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which they appear on its walls; then take a sufficient number of measurements, noting the dimensions on each figure in the sketch; and at the same time fix by measurements the relative position of each figure. For black lines a black lead pencil should be employed; and for red or yellow, use crayons of these colours. For white, use the black pencil, making a note "White" on all the lines which are of that colour. Being satisfied that all the necessary dimensions for the accurate reproduction of every drawing are taken, next measure the length, depth and height of the cave, this information being valuable for future identification by other investigators. Note also the character of the floor, and whether there are stains of smoke on the roof, or other signs of former habitation. The kind of rock should be noted, and also whether it is a continuous escarpment or an isolated boulder. I use a good pocket compass for observing the direction in which the cave faces, noting also at the same time its bearing and approximate distance from the nearest purchased land, or other well-known point. If there is permanent water, or a suitable camping-place near, the fact should be stated. Enquiries may be made as to how long the cave has been known to Europeans, or on any other points which may suggest themselves to the student as likely to be of value. or which would help to identify the locality.

In making my notes of carvings found on rocks, I adopt a somewhat similar course, sketching and measuring every figure. The width and depth of the grooves along the outlines should be measured, and the direction which the rock slopes stated. The locality, kind of rock, nearness of water, &c., mentioned in regard to the paintings, should also be given. For taking the measurements I use a tape measure, 66ft. long, graduated to feet, inches, and half-inches, fitting in a case into which it can be wound up when not in use.

In several of the cave paintings which I have visited, many of the figures were scarcely distinguishable, and required to be viewed from different standpoints before they could be made out. When these paintings are very indistinct, I have found that one can see them better by standing a few yards off than when close to them. As regards the carvings, many of them are very much weather-worn, and so nearly obliterated that it

The Rock Pictures of the Australian Aborigines. [With Plates I and II.]

By R. H. MATHEWS, Licensed Surveyor.

[Read at a Meeting of the Society, Saturday, April 25, 1896.]

In 1894 I contributed a paper to the Royal Geographical Society of Australasia, Queensland Branch, on the "Aboriginal Rock Pictures of Australia."* In that paper I have fully detailed the manner in which the different styles of paintings and carvings are produced by the native artists, and have noted their geographical distribution throughout Australia, with some remarks on their probable age and significance. It will not, therefore, be necessary in the following pages to again refer to these parts of the subject. Since then I have continued my researches, and have succeeded in making copies of several aboriginal paintings and carvings not hitherto recorded, which I propose to describe and illustrate in the present paper.

The subject of native drawings, found in various parts of Australia, showing the imitative faculties of a primitive people, is one of wide importance and permanent interest. There is still a large unworked field in Australia in regard to aboriginal art, and I hope that all those who are able to copy and describe these rock pictures, and have opportunities for doing so, will endeavour, on every occasion which presents itself, to prepare accurate *fac-similes* of as many as possible, in the hope of obtaining a clue to the picture writing of Australian tribes.

tribes. For the information and assistance of students who may be desirous of doing useful work in this branch of Anthropology, I would like to state that the only satisfactory way of reproducing these drawings is to adopt the following method, which I will endeavour to briefly explain. On arriving in a cave containing native paintings, the first thing to be done is to make a careful sketch of the outlines of all the figures in the relative order in

*Proc. Roy. Geog. Soc. Aust., Q. Branch, vol. x., pp. 46-70., pls. ii and iii.

requires some practice to be able to discern them at all; whilst others are clearly defined and can be seen without difficulty. Those situated on flat rocks are more easily seen on sunny than on cloudy days; but the best time to observe those which are very faint is either on a dewy morning after sunrise, or any time after a shower of rain; the dew or the rain, as the case may be, collects in greater quantities in the grooves than elsewhere, and indicates their position. I remember on one occasion visiting a large flat rock on which were carved about 30 figures of different objects. I had, as I thought, completed taking them all in my note-book when a thunderstorm came on, during which I took shelter under a leaning tree. When the shower was over, I came out, and before starting away, took a "last look" over the rock, and was rewarded by finding the figure of a woman, 11ft. 3in. high,* the most important discovery of the day, which I would otherwise have missed altogether, owing to the extreme faintness of its outline.

From the above remarks it is obvious that these rock paintings and carvings will become fainter and fewer in number every year, and in course of time will disappear altogether; therefore every person who is competent to do his share of the work should assist in rescuing these specimens of native art from oblivion. If any protracted delay takes place in the carrying out of the work suggested, much information which could now be secured will be lost to science.

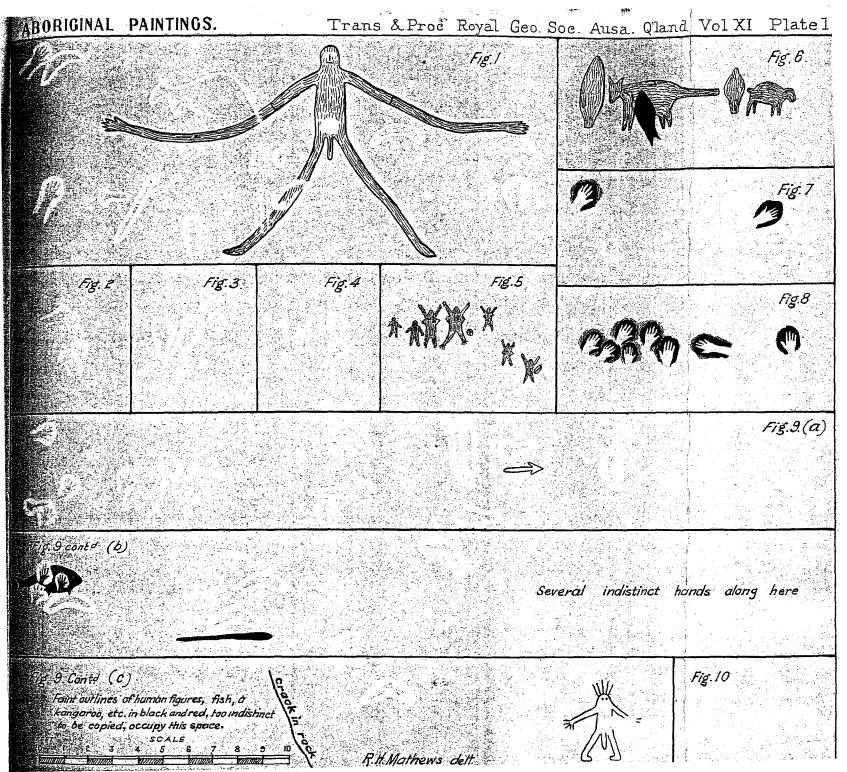
Thus far I have dealt with the modes of *collecting* information, but after it has been obtained it is important that it should be *published* through such channels as will make it of permanent interest and value. I would suggest that all societies in Australia and Europe, which have amongst their objects the diffusion of knowledge of this character, should welcome contributions of the kind referred to, and in cases where they are of sufficient merit, to publish them. They would be discussed by different members who are able to do so by reason of complete acquaintance with the subject.

To those unaccustomed to the preparation of the Plates required in these researches, a few practical directions relating to this part of the subject may be found of some assistance. In reproducing cave paintings from the notes taken in the field, crayon paper of a sandstone colour may be used to represent the rock. All the paintings in any given cave should first be outlined in pencil in their relative positions from the sketches and measurements given in the field-book, and then drawn in the proper colour in which they appear on the rock. A brush or a pen will be used for this purpose according to the kind of drawing to be depicted. Chinese white may be used for that colour, vermilion for red, Indian ink for black, Chrome yellow for that colour, and so on. The rock carvings may be drawn on any suitable white paper in pencil as in the case of paintings, and afterwards drawn in with Indian ink. A convenient scale for the Plates of both paintings and carvings is two feet to one inch, which was that adopted in drawing the originals of the Plates attached to this paper.

Plates for publication should be drawn the size, or some multiple of the size, of a page of the journal in which they are to be published. For example, a Plate to form one page of the journal in which this paper is printed should be about 7in. by 41 in. It is generally found more convenient, especially when the objects are small and numerous, to draw the Plate on a larger scale than that required, which can afterwards be reduced by photography or otherwise to the proper size for publication. Thus, a Plate intended for a single page would be drawn 14in. by 9in., if the scale were to be reduced to one-half; 21in. by 131 in if it were to be reduced to one-third. and so on. It is sometimes found necessary or convenient to use folding plates-two, or three, or four times the width of a page but not exceeding the length. From the preceding remarks the reader will have no difficulty in understanding how to draw these folding plates on a large scale for reduction to the proper size.

Few men are capable, and fewer still are willing, without some personal advantage, to lend their assistance in collecting information respecting the aborigines; but it is hoped that the practical hints which I have here given may induce some of those residing in districts where these drawings are found to spare a few half-hours now and then for the purpose of copying and describing them in the way I have indicated. I hope it is

^{*}This interesting carving is shown as Fig. 2, Plate XVI., illustrating my paper on "Rock Paintings and Carvings of the Australian Aborigines," Journ. Anthrop. Inst., Vol. xxv., pp. 145-163.



ROCK PICTURES OF AUSTRALIAN ABORIGINES.

Only necessary to point out the value of these specimens of native art to awaken an interest in them among people who would otherwise pass them by without notice.

I will now proceed to describe the several figures shown in the Plates annexed to this paper, following the arrangement adopted by me in the paper referred to in the opening paragraph, of dealing with the paintings and carvings under two separate heads. The Plate containing the rock pictures will be first described, and then will follow a description of the Plate illustrating the rock carvings. As all the paintings and carvings included in this paper are situated within New South Wales, it will not be necessary to add the name of the colony in the description of each Fig.

PLATE I.-ROCK PAINTINGS.

Fig. 1.-The most prominent object in this cave is the grotesque nude representation of a man, a little over 9ft. high, if the legs were close together instead of being extended. The top of the head is about 12ft. above the floor. From hand to hand measures nearly 17ft-the right arm being about a foot longer than the left, and both have a band around them about 2ft from the shoulder. The whole figure was first outlined in white, and the space within this outline was then shaded red by a number of strokes drawn in the direction of the body and limbs, which appear to have been done with some red substance held in the hand of the operator. The eyes are delineated in white colour, the right eye being somewhat larger than the left; and the nose and mouth are shown in red. This is much the largest and most remarkable human figure I have yet met with amongst the cave paintings of New South Wales.

On either side of the body, just below the arms, are some perpendicular lines, three being on the right-hand side and four on the left. Touching the right leg are three similar lines, and just above them are four more drawn on top of a left hand. All these lines are in white colour, and are evidently intended to convey some meaning. Above the right arm is an unfinished drawing of a kangaroo, outlined in white. The remaining figures consist of six hands—the right and left being equally represented—two tomahawks, a waddy, and three boomerangs, all executed in the stencil method, in white colour. This cave or rock shelter is in an escarpment of Hawkesbury Sandstone, situated within Portion No. 2 of 640 acres, in the parish of Milbrodale, county of Northumberland. It is 58ft. long and 29ft. high, the greatest depth being about 22ft. It faces the north-east, and there is permanent water in Bulgar Greek close by, but the cave does not appear to have been much used as a camping-place of the natives.

An incomplete drawing of some of the objects in this cave was published in Plate XIX, in the *Journal of the Royal Society of New South Wales*, Vol. XXVII., illustrating one of my papers on aboriginal rock pictures. On again examining the cave, with the aid of experience gained in other places, I distinguished some lines and figures which had previously escaped my notice.

Fig. 2—In this cave there is now visible a group of six hands, four of which are evidently those of children, and are all stencilled in white colour.

The cave or shelter is situated about two chains westerly from Doughboy Beach, a small indentation in the left shore of Berowra Creek, a tributary of the Hawkesbury River, in the parish of Berowra, county of Cumberland, and is about ten chains easterly from the south-east corner of Portion No. 7 of 40 acres in that parish. The shelter is 20ft. long, average depth about 6ft., and height 5ft. 6in., and it faces N. 50degs. E. The floor consists partly of stone and partly of earth; among the latter are numerous oyster and mussel shells, which, with the smoke-blackened roof, indicate that it has been used as a camping-place by the aborigines.

Fig. 3.—This cave is situated in a large sandstone rock on the hillside at Bar Point, on the left shore of the Hawkesbury River, within Portion No. 3 of 50 acres, in the parish of Cowan, county of Northumberland. It is eight or ten chains back from the shore of the river, and faces S. 30degs. W. The floor consists of shells and earth several feet deep, and the roof is black with the smoke of many fires. The length of the cave is 41ft., average depth 12ft., and the height of the roof varies from 6ft. 6in. to 9ft.

On the back wall are faintly distinguishable about a dozen hands executed in white stencil, three of the best of which are here reproduced in their relative position. Fresh water is obtainable in a little gully about a quarter of a mile northerly from this rock.

Fig. 4.—The cave containing these paintings is at Doughboy Beach, a few chains farther up the hill, in a north-westerly direction from the cave which Fig. 2 represents. It is 27ft. long, 6ft. high, 10ft. deep, and faces N. 50degs. E. The floor consists of earth mixed with shells, and the roof is blackened by smoke, indicating that the place was formerly inhabited by aborigines. It is in a low escarpment of Hawkesbury Sandstone about five chains back from high water. Fresh water is obtainable for some time after rain in a little gully running down the hillside a few chains distant.

The paintings now visible consist of one left hand and three right hands, one of the latter being that of a boy or girl, judging by its smaller size.

Fig. 5.—These paintings are found in a small cave or rock shelter on the right bank of a freshwater gully running into Kangaroo Bay, a shallow inlet on the western shore of Berowra Creek. The cave is about two or three chains up the gully from the head of the Bay, and is situated within Portion No. 163 of 40 acres, in the parish of North Colah, county of Cumberland; it is in a precipitous escarpment of Hawkesbury Sandstone which bounds the creek at this place. The length of the shelter is 13ft., depth 6ft. 6in., height 8ft., and it faces N. 55degs. W. There are no indications of smoke on the roof, and the floor consists of solid stone.

There are seven human figures drawn in black on the back wall of the cave; the two larger ones appear to be women, having the mammæ delineated in the usual way, and the others are either intended for children, or are drawn on a smaller scale. Two of the smaller figures appear to be females, but the sex of the other three is not distinguished. The two larger figures are respectively 15in. and 16in. high. and the smallest 7in. Close by one of the women is a round black disc, 3½ in in diameter. There is an oval object, 3in. by 2in., résembling a shield near one of the small human figures. The remaining drawings in this cave comprise a stencilled right hand and a native tomahawk.

Fig. 6.—These drawings are found in a shelter in a bluff rock of Hawkesbury Sandstone, some 40ft. from the right bank of mith's Creek, about a mile and three-quarters above its juncmith's Creek, about a tributary of the Hawkesbury River, in parish of Broken Bay, county of Cumberland. This shelter see S. 60deg. W., and the floor consists chiefly of shells and residues the control of the shell of the shell of the residues of the shell of the shell of the shell of the residues of the shell of the shell of the shell of the residues of the shell of the shell of the shell of the residues of the shell of the shell of the shell of the residues of the shell of the shell of the shell of the shell of the residues of the shell of the shell of the shell of the shell of the residues of the shell of the shell of the shell of the shell of the residues of the shell of the residues of the shell of the residues of the shell of the shel

The paintings consist of a quadruped which may have been the paintings consist of a quadruped which may have been been a dog, with a fish drawn upon its bedy in a darker colour; another animal, which was perhaps been a darker colour; and two other objects which probably intended for a wombat; and two other objects which probably represent shields or perhaps fish. The larger one is 2ft. 10in. long; and the smaller, 1ft. 6in. All the figures in this cave are drawn in black colour.

Fig. 7.—This cave is situated in a low escarpment of Hawkesbury Sandstone, about two and a-half chains from the right bank of Reedy Creek and about three-quarters of a mile notth-easterly from Portion No. 30 of 80 acres, parish of Bumker, county of Phillip.

The rock shelter is 25ft. long, 11ft. deep and 11ft. high. It nees S. 50degs. E. and has the smoky roof and walls common to baves which have been used as places of residence. The floor consists of sandy soil and ashes.

The first figure on the left of the spectator is the representation of a left hand in red stencil. Then follows about 10ft.* of the wall on which are discernible a few red patches, but no figures are distinguishable owing to disintegration of the surface. Next is a group of three hands, two of which, a left and a right, are executed in white stencil, with a right hand between them done in red stencil. About a foot below the last-mentioned hands is a representation of a boomerang in white stencil, the weapon having been placed against the rock and a white colour blown around it.

The drawings in this cave have the appearance of being very old, and are further very interesting on account of both white and red stencilling being found grouped together in the same dave.

*In order to save space on the Plate, this distance is there shown as about 6ft. instead

if 10ft.

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Fig. 8.—This cave, which is simply an overhanging rock shelter, in an ordinary rocky escarpment of the Hawkesbury Sandstone, is situated on the western side of the ridge, dividing the waters of Davis' Swamp from those of Cox's Creek, about a quarter of a mile easterly from the eastern boundary of Portion No. 49 of 160 acres, parish of Coolcalwin, county of Phillip.

The length of the shelter is 23ft., its depth, 10ft., and its height, 10ft., the space having been hollowed out by atmospheric influences. The floor is sandstone, and there are no indications of the recess having been occupied by the aborigines as a place of residence. There is no permanent water nearer than Cox's Creek or Davis' Swamp, either of which would be about a mile and a-half away, but there are small gullies much nearer, in which water could be obtained during the winter months. The cave faces north-west.

On the left of the spectator, as he faces the recess, are six hands with the fingers pointing upwards towards the expanse of the cave. Then a hand and arm as far as the elbow, in a horizontal position, with the fingers pointing towards the other hands. About 2ft. to the right of the last described hand, is another with the fingers pointing upwards.

All the hands in this shelter are executed in red stencil, and are well preserved. Of the eight depicted, five are left and three are right hands.

Fig. 9.—The large cave in which these paintings are found is situated on the northern side of Long Island, one of several islands in the Hawkesbury River, parish of Cowan, county of Cumberland. The Great Northern Railway from Sydney to Newcastle passes over the eastern end of the island, connecting it with the southern shore of the Hawkesbury River by an embankment, and with the northern shore of that river by a long iron bridge.

The cave is hollowed out of the base of a rugged escarpment of Hawkesbury Sandstone, about two chains back from the shore line bounding the island, and faces N. 25 deg. W. Its length is 112ft.; the depth from the front to the back wall at the widest place, 19ft.; and the height of the roof above the floor varies from 8ft. to 12ft., owing to irregularities both in the roof and in the floor. The latter consists for the most part of sand which has weathered away from the roof, but there are patches of normy soil here and there amongst it, and in some places the bare rock is visible. There are traces of smoke on the roof, and unders are found mixed with the soil on the floor, indicating that the cave has in former times been used as a camping-place by the aborigines. There is fresh water in a small gully on the southern side of the island, about a quarter of a mile from the eave, from which it is probable the natives obtained water for eamp use.

There are still about 100 hands visible, some of which are easily seen, but most of them are barely discernible. It is probable that there were formerly many more hands than are now distinguishable, but they have been carried away by wasting of patches of the rock. These hands are stencilled in white colour, and are scattered along about 92ft. of the back wall of the cave. I have copied only twenty-one of these hands, because in the remainder of them it was impossible to definitely distinguish whether they belonged to the right or left hand.

In order to bring such a large number of paintings into the smallest possible space on Plate I, I have divided this cave into three sections— (α) , (b), and (c); the part (b) being a continuation of (α) , and the part (c) being a continuation of (b)—these three sections together representing a length of 92ft. of the cave wall.

As the spectator stands facing the back wall, the objects on his extreme left, near that end of the cave, consist of a native tomahawk with handle, and five left hands, one of which has part of the arm attached. Farther to the right is another group comprising a right and a left hand, between which is another native tomahawk with handle. Above and to the right of the last described, are two boomerangs and two native clubs. Attention is drawn to the unusual manner in which the stencilling has been done around the margins of these weapons. The pipeclay has evidently been applied to the rock in a liquid or pasty state, either with some kind of mop or brush, or was blown in a moist state out of the mouth. A short distance below the two clubs is stencilled the figure of a fish, 18in. long and 6in. across the widest part of the body. A fish has evidently been held against the rock and the colouring matter

applied around it. The next object is another native tomahawk with handle, and below it what appears to be intended for an eel, 18in. long, has been outlined in red colour.

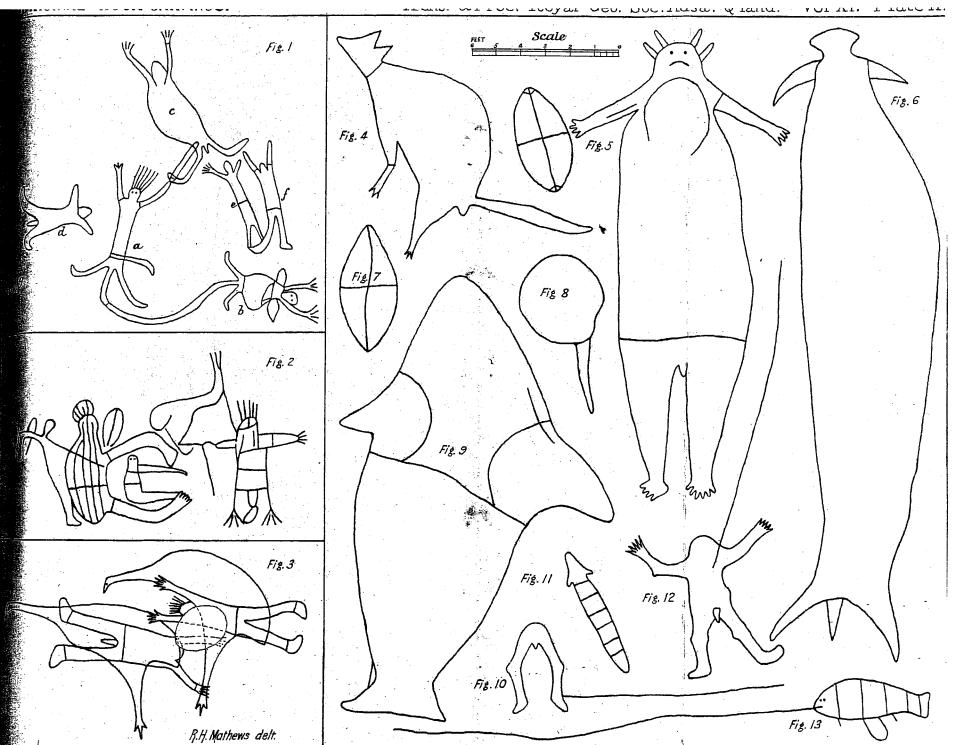
Farther to the right, near where the back wall meets the roof, is the point of a native spear, showing two of the barbs, perhaps used in spearing fish. Next follow three boomerangs, and below them are four small objects which may have been intended for native tomahawks without handles. The next object is a very perfect figure of a fish 11in. long and 4in. wide, showing the mouth and a ventral fin. Close to the last described is a boomerang, below which are three small hands —two left and one right.

The next figure is a fish 2ft. 6in. long and 1ft. across the body. It is drawn in solid black colour and has a pectoral and a ventral fin. Partly covering the body of the fish and executed subsequently to it are three left hands, and below these is a boomerang. Farther to the right is a club nearly 4ft. long, drawn in solid red; above this are three boomerangs, and above the latter are three right hands in the shut position, which are comparatively uncommon in native drawings. Close by the last described is the head of a fish showing the mouth, the remainder of the drawing having been carried away by the weathering of the rock.

The next drawing is a boomerang, with a left hand not far from it. Then there is a considerable space on which several indistinct stencillings of hands may be detected, amongst which is a well-defined left hand in the shut position. Continuing on towards the right, there are discernible on the cave-wall faint outlines of what appear to be intended for human figures, fish, a kangaroo, and other objects, some of which are drawn in black and others in red, but too indistinct for anything definite to be made out from them.

At the end of the space referred to, there is a crack or fissure in the cave wall which I have shown on the Plate, in order that it may be used as a sort of "reference point" by future visitors to the cave. The next drawing is a boomerang, close to which is a very small left hand, apparently that of a very young person; and a little farther on is the left hand of an adult.

The last figure in this cave represents a man drawn in red outline, 2ft. 8in. high, with his arms and fingers extended,



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having five lines, seven inches long, radiating from the top of the head, as if to indicate ornaments stuck in the hair. The only features now discernible on the face are the eyes; if the nose and mouth were originally delineated they have disappeared by the natural decay of the rock. The feet are turned inwards, which is an uncommon position in native drawings, the toes usually pointing outwards. Partly covering portions of the body of the human figure are two left hands stencilled upon the rock at a later date.

All the hands, tomahawks, boomerangs, two clubs, some fish, the barbed spear-head, and a few small objects, are executed in the stencil method of drawing, and are all in white colour. The human figure, a club, and what is supposed to be intended for an eel, are drawn in red. One of the fish is drawn in solid black colour, as previously stated.

Fig. 10.-This cave is in the end of a large boulder of Hawkesbury Sandstone, embedded on the slope of a hill, about five chains south-easterly from the Hawkesbury Railway Station, within Portion No. 9, of 100 acres, parish of Cowan, county of Cumberland. Its length is 12ft., and it extends 8ft. back into the rock. Its height at the entrance is 5ft. 6in., which increases to 6ft. inside, on account of the dome-shaped roof. There is one right hand and four left hands stencilled in white colour on the back wall of the cave, which is crescent-shaped. There are smoke-stains on the roof; and on the floor, which consists of a mixture of soil and sand, there are remains of cinders, showing that the aborigines have used the rock-shelter as a campingplace. The cave faces the west, and there is a stream of permanent fresh water in a small gully a short distance southerly from it.

PLATE II.-ROCK CARVINGS.

Fig. 1.—This interesting group of native carvings is on a flat rock of Hawkesbury Sandstone, whose surface is raised only a few inches above the level of the adjacent ground, and distant a few yards from the western side of the old road from Sydney to Peat's Ferry, about a mile and a-quarter northerly from Vize Trigonometrical Station, parish of Cowan, county of Cumberland. The road at this place follows the top of the range dividing the waters of Peat's Bight Creek from those of Seymour

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Creek, in both of which there is permanent fresh water. The group consists of five men, a woman; and a human hand, all shown in the Plate in their correct relative positions exactly as they appear on the rock. I will divide them into seven sections (a) to (g) for the purpose of more clearly describing all the figures.

(a) This carving represents a man in the attitude of dancing, having in his left hand a club or "wooden sword," with another somewhat similar weapon with a falcate end, apparently stuck in his girdle. Mr. Collins* says "that the native men of the district around Sydney carried wooden swords in their girdles"; and Captain M. Flinderst in speaking of some paintings at Chasm Island, describes the figure of a man who held in his hand something "resembling the waddy, or wooden sword, of the natives of Port Jackson." Captain W. Tencht in speaking of the aborigines of Botany Bay and Port Jackson says, "They have, besides, long wooden swords, shaped like a sabre, capable of inflicting a mortal wound."

The eyes are shown and eight lines about a foot long rising from the head, probably representing feathers or some other ornament. There are lines across each of the arms at the shoulders. The length of the body is out of proportion to the rest of the figure and one leg is longer than the other—remarks which apply to all the figures in the group.

(b) This curious figure of a woman is joined to the last figure by a double line about 8ft. long connecting their generative organs, and is apparently illustrative of sexual intercourse. The mammæ are delineated in the way usually employed by the natives in representing women, and the belly is very large, perhaps intended to indicate that she is *enceinte*. There is a belt around the waist, another round the chest under the mammæ, and a band around the right arm at the shoulder. The eyes are the only features delineated, and there are no ornaments on the head. Below the belt which crosses the body under the mammæ are two other lines, the purpose of which I am unable to state.

* "Account of the English Colony in New South Wales," 1798; Vol. 1., p. 567.

+, Voyage to Terra Australis," Vol. II., p. 189.

(c) This rudely drawn figure represents a male and is the largest one of the group. The arms are raised above the head, and there are four fingers on each of the hands, which, in this respect, resemble those of the woman.

(d) This is another roughly drawn male figure, having a line across the neck, perhaps intended for a neckband.

(e) Another figure, probably a male, with five fingers on one hand and none on the other. The body, which is very much, elongated, has a belt around the middle part of it.

(f) This probably represents a male, with a belt around the waist, and bands around the arms near the shoulders. One of the feet is fairly well drawn.

(g) This representation of a hand, cut into the rock like the other figures, completes the group.

This group is interesting on account of showing some of the positions assumed by the natives in dancing. Lieut. W. H. Breton, in speaking of some of the customs of the natives near Wollombi, New South Wales, between the years 1830 and 1833, says :--- " One of their dances commenced by great adorning of their heads with feathers, etc., after which they formed a circle round four women and then began dancing. The women were on their knees and threw their heads about as if knocking them against the ground. At intervals they threw up their heels like an animal when kicking, the whole party at the same time yelling in concert in the most hideous manner imaginable, and with as much regularity as if a master had been at hand to direct them. After this had continued some time the women raised themselves on their hands and feet, the men still dancing round them and accompanying their movements by the most libidinous gestures. The remainder of the dance was far too disgusting to bear description."-Excursions in New South Wales. West Australia and Van Dieman's Land; 2nd ed., pp. 177-178.

Mr. R. Sadlier says, "There are many kinds of corroborees. All have the song and the dance; both are, at times, very libidinous, especially the dance of the women."—Aborigines of Australia, p. 19.

Fig. 2.—This strangely designed group of figures are carved on the face of a sandstone boulder lying on the slope of a hill, about three-quarters of a chain from the right bank of Berowra

f "Narrativé of the Expedition to Botany Bay," 1789 ; Second Edition; p. 87.

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Creek, about ten chains below what is shown on the parish map as Frank's Bight, parish of Cowan, county of Cumberland. The face of the rock, from the ground upwards, slopes away from the observer at an angle of about 20degs. from the perpendicular and the carvings which are on the side towards Berowra Creek, are visible from the water.

The central figures of the group are suggestive of a woman with a child upon her lap. The larger figure has four longitudinal stripes on the body, a belt around the waist, a band across the thigh, and another on the arm; there is also what appears to be a head-dress. Beside this figure are a number of lines resembling those cut upon the ground and upon trees, and known as "yammunyamun" among some tribes. These lines terminate behind the nether part of the body in an object resembling a human foot.

The smaller figure, which may be intended for a child, has also a belt around the waist, and the line forming the lower side of the arm is continued across the body; the only features shown are the eyes.

The roughly drawn male figure on the right hand of the spectator is 4ft. 4in. high, 14in. across the body at the belt, and has five lines varying in length from 11in. to 7in. rising from the head. One arm has a band around it, and four fingers are shown on the hand, but the other arm is very rudimentary. Each of the legs, which consist of a single line, terminates in four divisions, apparently intended to represent the toes. At the end of the penis there is an oval object 9in. by 4½in., which I am unable to identify. Between this figure and the others are some more lines of the yammunyamun pattern previously referred to.

The presence of the "yammunyamun" devices on the rock is suggestive of its having been drawn to commemorate the burial-place of some of the natives, and the position of the first described figures points in the same direction. I merely throw out this as a suggestion without offering any opinion.

All the grooves of these figures are cut into the rock about half-an-inch deep and an inch and a-quarter wide: There is permanent fresh water in the small creek running into Frank's Bight.

Fig. 3.-This group, which among the sable artists who avecuted the work, may have been connected with some wellterrown story of an emu hunt, is on a flat rock level with the murface of the ground, on the western side of the cleared road from Pymble to Cowan Creek, via Bobbin Trigonometrical Station, and about half a mile southerly from the latter, in the marish of Gordon, county of Cumberland. It includes two emus,* the left-hand one being 7ft. 6in. from the bill to the tail, and Sit. Bin. high, the corresponding measurements of the other one haing 6ft. 10in. and 6ft. 7in. respectively, the latter having the eye delineated. In both birds only one leg is shown, and the foot is a straight continuation of the leg, a mode of drawing have frequently observed in native figures of emus. There are two men, having their heads pointing in contrary directions, apparently lying on top of the emus; both have belts around their waists and bands around their ankles, the latter of which The feet of the smaller man are turned are unusual. inwards, a position which is not very common—the toes generally pointing outwards in opposite directions, whilst in some cases both the feet | are drawn in the same direction. A representation of hair or an ornamental head-dress is shown on the head of the latter. The larger figure has a band around one of his wrists, and appears to have hold of the leg of one of the emus. The smaller human figure apparently has a hand on each of the birds. There is a very shallow oval-shaped hollow in the rock, worn out, I think, by the weather since the carving was done, owing to its having been softer than the rest of the surrounding surface. The wasting of this oval patch has probably carried away some of the original lines of the figures. leaving them as they now appear. I have shown by dotted lines where it is probable grooves formerly existed. Nearly all the lines in this group have suffered considerably from the wasting influence of the atmosphere, combined with the erosion. caused by water flowing over them during rainy seasons, consequently it requires careful observation to follow all the outlines of the figures.

* Capt. Wickham mentions emus among the carvings described by him on Depuch Island, Western Australia.—Journal Royal Geographical Society, London, Vol. xit, pp. 82-88.

Bee Fig. 6, Plate xcix., Rep. Australas, Assoc. Adv. Sci., Vol. vi., p. 635.

ROCK PICTURES OF AUSTRALIAN ABORIGINES.

An incomplete drawing of this group appears in the *Proceedings of the Royal Society of Victoria*, Vol. VII., n.s., Plate IX., Fig. 14, illustrating a paper contributed by me on "Aboriginal Rock Paintings and Carvings in New South Wales." Since that paper was printed I have again visited the locality and cleared away a quantity of earth and rubbish, exposing to view the complete group as it is now shown in the present paper.

Fig. 4.—The large carving of a kangaroo* here shown is 18ft. lin. from the tip of the nose to the end of the tail. There is an incised line across the neck and also across the foreleg, and the animal appears to be in the attitude of jumping. The two fore or hind legs of animals are very seldom delineated in native drawings—one of each being the general mode of representing them.

This kangaroo is carved on a flat mass of Hawkesbury: Sandstone about two chains long, level with the surface of the ground and sloping N. 20degs. E. It is about a chain from the left bank of a little fresh-water creek, emptying about a quarter of a mile distant into a small bay—a basin-like expansion of the north-eastern side of Yeoman's Bay, Cowan Creek, parish of Broken Bay, county of Cumberland.

Fig. 5.—This colossal representation of a man bearing a shield in his right hand is carved on a large sandstone rock, sloping gently towards the north-east, a few yards from the south-western side of the old track leading from Portion No. 71 of 100 acres, parish of Broken Bay, county of Cumberland, towards Tabor Trigonometrical Station. There is permanentwater in a small gully about half-a-mile away.

From the top of the head to the feet is 18ft. 6in., and the greatest width across the body 5ft. 7in. There is a belt around the waist and a band around the left arm; the eyes and mouth are shown, but not the nose. There are four horn-like appendages rising from the head which are probably intended to represent ornaments stuck in the hair. On the right arm is an incised line 16in. long, and on the chest an unfinished oval figure which I cannot identify. The breadth of the shield is 211. 211. and its length 4ft. 4in., with small lozenge-shaped spaces theach end. It has a longitudinal and a transverse bar carved inpon it. The left foot is represented facing straight out, which is very unusual, and has six toes; the right foot is also foreshortened and has four toes. The general aspect of this man and his shield and has be compared with Fig. 7, Plate IX., *Proc. Roy. Soc. Victoria*, Vol. VII., n.s., pp. 151-152.

Fig. 6.—This strange-looking figure is carved on a continuation of the same large rock as the last described, and is close to it. The extreme length is 25ft. 6in., and the width of the body, at the widest part, is 5ft. 7in. The body and fish-like tail suggest its having been intended for a large fish; whilst the head and arms, and what appears to represent the penis, would seem to indicate that it was designed for some monster of human shape. I have before described some curious monsters among native drawings, for examples of some of which the reader is referred to Fig. 10, Plate IX., *Proc. Roy. Soc., Victoria*, Vol. VII., n.s., p. 158; and Fig. 15, Plate III., *Proc. Roy. Geog.* Soc. Aust., Qld. Branch, Vol. X., p. 70.

Fig. 7.—A shield, 5ft. 2in. in length and 2ft. $4\frac{1}{2}$ in. broad, with a longitudinal and transverse bar—the former being flexuous, as shown in the Plate. This carving is found upon the same rock as the gigantic drawing of a man shown in Fig. 5, and not far from it.

Fig. 8.—I think this carving, which is on the same rock as Fig. 4, was intended to represent the sting-ray, as I have seen several similar drawings on different rocks, the animals being represented of various sizes,* ranging from 22ft. 1in. to less than 2ft. in length, the larger carvings being found on rocks where there was plenty of room, and the smaller where the space was more restricted.

Fig. 9.—This large and well-designed figure of a fish, perhaps intended for a shark,[†] is carved on a mass of Hawkesbury Sandstone, almost level with the surface of the ground, a few yards on the western side of the old road from Peat's Ferry to Sydney, about a quarter of a mile northerly from the group shown in

^{**} A Kangaroo is mentioned by Captain Wickham in his list of carvings on Depuch Island.--Loc. cit., p. 83.

t Captain Wickham mentions having seen a man with a shield among the carvings on Depuch Island.—Loc. cit., p. 82.

^{*} See my paper on "Australian Rock Pictures," contributed to the Anthropological Society at Washington, published in *The American Anthropologist*, Vol. VIII, pp. 268-278, Plate II, Fig. 36, representing a sting-ray of colossal dimensions. 11; Sharks were seen by Captain Wickham among the Depuch Island carvings.—*Loo.* 14; marks were seen by Captain Wickham among the Depuch Island carvings.—*Loo.* 14; pp. 82-83.

ROCK PICTURES OF AUSTRALIAN ABORIGINES.

Fig. 1. There is permanent water in gullies within half a mile. The total length from the snout to the tail is 17ft. 10in., and the measurement from point to point of the fins is 11ft. 10in. the width across the end of the tail being 4ft. 5in. There is a slightly sinuous line across the body behind the fins, and from it arise curved lines, meeting the outline of the fore part of the fish. Near the tail of the fish is a double outline, as if the artist had made a mistake and then corrected it. On the front side of the dorsal fin is an incised line 18in. long, a few inches within the outline, and almost parallel to it. The rock slopes easterly.

Fig. 10.—This curious carving, representing the lower half of a man, is situated on a large flat rock in a north-easterly continuation of the same outcrop of sandstone as that on which the last described figure is drawn, and is about from six to ten chains distant from it. The rock at this place has a gentle slope towards the south-east. From the toes to the top of the figure is 3ft. 7in., and the legs are in the attitude in which the natives appear when dancing. An incised line, nearly straight, reaches from the instep of one of the feet for a distance of 9ft. 2in., which may have been intended for a spear. Compare this with my description of Fig. 12 of this Plate.

Fig. 11.—This carving, which appears to be intended for an eel, is on the same mass of rock as Fig. 10. It is 5ft. 5in. long, and the width at the widtest part is 10in. The length of the fins is 5in., and there are six incised lines across the body, similar to those appearing on the body of the fish shown in Fig. 8, Plate III., Proc. Roy. Geo. Soc. Aust., Queensland Branch, Vol. X.

Fig. 12.—This remarkable carving, representing a native wounded by a spear, is on the same flat rock as Figs. 10 and 11 of this Plate. The man is 5ft. 7in. tall and is roughly drawn. The head is very short, perhaps to indicate that it is hanging on the breast. The line which I assume to be a spear is 12ft. 9in. long, nearly a foot of which is within the outline of the man's shoulder, and its distal end is slightly bent. The man appears to be in the attitude of falling.

Fig. 13.—The last figure on the Plate, but by no means the least interesting, is evidently intended to represent a fish cought on a line. Collins, in his Account of the English Colony in New South Wales, published in 1798, Vol. I., p. 557, speaks of the aborigines fishing with hooks made out of oyster shell, and fishing-lines made from the bark of a tree. The length of this fish is 4ft. 9in. There is a large ventral fin and two short incised lines projecting from the belly, probably intended for fins. There are five lines drawn across the body, and the two eyes are shown on the same side of the head, a mode of representing the eyes often observed in native pictures of different animals. The length of the string is 17ft. 5in.

The carving here represented is on the face of a perpendicular rock skirting the northern shore of Calabash Creek at its junction with Berowra Creek, and is distant about threequarters of a mile in a south-westerly direction from Portion No. 6 of 40 acres, parish of Berowra, county of Cumberland.

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