

Survey of the Village and Carved Rocks of Orongo, Easter Island, by the Mana Expedition.

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SURVEY OF THE VILLAGE AND CARVED ROCKS OF ORONGO, EASTER ISLAND, BY THE MANA EXPEDITION.¹

[WITH PLATES III-XVII, AND MAPS.]

By MRS. SCORESBY ROUTLEDGE.

INTRODUCTORY NOTE.

DURING the first portion of the time spent by the Expedition on the Island, 1914–15, they resided at the foot of the hill on which Orongo stands, and for some weeks, whenever the weather and other circumstances rendered it possible, ascended to the site and spent the day in examining the remains. They were frequently accompanied by natives with the object of gaining local information, but the knowledge acquired in this way with regard to structure, as distinct from folk-lore, was not very great. Various visits were also paid to the locality by the Expedition towards the end of their sojourn, and doubtful points were studied afresh.

Every possible house was thus in turn entered and many of them more than once. This was not always an easy process, as it usually necessitated scrambling on hands and knees, or wriggling like a serpent, through the diminutive tunnel-like entrances which give access to the interior; the investigation was attended also by a certain apprehension that the large slabs of the roof, often in a precarious condition, might descend on the heads of the visitors. In perfect specimens the inside was almost dark and had to be examined by means of candles. It must be remembered, in extenuation of a certain lack of uniformity which at times exists in the notes, that knowledge with regard to the dwellings was only procured by degrees and as the study proceeded. Some of the work also had to be done during the absence in Chile of the head of the Expedition, owing to the outbreak of the European War.

The survey of the village was made independently by the Surveyor to the Expedition. With regard to each individual house, only a general accuracy of ground plan was aimed at by him, and when the detailed drawing has obviously conflicted with fuller information obtained by others it has been altered accordingly.

In the illustrations, the photographs are topographically accurate. The sketches have been drawn so as to convey a generally truthful impression, but not so as to be necessarily correct in every detail, which was not their object. Some of the illustrations which have previously appeared are repeated for more detailed reference.

The carved rocks were studied on many occasions and in various lights, and photographs were taken. Attempts which were made to obtain paper squeezes were not very successful, as owing to the distance from camp it was rarely found

¹ The cost of the blocks for the illustration of this paper was defrayed by Mrs. Routledge.

possible to remove them at the right moment, the high eddying wind from the cliff tearing them to pieces as they dried.

While every endeavour has been made to ensure accuracy, it will be readily understood that it has been almost impossible to avoid all mistakes and omissions, especially when matters cannot be fully written up on the spot. These it is to be hoped will be rectified by our successors.

Finally, an appeal must be made for kind indulgence owing to the circumstances under which the text has inevitably been finished, which render it impossible to obtain friendly criticism or make personal correction of the proofs.

S.S. Camito, off Jamaica, Christmas Day, 1920.

HISTORY, POSITION, AND PLAN OF THE VILLAGE.

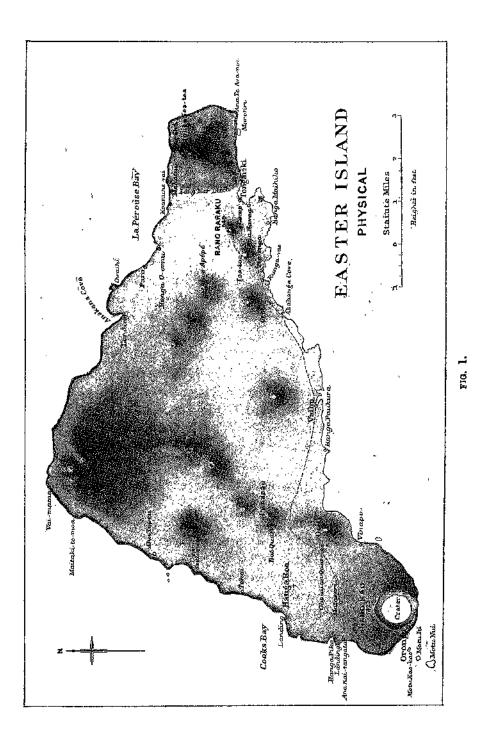
On the summit of the extinct volcano known as Rano Kao, which forms the south-western angle of Easter Island, stand the old stone village and carved rocks of Orongo. There is as yet no clue to the date of the earliest houses or carvings, but the dwellings were occupied as lately as the sixties of last century, and the builder of one of the latest is said to have been remembered in recent times. The site was connected with a bird-cult practised in the islands, and the inhabitants awaited here the coming of a migatory sea bird, the Sooty Tern, which nested on some rocky islets near at hand. Such information as could be gathered about the bird-cult has been recorded elsewhere,¹ and it is proposed to deal here only with the existing stone remains.

On three of its aspects the mountain of Rano Kao has been worn away by the sea till its sides are almost vertical, and, in its outermost portion, only a narrow edge of rock separates the lake, which lies within the crater basin, from the Pacific Ocean. The village commences where the width of the rim, between the crater wall and the sea cliff, is about one hundred yards. It follows the diminishing summit for about two hundred yards and terminates very shortly before the narrowest part of the rim is reached, and where the breadth of level ground is only 30 to 40 feet (Plate III).

Where the houses begin the crater edge is somewhat higher than that of the cliff, and the dwellings lie, broadly speaking, in two rows which at one point overlap one another. The final houses are built amongst a group of rocks which are highly carved. All the houses face the sea, and are entered from that side. For the sake of convenience, the front, or seaward aspect, will be uniformly termed the "south" side; actually it varies somewhat, but is most generally south-west. The total number of dwellings is forty-eight.²

¹ See Folk Lore, December, 1917: The Mystery of Easter Island, p. 258.

² The numbers shown on plan reach forty-five, but in three cases, where a house has not been identified by the Surveyor, it has been inserted and the numbers duplicated.



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Many of the houses are in good repair, in other cases they have been ruined to obtain the painted slabs and carved doorposts, and have no doubt in some instances suffered from natural decay. The rocks are much weathered, but a large proportion of the designs can be clearly traced.

CONSTRUCTION OF A TYPICAL HOUSE.

All the houses are built of stone obtained from a quarry which is close at hand on the crater side of the summit. The rock is a fine grained volcanic sandstone bedded in large laminæ. In certain parts of the quarry the laminæ are curved and the section then resembles that of an onion (Plate V, Fig. 1). In size and shape the dwellings differ greatly from one another, accommodating themselves to the formation of the ground and pre-existing structures; they have, however, in common, not only the material of which they are constructed, but also a typical form to which the better specimens approximate in greater or less degree. Such a typical building will be first described, and later each house will be dealt with in detail. The Orongo house differs widely from that usually found elsewhere in the island. In both cases the dominant note is that of the upturned canoe, but, on the lower ground, the "ribs and keel" are of wooden rods, and the "skin" is of thatch, stone being employed for the foundations, or "gunwale," alone, and that only in the best built specimens.¹ Though, as will be seen, there is evidence to show that at least one of these thatched buildings has antedated at Orongo some of the stone dwellings, it is obvious that as a class it is unsuited for so windy and exposed a position. The natives term the Orongo habitation not haré or houses, but ana or cave.

A typical house is built as follows :---

The Site is chosen on sloping ground and the soil excavated sufficiently to obtain the required level space.

The Foundations are of rough cubes of rock weighing perhaps one cwt. each. They are laid in the form of an oval, the greatest length of which may be 26 feet, and the greatest width 6 feet (Fig. 3, in text).

The Walls.—On the inner side of the foundation course, slabs are set up on edge, the largest and flattest sections of stone from the quarry being used for lining the interior and placed vertically (Plate IV, Fig. 2).

The two side edges of the slabs approximate to the side edges of the adjoining slabs. The panels are of greatest height and size in the centre of the house, and diminish on either hand. In theory, the whole interior of the house is lined with slabs; in practice, towards the extreme ends of the house they are frequently altogether wanting.

¹ See The Mystery of Easter Island, p. 215. There are, however, scattered throughout the island numerous cairns with chambers which have been used as dwellings, and in one or two instances more carefully built stone houses.

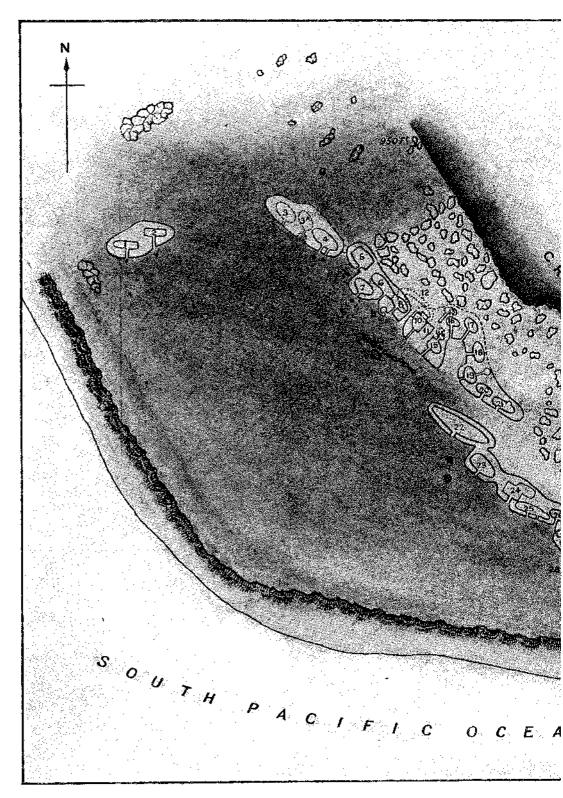
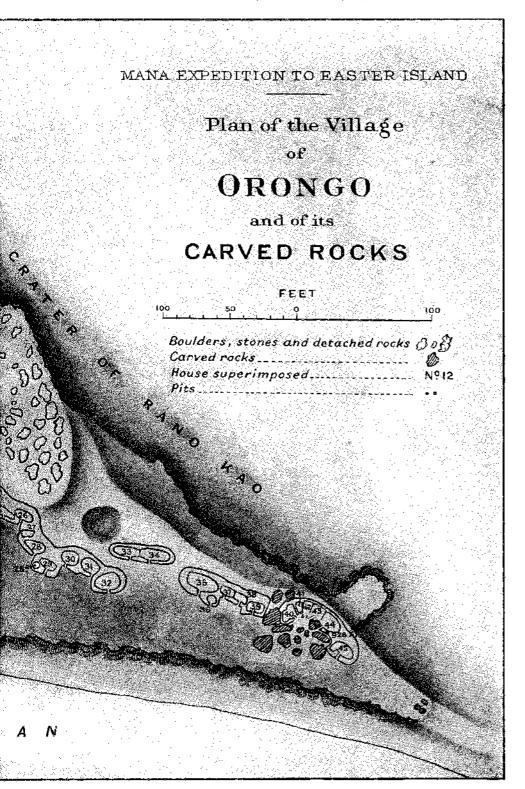


FIG. 2. SURVEY OF VILLAGE AND CARV:

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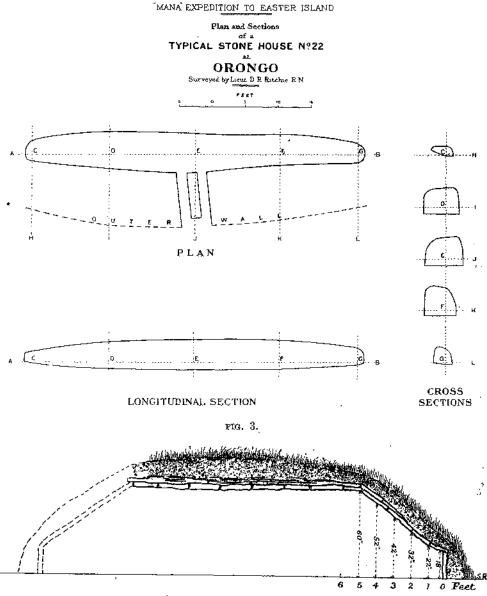


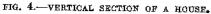
ARVED ROCKS OF ORONGO.

2,

[To face p. 429,

The body of the wall is formed of small or shattered fragments of the stone, laid in horizontal courses with broken joints. These small, horizontally placed slabs are governed in position by the vertical slabs, behind and between and above





which they are built up. In portions of the wall where there is no panel--that is, above and between the vertical slabs--the laminæ are brought forward to such a degree that the edges, which are directed towards the interior of the house, are in the vol. L. 2 g

same plane as the panels, thus holding them in place. The result is that the finished wall presents a series of panels of irregular margin with the space behind, above, and between them filled in with dry masonry (Plate X, Fig. 1).¹

When the back wall—viz., that on the side where the ground is highest—has risen to a certain point, it is panelled on the exterior side also by means of large wedgeshaped slabs of inferior shape and quality, thicker at one end than at the other (Plate IV, Fig. 1). These exterior slabs are held in place by the excavated earth being filled up again behind them. The front wall—viz., that facing the sea—does not have exterior vertical slabs.

The walls are of great thickness; where they can be measured—*i.e.*, on the front side—their width is usually 6 feet or 7 feet.

It is not unusual to find intervals in the masonry carefully arranged to act as niches or shelves, and sometimes as a hatch between two adjoining houses, through which articles could be passed.

The Entrance.—At the level of the floor and in the centre of the front or sea side of the house, a means of ingress and egress is provided in the shape of a rectangular tunnel, of which the roof, two sides and floor are, in the best built specimens, formed of slabs (Plate VI, Fig. 2). At either end of the tunnel—*i.e.*, where it enters the house and the open air respectively—is a door frame (Plate XI, Fig. 1). The frame consists of two uprights, a lintel, and, in perfect specimens, also of a sill. The last is formed of a slab sunk vertically into the ground, so that its upper edge shall be flush with the surface of the floor.² The uprights at the exterior end are often stones of considerable size, and carved. Where these frames remain in place, accurate measurements can be given of the passage at either end. Each house has typically only one aperture, but sometimes two are found, or one is in duplicate, the two passages being side by side.

The Floor is raised slightly above the level of the foundations. Selected earth is used; it is never paved with stone.

The Roof.—When the walls have reached their full height the laminæ are imbricated, or "tumble home," till the opening is reduced to such a size that it can be spanned by a series of single slabs, thus completing the arch or roof (Plate V, Fig. 2). For these roofing slabs the curved laminæ are chosen, and they are often of such dimensions that ten men would be required to move a single slab into place. If the house is seen in longitudinal vertical section the roof resembles a dome, of which, say, the middle two-fourths is flattened (Fig. 4, in text).

The height of the chamber measured from the highest part of the roof to the floor is usually about 5 feet.

' This method is practically identical with that employed in building the seaward face of many of the ahu or burial places. See The Mystery of Easter Island (Fig. 37).

² In the following descriptions there is frequently no mention of the sill, but it is believed that where there is no note on the subject it did not exist, or was not visible. Form of Structure.—The shape of the house, when the roof is added, noticeably resembles that of an inverted Canadian canoe, *i.e.*, both ends are alike, and as it diminishes in breadth, so does it diminish in height.

Earth Covering.—When the house is completed soil is placed over it; the depth of the roof may amount to about 2 feet. The anterior wall alone is left bare. Otherwise the house is so covered with earth as to blend with the surrounding surface (Plate VIII, Fig. 1).

Decoration.—The interior is often decorated by means of a white pigment, with which the walls and roof are covered, giving the effect of whitewash. The largest slabs—*i.e.*, those opposite the doorway, where they obtain most light—are frequently also adorned with designs in colour (Plate IV, Fig. 2).

Exterior Cavity for Stores.—Outside the house a small pit is not unusually found, a few feet from the door and in line with it. These pits are lined, and in the best specimen, also floored and roofed, with slabs. Nodules of volcanic ash were frequently found in them, which are said to have been used for heating purposes, and the pits were at first reported to have been used for cooking purposes. Later it was stated that they were intended to contain stores, and as practically no charred ash was found, this latter statement is probably correct (Plate VII, Figs. 1, 3). These pits are shown in the plan where discovered, but many are probably buried or destroyed.¹

Kitchens.—The site of the cooking places was pointed out nearer the cliff edge. They were, it was said, simply cavities dug in the earth and not lined with masonry.

THE HOUSES IN NUMERICAL SEQUENCE.

Nos. 1 and 2 are covered by the same mound of earth. Their orientation is unique, as they stand at right angles to the crater, and also at right angles to the main row of buildings.

No. 1.

Condition :---one-third of house at the north-west end broken down. Roof and part of wall absent. Panels² largely broken away.

Passage :---6' 8", outer end indeterminate, inner end 1' $6'' \times 2' 1''$; roof of flat slabs; has apparently never had panels.

Chamber :—23' 0" \times 4' 4" \times 4' 3". East end square, made from slab 3' 6" wide ; west end rounded.

Decoration :—exterior, a large sculptured stone, contiguous to outer door but partially buried, was laid bare. It bore one small bird-man^z figure and a larger design obliterated by weathering.

¹ The "drain for the dead," mentioned by Surgeon Palmer (*Ethnological Review*, Vol. I, p. 371), was carefully sought and excavated for, but could not be recognized.

² In the following description, for the sake of simplicity the laminæ will be termed "panels" where employed vertically, and "slabs" when used horizontally.

³ See below, "Carvings according to Type," Bird-man.

Small Pit :---immediately in front of door (excavated) defective, lower portion of stone apparently circular, diam. about 2' 0''; contained shells of sea snails, no trace of fire.

No. 2. (Plate VI, Fig. 1.)

Condition :---unroofed.

Passage :—outer end fallen in, inner end 1' $2'' \times 2' 1''$.

Chamber :—23' $0'' \times 5'$ 8"; both ends bluntly rounded, radius east end 23", west end 32"; most of roof fallen on to floor; panels largely removed.

Decoration :---none.

Small Pit :—5'0'' from approximate position of former door, contained small chunks of volcanic ash.

Nos. 3, 3A and 4 are built individually and covered by a common mound of earth. They commence the line of houses with their backs to the crater.

No. 3 is completely wrecked, but excavation made clear that it has been a distinct house from the one next to it, No. $3A^{1}$

No. 3A.

Condition :---roof partially fallen in at one extremity. Outside door had to be searched for and cleared.

Passage :-- 6' 7", outer end indeterminate $\times 1'$ 5", inner end 1' 6" $\times 2'$ 0". Chamber :--23' 0" $\times 5'$ 7" $\times 4'$ 7".

Decoration :---traces of interior covering of white pigment. On slab facing door a painting in red on white ground of a full rigged ship with her yards in line with her keel, two square sails on each mast.

Objects found :---Ou floor, large number of marine shells, remains of chicken and rabbit bones, one rabbit bone with traces of red paint---a bone needle.

No. 4.

Condition :-- almost perfect

Passages :---two; eastern passage 7' 9", outer end (partially filled up) 1' 9" \times 1' 5"; inner end 1' 10" \times 1' 11"; western passage 7' 0", outer end 2' 6" \times 2' 9", no sill. The walls consist in their lower part of large bars of stone having a smooth surface; in their upper part of small slabs with their free edges accurately adjusted

Chamber :---23' $5'' \times 5' 9'' \times 5' 0''$; radius east end 3' 3'', west end 2' 10''. The largest of the panels is 3' $10'' \times 2' 10''$, from this they range down as required. The walls "tumble home," leaving an interval of 2' 6", which space is covered by flat slabs. The central 12 feet of the roof is almost flat, the slabs being placed edge to edge.

Decoration :---whole of interior surface of walls and roof has been covered with white pigment.

¹ Nos. 2 and 3 are presumably those wrecked by the American Expedition in 1886, but it is not possible to make the plan of Orongo made by the *Mohican* coincide entirely with our own. The account of Paymaster Thomson is as follows :---

"From houses Nos. 2, 3 and 4 (Fig. 6) on Lieut. Symonds' chart of Orongo, were taken samples of these sculptures (*i.e.*, carved door-posts). Houses marked 1, 5, 6, were demolished at the expense of great labour, and the frescoed slabs obtained."—Smithsonian Report, 1889, p. 480.

The photographs of Orongo in the Report are excellent.

Objects found :--one of the sea boulders which are used as pillow stones (Plate XVI, Fig. 3) and two mataa (spear-heads).

Small Pits :--two. One is 3' 0" from east door, 2' $0" \times 2' 0"$; the other (excavated) is 5' 0" from west door, 2' $0" \times 1' 5" \times 1' 3"$ deep; it is formed of slabs placed vertically, no defined bottom. No signs of fire save one piece of charcoal.

Nos. 5, 6, 7, 8 and 9 form a group; 6 and 8 are divided by a partition wall only; 7 and 9 have been subsequently added. 9 is remarkable from the circular shape, which has been found the best way of utilizing the available space. 5, 6 and 7 have all been decorated with designs of European ships.

In the rocks above this group at its westward end is a cave which has been inhabited.

No. 5.

Condition :--fair.

Passage :—5' 0", outer end indeterminate $\times 1'$ 5"; inner end 1' 10" $\times 1'$ 7", with sill. Walls of small slabs with free edges corresponding.

Chamber :—23' $5'' \times 6' 4'' \times 5' 0''$. Front wall is somewhat irregular, forming club-shaped extremities. East end has rectangular corners and is 5' 4" wide. West end has also corners almost rectangular, and is 7' 2" wide.

Decoration :---does not appear to have been "whitewashed" generally, but two of largest panels, those opposite the door, have had painted designs, one showing indication of a square-rigged ship, red on white ground, as in House No. 3A.

Small Pits :—two; one 6' 0" from door, 1' $10'' \times 1' 10''$; the other 9' 10" fromdoor in approximately same line, 1' $5'' \times 2' 1''$.

Natural Cave, used as dwelling place, above No. 5. The excavation disclosed the foundation of a wall which closed the mouth of the cave, allowing entrance through a doorway. The inside area was excavated to a depth of 1 foot. A well-finished *mataa* was found, also a quantity of flakes and chips and a hammer-stone.

Outside the wall, and immediately contiguous to it on the right of the entrance, was a small pit, containing sheep bones and shells and the rounded nodules of ash used for heating—no charcoal.

No. 6.

Condition :- almost perfect.

Passage :--6' $2'' \times 2' 10''$, outer end 1' $6'' \times 1' 2''$, inner end not stated, no sill. Chamber :--21' $4'' \times 5' 10'' \times 4' 9''$. East end is only divided by a rough partition from No. 8. On west side of entrance, 4' 0" from door, a cavity has been left between the upper portions of two large panels, making a V-shaped opening which has been formed into a properly made hatch leading into No. 7.

Decoration :---two large panels opposite doorway with painted designs. A, a face adorned with paint, red on white ground; B, three-masted ship, black on white ground, with two small figures in rigging, one of them wearing a red shirt (Plate IV, Fig. 2, II). Roof painted white.

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No. 7. (Plate VII, Fig. 1.)

Condition :— Front of house has fallen down through door-posts being removed : entrance passage blocked by débris. A small opening was made in the west end of roof by which to enter.

Passage :—outer end broken down and excavated, inner end 1' $8'' \times 1' 9''$, lower portion of frame *in situ*; floored with slabs in and near entrance.

Chamber:—18' $10'' \times 6' 5'' \times 4' 2''$. Connecting hatch to No. 6, *q.v.* A small pit was found in the floor near the door, the only instance discovered of such a pit within a building; two sides remained, length 2' 1"; contained two sea boulders, bird bones and shells; no sign of fire.

Decorations :---outside : a sculptured stone, partially buried, in exterior wall about 3' 0" from doorway, which was excavated and found to bear a roughly carved face, the eyes slanting from the nose upwards; the ear is indeterminate but approaches the natural rather than the elongated type (Plate VII, Fig. 2). Inside : roof whitewashed in places : panel facing door has indications of squarerigged ship, black on white ground.

Objects found :---three pillow stones.

Small Pits :—one in chamber (as above). Two outside the house in line with the door and with one another. The first 1' 4" from door, 1' 6" \times 1' 4", small boulder inside. The second 4' 0" from door, oval, 3' $0 \times 2'$ 0", made of pieces of laminated rock placed on edge in the middle and on side at end : floored in major portion with two large slabs and elsewhere in part with small pieces; the roof not perfect but formed of slabs, imbricated like the houses, and apparently closed by one slab. Depth from roof to floor has been about 7". It contained *pipi* (shells) and chicken bones, and at the edge rounded stones such as are used in heating. No trace of fire.

No. 8.

Condition :-- good

Passage :—6' 3", outer end 1' 7" \times 1' 4", inner end 1' 8" \times 1' 8", with sill; carefully paved.

Chamber :—14' $10'' \times 5' 4'' \times 4' 9''$. East end radius 1' 11", west end blunt and only slightly curved, its terminal wall 3' 1" in width. The partition wall dividing from No. 6 is not uniformly solid, and would permit of the passage of articles, but not of persons. The dome of the roof consists, as to its middle threefifths, of slabs laid side by side.

Decoration :---white paint on some slabs of roof.

No. 9

Condition :- good, but protecting earth from one side and dome of roof washed away. Exterior walls raised on natural boulders.

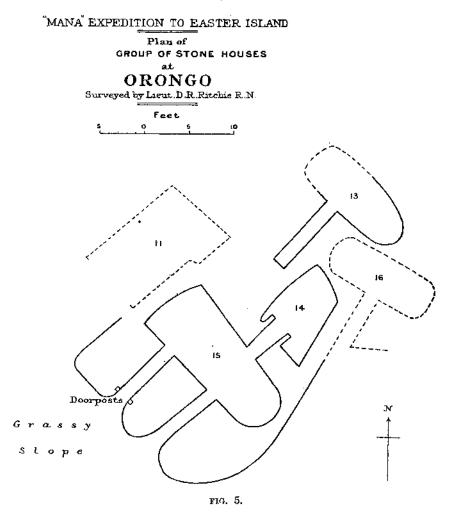
Passage :—1' 2" only, outer end 1' $1\frac{1}{2}$ " \times 1' $4\frac{1}{2}$ ", inner end 1' 3" \times 1' 6", no sill; paved with one slab.

Chamber :—almost circular 6' $9'' \times 6' 4''$. Walls formed of large panels extending 2' 0" above the floor line; the roof rests on the panels and is gradually domed inwards, its summit is formed by one large slab closing a terminal opening of 3' 0" in width.

Decoration :---none.

The group comprising houses Nos. 10 to 16 (Text-fig. 5; Plate VIII, Fig. 1), forms the most interesting and also the most difficult problem in the village. The following explanation for the position of three houses is put forward, with reserve on certain points.

Nos. 13 and 16 are the earliest houses of the group, forming part of the original line of the village. No. 14 was obviously built to accommodate itself to them, and



it may reasonably be concluded that it originally communicated direct with the outer air, otherwise the length of its passage would be pointless.

No. 13 has been wrecked by a fall of stones from above and never repaired. No. 15 was subsequently built in front of the now useless entrance of No. 13, and also in front of No. 14, turning the latter into an inner chamber ? (Text-fig. 5).

The end wall by this later addition, No. 15, also made Nos. 16, 17 and 18 open on to a small court.

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Nos. 10 and 11 are only separated from one another by a partition, and were therefore presumably built at the same time. The east end of No. 11 has the appearance, as far as it was surveyed, of having been built to accommodate itself to the west end of No. 15; if this is the fact Nos. 10 and 11 are later than No. 15. No. 11 is the house which contained the statue now at the British Museum (HOA-HAKA-NANAIA) and is unique in shape. Either the house was built to contain the image, or this is the original position of the statue and the house was erected later; in view of the irregular form of the building, the latter seems the more probable.

Not only is No. 11 presumably more recent than No. 15 and consequently than No. 16, but there is evidence of a different and interesting character to connect it chronologically with the later numbers 17 and 18. It contains, in common with the last two houses, stones wrought in the manner typical of the foundation stones of the thatched type of dwelling. Not only is their shape remarkable, but most of these stones possess also cup-shaped depressions in which were inserted the rods which were tied together at the top to support the thatch, and are quite unmistakable. Inside No. 11 is a small stone of this nature, while two large ones wrought to type have apparently been its door-posts (Plate VIII, Fig. 2). Nos. 17 and 18 have no less than eight such stones built into their walls, including two of the curved shape which form the ends of the thatched houses. A structure of the type now associated with the lower ground has therefore presumably existed in this neighbourhood, and been at some time destroyed, the material being used in the new buildings. A wrought stone of similar origin forms the west end of No. 22, which is near by, other wise the only other places in the village where such stones are to be found are, curiously enough, in Nos. 43 and 44 at its extreme end.

Not less interesting than the old foundation stones is a circular stone, also of hard basalt, which is built into No. 18, and precisely resembles the bed plates of the images on the *ahu* (Plate X, Fig. 2). Its measurements are 3 feet 5 inches by 2 feet 10 inches, those of the base of the statue, 3 feet by 1 foot 6 inches. The probability seems great that the statue originally stood on it, in the open, in the same manner as the other statues in the island. The only difficulty lies in the contracted form of the base of the image which is not associated with the *ahu*, but with the buried statues. The image is said to have been, before its removal, embedded in the ground, which presumably accounts for the excavated condition in which we found the floor of No. 11. It seems not unlikely, however, that the figure would in any case be sunk when placed in or surrounded by the house, in order to lessen the necessary height of the building.

If the statue was in place before any of the houses were erected it would account for No. 13 being built so far back and out of the line of its neighbours, a position which proved its ruin.

No. 12 seems to have been erected last of all, and when sites were still more difficult to obtain. It is on a higher level than Nos. 8 and 10. Its foundation

wall rests on their back walls and is approached between their respective covering mounds.

A regular line of small boulders which runs in front of houses Nos. 9 to 15 has the appearance of part of a foundation, but no satisfactory explanation was forthcoming and none could be found.

No. 10.

Condition :-- good.

Passage :—7' 9", outer end had to be partially excavated, width 1' 5", inner end 1' $10'' \times 1' 10''$.

Chamber :—length 14' 6". The east end is the widest portion ; it is formed by a straight wall 8' 5" in length; about the middle of the chamber—*i.e.*, at 7' 0" from the east wall—the width is 8' 0"; at 10' 0" from the east wall it is 6' 5" and at 11' 0" it is 4' 3". The two end walls and the two side walls curve inwards, and great slabs are placed on the top ; the result is a completely vaulted chamber. The greatest height is 5' 1".

Parallel to the north wall, and on the further side of it, is a long cupboard $5' 6'' \times 2' 11'' \times 2' 3''$. It is reached from the chamber by an aperture through the wall, with a width of 1' 0" at the bottom, 5" at the top, and a height of 1' 4".

Decoration :--- none.

No. 11. (Plate X, Fig. 1.)

No. 11 presents a form entirely different from that of any other house. It is a chamber with vertical walls and an almost flat roof. It has one square end, that at the north-west corner, and a rectangular recess at the north-east corner. One end of the roof and one end of the building, those on the south aspect, are entirely missing. The walls are laid bare some six to nine inches below the foundations.

The east side is formed as to its southern part by a straight wall, as to its northern part by a recess. The foundation consists of three blocks of stone, one of which blocks is hand-wrought. The floor has been excavated to the extent of 9" below the lower border of the blocks. On these three foundation blocks the wall is built by placing slabs horizontally. These laminæ gradually extend inwards at the top of the wall so as to form the lower portion of the roof, which is finally completed by the super-position of large slabs measuring respectively in the clear inside 3' 5" \times 3' 2", 3' 1" \times 1' 3", and 3' 0" \times 1' 2". The height of the east wall from the assumed old floor line to the spring of the arched roof is 3' 9". The length is 8' 5".

The recess commences at 8' 5" from the south end of the east wall and extends from that point to the north wall of the building. This recess is a continuation of east side of the house and is $\pounds' 10''$ in length. It is 1' 0'' in depth.

The south side of the recess is formed by the end of the slabs of the east wall being gradually brought inwards to form half an arch. In the north side of the recess (coinciding with the eastern end of the north wall of the house), the lower 22" are panelled, above which slabs gradually project inwards, thereby forming the corresponding half of an arch. The east, or back side, of the recess is formed of four panels, one of which panels extends above the floor line 2' 5". Resting on the upper edge of this panel the slabs extend upwards, each slab

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projecting inwards, forming a curved surface blending with the roof. The three panels which form the remainder of the east wall of the recess are only slightly built to the lamellar structure. The total result is a recess, or alcove, with a rectangular floor and walls in its lower part, but concave from side to side and concave from above downwards in its upper portion.

The curvature of the east and north walls gradually blends into the flat root of the building, formed by four flat tiles, imbricated.

The north side is a wall which consists in its lower part of three panels, two of which measure respectively $2' 5'' \times 3' 2''$ and $4' 0'' \times 2' 11''$; on these three panels rest the upper part of the wall, which is made of imbricated slabs gradually projecting inwards to form the roof. This north wall is built into a solid bank. Its length is 8' 8'', including the recess at its east end.

The west side is a wall which consists in its lower part of five panels, two of which measure respectively 3' $4'' \times 3' 4''$ and 5' $0'' \times 1' 3''$. These panels simply form an imperfect partition between this and the adjoining house (No. 10), and there is no indication that, at this point, a wall built of slabs ever existed. The panels have been undermined and displaced, but have evidently carried, and do still carry, the upper portion of the wall, which is of slabs and is uncurved. Length 12' 6''.

At the north-west corner is a wrought foundation stone of basalt with a cup-shaped cavity

The south side is reported to have been destroyed when the image was taken out. The house is stated to have originally had a passage entrance similar to the other dwellings, but no such foundations are at present visible. Exterior to the present entrance is a cupboard niche which seems to have served the same purpose as the small pits.

Line of embedded stones, carved stone, and two door-posts.

In front of houses Nos. 9 to 15 and some twenty feet from them is a line of boulders inserted in the ground which extends for about fifty feet.

Adjacent to this line of stones, on the sea side, is a horizontal stone on which is carved the figure of a bird-man seated on a head or skull.¹

Also near the line of stones, but on the crater side, were lying the two large stones wrought as foundations for a thatched house, which have been presumed to he the door-posts of No. 11, thrown aside when the house was destroyed. On one of these a face has been carved (Plate VIII, Fig. 2).

No. 12. (Plate VI, Fig. 2.)

The situation of this house is unique. It is built on a higher level than those in front of it, Nos. 8 and 10, and its front walls rest on their roofs.

Condition :--major portion of roof and south wall deficient. Exterior door and passage had to be excavated, only the lower portion remained.

Passage :—7' 4", outer end width at bottom 1' 4" with sill, inner end width at bottom 1' 9", no sill; paved with blocks.

Chamber :—25' 6" \times 5' 2". Central portion unroofed. East end semicircular; west end rectangular 3' 0" in width, the end wall 1' 0" in height from which springs the domed roof. The lower part of the north wall is formed of irregular

¹ The position of this stone was altered slightly by us in order to photograph it.

cubes with panels in places, slabs superimposed. The lower portion of the south wall is faced with thin panels and slabs superimposed.

No. 13.

Situated immediately against and 10' 0" below a vertical wall of rock.

Condition :--east end perfect. At west end two-thirds of the roof have been crushed in, and the house filled up with rocks and débris from above.

Passage :---none connecting with present exterior, but on south side of house (7' 9" from east end) is an opening with perfect frame 1' 9" \times 2' 2" with sill. The east door-post has two slots cut in it, 1" and 2" respectively; no corresponding slots in west frame. The opening is the entrance to a passage 9' 0" in length and in perfect condition, which is closed at the further end. The walls are formed from floor to roof of slabs; the roof is of slabs placed edge to edge; the floor has no slabs.

Chamber :--13' $0'' \times 6' 0'' \times 4' 0''$. East end semi-circular, normal domed roof; west end in ruins.

Decorations :—the edge of one of the slabs in the passage, measuring $2' 0'' \log 3''$ deep, is engraved throughout its entire length with ko mari¹ figures and covered with white pigment.

Objects found :—3' 6" from further end of passage a skull lay on its left side silted up to line of the sagittal suture. The earth was not in contact with the buried surface of the skull, being distant from it all round for about half an inch, the tip of the finger could be inserted beneath the skull on the left side. A quantity of bird bones and sea shells were lying in passage.

No. 14. Opening out of No. 15.

Condition :---good.

Passage :--4' 7"; outer end (from No. 15) broken 2' 9" \times 1' 9", inner end 1' 9" \times 1' 5".

Chamber :—a symmetrical recess each side of the inner end of passage. Greatest length of main chamber 7' 6"; greatest width 6' 6" (for details see plan); height 4' 7".

Objects found :- mataa in passage.

No. 15.

Condition :--perfect, except exterior entrances, which are broken down.

Passages :—two; west passage 7' 9", outer end broken (excavated), inner end 1' 9" \times 1' 5"; east passage blocked.

Chamber :--17' 9". East end semi-circular, greatest width 6' 0" (radius 2' 0"), west end almost rectangular, width 7' 8". (For details see plan.)

Decoration :—panel opposite west passage, 2' $4'' \times 2' 11''$, with painting of a bird.

No. 16.

Condition :--- practically perfect,

Passage :--6' 0", outer end imperfect, inner end 1' 9" \times 1' 7" with sill.

Chamber :---12' $9'' \times 5' 0'' \times 6' 2''$. Ends oval and flattened. Walls lined with particularly large panels, the surfaces of two of these, as they show above the floor, measure respectively 5' $0'' \times 4' 0''$ and $4' 0'' \times 4' 0''$. This house and No. 17 are exceptionally high.

¹ See below, "Carvings according to Type," ko mari.

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No. 17.

Condition :—Almost perfect.

Passage :---6' 6", outer end imperfect, inner end 1' $8'' \times 2' 3''$, with sill.

Chamber :—14' $0'' \times 5'$ 7'' $\times 6'$ 6''. Normal type. Ends curved and flattened, End wall vertical, 6' 0'' in height. Solid wall separate from No. 16. Built into walls are five wrought stones of the type used for foundation of thatched houses, four of them show drilled holes of customary style and two of them are also curved as used for the ends of the houses, one has no holes. Roof is only slightly domed.

Objects found :-- a number of pillow stones.

No. 18. (Plate X, Fig. 2.)

Condition :--very good.

Exterior wall contains a drilled stone of previous type, also a round stone with flattened surface, measuring $3' 5'' \times 2' 10''$.

Passage :--4' 6". outer end imperfect, inner end 1' $5'' \times 1' 11''$, with sill ; walls of panels, not of slabs.

Chamber :---13' $0'' \times 5'$ $7'' \times 5'$ 0''. One end rounded and much flattened, giving width on floor of 5' 0''. Into eastern wall are built two wrought stones, one containing one hole and the other one and a half holes.

Decoration :---one stone highly ornamented, painted, and with seven ho mari figures deeply cut.

Objects found :---four mataa.

Carved stone built into wall between entrances of No. 18 and No. 19. Design, bird-man.

Nos. 19 to 21 terminate the line of buildings on the higher portion of the ground.

The only dwellings in this section of which the ground plan calls for remark are Nos. 19 and 19A. Here we have two structures, as with Nos. 14 and 15, opening out of each other, not directly, but with a passage between them of considerable length. In this case the interior abode is more of the nature of a cave, being partly excavated out of the rock. That the outer chamber was here also an afterthought seems not improbable. It is possible, however, that it may have been deliberately constructed as a place of hiding, a theory to which the attempt to conceal the entrance would lend some colour.

The concluding houses, Nos. 21 and 21, are falling into decay.

No. 19.

Condition :—practically perfect.

Passage: 5' 0", outer end broken, inner end 1' 8" \times 1' 7¹/₂", sill perfect.

Chamber :--14' $0'' \times 4' 0'' \times 4'0''$. Construction typical throughout. Ends oval. Floor level with sill. A properly built hatch $9'' \times 9''$, opens into No. 20.

Decoration :—slabs opposite door have been painted, almost obliterated; on roof, birds red on white, a figure $S'' \times 4''$ which may be a *mataa*, and various other designs.

No. 19A. Cave Annexe to No. 19.

Condition :---half of slabs forming roof have fallen in, large amount of earth worked in from above, floor very wet.

Passage :—8'0", outer end 1' $8'' \times 2' 2''$, is a concealed entrance behind a slab in No. 19, the inner end opens into the cave.

Chamber (cave) :—circular 6' 0" in diam. \times 5' 0" in height, hollowed out of natural rock and walled up in places. Roof formed of flat slabs.

Decoration :--lintel of door behind slab covered with *ko mari* figures; opposite door a painting on natural slate, red outlined in white, possibly a canoe under canvas. White patch on ceiling.

No. 20.

Condition :---roof and south side threatening to fall.

Passage :—about 5' 0", outer end missing, inner end 1' $9'' \times$ indeterminate, no sill or lintel in accurate position.

Chamber :--18' $0'' \times 4' 10'' \times 5'$ 6". West end oval, termination 2' 2" in width; east end flattened, termination 4' 1" in width. Northern wall exclusively composed of large blocks and slabs. Hatch communicating with No. 19 has an opening of 1' 6" and a length (through the wall) of 1' 10", the bottom formed by a single slab. Immediately inside the doorway a cavity has been hollowed under the floor and covered with slabs.

Decoration :--- north wall many carved ko mari figures. No other design.

No. 21.

Condition :—a quarter of the roof at the east end is gone, entrance blocked, and whole tottering.

Passage :—about 4' 0" remains, outer end gone, inner end I' 6" \times 1' 7", no sill. Chamber :—20' 0" \times 5' 6" \times 5' 7". East end oval, on its north side a small alcove 3' 10" \times 2' 1", having a semilunar curved roof and domed back, pillow stone *in situ*; west end flattened; a hole through the wall communicates with No. 20.

Objects found :---pillow stone, and sphagnum from crater lake (used for caulking boats).

No. 22 begins the line of houses which stand at slightly lower level than the foregoing, and nearer the sea. They continue in a comparatively straight line till No. 32 is reached. The shape of the houses varies considerably. No. 22 is one of the largest and most typically cance-shaped in the village. The floor was excavated, but nothing found which would, it was felt, justify similar work in other houses. Nos. 24 and 25 are of irregular form with curious extensions, while No. 27 is oblong, not oval. Near the entrance to No. 22 are some stones carved with a bird-man and a face.

No. 22. (Text-fig. 3.)

Large and typical canoe shape. Condition good.

Passages :—two, nearly identical, each 6' 9", outer ends frames missing and measurement uncertain, inner ends west 1' $8" \times 1' 8"$, east 1' $10" \times 1' 5"$; both with sills, inner portion of both passages flagged; in outer portions flags appear to have been removed.

Chamber :—52' $0'' \times 5' 9'' \times 4' 8''$. (See Text-fig. 3.) Size of panels somewhat irregular. Cupboard in the wall 5' 0'' from west passage entrance, 1' $0'' \times 2' 0''$ and 1' 8'' back to front.

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Floor was excavated by drawing a line down the centre and very carefully scraping the surface of one-half of it. For a depth of 2" the substance was a bright yellow volcanic ash, homogeneous, which had apparently formed a " pigalecred" floor. The upper surface of this floor was undulating, having apparently sunk locally. At a depth of 1' 0" the same material was found non-homogeneous, and in the shape of rough nodules. Resting on the pigaleered floor and fitted against the panels, but not passing under them, were four small slabs. Charcoal dust, and pieces of charcoal the size of a finger-nail were found in very small quantities 10" beneath the upper surface of these flagstones. Charcoal was also found in one other spot, a depression in the floor, 4" below the surrounding surface, and mixed up with the alluvium which had accumulated in the hollow. With the exception of the foregoing no object suggesting action of man was observed in cutting through the floor, or in clearing the surface of the floor of alluvium.

Decoration :---two panels opposite entrance have been painted

No. 23.

Condition :- very good ; a small hole in roof.

Passage :---outer end and part of passage blocked, inner end broken; lower half of wall made of panels, upper half of slabs.

Chamber :—21' $8'' \times 7'$ 4", the greatest height is 5' 7", the walls at the east and west ends are respectively 2' 0" and 1'.5" in height. The ends are curved and domed. The whole is particularly well-built.

Decoration :—on the north wall are two slabs with faint traces of a squarerigged ship painted in white on red background.

No. 24.

Condition :---the two ends are in fair preservation ; the middle portion of the north wall and roof have fallen.

Passage :—ruined, outer end broken, inner end 1' $10'' \times 2' 0''$, with sill.

Chamber :—total length, 19' 6". Shape irregular, the entrance is not in the middle of the chamber but at 5' 6" from the west end, towards the middle of the house the north wall recedes till at about 11' 6" from the west end the greatest width is reached, 14' 3". The height of the wall at the west end is 2' 0", at 4' 0" from the east end the height is 4' 0".

No. 25.

Condition :---middle two-fourths of roof of main part of house missing, both entrances blocked

Passages :—two; west passage (10' 0" from west end of chamber) in ruins, inner end still open but no post, lintel, or sill east passage (18' 6" from west end of chamber) outer end broken down, inner end 1' 6" \times 1' 6".

Chamber :—length 22' 0", width (4' 0" from west end) 7' 4". Height of dome roof at west end 3' 2". The west end is square 6' 6" in width, and the north wall at this point is formed of a mass of basalt giving a height of 2' 6" above the ground and a width of 5' 0".

At east end of chamber is an extension 7' 0" in length with uniform width of 5' 0"; greatest height 3' 4"; wall at east extremity 1' 9".

Decorations :--- none exist.

No. 26. (Plate IV, Fig. 2, and Plate XI, Fig. 1.)

Condition :---perfect.

Passage :—5' 2", outer end 1' 8" \times 1' 9", inner end 2' 3" \times 1' 10", with sill; paved.

Chamber :—23' $4'' \times 6' 6'' \times 4' 3''$. Construction normal. East end oval ; west end flattened.

Decorations :—Panels of wall painted, showing three representations of "ao,"¹ red on white, one bird ² red on white, one design in black, possibly a ship; on roof, birds painted in red, black and white.

No. 27.

Condition :—perfect.

Passage :—1' 8" only, outer end 1' 10" \times 1' 8", inner end 1' 9" \times 1' 4", with sill; paved.

Chamber :—8' $2'' \times 4' 3'' \times 3' 9''$ Shape oblong, not oval, north side longer than south side, corners consequently not rectangular. Door at west end, not in centre.

Decorations :---one slab (not opposite door but near it on north side, shortness of passage allowing light) inscribed with design.

No. 28.

Condition :- most of roof and portion of north wall gone.

Passage :---6' 6", outer end broken down, inner end 2' 0" \times indeterminate ; roof slightly concave.

Chamber :—length 24' 0"; width at 4' 0" from east end = 5' 3", at 8' 0" = 6' 4", at 16' 0" = 5' 11"; height indeterminate. East end is a dome with 2' 0" radius; the west end is flattened with a width of 2' 0". The south wall is almost entirely built of slabs, while the north and the end walls are of panels from which the roof springs. The remaining part of the roof is formed of slabs of fairly uniform size, one of which measures 4' 6" \times 1' 4".

Decoration :----none.

No. 28a.

A small house in the corner between Nos. 28 and 29; broken down, could not be entered.

No. 29.

Roof fallen in, could not be entered. Length about 19'0".

No. 30.

Condition :- good

Passage :—6' 3", outer end 2' 10" \times indeterminate, inner end 1' 9" \times 1' 10", with sill.

Chamber :—20' $8'' \times 6'$ $8'' \times 5'$ 6''. Panels of large size ; one opposite door 3' $10'' \times 3'$ 5''

Decoration :---on panel opposite door picture of sailing ship, red on white. No. 31.

West side passage fallen forward, preventing entrance, otherwise apparently in fair condition.

¹ Ceremonial paddle.

² See below, "Summary of Carvings according to Type," Bird figure.

No. 32.

Condition :---roof and sides falling in,

Passage :—6' 1", outer end 1' 7" \times 1' 7", inner end 1' 10" \times 1' 10", with sill still *in situ*, which is placed inside the chamber abutting against the uprights, its two ends do not fit between the uprights. Wall consists in its lower half of panels, in its upper half of slabs.

Chamber :—21' $8'' \times 5' 3'' \times 4' 9''$, width of east end 3' 9'', of west end 4' 11''. The panels have in this case not been built into the wall but are placed against it. They are of large size, one of the biggest is 4' 1'' square ; another 3' 10'' \times 3' 5''.

A break occurs in the line of houses between Nos. 32 and 35; Nos. 33 and 34 stand apart under one covering, and slightly to the rear, further from the cliff edge than their neighbours.

The notches on the inner door-post of No. 33 are of interest.

No. 33. (Plate XJ, Fig. 2.)

Condition :---good.

Passage :--6' 6", outer end 1' 8" \times 1' 7", inner end 2' 2" \times 2' 1", with sill; wall entirely of panels, slabs only being used to bring them to the level; floor partly paved.

Chamber :—19' $4'' \times 7' 2'' \times 5' 8''$. West end oval, east end flattened to permit of gap between upper portion of panels as communication with No. 34. Panels opposite door horizontal not vertical, one 4'9" with a height of only 1'11"; remainder of panels generally low, the wall being principally composed of slabs.

Decoration :--at inner end of passage the west door-post shows on each side a number of rough notches On one side of the post they form a continuous series, numbering fifty-five; on the other side they are in two series with a break between them, the upper series numbers seven notches, the lower series thirteen. Each notch was said to represent a day spent in the house by the recorders.

Traces of paint on ceiling.

Small pit in front of entrance, 1' $2'' \times 1' 0''$; depth uncertain.

No. 34.

Condition :---roof of passage fallen down slightly, making it too low to enter. Otherwise in good condition. It can be seen into from No. 33.

Decoration :---traces of painting on two slabs opposite the door.

Nos. 35 to 39 finish the houses of Orongo proper, or those to the west of the carved rocks. No. 39, which has unique recesses on each side the entrance, abuts on the carved rocks.

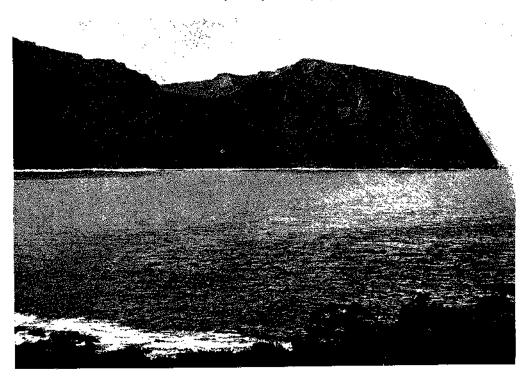
No. 35.

Condition :—roof broken in at north end ; passage partly closed. Passage :—indeterminate.

Chamber :—22' $2'' \times 6'$ $7'' \times 5'$ 5''. East end oval; west end flat with north corner rectangular, and south corner slightly rounded. Right of door a small recess in wall 2' 0" in length and 1' 0" in height.

Decoration :- some drawings on roof ; the subjects could not be determined.

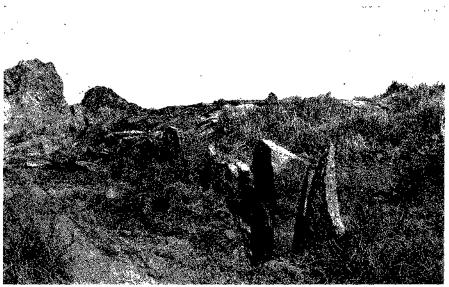
Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate III.



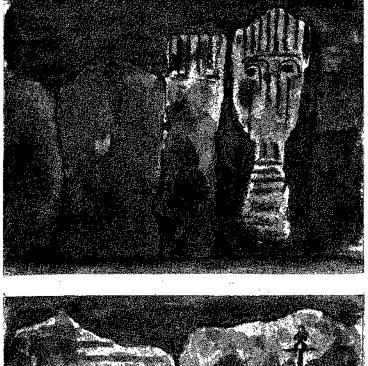
1. RANO KAO FROM ISLET OF MOTU NUL.



2. CRATER OF RANG KAG, ORONGO ON THE RIGHT (SKETCH) SURVEY OF VILLAGE AND CARVED ROCKS OF ORONGO.



1. EXCAVATION SHOWING CONSTRUCTION OF BACK OF HOUSES.





2. PAINTED SLABS (SKETCH). I.—Two representations of an *ao*, or ceremonial paddle. No. 26. II.—A face adorned with paint; a European ship. No. 6. SURVEY OF VILLAGE AND CARVED ROCKS OF ORONGO.



1. GEOLOGICAL SECTION SHOWING CURVED JOINTING IN ROCK USED AS CAPSTONES OF HOUSES.



2. CAPSTONES OF HOUSES IN FOSITION.

Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate VI.



1. END OF A HOUSE UNROOFED. NO. 2.

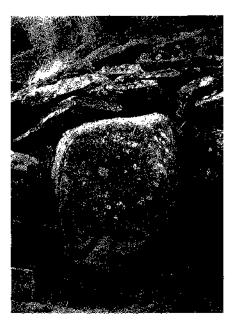


2. ENTRANCE PASSAGE UNROOFED. NO. 12. SURVEY OF VILLAGE AND CARVED ROCKS OF ORONGO

a 4



I. A BROKEN DOOBWAY, SMALL FIT, AND CARVED STONE. NO. 7.



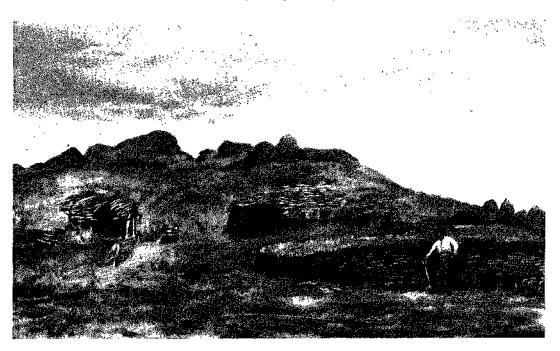
2. STONE CARVED WITH FACE. NO. 7.



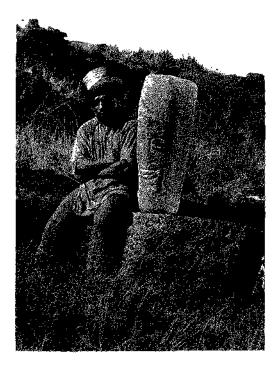
3. A SMALL PIT. NO. 7.

SURVEY OF VILLAGE AND CARVED ROCKS OF ORONGO.

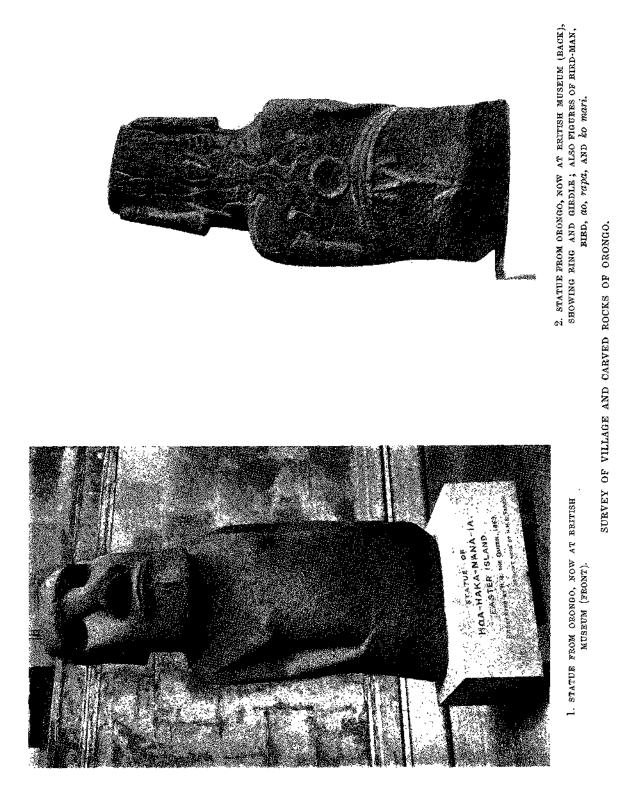
Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate VIII.



1. CENTRAL HOUSES OF VILLAGE (SKETCH). LEFT TO RIGHT, NOS. 10, 11, 15, 16, 17, 18, AND 22 (DOUBLE ENTRANCE).



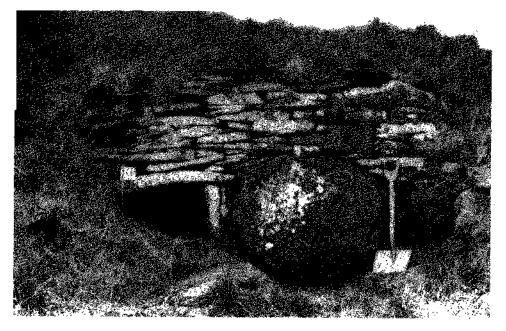
2. DOOR-FOST, FORMERLY A FOUNDATION STONE, CARVED WITH FACE. SURVEY OF VILLAGE AND CARVED ROCKS OF ORONGO.



Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate X.

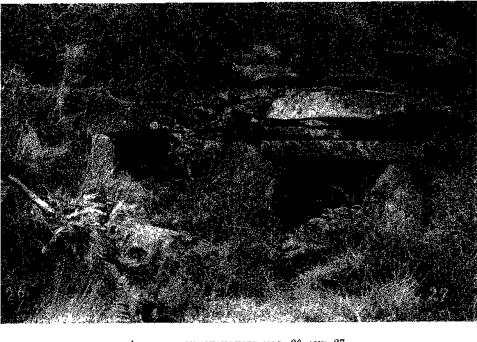


I. HOUSE NO. 11, WHICH CONTAINED THE STATUE.



2. HOUSE NO. 18, WITH CIRCULAR STONE, PROBABLY A FEDESTAL.

Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate XI.



1. DODEWAYS OF HOUSES NOS. 26 AND 27.



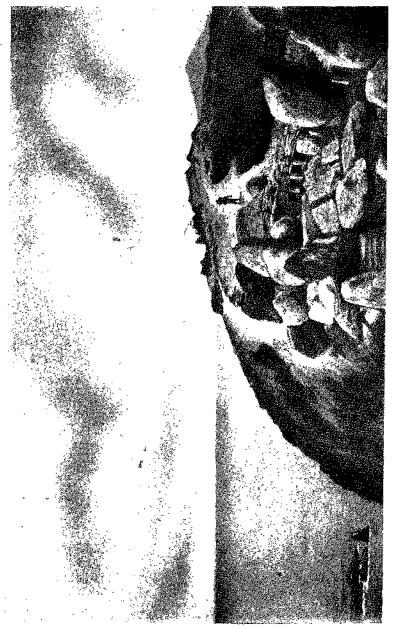
2. HOUSE NO. 33.



1. WESTERN GROUP OF ROCKS, WESTERN ASPECT.



2. Face carved on western rocks, 1' 4" imes 1' 6". SURVEY OF VILLAGE AND CARVED ROCKS OF ORONGO.



HOUSES NOS. 40 TO 44, AND CARVED ROCKS (SKRTCH).

Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate XIIIA.



1. HOUSES NOS. 40 TO 43.



2. WESTERN GROUP OF ROCKS, EASTERN ASPECT.

Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate XIV.



1. STONE CARVED WITH THREE BIRD-MEN, 6' $0'' \times$ 4' 0''—western group.



2. CARVINGS OF TWO BIRD-MEN AND A FACE.

Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate XV.



1. BIED-MAN HOLDING EGG.

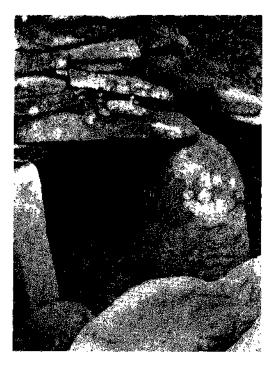


2. GEOLOGICAL SECTION OF THE CLIFF OF WHICH THE TOP IS THE CARVED HORIZONTAL STONES.

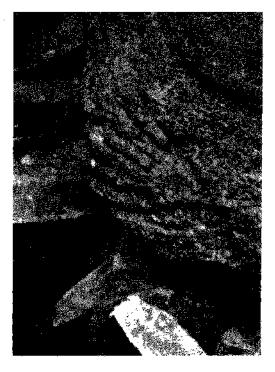


3. BIRD-MAN WITH CROOKED BEAK, HEIGHT 4' 4"; ON LEFT, HANDS HOLDING AN EGG.

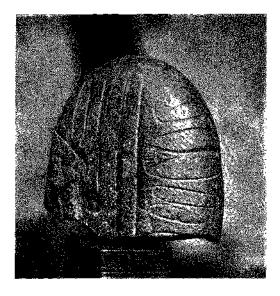
Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate XVI.



1. DOOR-POST BETWEEN NOS. 41 AND 42.

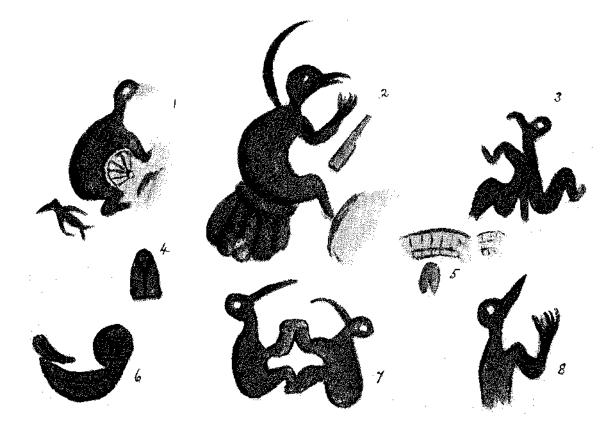


2. "FAN" CARVING ON STONE BETWEEN NOS. 43 AND 44.

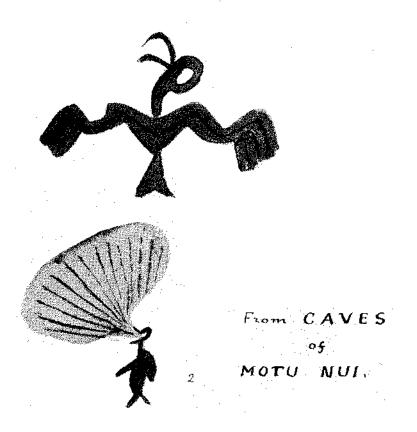


3. FORTION OF A FILLOW STONE, CARVED WITH ko mari figures.

Journal of the Royal Anthropological Institute, Vol. L, 1920, Plate XVII.



CARVINGS AT ORONGO (SKETCHES): I. BIRD-MAN WITH FAN FIGURE. 2. BIRD-MAN WITH APPENDAGES.
BIRD-MAN SHOWING TWO LEGS AND TAIL. 4. Ko mari. 5. NOT KNOWN. 6. Rei-miro. 7. BIRD-MAN, DOUBLE FIGURE. 8. BIRD-MAN HOLDING EGG.



2. CARVINGS FROM MOTU NUT: 1. BIRD WITH JOINTED WING. 2. BIRD CALLING. SURVEY OF VILLAGE AND CARVED ROCKS OF ORONGO. No. 36.

Condition :---exterior of entrance broken down; can be entered by hole in south wall.

Passage :---broken down at outer end, inner end 1' $5'' \times 1' 11''$.

Chamber :---11' $9'' \times 6' 0'' \times 5' 7''$; oblong with corners bevelled. Niche in one corner with length (back to front) 2' 1", width 1' 10", and height about 1' 0".

Decoration :----traces of painting on two panels opposite door.

A coping runs about 1' 0" from exterior wall with apparent object of keeping the soil from slipping.

No. 37.

Condition :---good.

Passage :---6' 6", outer end imperfect, inner end 2' $0'' \times 2'$ 8", with sill; walls built of tiles only; partly flagged.

Chamber :--12' $2'' \times 5'$ $10'' \times 5'$ 7''. West end rectangular with rounded corners; east end rectangular. Opening at east end to No. 38 between tops of two slabs.

Decoration :---two panels opposite door have been painted, one bears traces of sailing ship, other indeterminate. Ceiling, traces of white paint.

No. 38.

Condition :—a hole in the roof; otherwise good.

Passage :—5' 9", outer end 2' 4" \times indeterminate, inner end 1' 8" \times 1' 9", no sill; not flagged. In the east wall at the inner end is a small recess, back to front 9", width 1' 0", height 7".

Chamber :—10' $4'' \times 5' 9'' \times 5' 0''$, oblong with rectangular ends. Opening to No. 37. Recess on east side of door, on ground level but partly enclosed by a stone across the bottom of the entrance, back to front 2' 0", width 2' 3", height 1' 9".

Decoration :---slabs opposite door, traces of white paint. On roof small birds in white, roughly drawn.

No. 39.

Condition :---Middle of north wall and roof broken down. Exterior entrance broken.

Passage :- about 5' 2", outer end missing, inner end width 5' 4".

Chamber :—plan peculiar. Rectangular main chamber 16' $4'' \times 4'$ 8"; in addition, on each side of the entrance are two large recesses, concave in form, which extend from the walls of the passage to the respective ends of the house. These recesses measure at each end—that is, at their narrowest points—about 2' 4". Their roofs are domed. The effect given is that the passage penetrates the house and divides its southern side into two parts.

The final portion of the village, that built among upstanding rocks, seems to be most correctly known, not as Orongo but as Mata-ngarau.¹ (Text-fig. 6; Plates XIII, XIIIA, Fig. 1.) The earth covering the rear of houses Nos. 40 to 45 blends with the edge of the crater. Nos. 40 to 44 open on to a small court with a natural pavement of irregular slabs, length from west to east 20 feet, width from north to south 16 feet.

¹ Precisely what this term covered or conveyed is a little vague. It is hoped to discuss it on some future occasion.

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On the west and east side of the "court" are vertical rocks, varying in height from some 4 feet to 8 or 10 feet. Both pavement and rocks are covered with carving.

The south side of the court is the edge of the sea cliff, which is here for a short distance almost vertical. The upper part of the face has crumbled away, with the result that a section is exposed, measuring perhaps some 8 to 10 feet in depth. Of this section, the highest part has fractured into the slabs which form the carved pavement aforesaid. The slabs tend to be concavo-convex from below upwards after the manner of the roofing slabs. The central rock of the section has fractured into large quadrilateral cubes. The bottom section is of similar nature to the top layer, but is rubble. At the foot of the section a small portion of the cliff tends to be horizontal, and it is possible to walk with comfort underneath the section. This comparatively level portion is said to have been used for cooking purposes.

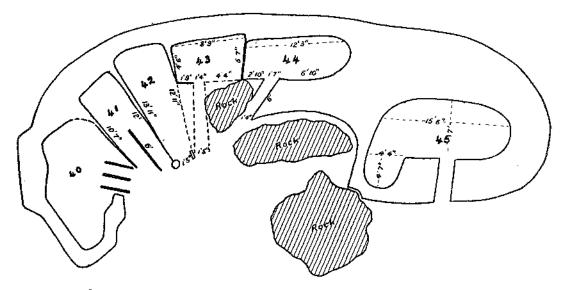


FIG. 6.—GROUND PLAN OF HOUSES NOS. 40 TO 45, SHOWING CERTAIN MEASUREMENTS.

Nos. 40 to 44 may perhaps be most correctly considered as forming one house divided into sections, of which the west end of No. 40, which is oval, and the east end of No. 44, which is also oval, form the respective terminations. No. 45 is of normal type. It was stated independently by more than one native authority that at the great bird festival these houses were lived in by old men, who chanted from the local tablets or script. Nos. 40, 41 and 42 were, it is said, occupied by the experts from Kotuu, or the west side of the island, and Nos. 43, 44 and 45 by those from Hotu Iti, or the east side of the island.

No. 40.

Condition :--roofless and in ruins. Entrances :--two.

No. 41.

Condition :- good.

Entrances :---two, divided by a row of panels which continue half-way into the house.

Chamber :—rectangular in the shape of a fan. Length south end 3' 7", expanding towards the north or crater side. Width west end 10' 7", east end 12' 0".

Decoration :—on the east wall is a figure with body of a lizard and the head and arms of a man. The door-post between Nos. 41 and 42 bears on the lower portion of the south side a roughly carved face. On its west side there are six *ko mari* and at the bottom a composite figure of a *ko mari* with three symmetrical holes on each side.

No. 42.

Condition :--entrance and part of north wall broken down.

Entrance :---the wall between this house and No. 41 diminishes in breadth from north to south and finally consists of one panel only. It terminates in the door-post aforesaid, which partially blocks the entrance.

Chamber :---this is also fan-shaped, radiating from a southern base of 1' 5" West wall 13' 11", east wall 12' 11". Present height 3' 0".

Decoration :---on south wall a figure shaped like a hook.

Object found :--sphagnum. (See house No. 21.)

No. 43.

Condition :--- north wall broken down, a stone bowl (taheta) has been built into it. Roof off

Passage :—5' 3". The west wall between Nos. 42 and 43 is partly broken down, but at its outer end the door-post, which is common to both houses, is clearly visible. The door-post at the inner end of the passage is a small foundation stone from thatched house with two holes.

Chamber :—an irregular oblong, walls measuring respectively north 8' 9", south 8' 0", west 4' 6", east 5' 7". It is divided by panels only from No. 44; articles could be passed through. A large carved rock separates the entrances of Nos. 43 and 44.

No. 44.

Condition :--- perfect.

Passage :---west wall 5' 0", east wall 6' 0", outer end 1' 4" \times 1' 8", inner end 1' 5" \times 1' 8"; paved. Outer door-post is a foundation stone from thatched house. A niche forming a cupboard on west side of the passage at the inner end. Chamber :---length 12' 3"; west end rectangular, 4' 7"; east end oval.

Height 4'.

Objects found :--- a hammer-stone in passage niche ; also one in chamber.

No. 45.

Condition :---fair.

Passage can be traced.

Chamber :—oval, 15' $6'' \times 7' 0''$. At west end on south side is a recess with oval termination, 4' $7'' \times 4' 4''$.

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CARVINGS ON ROCKS.

A few carved stones are scattered throughout the village and have been alluded to in place, but the most remarkable are those on the rocks at the eastern end. These carvings, in some instances at any rate, antedate the houses between them, which have been built over and conceal the figures. While a few of the carvings stand out conspicuously, most are weathered away in greater or less degree, and have to be carefully sought for. Many also can only be seen at certain times of day, or when the light is propitious. This renders the work of tabulating them very difficult. In all cases, therefore, the "total" number recorded must not be considered as dogmatic statements regarding the number of which traces may remain, still less as to the number which have originally existed.

SUMMARY OF CARVINGS ACCORDING TO TYPE.

1. Bird-man.

This form is the most prevalent, and representations of it appear some 120 times on the end rocks,¹ as well as some four times in the earlier part of the village. It consists of the figure of a man in a crouching position with the head of a bird. It has frequently a hooked beak and gular pouch in a manner reminiscent of the frigate-bird.² The hands are usually held up (Plate XV, Fig. 3), and in at least three known cases hold an egg (Plates XV, 1; XVII, 1, No. 8). The figure in at least one case is seated on a human head or skull. In one instance a carved design extends below the buttock which may be a tail, and a crescent springs from the shoulder, possibly representing a wing (Plate XVII, 1, No. 2). The bird-man is always shown in profile, but in an isolated case both legs are depicted as spread out and have a possible tail between them (Plate XVII, 1, No. 3).

Apart from the rocks of Orongo and one or more stones on Rano Kao, at the top of the descent to the crater, it is believed that the design of the bird-man can only be found in two places on the island, at Tongariki on the south coast, and near Ahu Vaitara-kaiua on the north side.³ In both cases it was roughly carved on horizontal rock.

2. Bird Figure.

A figure of a bird occurs some four times on the rocks, and is found in the decoration of some of the houses; it is also seen on the back of the statue Hoa-hakananaia (Plate IX, Fig. 2). This bird design is always of the same general character as that found painted on the roof of the cannibal cave (Ana kai-tangata).⁴ In the

¹ Previously provisionally given as 111.

³ See H. Balfour, Folk Lore, December, 1917, and The Mystery of Easter Island, p. 296.

³ The carvings scattered throughout the island, of which there are a large number, have not yet been tabulated.

^{*} The Mystery of Easter Island (Fig. 102).

rough carving, however, on back of the statue the forked tail, which is very prominent there, and can be seen elsewhere, does not appear, possibly for reasons of space.

The figure of a bird with a joint in the outstretched wings, which is found occasionally in the island and also in a cave in the island of Motu Nui, is not found at Orongo. It is illustrated for purposes of comparison (Plate XVII, 2, No. 1).

3. Ko mari (or ko marie).

Next to the bird-man the most frequent symbol is a small geometrical design said to represent the female sex. It occurs most often on the horizontal rocks or "pavement." It was reported that women of the island, possessed of personal attractions, "fine women," came up to this spot to be immortalized after this manner by professional artists, and that each of these designs represented a particular woman. The symbol is frequently found on pillow stones (Plate XVI, Fig. 3),¹ and elsewhere. Total number on rocks, 49.

4. Faces.

These occur 19 times on the end rocks and two or three times in the village besides those on door-posts. In two cases names were given to them by an old man known as Kapiera.

5. Rei-miro.

The breast ornaments of women are pictured twice. In one case one end is geometric, the other represents a face (Plate XVII, 1, No. 6). In the other case, which is close to it, both ends of the *rei-miro* are geometric, but there is a face almost immediately above it.²

6. Fan Figure.

A peculiar figure with lines radiating from a centre forming a section of a circle. If the carving below the buttock of No. 2, Plate XVII, I, which somewhat resembles the fan, is not counted but reckoned as the tail of the bird-man, the figure in some form occurs three times; once as forming a centre to the bird-man (Plate XVII, 1, No. 1), once on the stone between Nos. 43 and 44, where it is near to but not in any sort of conjunction with the buttock of a bird-man (Plate XVI, Fig. 2), and once roughly and independently scratched on the pavement.

There are a few other carvings not included in the above types, but not sufficiently definite to be classified.

SUMMARY OF CARVINGS ACCORDING TO POSITION.

I. Western Group of Rocks, between No. 39 and the horizontal stones.

1. Western aspect looking towards the main portion of the village. Total carvings, 21 bird-men and two faces. The face which is most prominent was

¹ This stone is now in the possession of Capt. A. W. F. Fuller, (to whom it was presented by Mr_i P. H. Edmunds, of Easter Island) who has kindly consented to the figure of the stone being given in this paper.

² In the rei-miro in the British Museum both ends are carved as faces. The Mystery of Easter Island (Fig. 115).

reported to be known as "Aringa-o-Tupa" (face of Tupa), and to represent "a man who slept in No. 39."

2. Eastern aspect looking towards the horizontal stones or pavement (Plate XIIIA, Fig. 2). The most prominent carvings are on an upper rock on the seaward side and consist of three bird-men in an inverted position (Plate XIV, Fig. 1). Below this is the bird-man, and fan composite figure and near it two birds, also a *rei-miro*. A large rock on the grass at a still lower level is nearly descending into the sea; it has numerous carvings.

One of the lowest rocks on the landward side, next to the entrance to No. 40, had to be excavated and the carvings were found well preserved. They consisted of two bird-men back to back with a face between (Plate XIV, Fig. 2). Total carvings, 18 bird-men, 3 birds, 5 faces, I *rei-miro*.

II. Eastern Group of Rocks, forming the conclusion of village.

1. Western aspect looking towards the horizontal stones or pavement. The rocks of this group are more detached than those of the western. The solitary stone which stands between the entrances to No. 43 and No. 44 has been also included. It bears several bird-men, and on the top a face said to represent "Tukihiva-a-Haumoana." At the bottom of the same stone near the entrance to No. 43 is the fan figure (Plate XVI, Fig. 2). (See above, p. 449.)

A big stone (Plate XV, Fig. 3), on the east side of the entrance to No. 44, shows a large bird-man; the back of the head and figure are almost obliterated, but the hands are clear and hold an egg. Next to this last is a vertical rock, in shape resembling a tombstone said to be known as "Haré-o-Viki." Its western face is covered with a bird-man strikingly unweathered. The marked feature of this figure is the manner in which the beak has been curved, apparently to accommodate it to the space available.¹ A conical stone stands on the sea side among the horizontal stones of the pavement. The bird-man on it also holds an egg. Total carvings, 27 bird-men, 3 ko mari, 1 face, 1 fan figure.

2. Eastern face, looking towards narrowest part of crater rim. The rocks on this aspect are much weathered and much carving has probably disappeared. Total carvings, 10 bird-men.

III. Northern Group of Rocks.

On back side of houses Nos. 40-44, and facing crater, are two carved stones with a total of 7 bird-men and 2 *ko mari*. Here is the bird-man with the unique appendages which may represent a tail and wing (Plate XVII, Fig. 1, No. 2. See p. 448). Two other bird-men face each other with hands and feet united (Plate XVII, Fig. 1, No. 7).

¹ In Plate XII, Fig. 1, this stone can be seen between the stones of the western group, but is not one of them.

IV. Horizontal Stones or "Pavement" between houses Nos. 40-44 and the edge of the cliff.

Here the ko mari figure is most numerous, being found all over the pavement. Near the south or seaward edge on the west side and close to the similar figures on the west group of rocks is a *rei-miro* figure, with face at one end. (See above, p. 449, Plate XVII, Fig. 1, No. 6.) Below the edge, on a vertical face towards the sea, is the bird-man with two extended legs. (See p. 448.) There are also two faces. On the north side the pavement opposite the entrances to houses Nos. 40-44 is lower than the general level, and had become filled with soil and débris. Excavation, though it failed to reveal, as had been hoped, matter giving clue to date, or of other firstclass interest, brought to light some comparatively unweathered carving. Also a detached stone on which the bird-man, though somewhat worn, very clearly holds an egg.¹ (Plate XV, Fig. 1.)

Total carvings on these horizontal rocks are 44 ko mari, 37 bird-men, 11 faces, 1 rei-miro, 1 bird and 1 fan figure; this includes 1 bird-man, and 2 faces on their seaward or vertical aspect.

One or more rocks beyond the village bear traces of carving.

¹ This stone can be seen in Plate XIIIA, Fig. 1, removed from lower level and placed on pavement. It is now at the British Museum. For photograph from a cast made by Mr. H. Balfour, see *The Mystery of Easter Island*, Fig. 112.