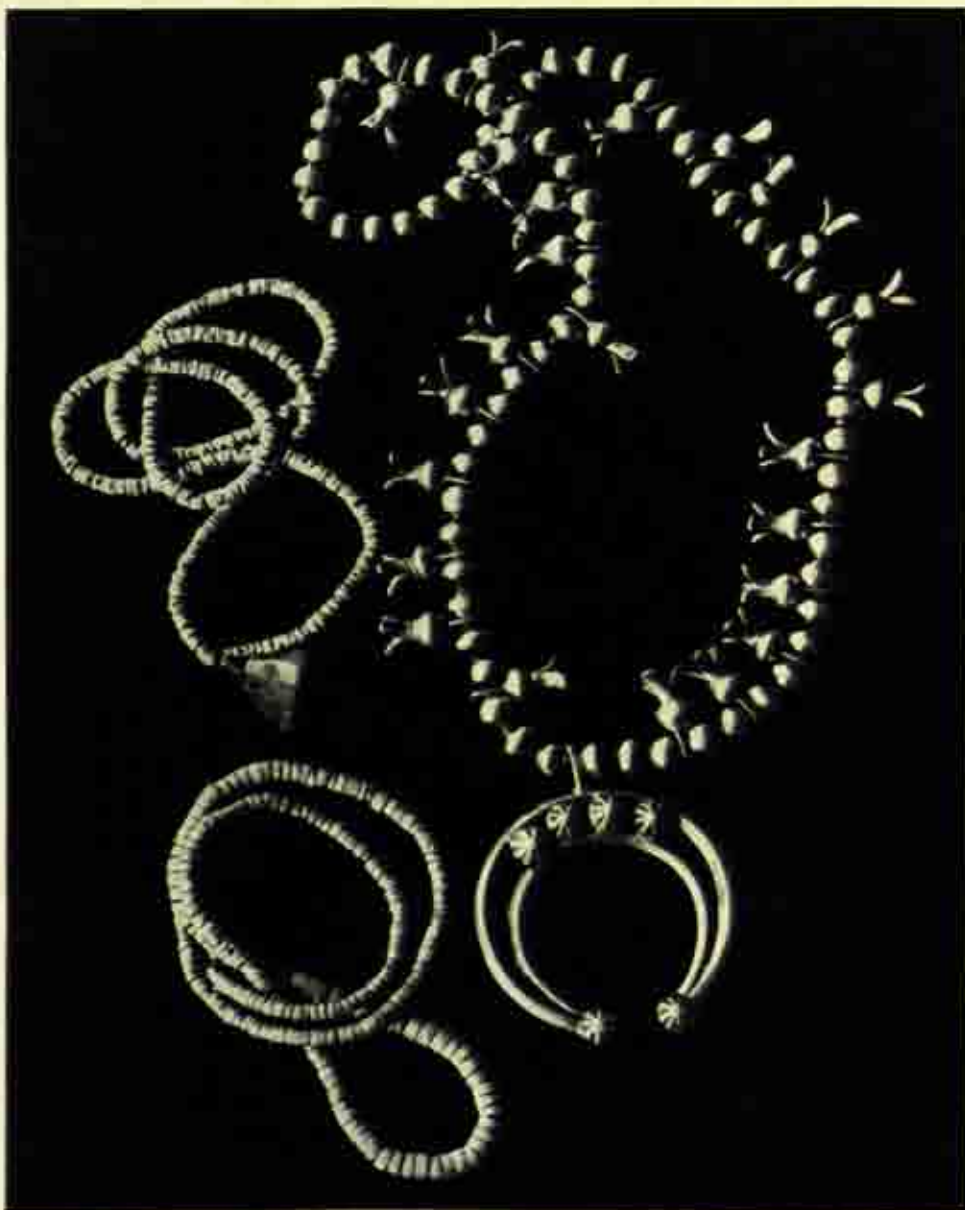


PLATE 62

AMERICAN INDIAN 20th century

(By courtesy of Mrs. Frances
Gorelik.)

The top necklace on the left hand of the photograph is Wampum peag, white shell discs used as beads and as money. The pendant is of turquoise matrix. The lower necklace is of green turquoise. Navaho contemporary silver necklace of globular beads and squash flower pendants, and a crescent pendant. The Navaho Indians of Arizona and New Mexico were taught silversmithing by the Mexicans in the mid-19th century.

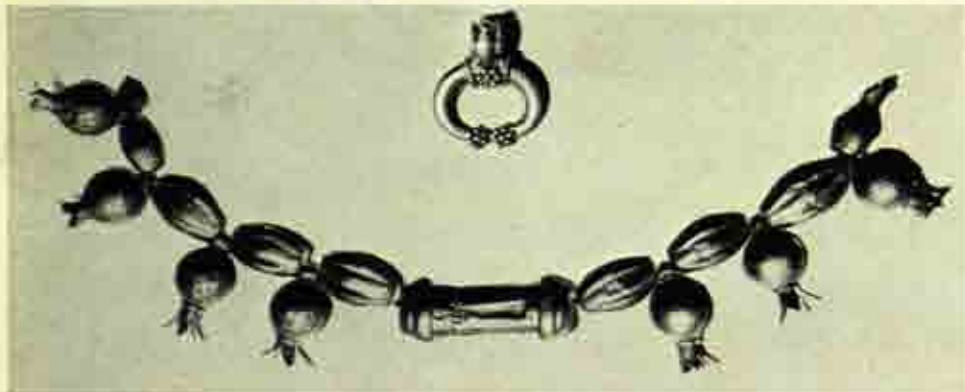
Gold crescent of Ashtoreth, with her rosettes, and an uracus decoration on the loop. Roman, 1st century.

(In the State Historical Museum Department of Cypriot Excavations, Oslo.)

Necklace of gold fluted beads with pomegranate pendants, and an Assyrian seal. From Cyprus.

On the Assyrian wall sculptures from Nimrud, the king and the gods wear one such pomegranate as the centre ornament on bead choker necklaces.

Photograph, William Churchill.



on one of the essential working parts of his jewellery, such as on the fastening of a necklace.

Although the jewellery trade was now established as a wholesale and mass-producing business in which everything possible, except in the most precious work, was made by machine, some ideal designers, concerned at this condition of the craft, in the early twentieth century made a gallant attempt to re-establish beauty in place of financial value as the criterion for jewellery. They worked largely in silver with inexpensive stones, with which they could not slay their Goliath. Nevertheless they did not work in vain, for although they were considered to be amateurs, not having been apprenticed to the craft, their understanding of the possibilities for beauty inherent in metal and stones impressed upon the Trade the necessity for improved design.

Yet the period of decline still persists. The massing of stones is a legacy from the seventeenth century, and the spirit dominating twentieth-century work still emanates from the nineteenth century, but is even more schizophrenic. Beside the jewellery which has commercial value, and imitation or costume jewellery only intended for temporary use, there is now cast plastic jewellery, having neither durability nor value.

The twentieth-century jeweller is harassed by economic difficulties and by a social problem. In an age when those things which have always been considered to be precious must now be available for all, in what manner is he to serve the present, honour the past, and supply the future?

The gold which falls as dust from his file has doubtless an ancient pedigree, and has travelled the world, and been made glorious, and melted into a shimmering, trembling pool more than once, and may yet again take loveliness upon itself. He holds on his palm the gems which were unconsidered minerals in the ground, and feasts his eyes on their intense colour which lay hidden in the darkness of earth's womb. They were created, as he was created, not for himself and his own delight, yet they need him to release their potential wonder. And he needs them too, that he may with all humility seek to add to loveliness. For, forever and forever the search for beauty will go on, since it is but the intensity of Man's desire to be laid on the bosom of God. And the world spins through space upon its path of glory, and stars call to stars across the void, and the golden clamour of Man's soul rings across all voids and spaces, claiming the truth which shall make clear mankind's story.

Glossary

- A jour.* Pierced, as if to let the daylight through.
- Amazonite.* A semi-precious gem, light green with silvery flecks.
- Bolt-ring.* A circular fastening, made of a hollow tube containing a spring and projecting tongue, which closes the circle but can be drawn back to admit a link.
- Bracteate.* A thin stamped disc of metal worn as a pendant.
- Brilliant.* A diamond cut with horizontal planes at the back and front, united by surrounding facets.
- Brilliant cut.* The cutting of any gem, as above.
- Bulla.* A hollow pendant, usually lentoid, to contain a charm.
- Cabochon, en cabochon.* The cutting of a gem so that the front is highly curved and the back concave or flat. A double cabochon stone has a lesser curvature at the back than the front.
- Carbuncle.* A dark red semi-precious gem, always cut *en cabochon*.
- Chamfer.* To bevel an edge or file away a corner. Also the plane so created.
- Champlevé.* A method of preparing the work for enamel: also the work so treated. The ground is cut away to make shallow cells for the enamel, which is finally levelled with the remaining portions of the metal.
- Chasing.* Decoration of metal, in line or relief, from the back.
- Chenier.* A tube of metal used in short lengths, made by drawing sheetmetal strip over a wire core through a hole in a drawplate.
- Choker.* A necklace of about fifteen inches in length, encircling the base of the throat.
- Cire perdue, or waste wax.* A method of casting by which the wax model is melted out of the encasing mould, thus destroying the model in the process.
- Cloisonné.* A method of preparing the work for enamel or garnet inlay, by which the pattern is outlined in strip metal, making separated cells or cloisons.
- Collet.* The collar of metal which holds the set stone in a jewel.
- Dally.* A necklace long enough to fall between the breasts.
- Electrum.* Unrefined gold containing a high percentage of silver.
- Engraving.* Decoration by cutting the lines on metal.
- En suite.* In the same style: forming a set.

- Felspar.** A glittering white stone.
- Filigree.** Work delicately executed in patterns of fine wire, either on a solid background or *à jour*.
- Foil.** Thin shining metal, placed behind a gem to add colour or light.
- Frit.** A glaze mixture of sand and vitreous flux.
- Garnet.** The same stone as a carbuncle, but cut with facets.
- Girandole.** An eighteenth-century pendant or earring of closely set stones, with one or three tear-shaped drops, which usually have a centre stone larger than those in the border.
- Granulation.** Decoration of metal with tiny granules.
- Jadeite.** A hard, semi-opaque stone, darker in colour than jade.
- Jet.** A black variety of coal capable of taking a very high polish.
- Lac.** An Indian resin.
- Marcasite.** Crystallized iron pyrites, used in jewellery to represent diamonds.
- Mill.** To give a ribbed surface, as on the edge of a modern coin.
- Millefiore.** Slices of ornamental glass, showing the transverse sections of diversely shaped and coloured rods fused together.
- Minuterie.** Very small sculptures, executed in metal, wood, ivory, or wax.
- Morse.** A large ornamental brooch, generally set with precious stones, used to fasten a cope.
- Nephrite.** Jade.
- Niello.** A black composition of metallic alloys for filling in engraved designs in metal.
- Pailletons.** Snippings of metal.
- Pavé.** Sunk settings, in which the half-pearls or gems are laid close beside each other.
- Pent-à-col.** A medieval pendant worn hanging from the high collar.
- Pinchbeck.** A metal named after the eighteenth-century inventor, intended to counterfeit gold and used for inexpensive jewellery.
- Plasma.** A green translucent quartz.
- Repoussé.** Decoration of metal in line or relief, from the back.
- Rose.** A rose-cut diamond.
- Rose cut.** The cutting of a *cabochon*, to cover the curved front with triangular facets. Old diamonds were cut in this manner. Double *cabochon* stones can be cut as a double rose.
- Sautoir.** A chain reaching to the waist, popular at the end of the eighteenth and beginning of the nineteenth centuries.

THE BOOK OF NECKLACES

Scorper. An engraver's gouge, producing a wide, and not a linear, cut.

Set clear. The setting of a stone with no metal behind it.

Séigné. A jewelled ornament for the breast in the form of a bow, popular from the mid-seventeenth to the mid-eighteenth centuries.

Spacer. A bar in a necklace of multiple rows of beads, drilled to receive the threads, so keeping them evenly apart.

Stamping. A thin metal reproduction of a design, impressed in a die.

Swage. The impressing of an ornamental groove or moulding on a length of metal as it passes through an open-ended die.

Table cut. The cutting of a gem with a flat surface and bevelled edge. In the sixteenth century the front of diamonds was so cut, the back being left flat.

Toggle. Part of a fastening, longer than the loop through which it passes, and across which it lies.

Undercutting. The cutting away of part of the material, so that the edge of the remaining material juts over.

Verroterie. Jewellery with a flush inlay of glass paste or of sliced garnets.

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