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SOME NEW AND UNUSUAL STONE IMPLEMENTS FROM AUSTRALIA AND NEW GUINEA.

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(Figures 1–21.)

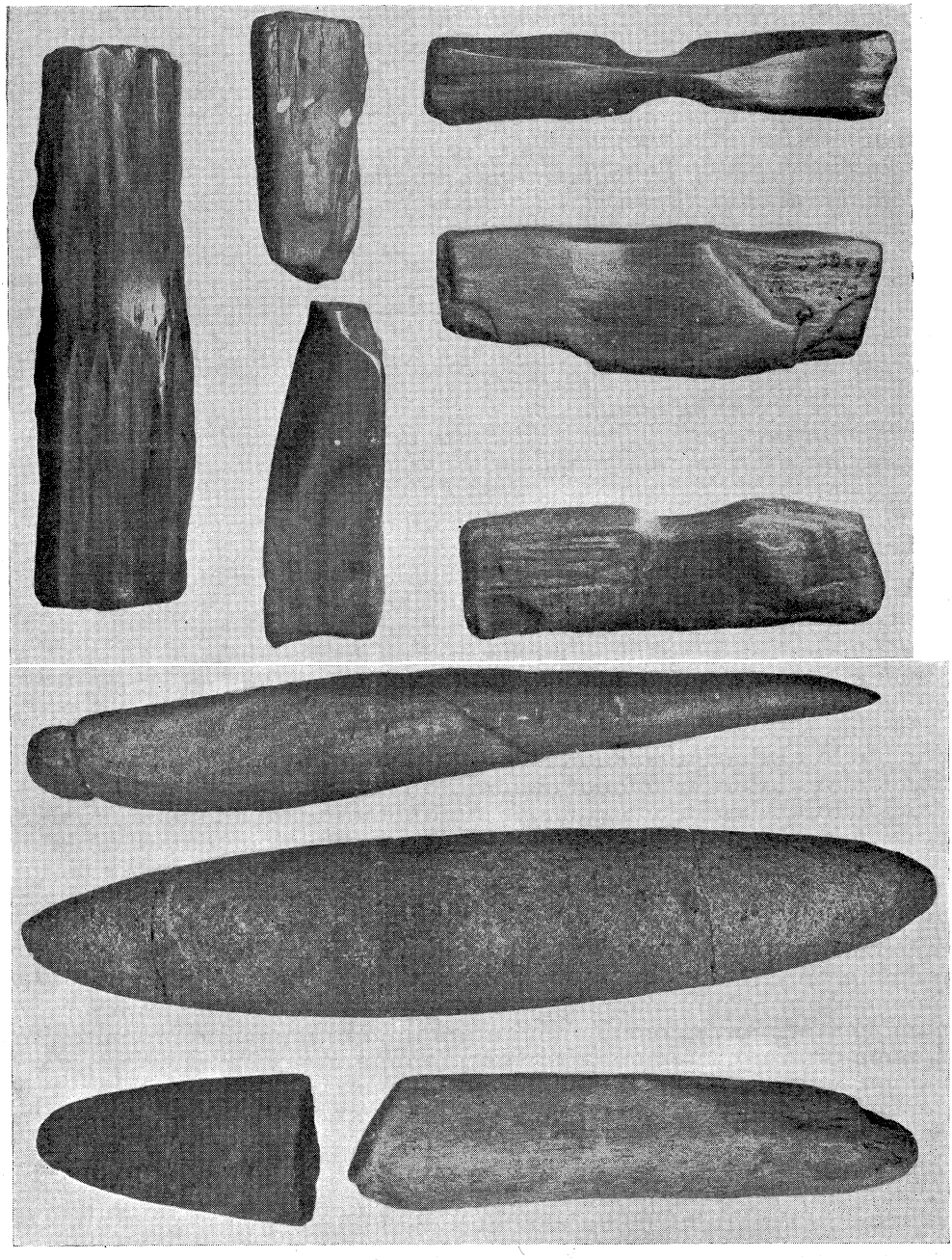
Abrading Stones.

Morella-type. During 1949 Mr. Duncan Mackay of Hereward Station, Morella, central Queensland, presented to the Museum a series of twelve complete and several imperfect specimens of a type of abrading stone not previously recorded in Australia. They were found in widely scattered places in the district, which is part of the Darling Downs, mostly near creeks and on claypans, but some were collected on hills some miles away from permanent water. One of the claypans yielded almost a dozen specimens. There is no evidence to suggest that they were produced by natural agencies, in fact, the polishing on them is obviously artificial.

They are all flat-sided pieces of silicified wood, mostly rectangular in transverse section, but some are plano-convex, oval, lozenge and triangular in section. Silicified wood is abundant in the district.

E.53229.1 (Figure 1) bears the greatest amount of use on its numerous polished surfaces, which are separated by sharp ridges. It is 10·2 × 2 × 1·8 cm., almost square in section, and the lower surface is flat with a deep groove in the middle; the opposite surface is flat at one end on which there is a very shallow groove, there is a deep groove in the middle, and the other end is ridged. One lateral margin or side is flat at one end which bears a very shallow groove, there is a second shallow groove in the middle, then a hump, and a third shallow groove at the other end adjoining a narrow grooved facet on its margin; the opposite side has a bevelled surface along each margin, between which is a flat face at each end, and a sharp ridge (between the grooves) in the middle. All of these surfaces are highly polished, and they bear in all eight grooves from some just begun to two almost 4 mm. deep. The grooves are from 1·6 to 2 cm. wide, and the deepest two are situated approximately in the middle of the lower and upper surfaces but not directly opposite one another.

E.53229.2–4 (Figures 2–3, 6) are three other well-used specimens of a similar type, 9 × 2·5 × 2, 9·3 × 3·5 × 1·5, and 11·5 × 3·4 × 1·8 cm. The largest one has broad upper and lower surfaces on each of which is a deep groove; these grooves are opposite one another, are closer to one end than the other, and are from 2 to 3 cm. wide. The grooves on both surfaces are formed by a narrow bevelled groove at each end and then a wider groove extending to the middle, there being two opposite narrow pairs and two opposite wide pairs of facets forming an encircling groove. The narrow pairs are separated by a narrow flat strip of unused cortex on each lateral margin. The surface is rough and ridged and the polishing extends from the groove at one end and halfway to the other end on one surface, and partly along the ridges on the other surface. One lateral margin is lightly polished from end to end, with the beginnings of a groove on each end, and the opposite side has the beginnings of a groove at one end. The second specimen has six grooves, among which two depressions form the groove on one broad flat surface, and the beginnings of the groove on the opposite surface; one lateral margin has two narrow bevelled grooves 2·5 and 4 cm. long, separated by a median ridge, and the opposite side has narrow grooves also. The third specimen has five grooves, four of which form an encircling groove closer to one end than the other. On one broad flat surface the groove is 3 cm. wide and 4 mm. deep, but the opposite groove is not so deep, and adjoins an



Figures 1–10.

1–6, Abrading stones of the *Morella*-type, made of silicified wood, from Morella, Queensland. 7, Stone figure of a lizard (?) from Mullaley, New South Wales. 8, Double-ended conical stone from the Adelaide River, Northern Territory. 9, Cylindro-conical stone from Point Plomer, New South Wales. 10, Distal end of a cylindro-conical stone from Attunga, New South Wales.

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even shallower groove. The two opposite grooves are separated by a median ridge on one lateral margin, and the opposite but much wider lateral margin has a similar arrangement. A fourth specimen, similar to the last-mentioned one but smaller, being 6 × 1·5 × 1·3 cm., has four shallow grooves asymmetrically distributed around the middle.

There are four imperfect well-used specimens, E.53330.1–4, each one broken across the middle of the groove, and one across one end also, which are from 5 to 5·6 cm. long. The fracture faces are not patinated.

E.53229.5–12 and 53488.1 comprise eight complete and one broken specimens on which the use is not so pronounced. One, 8 × 2 × 1·7 cm., has two opposite slightly concave and polished surfaces, and a narrow bevel 2 mm. wide extending partly along one edge of each surface. Six others, from 7 to 11 cm. long, possess from one to five grooves, most of them as part of an encircling series. One of these, with five grooves, 3 × 3·5 cm. in width and thickness, is the stoutest example in the whole series. One is a curved piece of material.

On all of the above specimens the two ends are comparatively flat and patinated, and they bear no signs of any kind of use.

The two remaining specimens are similar to each other, are broken across the groove, and the fracture or cleavage surface, and the facets of the grooves, have since become patinated. E.53488.2 (Figure 4), is 5·5 × 2·5 × 2 cm., oval in transverse-section, and its surface has a dull water-rolled appearance. It has in all five faces tapering towards one end which bears one side of an encircling groove, made up of four facets, broken through the middle. E.53330.5 (Figure 5) is highly polished all over, 7 × 2·5 × 1·8 cm., and rectangular in transverse section. At one end of one of the broader surfaces is a wide bevelled groove, which slopes upwards at each end, and adjoins two narrow grooves which end abruptly against the patinated end. E.53488.2 is patinated all over, including the surface of the grooves, but on E.53330.5 the patination is worn through to the black surface underneath on the large groove, and the two narrow grooves adjoining it are both patinated and polished.

The *Morella*-type was apparently used as a polishing implement for shaping and finishing-off rounded wooden surfaces such as the shafts of clubs and other objects. Each of the well-worn specimens was no doubt used over a very long period of time for a groove to be worn to a depth of 4 mm. into the stone by the polishing of fine-textured surfaces. They were probably carried about by their owners. One, for example, 53299.1, has no less than eight grooves on its completely polished surfaces. In use the implement was apparently held at one end and turned over when a narrower or shallower groove was required.

Four complete and four broken specimens possess one thick and one thin lateral margin, the latter being a thin median ridge on some examples. Thus their wedge or triangular section would be ideal for the fitting to them of a withe hafting of the kind used on edge-ground axes. The withe would be bent around the thick lateral margin or back, fitted along the upper and lower surfaces, and tied tightly together at the thin margin. In view of the fact that the ends show no signs of use, the only reason for hafting them would be for some unknown and non-practical function. The groove is obviously a result of the way in which they were used for polishing purposes, and is a functional character.

Giligulgul-type.—The first examples of this hitherto unrecorded type were forwarded by Mr. J. M. Clift in 1946, and others subsequently. One was found on top of a dam excavation and had apparently been buried, but the others are surface specimens, from his property, Giligulgul, on the Darling Downs. His brother found one at Nangram Lagoon, and Mr. A. G. Davidson found one on his property, Guluguba, next to Giligulgul. The author found one at Lake Conjola, on the south coast of New South Wales. They

are made from water-worn pebbles comprising a variety of highly siliceous and fine-grained sedimentary rocks among which are chert, jasperoid, and shale, with the possible exception of one igneous rock.

They form an heterogeneous series as follows: Two side-blow flakes 4·5 and 5 cm. long, with longitudinal polished faces, one of which is figured (Figure 12); thicker portion of a split-pebble 4 cm. long, roughly flaked round one end, with a longitudinal polished face (Figure 3); three pebbles (Figure 4), 5, 5, and 10 cm. long, with transverse polished faces from 2·3 to 3 cm. wide, the largest one (Figure 17) of which is a perfect example from Guluguba, and one 6 cm. long from Lake Conjola whose face is unpolished; a long igneous (?) pebble (Figure 16), 11·6 × 6·2 × 4 cm. with one transverse polished face on the cleavage surface and another smaller one 5·4 × 4 cm. long on the outer surface; a triangular sector (Figure 15) 3·4 cm. long, with two polished faces meeting in a sharp edge (unused), the smallest specimen in the series, made of a banded stone; an irregular piece of chert, 5·7 cm. long, with two small polished faces meeting at one end; an elongate pebble (Figure 11), 9 cm. long from Nangram Lagoon, Queensland, with a flat face which is patinated but which bears no signs of polishing.

In fashioning these implements the split-pebble technique was employed, probably block-en-block in which the pebble was stood on an anvil-stone. In all specimens the cleavage surface is flat and sharp-edged, features which are accentuated by the fine-grained materials used and by their rubbing or polishing use. On several the percussion fissures are apparent and the polishing occurs only on the ridges, but on the others no impact spot, bulb, or fissures are present. The polished surface is longitudinal on four, transverse on five, and on two sides of one irregular piece longitudinal and transverse, meaning with or across the layering or grain of the stone respectively. This surface does not bear any striations from grinding so that it has been produced by contact with a fine-textured surface, as with the *Morella*-type, and on all specimens it is so flat and well-defined that at first sight it does not seem possible that the natives could have produced it. On most of the specimens, too, the polished surface is lightly patinated. Mullers often bear a very smooth or polished grinding surface, but it is much larger in area than on the *Giligulgul*-type, the function of which might have been the finishing-off of wooden weapons and other objects.

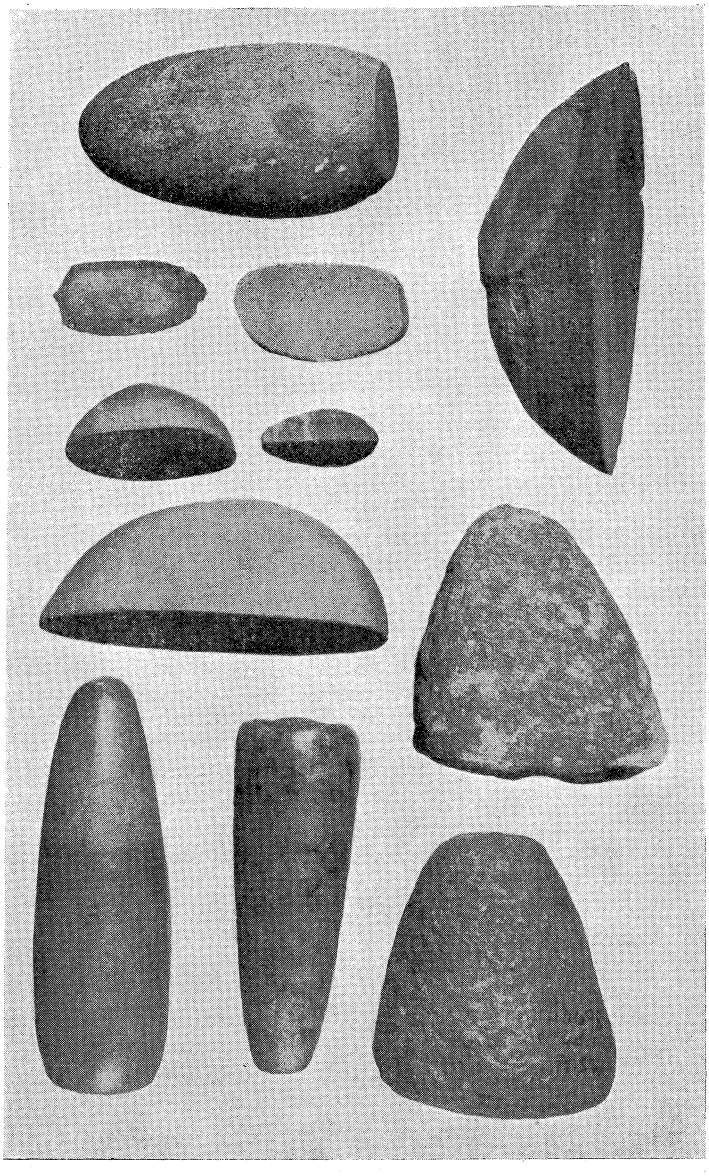
A Stone Figure from New South Wales.

(Figure 7.)

Mr. V. Ellis, of Mullaley, recently presented to the Museum a unique stone figure, the only one yet recorded in Australia. This figure represents a lizard, so far as one can judge, but of what type it is impossible to say, although a goanna is the most probable one. The aborigines used natural stones to represent various animal totems and their eggs, but to my knowledge there is no other record of a stone sculpture on the continent. This example was ploughed up in virgin land on a spur in the Kooringal portion of the Pilliga scrub, on the edge of the black soil plains, 15 miles from Mullaley which is situated in a triangle between Gunnedah, Boggabri and Coonabarabran on the northern tableland.

The figure is made of an igneous rock, probably basalt, weathered to a light grey on the surface. The stone occurs locally. It is 39·9 cm. long, and just more than 5 cm thick and wide. Two sides are flat and one convex, so that it is triangular in transverse section, although the tail is plano-convex. The head is defined by a deep encircling groove, 1 cm. wide and 3 mm. deep, but is not shaped in any other way, nor are the features indicated. The body increases in thickness from the neck, on the convex surface, and the thickest portion of the body is one-third of the length from the head. It then slopes downward to the tail, which terminates in a narrow convex and sharp edge. There are two narrow grooves on the body; one is a complete one which projects backwards in a semi-circular loop towards the tail on the convex and on one of the flat surfaces, and

forwards towards the head on the other flat surface, where there is a shallow groove up to 2 cm. wide in front of it, and then a narrow oblique groove which is evidently intended to be like the other encircling one but was not completed. Along the complete body groove the lower side has been ground away to form a step or slight difference in



Figures 11–21.

11–16, Abrading implements of Giligulgul-type found by Mr. J. M. Clift. 17, Abrading implement of Giligulgul-type found by Mr. A. G. Davidson. 18–19, Cylindro-conical sago-strippers from Aitape and Vanimo, northern New Guinea. 20, End of a cylindro-conical stone from Bulga, Hunter River Valley, New South Wales. 21, End of a cylindro-conical stone from Baradine, New South Wales.

the levels of the surface on each side, thus separating the body portion from the tail. There are no other markings, and the only other shaping of the specimen would appear to have been that of the tail. It was evidently a conveniently shaped piece of stone requiring very little work to produce this figure.

Cylindro-conical Stones and Sago-strippers.

The Australian Museum has acquired in recent years four cylindro-conical stones from north-eastern New South Wales and one from the Northern Territory which add considerably to the known distribution of these implements.

E.52565 (Figure 8) is a unique type presented by Captain W. Murphy, which he found on black soil plains, two miles from the Adelaide River and four miles east of Humpty Doo Station, in the Northern Territory. The only comment given by local natives to Captain Murphy was that it was made a long time ago, but Mr. W. E. Harney was told by one of the old men from the area that he had seen such stones in use—they were buried until required for certain ceremonies during which they were rubbed on a girl reaching puberty to ensure her fertility.

It is made of a coarse light-grey and light-buff coloured quartzite, comparatively soft in texture. Around the periphery of each of four cleavage faces, the specimen being in three pieces, is a ring of brown patination from 3 to 4 mm. thick. It is a bi-conical implement, 31·5 cm. long and 8 cm. in diameter in the middle, weighing 7 lbs. 3 oz. It is neatly shaped by pecking but bears no incised markings. It is asymmetrical, one half being slightly more convex than the other. On one end a thin spall has been knocked off, and the other end is rounded and unmarked. This is the only bi-conical implement of this type recorded in Australia.

E.53649 (Figure 9) is a straight cylindrical stone from Point Plomer, on the far north coast of New South Wales, in the C. C. Towle collection of stone implements in this Museum. It is made of a grey knotted schist, and the smooth surface is roughened by weathering on one side. The butt is an oblique flat surface. A large flake is missing from one side of the conical head (as shown in Figure 9), and two series of flakes have been struck off the edge of the butt. It bears no incised markings, and is 26 cm. long, 6 × 5·5 cm. in width and thickness across the butt. This is the only cylindro-conical stone known from the coast of New South Wales and it was found on a surface shell-midden.

The other three specimens are distal ends only. E.52402 (Figure 10) was presented by Mr. E. D. Coulter who found it on the top of a limestone ridge, 6 miles north-east of Attunga and 1¼ miles due east of the 20-mile peg on the Tamworth-Manilla road, on "The Braes", a station owned by Mr. Atkinson. With it were found edge-ground axes and a percussion stone. It is made of a local hardened gritstone, and was shaped by pecking. There are slight percussive abrasions on the rounded end. The cleavage face bears a brown iron-stained patination. It is oval in transverse-section, measuring 6·5 × 5·6 cm., and the piece is 12·5 cm. long. E.50752 (Figure 20) was presented by Mr. A. N. Eather who found it in open pastoral and farming country at Bulga, on the southern side of the Hunter River Valley. It is made of coarse sandstone and its surface is stained and discoloured by exposure. It is rectangular, with rounded corners, in transverse section measuring 7 × 5 cm. in width and thickness, and is only 8 cm. long. On the surface it bears about two dozen roughly parallel longitudinal rows of short straight incisions about 8 mm. long. The point is battered and several fragments were knocked off during this usage. E.53698 (Figure 21) was presented by Mr. G. H. McNaught who found it in plains country at Baradine, on the northern tableland of New South Wales. It is made of sandstone, is 8 cm. long, the pointed end has been battered to a flat a flat face 2 cm. in diameter and the other end is a battered convex surface 7 × 5 cm. in size. Its most recent functions, therefore, have been those of a hammerstone and pestle. It is possible that the Bulga and Baradine specimens reached these localities by trade from western New South Wales.

Three New Guinea implements, two of which are illustrated (Figures 18–19), in our collection are of interest in connection with the occurrence of the cylindro-conical stone in Australia, but whether the similarity in form of the implements in these two regions has any significance is not known. These specimens are three sago-strippers used to break up the pith in sago logs. They are made of a mottled serpentine, and are all very well shaped, highly polished cylindro-conical implements, each possessing a well-cupped base and a battered distal end. The outer edge of the base on each one is striated and is worn inwards from use. E.28679 from Uweal, Aitape district, is 10·5 long and 3·5 cm. in diameter, and E.29897 from Murik, Aitape district, is 12 cm. long and 3·5 cm. in diameter, both being presented by Mr. R. F. Armstrong; E.33010 from Vanimo is 10·5 cm. long and 3·5 cm. in diameter, and was presented by Mr. G. A. V. Stanley with a note stating that it had come from Netherlands New Guinea by trade. A similar implement, lacking the cupped base, is recorded on far-away Rossel Island by Armstrong (1928, p. 30, pl. XIIB), but hafted wooden sago-strippers of the same shape are used by many of the sago-working peoples of New Guinea. Collings (1949, pp. 18 and 21, Figures 2–3) has described several examples collected on the Kelabit Plateau by T, Harrisson, Curator of the Sarawak Museum, from Ulu Lawas in the Murut country, in Borneo, and one from Netherlands' New Guinea.

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