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ROCK ENGRAVINGS OF THE SYDNEY-HAWKESBURY DISTRICT

Pt. 1: Flat Rocks Ridge: a Daruk Ceremonial Ground.

By FREDERICK D. MCCARTHY

Attention was first drawn to the Flat Rocks gallery by the late R. H. Mathews, who illustrated nine of the figures in various papers between 1895 and 1899. He visited the site (Group 6) during his work as a surveyor and had it reserved as a national monument. In 1945 Mr. Gordon Boes gave me the localities of Groups 1 to 5 on the same ridge, which runs from the south-west to the north-east for about ten miles, extending from Gunderman, on the Hawkesbury River, to Mangrove Creek. I first visited Flat Rocks in 1947 with Mr. Paddy Pallin, and in the same year I spent a week recording Groups 1 to 7, in the area between Starkey Trigonometrical Station and Flat Rocks, accompanied by Mr. R. Gavin, a Museum preparator. I spent a week in early April, 1954, accompanied by another preparator, Mr. N. Camps, recording Groups 8 to 13 which are situated east of Flat Rocks and on a ridge some distance away.

Flat Rocks ridge is situated in typical Hawkesbury sandstone country covered with eucalypt open forest or woodland. The undergrowth is patchy on the ridges but is often thick and spiky in the gorge and valley bottoms. On the ridges the terrain is rough, being covered with broken rocks and large outcrops of sandstone. The trees push up rings of rocks at their base as they develop to maturity, and when the trees are burnt out by a bush fire these rings of stones suggest artificial arrangements.

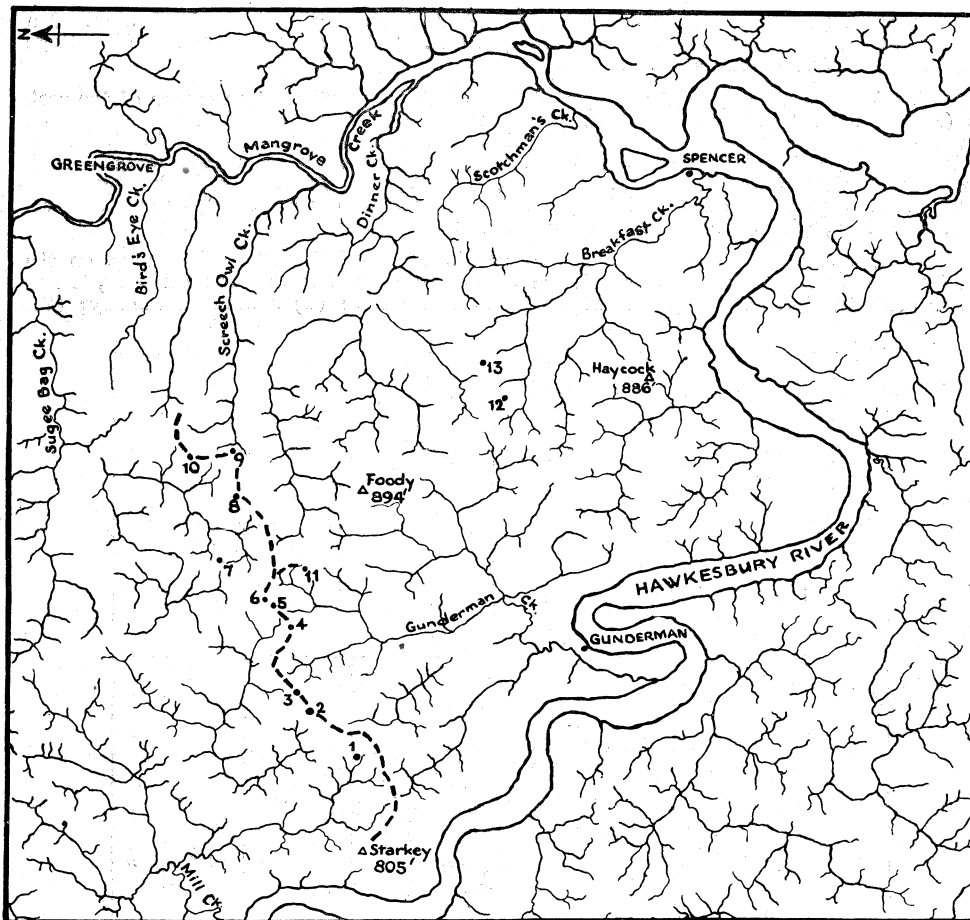


Fig. 1.—Flat Rocks Ridge area, showing location of Groups 1 to 13.

Represented in the engravings are mammals which still frequent the area—rock wallabies (fairly common), and wombats, echidnas, and possums, which occur in reasonable numbers. Others are rare or extinct. An occasional Great Grey kangaroo and dingo may be seen. Emus are extinct although featured in several galleries. Flying foxes still haunt the countryside and feed on *Angophora* blossoms in late summer and early autumn. The area lies within the territory of the Daruk tribe.

There are in all nine groups (Nos. 1 to 6, 8 to 10) of rock engravings on the Flat Rocks ridge, and these will be described from the Starkey Trig. or southern end. There is, in addition, one group (No. 7) on a ridge (adjoining the Flat Rocks site) which forms the eastern side of Dinner Creek. This group is at the Flat Rocks end of the ridge; a reconnaissance of this and another ridge running north-westward towards Mill Creek did not reveal any carvings. Three further groups (Nos. 11 to 13) occur on the ridge running from Flat Rocks through Poody Trig. Station and thence to Mangrove Creek at Scotchman's Creek. The whole of this section of country is a maze of steep sided ridges, deep gorges, and creeks. Mill and Gunderman creeks flow into the Hawkesbury river, while Breakfast, Scotchman's, Dinner, Screech Owl, Bird's Eye and Sugee Bag Creeks flow into Mangrove Creek, a major tributary of the Hawkesbury river.

FLAT ROCKS RIDGE

Group 1.

This group is situated on top of the ridge at military map reading 057.705, and the figures are engraved on a number of separate rocks. The group is about a mile east of Starkey Trig. Station, at the head of a small creek joining part of the headwaters of a larger creek which flows into the Hawkesbury River. The rocks are surrounded by large trees and low scrub on two sides.

Series I, northern end of group, Nos. 1 to 4.—In the north-western corner of the rock is (1) a beautiful pelican, 4 ft 6 in. long, with no legs, as though it is swimming, and its bill rubbed into an intaglio groove. With it is (2) an animal-like figure of indeterminate nature, and (3) a male wallaby 4 ft 6 in. long with a triangle of rubbed intaglio work on the underside of its neck, unusual single line endings to the front and hind legs, and a long, sharply pointed tail. Eight feet above these figures is (4) a crudely drawn kangaroo, 6 ft 9 in long, with a large rounded head and short tail.

Nos. 5 to 13.—East of the kangaroo (4) is another series of small figures, on the south-eastern corner of the rock, comprising: (5) two circular figures about 20 in long, one of which bears two lines like a neck running into natural cracks; (6) a headless wallaby; (7),

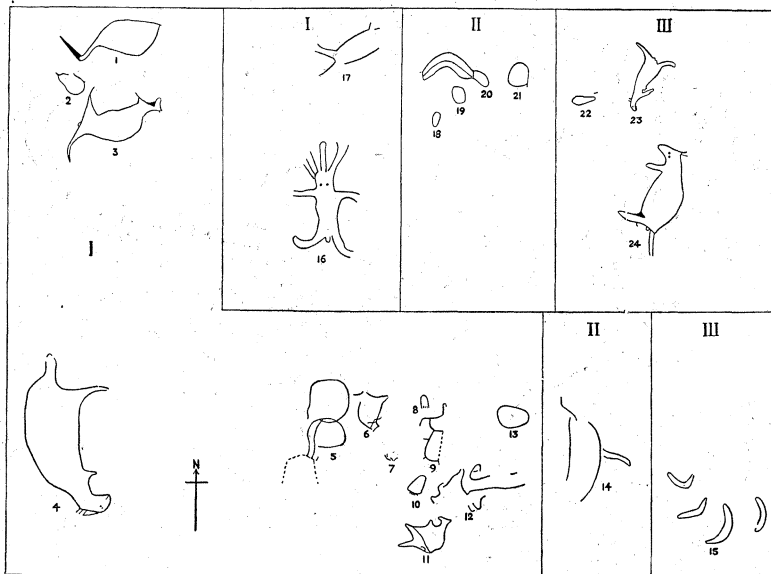


Fig. 2—Left and bottom: Group 1, Series i to iii. Top right: Group 4, Series i to iii.

(9), (12) several complicated and indeterminate line figures in two of which the punctured outline is continued in natural cracks; (8), (10) two human foot-tracks, or mundoes, with toes; (11) a wallaby just over 2 ft long with a band across its hindquarters, on which there is also a crescentic mark; (13) an oval $13\frac{1}{2}$ in long.

Series II.—Thirty feet south of Series I, on another rock, is (14) an indefinite figure, incomplete and weathered away in parts, of an emu (?) just over 4 ft long.

Series III.—Just over one hundred feet to the south-east is another rock bearing (15), four returning boomerangs, two of which are angled types.

Technique and Preservation.—The figures in Series I all have conjoined punctured outlines $\frac{1}{2}$ in wide and from $\frac{1}{8}$ - $\frac{3}{16}$ in deep. Many of them though not weathered to any extent are difficult to discern because the grooves have become coloured by weather and lichen in the same way as the rock surface itself. Series II and III have smooth rubbed grooves, rather faded by weathering, and would appear to be older than Series I.

Remarks.—The human foot-tracks suggest the hunting of a kangaroo (or wallaby) with boomerangs. Kangaroos (or wallabies) form the commonest motif in the group. The complex grouping of indeterminate figures in Series I is unusual, as are the intaglio bill of the pelican and a similar marking on the wallaby (3).

Group 2.

This group is situated on a large undulating rock surface at the juncture of the second spur south of Flat Rocks, on the eastern side of the latter ridge, at military map reading 065.712. The rock is on the lower edge of the spur, above the deep gorge of Mill Creek, with large trees and thick low scrub above it on the ridge.

Series I.—At the western end of the rock, where it is flat but sloping to the south, are to be seen (1) a small oval, probably a mudoer and (2) a fine male kangaroo, almost 5 ft long, in a stylized pose with drooping tail. It is twenty-five feet north of a set of five figures engraved in a concave area of rock. They consist of (3) another kangaroo 5 ft 6 in long in a stylized pose similar to (2); (4) a woman 7 ft 3 in long in an agitated dancing pose, with arms curved (fingers shown) above her head which is thrown back to one side, lateral breasts, and short legs. The three lines on her breast might represent either painted or cicatrized lines. The next one is (5) a bird like a scrub-hen, with single pointed limb, and deeply hollowed back, in a standing pose. Below this bird is (6) an excellent koala bear 6 ft 7 in long, in profile, with outstretched single arm bearing four claws, also in the typical stylized standing pose in which this mammal is usually depicted. Below its arm is (7) a leaping kangaroo over 6 ft long. The three kangaroos in this series are correctly proportioned, with thick hind-quarters and slender upper bodies.

Technique and Preservation.—The outline of No. 2 is of fresh, clearly defined conjoined punctures $\frac{3}{4}$ in wide and $\frac{3}{8}$ in deep. The outlines of Nos. 3 to 7 are of smoothed conjoined punctures, slightly weathered but not rubbed, $\frac{3}{4}$ to 1 in wide and up to $\frac{3}{8}$ in deep. They are all thus well defined.

Remarks.—The presence of the woman in a dancing pose indicates a ritual significance for this series. The animals are characteristic of those upon which the local Aborigines depended for food, and used as totems, particularly the kangaroo.

Series II.—On an adjoining rock surface, about sixty feet to the east, is one of the finest and most impressive pictorial compositions yet recorded among the rock engravings of the Sydney-Hawkesbury district. The rock is convex and slopes from the north to the south down the side of the ridge. It is an inspiring experience to approach this rock and see the work of an outstanding craftsman in this technique. The composition illustrates a kangaroo hunt. Towards the western end of the rock is (8) a gigantic kangaroo 16 ft 6 in long and 10 ft 3 in across the body from hind-toe to back. The tail is rather short and broad, the neck very thick, and the facial outline rounded. There are ten small basin-like pits on the head, the largest two of which might indicate eyes, but it is difficult to say whether the others are natural (as they occur elsewhere on the rock) or engraved for some purpose not understood. Four digits are shown on the front paw, and two large toes on the hind foot. The pose is stylized, semi-leaping in nature. This huge animal has been struck with twelve boomerangs from 1 to 2 ft long, some of which have the deep curve of the returning type and others the shallow curve of the non-returning boomerang. One might be a bladed throwing club. Five have hit the animal on the face, three on the neck, and one on the stomach. About twenty feet eastward are (9), (10) two dingoes, also large, being 5 ft 6 in and 6 ft long, in hot pursuit of the kangaroo, their mouths open and tails held up. They are well placed in the composition, and are unusually animated and unique depictions of this animal.

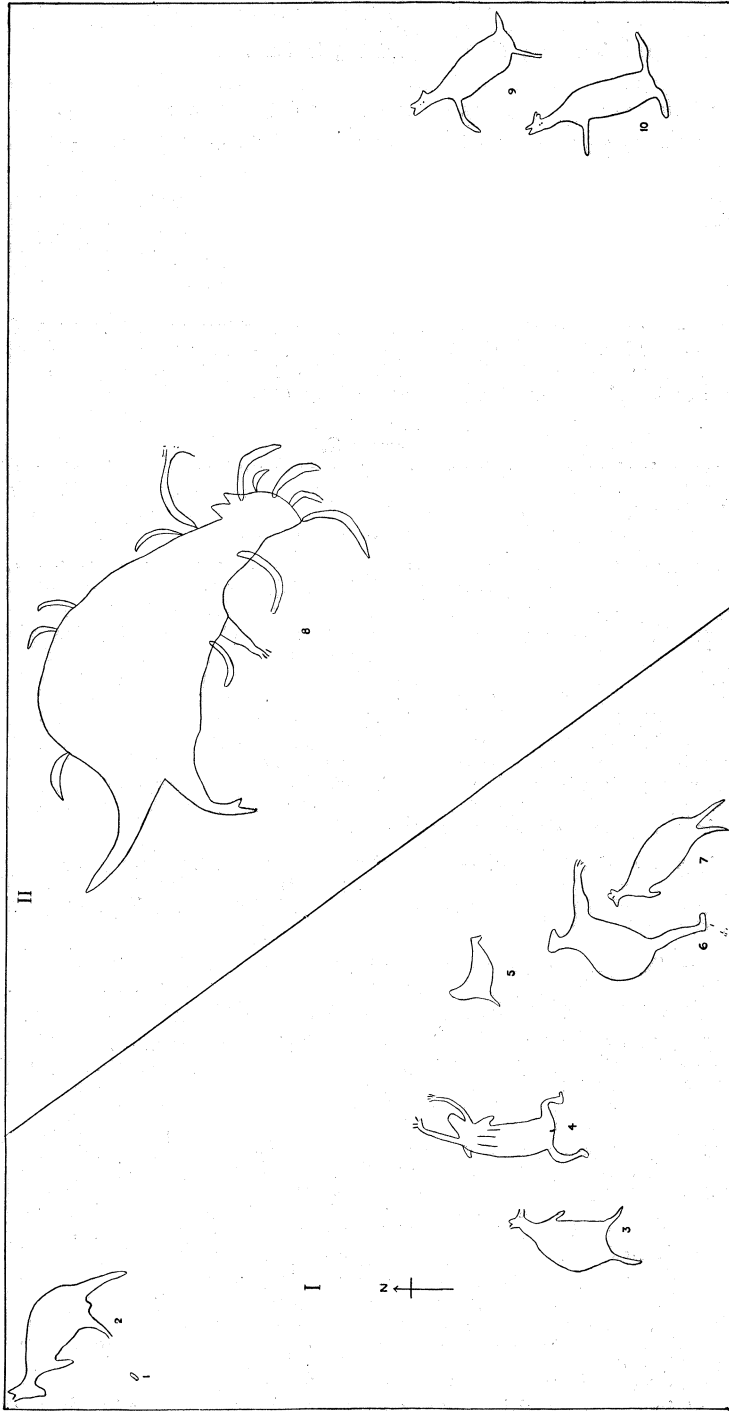


Fig. 3.—Group 2, Series I-II.

Technique and Preservation.—The kangaroo and boomerangs have rubbed grooves from 1 to $1\frac{1}{2}$ in wide and up to $\frac{1}{2}$ in deep, but those of the dingoes consist of conjoined punctures up to $\frac{3}{4}$ in wide and $\frac{3}{8}$ in deep, suggesting that they are a subsequent addition to the group or that their outlines had not yet been rubbed smooth like those of the other figures.

Remarks.—This is obviously a group of gigantic dreamtime animals explained by chants and stories to initiates taken to this rock. No myth has been recorded from the Daruk tribe to explain this group, which probably represents the legendary figures of a kangaroo killed by members of the dingo totem, forming part of an historical saga connected with this ridge as a whole.

Group 3.

Group 3 is situated on a long narrow rock ledge which runs for some hundreds of yards along the northern side of a saddle about fifty feet below the top of the ridge at military map reading 068.714. The saddle is covered by large trees and scrub. From it is to be seen an extensive view into the headwaters of Mill Creek and across the ridges to the north. There are five series of engravings at this site.

Series I.—At the northern end of the ledge, on a flat but slightly sloping rock surface, is (1) a male wallaby 5 ft 3 in long, excellently proportioned and in a leaping pose with tail curved upwards, hind limb forward ready to land, forelegs pointed backwards, and head well poised on a long straight neck. It has been struck on the forehead by a small boomerang. The outlines consist of conjoined punctures up to 1 in wide and $\frac{3}{8}$ in deep, clearly defined and well preserved, although the facial outline of the wallaby is indistinct.

Series II.—Engraved on a small flat rock among bushes, and east of Series I, is (6) a young emu 15 in long, depicted as though picking food from the ground. Its outline is made up of conjoined punctures $\frac{3}{4}$ in wide and $3/16$ in deep.

Series III.—Ninety feet north-east of Series II, on a flat rock just below the top of the saddle, are engraved (2) a death-adder snake, in semi-coiled position, with tongue protruding, and (3) to (5) three barred elongate objects from 2 ft 6 in to 3 ft 9 in long, which at first sight suggest bark-canoes, but as one has ears they are probably eels or fish. The outlines of this series are $\frac{1}{2}$ in wide and $\frac{1}{8}$ in deep, all being very weathered and indistinct.

Series IV.—This is the first portion of the main part of the group as a whole. The rock ledge is divided lengthwise by a wide crack in which flowers and grass are growing. On the upper part, which begins at a point about ninety feet south of Series II, are the following figures: (1) An open oval figure 6 in long, and a short, straight line; (2) young emu, striped as on the young birds, 13 in long; (3) indeterminate animal which could be a young emu or possum. Below this series, on the main rock in the group, is (4) an emu's head. Thirty-six feet to the south of (2) is (5) a mundoe with toes; at thirty-nine feet in the same direction is (6) a wallaby, poorly designed, 2 ft long, facing in the opposite direction to the mudoes; at sixty-six feet is another (7) human foot with toes; at one hundred feet is (8) another mundoe, and above it (9) a poorly done figure of a man with bent legs and penis (which is very long) as though he is in a dancing posture, with knees pushed forward.

On the lower rock, which is concave in this section, and nine feet west of (6) is (10) the remarkable figure of a huge woman 18 ft. long. She is turned sideways with her face to the front, her feetless legs are close together, her buttocks project two feet, her breasts are small and hang from the base of the arms. The latter are slightly above the horizontal, one has two large fingers, the other three, and both bear armlets on the upper arm and wrist. Her head is remarkable because of its enormous ears and five eyes, and the well-defined neck is an unusual feature of anthropomorphic figures among these engravings. Two attempts were apparently made to shape one side of the neck. Her outline is a smooth rubbed groove from $1\frac{1}{2}$ to 2 in wide, and up to $\frac{1}{2}$ in deep, being well defined and preserved. On one leg and below it is a series of weathered pits which might have some significance, but it is now impossible to determine whether they are artificial or natural in origin.

Series V.—On the next part of the outcrop to the south is a most interesting series of figures extending for more than one hundred feet to the southern end of the ledge. At the northern end is (11) a small triangular bag-like figure 1 ft long; below it is (12) a mundoe with toes pointing towards the female ancestral spirit and (13) a fine male wallaby 6 ft 3 in long; the surface of that part of the rock bearing the tail has flaked off. The head is held back, and the digits are shown on the forepaws. Above the wallaby is a curved line. Then come (14) two shallow potholes, which contain water during and after rain, with approximately forty axe-grinding grooves around them; (15) a circle almost 2 ft in diameter; (16) a well posed goose, 3 ft 5 in long, struck on the neck with a boomerang; (17) (18) lines

of indeterminate and incomplete figures; (19) a magnificent alert emu about 9 ft high and long, whose neck runs round the side of a small pothole. Its toes are ill defined but the bird is beautifully posed. In the next series are (20) an indeterminate and incomplete line figure; (21) two boomerangs 10 and 15 in long at the bird's head; (22) a man 6 ft 6 in high with a complicated series of lines about his head. He appears to have thrown his boomerang at the emu; (23) a set of smooth pits which probably represent a clutch of emu eggs; (24) a human leg-like figure which may be portion of a man or constitute a design in itself; (25) a pothole, now filled with soil, surrounded by about twenty axe-grinding grooves.

The next section of the rock is concave and slopes steeply down the ridge, but on it occur figures of (26) a possum 2 ft 6 in long; (27) a swordfish 14 ft long, with a small tail, four fins, five eyes, and a band across the sword; (28) a bag or incomplete bird; and (29) a roughly-shaped shield.

Technique and Preservation.—The outlines of the swordfish, possum, leg-like figure, man, large emu, human foot-track, and wallaby are smooth rubbed grooves from 1 to 2 in wide and $3/16$ – $3/8$ in deep. Those of the pelican, boomerangs and bag consist of conjoined punctures up to $3/8$ in wide and $3/16$ in deep, and should be inspected in the early morning or late afternoon light. The shield and bag-like figure nearby display conjoined punctures 1 in wide and $3/16$ in deep, and they have been smoothed by weathering.

Remarks.—Series I to III might be regarded as casual sets of engravings, but the human tracks, which are from 9 to 16 in long, indicate the sacred nature of the man group and probably represent the track of the large woman. It is probable that other figures in the group are featured in the legend connected with this female ancestress. On the other hand, there appears to be a hierarchy of figures in the group as a whole which makes it very difficult, as with other groups, to interpret them from the point of view of associations. The more important series, with the deepest and widest grooves, comprising the large woman, emu, boomerang, man, possum, swordfish, and several human tracks, might thus be considered as a ritual set. The technique also indicates that another set might consist of the circle (a pool?) the emu and the goose struck by boomerangs, the man, wallaby and human foot-track.

The woman is isolated in all her glory in the middle of a large portion of the rock surface. This woman, and the one shown in Group 6 (Series II, fig. 38) could have been the wife, shown in two different aspects, or wives, of the supreme culture-hero of this area. Thus, among the Wuradjuri of southern New South Wales (Berndt 1947: 77), the wife of Baiami was Kurikuta, an eternal ancestral being who left the earth in ancestral times to live in the sky. She was envisaged as being beautifully shaped, with large and protruding breasts, youthful and virile in nature. Her assistant-totem was the emu, and for this reason people cooking emu had to be careful not to burn the fat, otherwise Kurikuta would come down in the smoke, sending thunder in the day or a flash of lightning in the night as a warning. The lightning was produced by the movements of her body which was covered with glistening quartz crystals. A clever magician could divert Kurikuta from a camp, otherwise a number of people were killed during her visitation. In both groups of engravings (Groups 3 and 6) emus are represented, probably in the ritual relationship of assistant-totem to these female ancestral figures.

The swordfish is a unique petroglyph and its occurrence here is another indication that river people were the artists.

Group 4.

This group is situated on a series of large and prominent exposures of rock on the northern side of a very short spur jutting out into the headwaters of Gunderman Creek on the southern side of Flat Rocks ridge, and about one quarter of a mile from Flat Rocks, which can be seen from the eastern end of the outcrop. The military map reading is 078.716. Although the rock surfaces here are extensive and ideal for carvings only a few scattered figures exist.

Series I.—Engraved on a rock surface at the base of a ridge where it joins the spur, slightly south of the middle of the latter, are (16) a man 5 ft long with a rayed headband, no hands or feet; (17) portion of a wallaby. They are both faint, with outlines or conjoined punctures up to 1 in wide smoothed by weathering.

Series II.—On the next level down the slope, on the northern side of the saddle where the spur joins the main ridge, on a large rock surface, are: (18), (19) two human foot-tracks; (20) a curious crescentic figure with an oval head and a median stripe; (21) a circle 1 ft in diameter. They have smoothed grooves which have been rubbed (but are also weathered and faintly preserved) from 1 to 2 in wide and $3/16$ in deep.

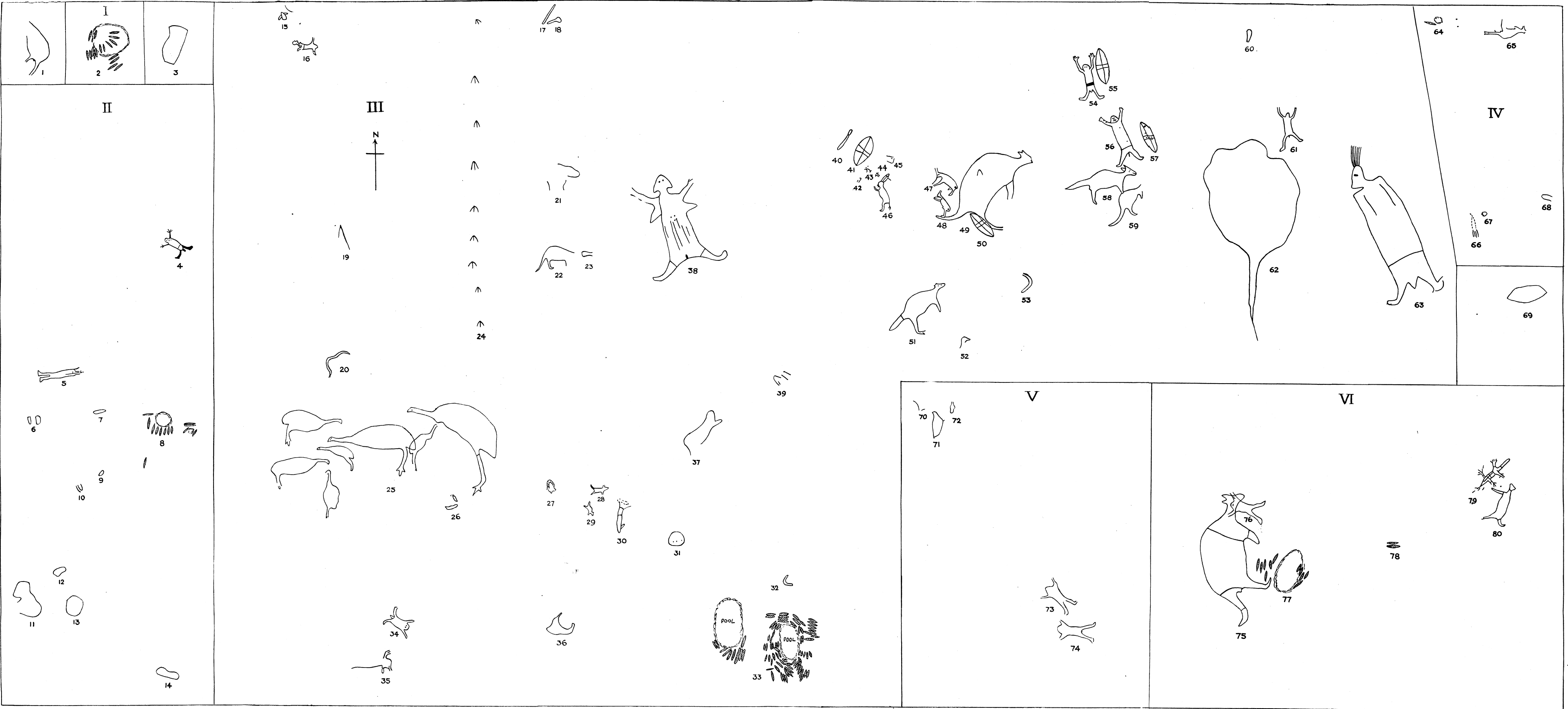


Fig. 5.—Group 6, Series I to VI.

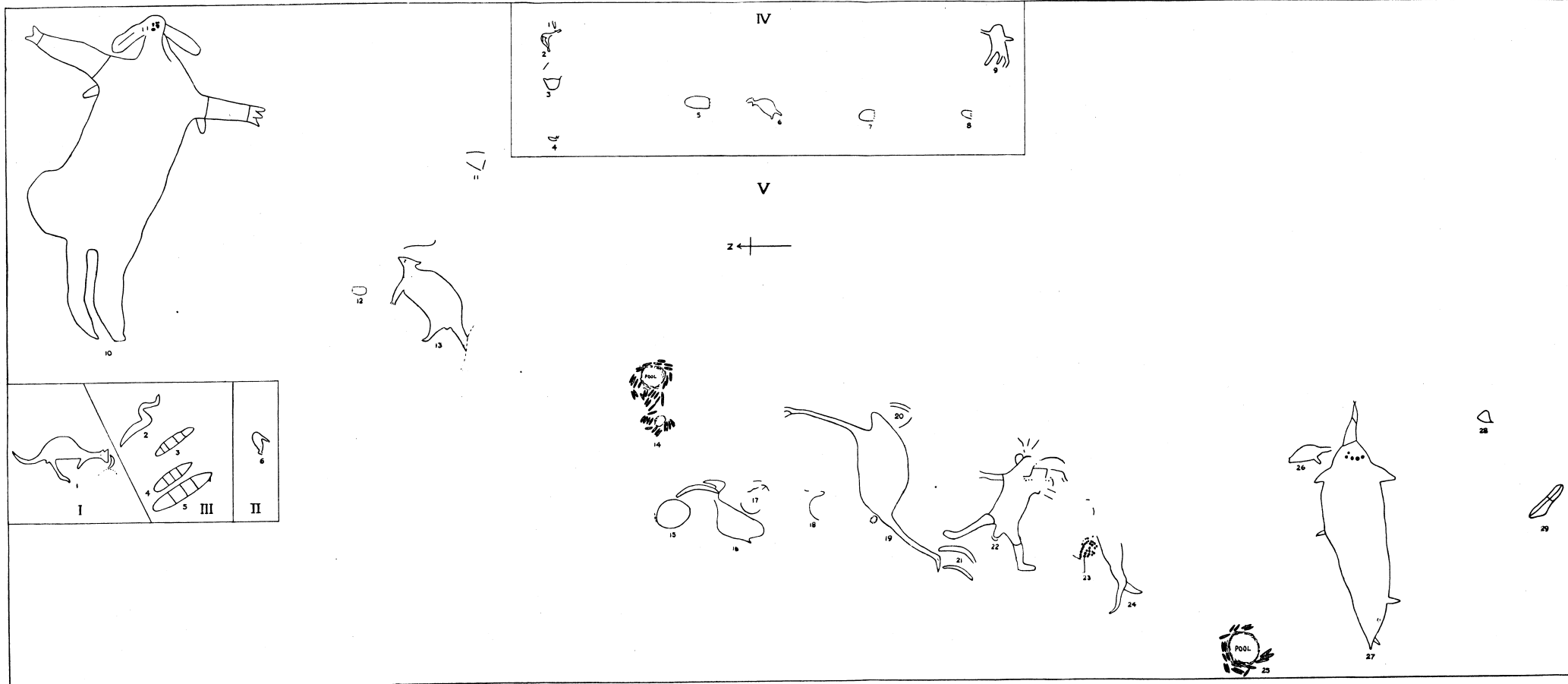


Fig. 4.—Group 3, Series I to V.

Series III.—Situated at the end of a high ledge of rock at the eastern end of the outcrop are (22) a human foot-track; (23), (24) two wallabies, one of which, 4 ft 9 in long, is badly drawn, and has an outline of conjoined punctures up to 1 in wide and $\frac{1}{4}$ in deep. The outline of the other is similar but is from $\frac{1}{2}$ — $\frac{3}{4}$ in wide and from $\frac{1}{3}$ — $\frac{3}{16}$ in deep. They are well preserved.

Remarks.—These sets would appear to have no special significance apart from the man wearing a ceremonial headband or head-dress. The crescentic figure is unique and indeterminate in nature, but it might represent a sword-club with a well defined handle. Most of the sets have weathered to faint outlines and the group is an old one.

Group 5.

Group 5 is located on a large expanse of rock with a rough, undulating, and pocketed surface, at the junction of a saddle and a spur about half a mile south-east of Flat Rocks, at a military map reading of 083.717. Here two mundoes were found pointing northwards, that is towards the main group, No. 6, but were not recorded. They apparently tie up the groups of carvings along this ridge and indicate the ritual path followed by the ancestral men and women, and subsequently by the living Aborigines during ceremonies. Thus another single mudoer was noted on a rock between Flat Rocks group and a group on the Foody Trig. Station ridge; no doubt it served the same purpose.

FLAT ROCKS

Group 6.

This site consists of a remarkably large rock surface, broken here and there by vegetation growing on thin layers of soil which have accumulated on various parts of the rock, and also in shallow potholes and depressions. The portion bearing the engravings is approximately 350 feet long and up to 100 feet wide, and slopes generally from north to south, where it ends in a series of steep and broken faces. The creeks on the southern side of this gallery form part of the headwaters of Gunderman creek, and those on the north are the headwaters of Mill Creek. Flat Rocks, whose military map reading is 082.720, is at a point where a number of important ridges come together from Gunderman and Starkey Trig. Station in the south and south-west, Mill Creek in the north-west, Mangrove Creek to the east by means of the Foody Trig. ridge from Scotchman's Creek, and several ridges between there and Dinner Creek. It can be reached either by following these ridges or by following up creeks such as Gunderman, Mill, Dinner, and Sugee Bag.¹ There is an extensive view into all the gorges at the headwaters of these creeks, and also across the ridges in various directions.

There are several small rock-shelters below the southern side of the main rock surface, but they show no signs of occupation. Near the lower edge of the rock is a pothole 5 x 3 ft and 2 ft deep (which holds stagnant water practically all the year round) surrounded by approximately seventy-four axe-grinding grooves. Above this pool is another pothole, filled with soil in which a sapling 10 ft high is growing, with about a dozen more grooves beside its lower edge. There is a reliable supply of water in a creek which runs down the ridge on the southern side of the gallery.

The site will be described in seven series of figures, beginning at the southern end from where is passed in review a magnificent series of engravings that must have taken many generations of artists to accomplish.

Series I.—At the extreme southern end, in a shallow depression on a large rock surface on the western side of the ridge, is (1) an incomplete headless kangaroo or wallaby 6 ft long; ninety feet north is (2) a shallow pothole (which holds water only in rainy weather), with nine axe-grinding grooves beside it and a further eight ground out on the bottom in a neat crescentic series. There is another pothole 15 in deep which holds water on this rock. One hundred yards north-east of Nos. 1 and 2 is (3) an irregular oval figure about 4 ft long with faded shallow outlines.

Series II.—This brings us to the first of the main rocks. In the south-western corner is (4) a man just over 3 ft long, with three and four long fingers, four eyes and a girdle, remarkable for the manner in which his legs, arms, and penis are hollowed out by rubbing into intaglio grooves up to 3 in wide. His outline consists of fresh conjoined punctures $\frac{1}{4}$ in wide and $\frac{1}{4}$ in deep.

A further one hundred yards in the same direction is (5) a headless man, long and slender in form, 5 ft 6 in high, with indefinite arms and head. A pair of mundoes (6) occur east of him, running from north to south, and another one (7), engraved from east to west, points to the main group. The outlines of all these figures consist of conjoined punctures up to 1 in wide and $\frac{1}{2}$ in deep, smoothed by weathering and considerably faded.

¹Along which bush walkers have erected a number of small cairns of stones as guides.

On another rock surface, near the southern end of the gallery occurs (8), two very shallow potholes holding water in rainy weather only, with eight and two axe-grinding grooves beside them.

Forty feet north-east of (7) are (9) and (10) two more mundoes, one running from the south-west to the north-east, the other from the south-east to the north-west. Both have faded outlines.

One hundred and twenty feet south of No. 4, at the edge of a flat white rock, are (12) and (13) two ovals 15 and 24 in long, and (11) a large bag-like figure which might be an animal (koala bear), 4 ft long, all close together. Their outlines are rubbed grooves from $1\frac{1}{2}$ to 2 in wide and from $\frac{1}{4}$ - $\frac{1}{2}$ in deep.

Fifty feet east of No. 5 is (14) another irregular oval figure 2 ft 4 in long, with rubbed grooves 2 in wide and $\frac{1}{2}$ in deep, very well preserved.

Series III.—Along the western side of the rock is (15) a small flying-fox 10 in long, with outspread wings and a crescentic line beside it; (16) a small man almost 3 ft long wearing a girdle, with an extension of one leg which is now very faint and difficult to discern. Both of these figures have conjoined punctured outlines 1 in wide and from $\frac{1}{3}$ - $\frac{3}{16}$ in deep but smoothed by weathering.

Continuing along this western side of the rock occur (17) a straight narrow weapon 2 ft 6 in long which is probably a spearthrower, and (18) a bulbous-headed club 1 ft 6 in long, beside one another. Their outlines are of fresh conjoined punctures $\frac{3}{4}$ in wide and $\frac{1}{2}$ in deep.

Along the southern edge of the rock occur (19) a large kangaroo track, and (20) a snake 3 ft 6 in long, also in a faded condition.

Ten feet east of a line of emu tracks (25) on the main rock begins a long series of figures which extend for about 180 feet to the east. The first set comprises (21) an incomplete and indeterminate figure; (22) a headless wallaby 3 ft 6 in long; and (23) a mudoe-like figure and some indeterminate lines. It is worth noting that when the tail of the wallaby, which was covered by soil and moss, was exposed its outline consisted of freshly defined conjoined punctures $\frac{3}{4}$ in wide and $\frac{1}{4}$ in deep. The other outlines are of the same type but are now smooth and indefinite due to weathering.

No. 25, the group of seven emus, and (24) their nine tracks leading westward across the rock towards the bush, constitute the finest set known of these birds among the Sydney-Hawkesbury engravings. Three of the birds are young ones from 4 to 5 ft long, the other four are adult birds 6 ft and 10 ft 6 in long, although one is much larger over-all than the others. Two of the young ones are standing erect, and the other five birds have their necks stretched out to the full as though feeding in a flock. They are all reasonably well drawn from living birds, stylized and not in motion. The three-toed foot is shown on three of them, the largest one has a band across its upper leg, and all but one have an eye. The outlines of this well preserved series are rubbed grooves from 1- $1\frac{1}{2}$ in wide and up to $\frac{1}{2}$ in deep. The tracks are from 8-12 in long.

Just below the emus occur two small figures, one (26) a narrow mudoe with three toes, the other a narrow rectangular figure 15 in long.

A series of small figures extends from the emus across the lower portion of this section of the rock, comprising (27), a barred crescent, perhaps an ornament suspended on a cord; (28) a small man; (29) a leaping wallaby; (30) a barred fish of the eel-type whose tail consists of an oval weathered depression in the rock; (31) a circle with three eyes probably representing the sun or moon; (32) a boomerang of the returning type; (33) two potholes around which there are ten and seventy-one axe-grinding grooves. The outlines of five of these figures are freshly defined conjoined punctures from $\frac{1}{2}$ -1 in wide and $\frac{1}{2}$ - $\frac{1}{4}$ in deep, and those of the other three are also of conjoined punctures 1 in wide and $\frac{1}{2}$ in deep, weathered to a smooth indistinct state of preservation.

Continuing southward, on another rock surface separated from the emus by a growth of grass and low bushes, are figures (34) a man in the usual upraised arms pose, (35) a bird or mammal killed with a spear, and (36) a dead scrub turkey with a broken neck, all about 3 ft long. Their outlines are of conjoined punctures 1- $1\frac{1}{4}$ in wide and $\frac{1}{4}$ in deep, weathered smooth but well preserved.

Eighteen feet further east is to be seen (38) the large and imposing figure of an ancestral woman, 11 ft long and 8 feet 6 in wide from foot to foot. It has no fingers, large breasts, and a design, representing either a painted or cicatrized one, shown by parallel lines of punctures on her body, and bands across her legs. The head is the same in shape,

triangular, as that of the huge figures at the Peter Howe Trust site at Somersby (McCarthy 1947) of which there is an example in Group 10 (Series III, Fig. 6) on this ridge. It is almost identical with the large female in the North Maroota group, almost due south across the Hawkesbury River. The figure is isolated in a prominent and commanding position on the rock. Its outlines are smooth rubbed grooves 2 in wide and $\frac{1}{2}$ in deep.

Fourteen feet below (38) are (37), an incomplete koala bear in profile, and (39) a small conical figure beside two short parallel lines.

Sixty-four feet across the rock, broken by a small island of grass and low bushes, is to be seen the largest number of figures in any part of the site. Nos. 40 to 59 constitute a kangaroo hunt: (40) a bulbous headed club 2 ft 6 in long; (41) a broad shield 3 ft 4 in long; (42), (43), (45) three small angled line figures; (44) a pair of kangaroo-tracks pointing south-west; (46) to (48) three baby kangaroos, 3-4 ft long, two of which are standing upright and one is on all fours. The first one has a curious mouth on its rounded head, a long barred ear, and a tasselled tail. On the other two are shown the anal chamber, a penis, and a line running from their noses to their front feet. They adjoin (49) a large buck kangaroo, 11 ft 6 in high, in a stiff upright leaping posture, with a thick humped upper body, and a V-shaped track-like figure pointing north-west within his outline; across his hind legs is (50) a broad shield, and below (51) a doe kangaroo 7 ft 6 in high, leaping along behind the buck. (51) has a band across the straight, broad tail. Also below the shield is (52) an emu's head; and (53) a returning boomerang 2 ft long.

The outlines of figures (41) to (48), (54) to (59) consist of sharply defined conjoined punctures, about 1 in wide and $\frac{1}{8}$ in deep, but up to $1\frac{1}{2}$ in wide and $\frac{1}{2}$ in deep, forming a splendid example of the technique. They are little affected by weathering agencies compared with Nos. 51 to 53 whose outlines are of the same kind but now smoothed by weathering. The outlines of No. 50, the large kangaroo, are smooth rubbed grooves $1\frac{1}{2}$ in wide and up to $\frac{1}{2}$ in deep. All are well preserved.

A tongue of moss separates the next part of the series, which consists of: (54) and (56), two men, 5-6 ft high, each beside a broad shield (55), (57), and (58), (59) two more kangaroos, one headless, 6 ft and 7 ft 6 in high. The upper man has a broad intaglio belt across the body and large fingers on the upraised hands, the lower one has the unusual combination of eyes, nose and mouth shown on the face, and there is also a necklet and a girdle. One shield displays what are apparently four spear marks. Although the two kangaroos are depicted in a stylized pose, the straight broad tail of the upper one compared with the gracefully curved tail of the lower one is worth noting. In this hunting scene two hunters are shown, and two others are represented by their shields. The "mob" of kangaroos, with the large buck as the leader, three other adults which are probably does, and three young joeys, is the most representative, and numerically the largest, shown among the engravings of the Sydney-Hawkesbury district generally.

Another tongue of moss extending down from the top of the rock surface separates this hunting composition from two extraordinary figures. One (62) is a stingray just on 22 ft long and 10 ft wide, the outline of the body being somewhat irregular. Above it is (61) a man almost 5 ft high, and (60) a mundoe 1 ft 6 in long pointing towards the stingray. East of the stingray is (63) an unusual depiction of an ancestral being, 18 ft long. It has a seven-rayed head dress, an elongate eye, a natural depression in the rock which might indicate a mouth, two lines on the body which might indicate arms (otherwise not shown), a girdle, and one curiously shaped foot. The figure is posed in a very animated manner, and the head is turned sideways towards the stingray. Another engraving of this being is included in Group 9 (Series II, Fig. 24) on the Flat Rocks ridge and it also looks westward. The outlines of the stingray and ancestral being are rubbed smooth, the grooves being $1\frac{1}{2}$ in wide and $\frac{1}{2}$ in deep; that of the mundoe is of weathered conjoined punctures rather faded, and that of the man is of sharply defined conjoined punctures 1 in wide and $\frac{1}{4}$ in deep, similar to those of Nos. (41) to (48), (54) to (59).

Series IV.—A considerable area of rock on which there are no engravings extends to the east, but in the north-eastern section occur: (64) an axe-grinding groove beside a very shallow pothole which holds water only during rainy weather; (65) a wallaby 4 ft 6 in long with a tasselled tail, in an upright posture, its outline consisting of sharply defined conjoined punctures 1 in wide and $\frac{3}{16}$ in deep where they were partly covered by soil and grass, but the exposed portion is slightly smoothed by weathering; ninety feet to the south is (68) a faded mundoe pointing eastwards, and (66), (67) four short lines, about 8 in long, engraved at one end of a weathered oval and light buff coloured depression 1 ft long in the rock, obviously to form a composite figure; one hundred and thirty feet to the east is portion of a large emu-like figure (not illustrated) now almost faded away; sixty feet further eastward near the edge of the rock surface is (69) an oval shield, just over 4 ft long. The outlines of Nos. 66 to 69 consist of conjoined punctures from $\frac{1}{2}$ — $\frac{3}{4}$ in in diameter, and $\frac{1}{8}$ in deep, but those of No. 69 are very narrow and are only $\frac{3}{8}$ in in diameter.

Series V.—Across another patch of vegetation up to fifty feet wide is an undulating rock surface, tessellated on its northern side, on which there is engraved another series of scattered figures, consisting of (70) two lines of an incomplete figure; (71) a bird 3 ft long with wings closed; (72) a curious bottle-shaped indeterminate figure. Twenty-five feet to the north-east, near the lower edge of the rock, are (73), (74) two men without any unusual features, almost 4 ft long. The outlines of this series consist of conjoined punctures about $1\frac{1}{4}$ in wide and $\frac{1}{2}$ in deep, smoothed and faded by weathering and difficult to discern.

Series VI.—Twenty feet to the east, across a narrow strip of vegetation, is another kangaroo hunting composition. (75) is a very big buck kangaroo, 14 ft long and 7 ft 6 in wide, in a leaping pose, well shaped apart from the fore-part of the body which is too thick, with bands across hind and fore limbs and on the front and hind quarters of the body. There is (76) a small man with both mouth and eyes, 4 ft high, superimposed on the kangaroo's head. The outlines are of conjoined punctures $1\frac{1}{4}$ in wide and from $\frac{1}{4}$ – $\frac{1}{2}$ in deep, slightly smoothed by weathering but well preserved and distinct. Beside the kangaroo's foot is (77) a pothole 5 x 3 ft, with a raised boundary on one side, beside which are eleven axe-grinding grooves, and (78) two more grooves about ten feet away. The association of kangaroos with pot-holes was a practice favoured by aboriginal artists and probably indicates that these animals were commonly killed in such situations. Group 7 is another excellent example of this combination.

Thirty feet eastward, in the south-eastern corner of Flat Rocks, are (79) a goanna, and (80) a dingo, both of which are unusual and excellent figures. The goanna, 5 ft 2 in long, is a delicately portrayed example with long claws on each limb, the lines apparently indicating its pattern of body colouration. The dingo, 4 ft 7 in long, has stiff legs, upcurved tail, and angular head, with bands across its neck, forelegs, and tail. It is one of the most realistic representations of the dingo known among the engravings as a whole, and the goanna is a unique portrayal. The outlines of the goanna and dingo are rubbed grooves $1\frac{1}{4}$ in wide and $\frac{3}{8}$ in deep, but the bands on the dingo are $\frac{1}{2}$ in deep. Both figures are well preserved.

Remarks.—This is undoubtedly the principal group on Flat Rocks ridge, but Group 3, with the huge ancestral woman and other figures (Series IV, Fig. 10), Group 9, with the male and female ancestral beings (Series I, Figs. 23, 24), Group 2, the ceremonial kangaroo hunt (Series II), must also have ranked high in the ritual pattern centred on this ridge. Mundoes or human foot-tracks connect the various galleries. In Group 3 they point both towards and away from Flat Rocks, and are apparently connected with the ancestral woman. In a group one mile north of Flat Rocks, along the ridge towards Mangrove Creek, are mundoes pointing towards Flat Rocks, and on the latter site they occur at each end directed inwards towards the principal figures. Thus it is obvious that natives approached the sites from both ends of the ridge.

Features of the Flat Rocks group are (a) the flock of emus, (b) the two kangaroo hunts, (c) the ancestral beings and (d) the huge stingray. What connection existed between these four elements of the gallery is unknown. The technique makes it quite clear that the main kangaroo hunt is more recent in age than the others, but whether it constitutes a separate series is not clear. One man in this technique is placed beside the stingray, which suggests that the series might be a later addition illustrating another incident in the story.

It is obvious that there exists in this site generations of work by aboriginal artists. The faded figures present in each group are not necessarily the oldest, because it was noticeable that where portion of a figure was covered by soil or moss its outlines were sharply defined and the exposed part of the outline was considerably affected by weathering even to being difficult to discern.

Group 7.

This group is situated at the beginning of a ridge which runs along the northern side of Dinner Creek to Mangrove Creek. The military map reading is 088.727. The group is included here because it is only a few hundred yards from Flat Rocks.

Series I.—On a narrow saddle of undulating rocks are two large kangaroos, 10 ft 9 in and 8 ft long. The large one is engraved on a slope of the rock, in a lifeless pose beside a large shallow depression which holds water during rainy weather; there are bands across the fore and hind parts of his body. The smaller one, thirty-seven feet to the north on a convex ridge of the rock, is stretched out flatly as though leaping at full speed, and is well proportioned. The outlines of both figures consist of conjoined punctures, now smoothed by weathering, 1 in wide and $\frac{1}{4}$ in deep. There is an extensive view from the rocks to the Sugee Bag Creek area to the north.

I



II



SOIL

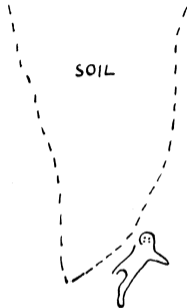


Fig. 6.—Group 7, Series I to II.

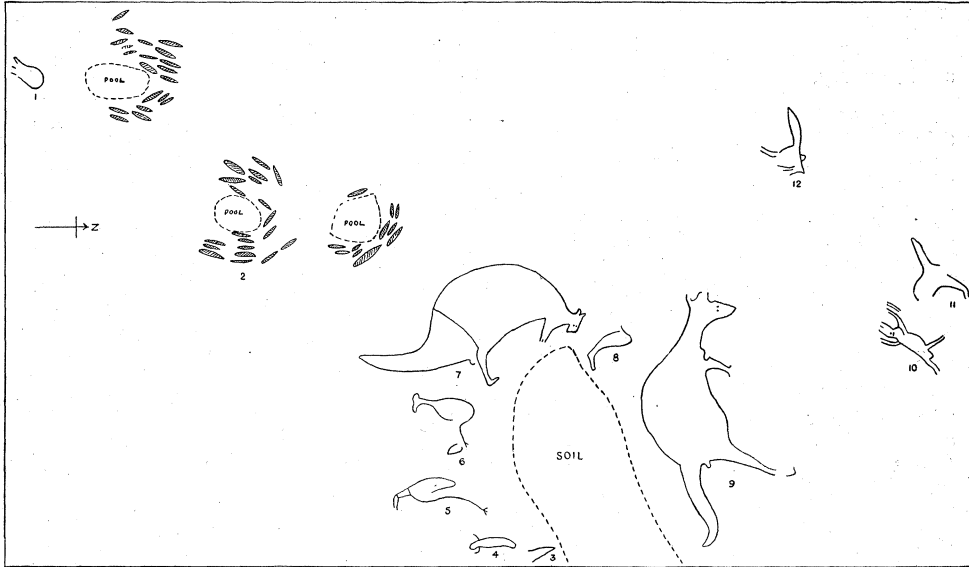


Fig. 7.—Group 8.

Series II.—On another large rock surface, flat but sloping from east to west, well down the side of the ridge about one quarter of a mile north of Series I are engraved three men of contrasting types. One has no right leg or arm but has four eyes. The middle figure, twenty-nine feet to the north, has uneven sized feet and the outlines of the arms are mixed up and indefinite. The third one, fifteen feet further north, is wearing a rayed headband and a girdle. Its rounded head is supported by a neck, and its arms point downwards, two unusual features in engravings of human figures. The outlines consist of conjoined punctures from $\frac{1}{4}$ -1 in wide and $\frac{3}{16}$ in deep, somewhat smoothed by weathering.

Remarks.—Whether the depiction of a pair of kangaroos, or other animals, as in Series I, was connected with hunting magic by the aboriginal artists is not known. Apart from a totemic significance, there are three possibilities in the interpretation of this and similar sites. One is that the animals were engraved by hunters prior to going hunting, in which case they would carry out a magical rite which might be limited to a chant to ensure the killing of big kangaroos, and the site is therefore to be regarded as one illustrating hunting magic. Another view is that the two animals were engraved as a record of a successful hunt by a party of hunters. A third interpretation is that the two kangaroos simply constitute the idle artistic expression of men camped near the site, and who knew it to be a favoured resort for these animals. It must always be borne in mind that these engravings involve a considerable amount of manual labour and time, a point which indicates perhaps a more serious interpretation than the latter one. The theme of hunting kangaroos and other animals is a recurring one among the engravings of this ridge, and it would appear to be the main inspiration for the engraving of these two animals. The three men in Series II do not appear to be connected with the kangaroos, and it is, of course, impossible to say whether they constitute a group in themselves or form part of the general pattern of engravings along the Flat Rocks ridge generally. Series of from two to five men are common among the engravings of the Sydney-Hawkesbury district, sometimes accompanied by a woman, their purpose being to illustrate or record certain social customs of which we are unaware for this area.

Group 8.

This group is situated on the main Flat Rocks ridge, about one mile east of Flat Rocks, at a military map reading of 097.724, beside the Bridle Track to Mangrove Creek. The rock surface is roughly semi-circular, about 90 feet long and wide, sloping slightly from west to east, forming the end of a rise on the ridge and at the beginning of a saddle at the other end of which is Group 9. From the site are the usual views into gorges and across the ridges. From this saddle unnamed creeks on the south side flow into Mangrove Creek, and on the north side into Sugee Bag Creek.

Figures in the main series are engraved around both sides of a shallow depression in which there is a growth of grass and low bushes in the lower middle of the rock. This depression would hold water during and after rainy weather, but it is problematic whether the Aborigines would have kept it cleaned out for this purpose unless they spent much time at the gallery.

Subjects.—At the southern end of the group is (1) a mundoe, bag-like in shape, 1 ft 6 in long, pointing south-west and 50 feet away from (2), three shallow potholes (separated from each other by a few feet), which hold water only after rain but which were filled with soil when inspected. Around them are twenty, twenty, and eleven axe-grinding grooves respectively. Thirty feet eastward are (3) a V-shaped figure, like the end of a bird's wing; (4) a lizard; (5), (6) two birds, 3 and 4 ft high, of the wading type, probably herons, at the foot of one of which is an incomplete oval figure; (7) a large and well portrayed male kangaroo 10 ft long with a very fat or broad tail, depicted in an ambling pose with its forepaws and head close to the ground; (8) a fish 2 ft long; (9) another huge kangaroo, 11 ft long, in a more upright pose than (7). Towards the northern side of the rock occur three more figures from 3 to 3 ft 6 in long, comprising (10) a man with rayed head-band; (11) a flying fox; and (12) either a bird or a second flying-fox.

Technique and Preservation.—The outlines are all of the conjoined punctured type. The punctures show clearly in some figures but are smoothed by weathering in others. They are from $\frac{3}{8}$ –1 wide, and from $\frac{1}{8}$ – $\frac{3}{16}$ in deep. Several of them, particularly figures (3) and (4), (7) and (12), can only be seen in the late afternoon or early morning light but the others are well preserved.

Remarks.—This site was obviously a stopping place where hunters sharpened their stone axes and engraved a record of the game they wished to kill or had killed. It is possible that the placing of the kangaroos and birds beside the waterhole indicates that they were killed in such a situation. On the other hand, the general theme may simply be a depiction of a popular and favoured hunting place for the artists responsible for the engravings. Such a scene was commonly the inspiration for bark paintings of Arnhem Land. The fish suggests people from Mangrove Creek or Hawkesbury River. Flying-foxes are abundant in the area.

Group 9.

This group is situated on the main Flat Rocks ridge, at the eastern end of a saddle which begins at Group 8, one furlong away. The military map reading of the site is 106.725 and it is beside the bridle track to Mangrove Creek. The engravings occur on the wider end of a long rock surface which extends for some hundreds of yards as a ledge along the top of the southern side of the ridge. The ledge also extends around the end of the saddle to the northern side of the ridge, but this section and the sharply defined eastern end, bear no engravings. The rock surface is up to fifty feet wide in the area bearing the engravings, the main group of which extends for seventy feet. The two series are separated by ninety feet. Water flows across the rock in various channels during rainy weather. The view from the gallery is eastward into the headwaters of Screech Owl Creek.

Series I.—At the western end is (1) a curious but indeterminate series of large rounded punctures 1–1½ in in diameter engraved in a hook design 3 ft 3 in long; (2) a young striped emu 4 ft 4 in high, with what appears to be a spear in its lower breast; (3) a wallaby; (4) another young emu; (5) a bird track, apparently of an emu, pointing to the south-east; (6) a boomerang; (7) an unusual figure which is probably a flying-fox; (8) a wallaby; (9) a tailless kangaroo 5 ft high, with three eyes; (10) a bird; (11) a well posed kangaroo 5 ft 9 in long; (12) an oval; (13), (14) two incomplete and indeterminate figures. In a separate set near the lower edge of the rock are (15) a bird; (16) an eel; (17), (18) two men, smaller than natural size; (19), (20) two boomerangs. The central series of figures comprises (21), (22) incomplete animals; (23), (24) a culture hero 12 ft high, and his wife 9 ft high; (25) an indeterminate but interesting mammal, probably a native tiger-cat; (26) three boomerangs, one of which is a right-angled returning type; (27) portion of a man.

Series II.—The scattered figures at the eastern end of the outcrop comprise (28) a wallaby 4 ft 6 in long; (29) flying-fox; (30) goanna; (31) six axe-grinding grooves.

Technique and Preservation.—The outlines of practically all these figures are from $\frac{3}{8}$ –1 in wide, and $\frac{1}{8}$ – $\frac{3}{16}$ in deep. They all consist of overlapping or conjoined punctures, showing out conspicuously in the young emu, and in the wallaby and flying-fox at the eastern end. The outlines of many of the figures have been smoothed by weathering and flowing water but none of them is rubbed. It was only after several examinations that the full series was discerned.

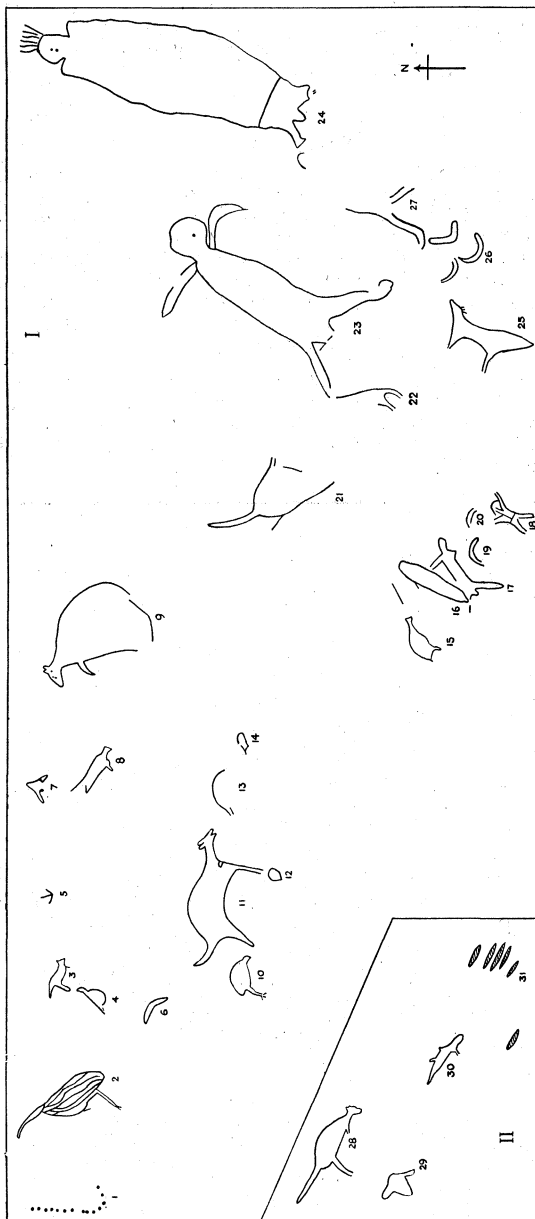


Fig. 8.—Group 9, Series I to II.

Remarks.—The most notable feature of the group is that the culture-hero, armless and wearing a rayed head-band and apparently portrayed from the side, is exactly the same in style as the one on Flat Rocks, though it is not as large. The wife, however, is shown in a different posture. They are also associated in both groups with kangaroos and emus as the principal animals, although birds, wallabies, a native cat, and a flying-fox also occur in this series. The weapon featured is the boomerang which apparently was in common use in this area. The site is probably a spirit-centre, totem-centre, and initiation ground, illustrating an incident in a legend.

Group 10.

This group is situated on the main Flat Rocks ridge, forming a complete saddle about one mile east of Group 9 at a military map reading of 105.732. The saddle is one rock surface divided into five separate areas by islands and strips of grass and low vegetation with one or two trees on the southern side. The whole of the rock surface bears a series of parallel cracks bisected in places by others at right angles, to form tessellations. The northern side of the saddle is a high, steeply sloping rock face. The view is into the headwaters of Screech Owl and Suggee Bag Creeks. The site includes 145 figures, and numerically is the most extensive recorded in the Sydney-Hawkesbury district. It will be described in six separate series, from east to west across the saddle.

Series I.—From south to north are the following figures: (1) two small ovals; (2) a large oval; (3) young wallaby; (4) bird; (5) four tiny figures of an oval, bird's head, and two incomplete figures; (6) incomplete boomerang; (7) portion of a bird; (8) incomplete figure; (9) goanna; (10) oval; (11) wombat; (12) man; (13) goanna; (14) indeterminate; (15) flying-fox; (16) shield; (17) oval.

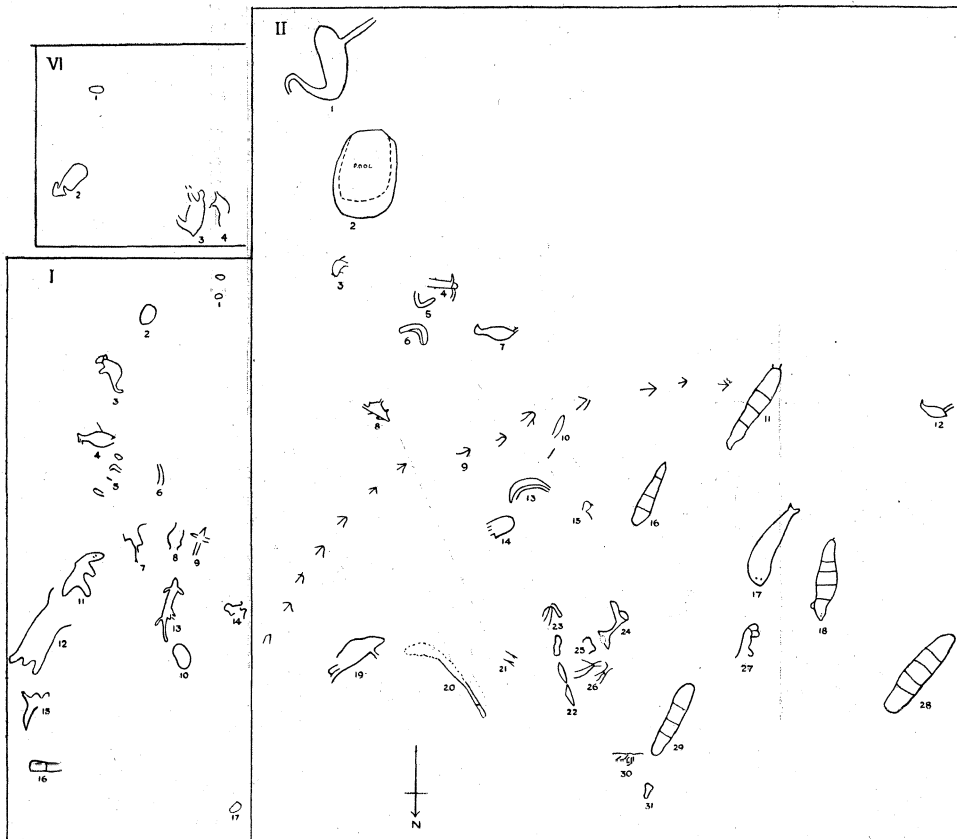


Fig. 9.—Group 10, Series I to II, VI.

The outlines are all about $\frac{1}{2}$ in wide and from $\frac{1}{8}$ - $\frac{3}{16}$ in deep and suggest work done by one generation and school of artists. They form a heterogeneous series of small figures, engraved without any apparent pattern or connection.

Series II.—From south to north are the following figures, engraved on an oval area of rock with a convex surface: (1) emu, gracefully posed, with head and neck withdrawn in a characteristic posture; (2) oval pool, only 1 in deep, encircled by a punctured line; (3) small mammal; (4) upper part of a man; (5)-(6) boomerangs of returning type; (7) bird; (8) small mammal; (9) crescentic line of fourteen bird tracks; (10) elongate oval figure; (11) barred fish; (12) bird; (13) broad boomerang; (14) large human foot-track; (15) incomplete figure; (16) barred fish?; (17) fish of flathead type; (18) barred fish; (19) mammal; (20) indeterminate figure merging into natural cracks to form what appears to be a club; (21) pair of kangaroo or wallaby tracks; (22) three oval figures, the top one probably a mundoe; (23 to 27) indeterminate figures; (28), (29) barred fish or bark canoes; (30) indeterminate; (31) hourglass-shaped figure.

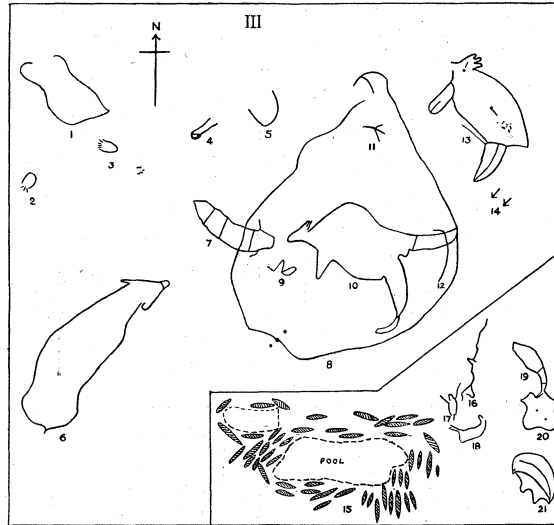


Fig. 10.—Group 10, Series III.

In various sections of this series there is some connection between figures. Thus the emu (1) is obviously standing beside a pool of water, and is apparently recorded as an observation by the artist. The barred figures (11, 16, 18, 28, 29) possess in Nos. 11 and 18 the characteristics of a fish, but the others are suggestive of bark canoes. Perhaps they represent both fish and bark canoes according to whether the anterior fins are indicated or not. Nos. 4 to 7 suggest a composition of a man throwing boomerangs at a bird. The line of bird tracks runs across the rock from Series I towards Series III, but its significance is not known. In Series II, (26) is unusual in type. Nos. 7 and 12 are obviously illustrations of the same bird but the species is indeterminate.

Technique and Preservation.—Most of the figures in this series have outlines about $\frac{1}{2}$ in wide and $\frac{1}{8}$ in deep, but in (22) oval, (9), line of bird tracks, and (28) barred figure, they are 1 in wide and $\frac{3}{16}$ in deep. Most of these figures are well preserved and were apparently never any deeper, but they are difficult to discern because lichen in the grooves has given them the same weathered colour as the rock surface, and it is necessary to search for some of them in the early morning or late afternoon light.

Series III.—Situated on a sloping area of rock at the western end of the group. From north to south are the following figures: (1) Mammal?; (2), (3) two human foot tracks leading off the rock to the west; (4) (5) two incomplete and indeterminate figures; (6) a large elongate flat-nosed figure, possibly an ancestral platypus, 8 ft long; (7) barred fish; (8) large bird, 12 ft high and 9 ft 6 in wide, with an unusually fat body. The beak suggests an eagle, but the body is that of a ground bird; (9) indeterminate, possibly a bullroarer on a string; (10) leaping kangaroo struck on the leg by a boomerang; (11) bird track pointing southwards; (12) curved line; (13) large mammal of indeterminate species; (14) pair of bird tracks; (15) shallow pools surrounded by forty-nine axe-grinding grooves; (16) line figure; (17) flying bird or flying-fox; (18) dead bird; (19) fish; (20) flying-fox; (21) echidna, particularly well posed.

Technique and Preservation.—The outlines of most of these figures are about $\frac{1}{2}$ in wide and from $\frac{1}{8}$ - $\frac{3}{16}$ in deep, but those of Nos. 6, 8, 10, 13 and 21 are 1 in wide and from $\frac{3}{16}$ - $\frac{1}{4}$ in deep. In the main they are not easy to discern, in fact Nos. 2, 3, 6, 8 were not found until a third search of the rock had been made in the best possible light. The outlines have all assumed the same patina and colouration as the rock surface.

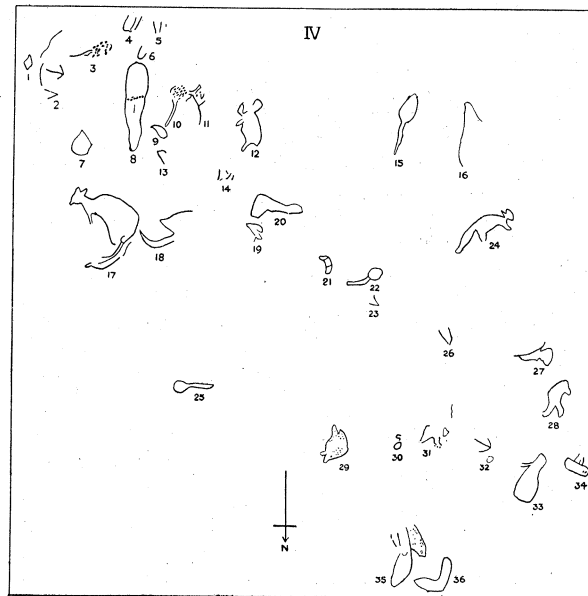


Fig. 11.—Group 10, Series IV.

Remarks.—This is undoubtedly the most important series of the six in this gallery as indicated by the large figures (Nos. 6 and 8 particularly; also Nos. 10 and 13) and by the presence of both human and bird tracks. No. 13 is a unique figure. The huge size of Nos. 6 and 8 indicates mythological associations, but both are indeterminate apart from No. 8 being the figure of a bird. Its great body raises the question again of the function and significance of such figures. Are they in themselves spirit-centres for totemic clans, the place in the rock where the ancestral beings desposited or embedded their supplies of eternal spirits to be reincarnated generation after generation? Or are they simply gigantic creatures typical of the dream-time world of the Aborigines, contesting with one another various rights, preying upon one another, and in other ways carrying out activities which form so important a part in the mythologies of Australian tribes as a whole? The line of bird tracks in Series II leads to Series III, and the bird and human tracks in the latter could form one track, as in other groups, although here they lead away off the rock to the north-east. Nos. 6, 8, and 13 are all unusual figures, but No. 6 is represented at the Peter Howe Trust, Somersby (McCarthy: 1947: 322-29 pl. A.D.) by three similar monsters from 22 to 32 ft 6 in long which I described as Rainbow-serpents. Smaller figures of this kind, commonly regarded as eels, occur throughout the engravings of the Sydney-Hawkesbury district. The flat beak of No. 6 suggests a platypus but on the other hand, the thin, short tail suggests a wombat, although it probably represents neither of these mammals. It is drawn from above and thus represents an animal commonly seen from that angle. Mammals are always shown in profile because they are viewed most commonly from the side.

Series IV, situated to the south of Series III on an oval and flat section of tessellated rock: Most of the figures are small enough to fit into one tessellation. They comprise from east to west: (1) lozenge-shaped figure; (2) pair of bird tracks pointing northward; (3) stem of a plant bearing edible rhizomes or bulbs; (4) portion of a bird; (5), (6) indeterminate and incomplete; (7) pointed oval; (8) indeterminate figure with line of large punctures 1 in in diameter across the middle; (9) bird; (10), (11) club, or root food similar to No. 3; (12) mammal; (13), (14) incomplete; (15) tadpole; (16) incomplete; (17) kangaroo lying down; (18) posterior portion of an emu; (19), (20) indeterminate; (21) boomerang; (22), (25) spherical-headed clubs; (24) a wallaby; (23), (26), (27) incomplete

and indeterminate (28) possum; (29) echidna; (30) oval and line, probably a bullroarer; (31) indeterminate; (32) bird track and small circle, probably representing a bird beside a waterhole; (33), (34) indeterminate mammals or insects; (35) indeterminate, with spotted figure adjoining; (36) boomerang, probably thrown at the rodent.

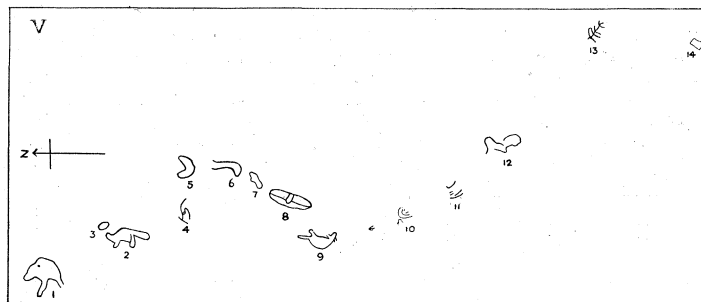


Fig. 12.—Group 10, Series V.

Technique and Preservation.—The outlines are all about $\frac{1}{2}$ in wide and from $\frac{1}{8}$ – $\frac{3}{16}$ in deep. All appear to have been done by the one generation of artists. Many are difficult to discern because the patination of their outlines is the same as that of the rock.

Remarks.—The range of subjects is highly varied in this series. It includes clubs and boomerangs which were evidently thrown commonly at birds and mammals, as illustrated in other groups along this ridge, and in Nos. 25 and 36 in this series. Unusual and unique figures here include Nos. 3, 10, 11, which appear to depict edible roots on a stalk, possibly of a sedge, and No. 15, the tadpole. The pair of bird-tracks (2) point towards Series II in which there is a line of them. A number of indeterminate and incomplete figures are represented. Apart from the hunting motive, there is no apparent pattern in this series.

Series V.—Situated on a long sloping but flat rock surface across the southern end of the group and of the saddle. From north to south are the following figures: (1) indeterminate animal; (2), (3) possum and circle; (4) indeterminate; (5) boomerang; (6) bird's (emu) head; (7) human foot-track; (8) shield; (9) wallaby; (10) to (12) indeterminate; (13) backbone motive, or leaf-frond; (14) rectangle.

Technique and Preservation.—The outlines are all about $\frac{1}{2}$ in wide and from $\frac{1}{8}$ – $\frac{3}{16}$ in deep. The figures are engraved mostly along the northern edge of this rock surface where it joins a strip of vegetation.

Remarks.—This is a series of odd figures, unrelated to any of the other series. Nos. 5 to 8 appear to represent the hunting of a bird whose head is shown, as is the boomerang thrown at it, the hunter's foot track and his shield.

Series VI, situated on a small flat but sloping area of rock at the western end of the group, above series III. The bridle track passes across this rock. They comprise: (1) oval, possibly a human foot-track; (2) indeterminate; (3), (4) two mammals, probably wallabies. Their outlines are $\frac{1}{2}$ in wide and from $\frac{1}{8}$ – $\frac{3}{16}$ in deep. They are well preserved and distinct.

General Remarks.—This gallery, comprising 145 figures, contains more engravings than any other site on Flat Rocks ridge. In most of the outlines overlapping or conjoined punctures are distinct, and none of the outlines has been rubbed. Most of the outlines, also, are about $\frac{1}{2}$ in wide and from $\frac{1}{8}$ – $\frac{3}{16}$ in deep, and suggest the work of one generation and school of artists. It is interesting to note that the outlines of most of these figures have assumed the same colouration, with lichen, as the rock surface itself, but this process can take place in less than one hundred years, as shown by the initials of white men engraved on sandstone rocks in some localities. It is not, therefore, a reliable indication of age.

A ritual motive is suggested in Series III, and the various series are linked here and there by either bird or human foot tracks. Otherwise, apart from hunting compositions, there appears to be no apparent pattern throughout the gallery as a whole. An impressionistic portrayal of action is recorded in the hunting composition, shown in Series V, Nos. 5 to 8, consisting of a boomerang, bird's head, hunter's track and shield.

The occurrence of so large a number of axe-grinding grooves at this site strengthens the theory that the carvings were done by people of the Eloueran culture, as suggested previously (McCarthy: 1948, 30).

FOODY-SCOTCHMAN'S CREEK RIDGE

This ridge runs from Flat Rocks *via* Foody Trig. Station to Mangrove Creek, and forms at its eastern end the southern side of Scotchman's Creek valley.

Group 11.

This small but interesting group is situated on the second saddle along the ridge between Flat Rocks and Foody Trig. Station, at a military map reading of 087.714. The figures are engraved on a series of small and separate blocks of rock beside the track in the middle of the saddle. These soft white sandstone rocks are in an unusual position for a group of engravings. The view is restricted by forest and scrub. The little creeks beginning at this saddle form part of the headwaters of Gunderman and Dinner Creeks.

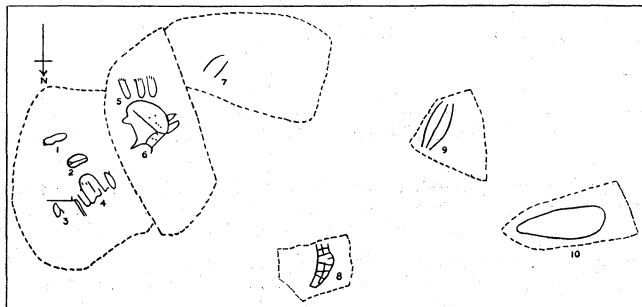


Fig. 13.—Group 11.

From east to west are the following figures: (1) human foot track; (2) barred oval; (3), (4) indeterminate; (5) three mundoes beside one another in a parallel set; (6) a beautifully portrayed echidna, bearing a few dots and two projections on the back which might be intended to indicate the spines; (7) incomplete; (8) barred, crescentic figure (like a snake's head); (9) shield; (10) oval, probably another shield.

Technique and Preservation.—The echidna and human foot-tracks have smooth rubbed outlines from $1-1\frac{1}{2}$ in wide and $\frac{3}{8}$ in deep. The outlines of the other figures are from $\frac{1}{4}-1$ in wide and from $\frac{1}{8}-3/16$ in deep. They are all clear and well preserved. Overlapping punctures show out clearly in several of the figures.

Remarks.—The principal motive in this group is that of hunting echidna and flying-fox. There is obviously a connection between the echidna and the hunter's feet, and similarly between the flying-fox and the other figures on the same rock. No. 1, however, is a human foot-track pointing towards Flat Rocks, and it is worth noting that another one occurs on the first saddle halfway between this site and Flat Rocks, carved on a large rock surface on the eastern side of the saddle. These tracks thus indicate a sacred pathway to the major Flat Rocks group.

Group 12.

Situated about halfway along the ridge between Foody Trig. Station and Mangrove Creek, at a military map reading of 115.683. The figures are engraved on two of a number of rock surfaces on the side of the ridge, at the beginning of a saddle. There is a view into the Breakfast Creek gorge.

On a flat rock sloping slightly to the south and east are engraved a (1) koala bear in profile, and (2), (3) two fish, one of the flathead type. About 60 ft to the east, on a higher ledge of rock, a set of three boomerangs (4) is engraved one above the other; one of them is notable for the concave shape of one arm. They are all about natural size. The fish indicate that river people were the artists responsible for this group.

Technique and Preservation.—The figures are clear and well preserved, and the outlines are only slightly smoothed by weathering. Portion of the koala was covered with soil and moss and when this was cleared away a sharp outline of conjoined punctures was exposed which contrasted noticeably with the slightly weathered remainder of the outline of this figure. All of the outlines consist of conjoined punctures from $\frac{1}{4}-\frac{1}{2}$ in wide and $3/16$ in deep.

Group 13.

This group is situated a mile east of Group 12, at a military map reading of 121.686. The site is a prominent and extensive sloping rock surface (corrugated in many places by running water, after rains), which extends along the northern and eastern sides of a high rocky knob on the ridge. The area of rock surface bearing the engravings is about 500 ft long and up to 100 ft wide. From it is seen a magnificent view into the gorge of a tributary of Dinner Creek and across the ridges behind it. The figures are scattered and difficult to find. They comprise, from east to west; (1) profile view of man with rayed headband; (2) human foot-track; (3) bust of a man; (4) circle; (5) elongate fish, barred, like a flathead; (6), (7) axe-grinding grooves; (8) mammal like a possum; (9) anterior portion of a kangaroo; (10) indeterminate; (11) man, with axe-groove beside his hand.

Technique and Preservation.—The outlines of all the figures are about $\frac{1}{2}$ in wide, and from $\frac{1}{8}$ – $\frac{3}{16}$ in deep, and consist of conjoined punctures. Nos. 1 and 5 are distinct and well preserved but the remainder are faint and may only be seen in the best light of late afternoon and early morning.

Remarks.—In reference to No. 4, a circle, it is worth noting that on this rock a number of natural ovals occurs, slightly irregular in shape in some instances; in one place at the eastern end there are three of them in a north-south line, which may have represented human tracks to the Aborigines. No particular interpretation can be placed upon such a group of old and scattered figures, but the small and well portrayed No. 1 is an unusual and important figure.

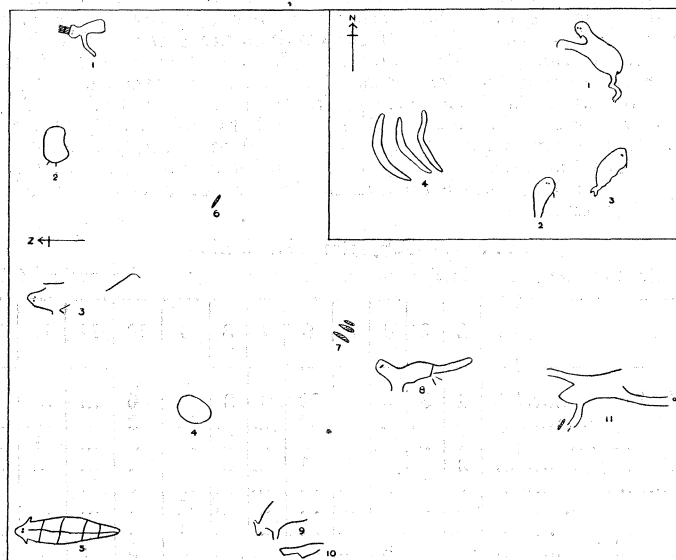


Fig. 14.—Left and bottom: Group 13. Top right: Group 12.

DISCUSSION

The many unusual features of, and unique figures in, the Flat Rocks ridge galleries are mentioned in the remarks about each site and need not be repeated.

The initiated men appear to have made periodical visits for hunting and ceremonial purposes to Flat Rocks ridge, and probably to the surrounding country generally. In the summer months these ridges are hot and inhospitable, rough underfoot, and water has to be sought in the creeks at the bottoms of the gorges. The same difficulty exists in regard to water during dry and drought periods. While the native men may not have minded visits under these conditions for ritual purposes, I believe that they would have preferred to remain near their river camps until rains created favourable conditions for these excursions during many of which, apparently, it was essential to have water in the pot-holes on the rocks as an aid in the grinding of axe-blades. Furthermore, it was probably necessary for the men to get the permission of their ceremonial leader, the one responsible for the sacred sites on Flat Rocks ridge, before they could visit any of the galleries.

Family groups of Aborigines lived along the Hawkesbury River, Mangrove Creek, and other main streams, where numerous kitchen-middens testify to long occupation. The rock-shelters that I have examined on the sides of the ridges in the vicinity of the engravings bear no trace of occupation. The general hunting of game by the men, and the collecting of plant foods by the women, was no doubt done on the ridges and in the valleys nearer the river and away from this sacred ridge.

A point of some importance is that Group 6, the Flat Rocks gallery, contains figures of a female ancestral being, emus, and a kangaroo hunt very similar to those of these subjects in the extensive gallery at North Maroota, on the opposite side of the Hawkesbury River, and about three or four miles from its southern bank. At the latter site, also, a kangaroo is shown struck by a large number of boomerangs, as in Group 2 (Series II), on Flat Rocks ridge. It is obvious that the local groups of natives on both sides of the river shared the same mythology but portrayed the characters in a slightly different manner. Mutual visits were probably made to each other's ceremonial grounds during the performance of the totemic and historical ceremonies.

This ridge is one of the few places in the Sydney-Hawkesbury district where a complete, or almost complete, series of petroglyphs of one local group or tribe exists for study as an entity. Here are assembled the body of artistic symbols of tribal religion which, since petroglyphs were first made in the area, was guarded by generations of aboriginal men from the uninitiated and the womenfolk.

The thirteen galleries herein described contain the imposing number of 279 engravings, in addition to which there are approximately 290 axe-grinding grooves around 16 potholes. As many of the petroglyphs are large ones, and some of the punctured outlines have been rubbed smooth, it is obvious that Flat Rocks ridge was a resort of the local and other natives for a long period of time. Some of the carvings are now so faint that they can be discerned only in the morning or late afternoon light, and then only by those with some experience of petroglyphs, but how long such a weathering process has taken in this area is still unknown. Attention has been drawn to the fact that the outlines of some figures, where exposed, show considerable deterioration caused by weathering influences, whereas other portions of these outlines covered by moss or soil are sharply defined and perfectly preserved. The axe-grinding grooves were probably produced intermittently during and after rainy weather, and their large number supports the idea of a considerable relative local antiquity for these galleries.

Table 1.—Subjects: Distribution.

The subjects and their distribution among the various galleries are as follows:—

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Kangaroos or wallabies	5	4	3	3	...	12	2	2	5	6	...	...	1	43
" " tracks .....	...	...	...	...	...	2	...	...	...	...	...	...	...	4
Koala bear .....	...	1	...	...	...	...	...	...	...	...	...	1	...	2
Dingo .....	...	2	...	...	...	1	...	...	...	...	...	...	...	3
Possum .....	...	...	1	...	...	...	...	...	...	2	...	...	1	4
Wombat .....	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Tiger cat .....	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Echidna .....	...	...	...	...	...	...	...	...	...	2	1	...	...	3
Flying fox .....	...	...	...	...	...	1	...	2	2	3	1	...	...	9
Indeterminate mammals	1	...	1	...	...	2	...	...	...	10	...	...	...	14
														84
Emu	1	...	4	...	...	9	...	...	2	3	...	...	...	19
Pelican	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Scrub turkey .....	...	1	...	...	...	1	...	...	...	...	...	...	...	2
Goose .....	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Heron .....	...	...	...	...	...	...	...	2	...	...	...	...	...	2
Clutch of eggs .....	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Bird tracks .....	...	...	...	...	...	9	...	...	1	20	...	...	...	30
Indeterminate birds .....	...	...	...	...	...	1	...	...	2	8	...	...	...	11
														67
Snakes .....	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Goanna .....	...	...	...	...	...	1	...	...	1	2	...	...	...	4
Tadpole.....	...	...	...	...	...	...	...	...	...	1	...	...	...	1
														7

	1	2	3	4	5	6	7	8	9	10	11	12	13		
Swordfish	1	...	...	...	...	...	...	5	...	...	...	1	10
Eel	3	...	...	1	...	...	1	...	...	...	...	2	2
Flathead	1	...	...	1	1	4
Stingray	1	...	...	...	...	...	...	...	1	1
Indeterminate fish	1	...	1	...	2	...	4	18
Culture-hero—															
Male	1	...	...	1	...	...	...	...	2	5
Female	1	...	...	1	...	...	1	...	...	...	...	3	5
Men	2	1	...	11	3	1	2	2	...	...	3	25	63
Women	1	...	...	...	...	...	...	...	...	...	...	...	1	1
Human leg	1	...	...	...	...	...	...	...	...	...	...	1	1
Human hand	1	...	...	...	...	...	...	...	...	...	...	1	1
Human tracks	4	...	4	3	2	10	...	...	...	7	4	...	1	35	63
Plants	2	...	...	...	2	2
Boomerang	4	12	4	...	...	2	...	...	6	8	...	3	...	39	53
Club	1	...	...	1	...	...	...	2	...	...	...	4	4
Spear	1	...	...	...	...	1	1
Spear-thrower	1	...	...	...	...	...	...	...	...	...	...	1	1
Shield	1	...	...	3	...	...	...	2	2	...	...	8	8
Ornament	1	...	...	...	...	...	...	...	1	1
Oval-circular	2	...	...	1	...	5	...	...	1	11	...	...	1	21	42
Linear	2	...	4	...	...	4	...	...	1	6	1	...	...	18	18
Barred oval	1	...	...	1	1
Parallel lines	1	...	...	...	...	...	...	...	1	1
Backbone design	1	...	...	...	1	1
Indeterminate	2	2	...	2	...	...	3	25	...	...	1	35	35

The table reveals that kangaroos, emus, boomerangs and men are the outstanding single motifs in the sites as a whole. The mammals and birds are numerically stronger than the fish, but nearer the coast the fish outnumber these subjects. There are forty-four identifiable subjects, but many of the figures in the indeterminate series were no doubt separate subjects to the Aborigines.

It is most probable that the ten galleries on Flat Rocks ridge belonged to a mythological saga which embodied beliefs about totems and spirits, and about the lives of the ancestral beings who are portrayed. Two sets of male and female heroes, probably husband and wife in each case, engraved in the one group occur in Groups 6 (Series 111, Figs. 38, 63) and 9 (Series 1, Figs. 23, 24) and there is in addition the remarkably large figure of a female ancestral being in Group 3 (Series IV, Fig. 10). Their names are unknown, but they are representative in this area of the All-Father (Baiami-Daramulan complex) beliefs and rites connected with the Bora type of initiation ceremonies widespread in south-eastern Australia. The human foot tracks, or mundoes, engraved on the rocks, and probably others made in the soil during ceremonies, linked together some of the groups associated with the ritual path along the ridge. The recurrent motif of hunting with the boomerang, particularly of kangaroos but also of echidna, emus and geese, illustrates an important theme in the daily life of these natives. It may have been inspired by hunting magic or by the desire to record success, but the kangaroo hunting episodes shown in Groups 2 (Series II, Figs. 8 to 10) and 6 (Series III, Figs. 40 to 59; Series VI, Figs. 75, 76) are obviously of mythological significance. Although there were many other totems besides the kangaroo and emu, these two overshadow all others because of their economic and mythological importance.

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EXPLANATIONS OF PLATES.

Plate 3.

1. Site of Group 3, looking east.
2. Site of Group 6, Flat Rocks, looking east.
3. Site of Group 8, looking north into the headwaters of Sugee Bag Creek.
4. Site of Group 9, looking east, with N. Camps on left. The rock is soft, much of it pale brown in colour, lacking a lichen-covered and weathered surface.
5. Portion of Group 10, showing the cracked nature of the rock surface and the disposition of the carvings.
6. Recording grid, with compass, on human figure (Group 4, Series I, Fig. 16).

Plate 4.

1. Upper portion of an ancestral being, 18 ft high, in Group 6 (Series III, Fig. 63), showing smoothed outline.
2. Ancestral being, 12 ft high, wearing a girdle (Group 9, Series I, Fig. 24).
3. Female ancestral being with smoothed outline, 11 ft high (Group 6, Series III, Fig. 38).
4. Head of female ancestral being with smoothed outline, 18 ft high (Group 3, Series IV, Fig. 10).
5. Profile view of a small human figure wearing a rayed headband (Group 13, Fig. 1).
6. Indeterminate mammal, and head of large bird, 12 ft high, with tracks (Group 10, Section III, Figs. 8, 11, 13, 14).

Plate 5.

1. Portion of a kangaroo hunt (Group 6, Series VI, Figs. 75, 76).
2. Two baby kangaroos (Group 6, Series III, Figs. 47, 48), showing conjoined punctures in outlines.
3. Portion of Group 8, showing birds and kangaroo engraved around a depression in the rock.
4. Wallaby struck by a boomerang (Group 3, Series I, Fig. 1).
5. Goanna and dingo. (Group 6, Series VI, Figs. 79, 80) with smoothed outlines.
6. Human tracks (mundoes) and echidna (Group II, Figs. 5 and 6).

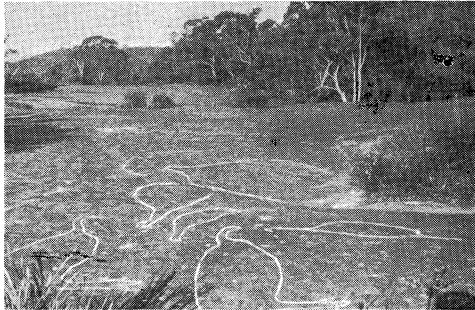
Plate 6.

1. Emu, 9 ft high (Group 3, Series V, Fig. 19).
2. Portion of a line of fourteen bird tracks (Group 10, Series II, Fig. 9).
3. Goose struck by boomerang, beside circle (Group 3, Series V, Fig. 16).
4. Tadpole (Group 10, Series IV, Fig. 15).
5. Hooked line of large punctures 1 to 1½ in diameter (Group 9, Series I, Fig. 1).
6. Axe-grinding grooves around pothole (Group 8, Fig. 2).

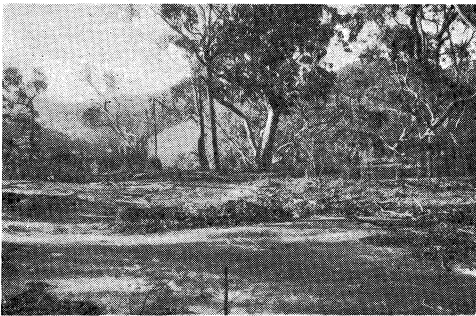
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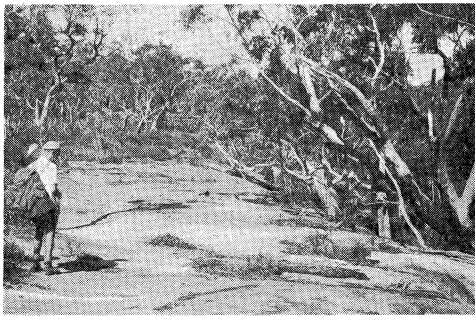
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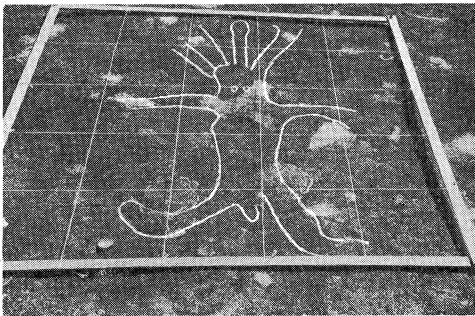
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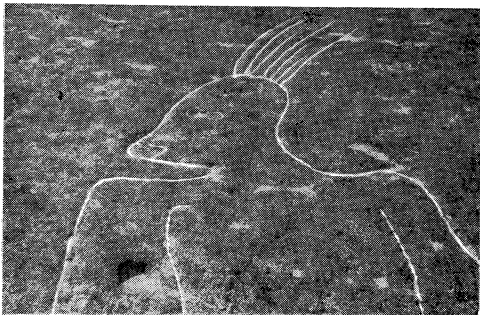
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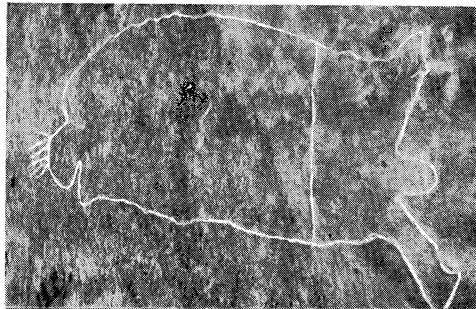
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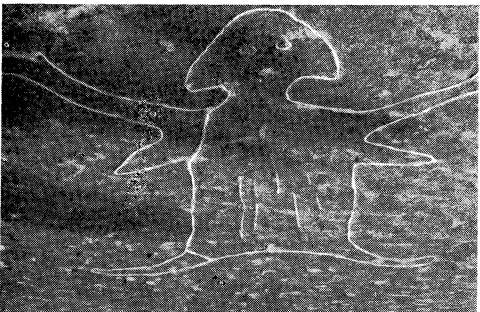
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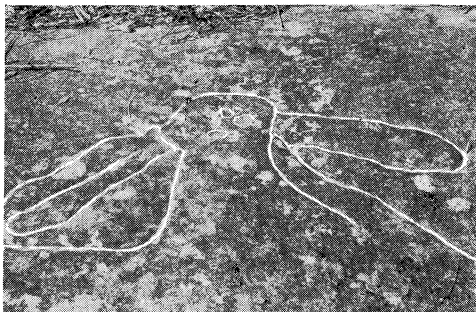
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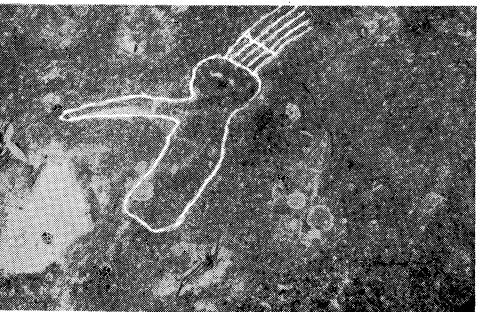
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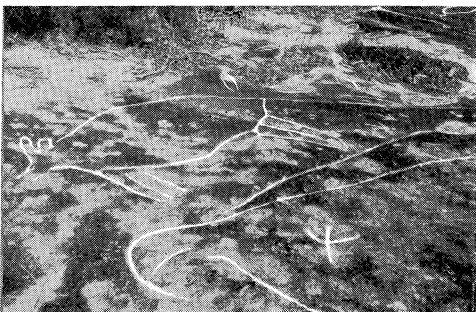
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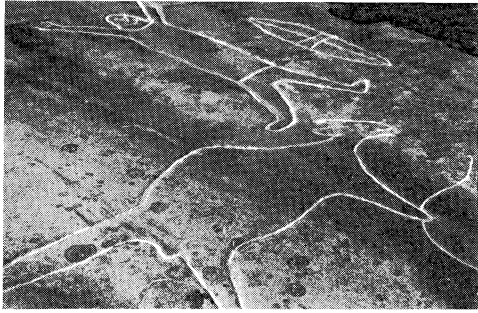
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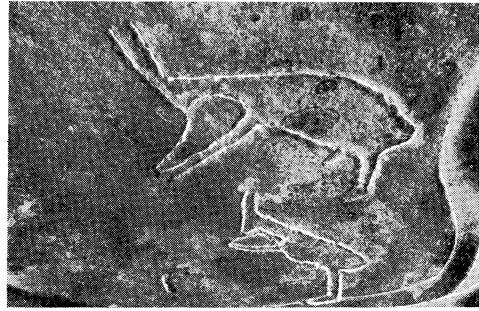
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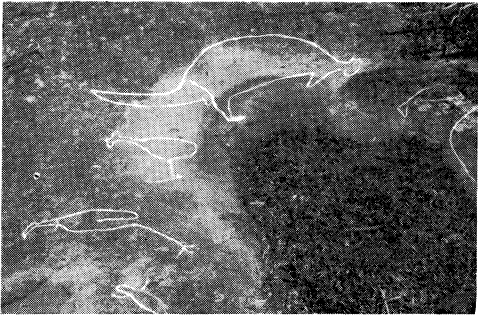
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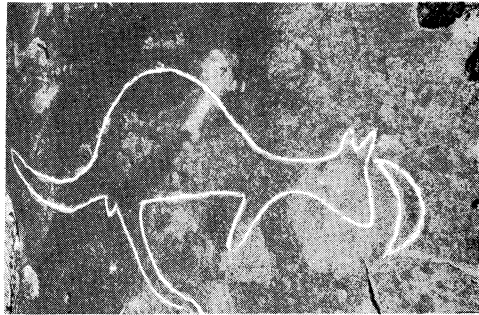
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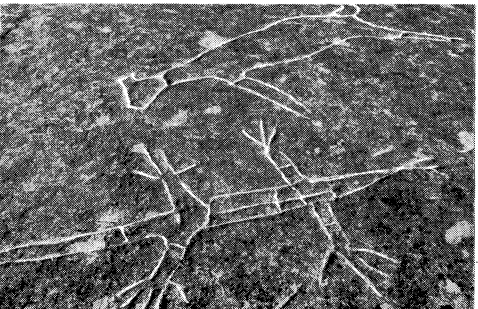
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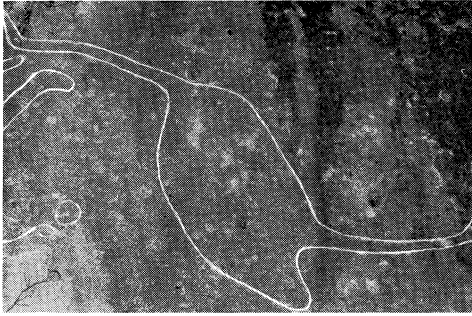
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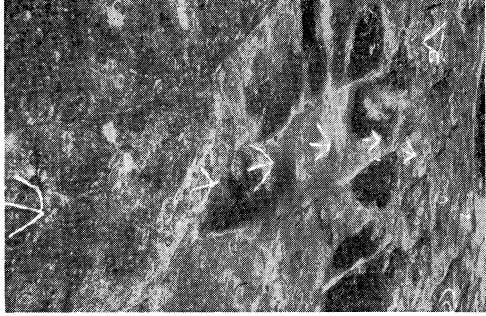
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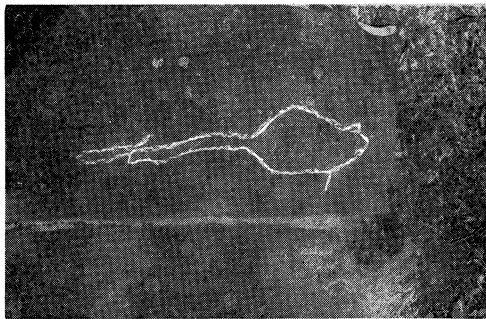
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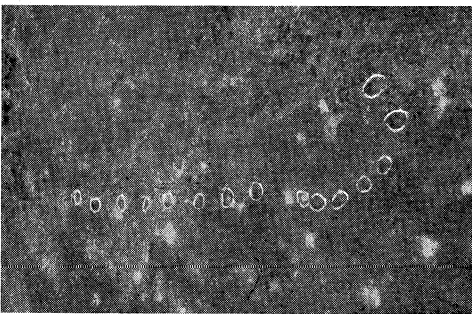
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