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Archives of Archaeology
No. 7

JAPANESE SOURCE MATERIALS ON THE ARCHAEOLOGY OF THE KURILE ISLANDS

Edited by

Chester S. Chard

1960

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INTRODUCTION

The possibility of an additional channel of Old World influences into northern North America besides the traditional Bering Strait route has been raised from time to time by such scholars as Frederica de Laguna, Henry B. Collins, Robert F. Heizer and Wendell Oswalt, who saw such influences as originating along the northeast coast of Asia (including the Japanese islands) and travelling thence via the Aleutians. Further exploration of this hypothesis came to a dead end in the virtual absence of any archaeological data from the area north of the main island of Japan. The present writer, in an analysis of Kamchadal culture and its historical relationships, attempted to throw some light on the matter by attacking the keystone of this postulated route -- the Kamchatka Peninsula. He became convinced, as a consequence, that the answers lay still further south in the Okhotsk Sea region between Kamchatka and Honshu, and that knowledge of this area was an essential prerequisite to any further research on Alaskan and Aleutian prehistory as well as on that of the Northwest Coast and the entire North Pacific area in general.

Fortunately, a significant amount of archaeological field work and collecting had been carried out by Japanese workers during the 1930's in the insular portion of the Okhotsk Sea region -- the Kurile Islands, southern Sakhalin and Hokkaido. Although the collections are believed to have been largely lost during the war, the results of this work had been presented in some detail in published reports. The latter were, however, entirely in Japanese and were unfamiliar or inaccessible to western students. Aided by grants from the Wenner-Gren Foundation for Anthropological Research, Inc.,

translation of these source materials was carried out in 1953-1956 under the writer's direction. In view of their potential significance for New World problems, it was felt that they should be made available to interested scholars. A practicable medium for this is now afforded by the new micro-card series of the Society for American Archaeology.

The present publication includes all significant Japanese reports on the archaeology of the Kurile (Kuril) Islands except for cases of duplication: e.g. preliminary reports have been omitted when the same author's final report covers the ground adequately. Other areas of the Okhotsk Sea region will be dealt with in future issues of this series.

Based on preliminary analysis of these Japanese sources, the archaeological picture in the Kurile Islands may be summarized as follows.

NORTHERN KURILES

The islands of Shumushu and Paramushiro, directly south of Kamchatka, were extensively investigated by Osamu Baba, who made five field trips between 1933 and 1938. Three stages of occupation were revealed. The earliest, represented by the Okhotsk pottery well known on the southern shores of the Sea of Okhotsk, probably does not antedate 1000 A.D. This is followed, perhaps as late as the 17th century, by remains of the proto-historic Kurile Ainu, and finally by those of the historic period (19th century). All this suggests that the northern Kurile Islands played little part in the prehistory of the North Pacific and could not have served as a route of cultural transmission until a relatively late date. Their closest cultural affinities lie to the south, with northern Japan, and any similarities with the Aleutians or other Arctic regions are more likely the result of common inheritance from a much more distant past.

(For a more detailed analysis of these finds and their wider implications, see the writer's "Chronology and Culture Succession in the Northern Kuriles", American Antiquity, Vol. 21, No. 3, pp. 287-292.)

CENTRAL KURILES

Entry into this area was restricted, even for Japanese, with the result that very little is known. Limited finds of stone and bone artifacts suggest that these islands belong culturally with the northern Kuriles rather than with the southern part of the chain. All pottery reported is of the Okhotsk type which accompanies the oldest occupation in the northern islands. The area is known to have been frequented by the Kurile Ainu in early historic times, however.

SOUTHERN KURILES

Although far more accessible, these islands have been very inadequately studied in contrast to the remoter north. Little if any scientific excavation has been done, and only fragmentary reports have appeared. In general, the southern Kuriles may be viewed as primarily an extension of adjacent Hokkaido. During the Okhotsk pottery period they may have constituted a cultural sub-center of some sort, since a number of distinctive stone artifact types seem to cluster here. The area comprising northeastern Hokkaido and the southern Kuriles was the last stronghold of primitive aboriginal culture in Japan; it survived here until relatively recent times. Although all of the cultural manifestations found in the northern Kuriles also occur here, these bear a distinctive stamp in the two regions, suggesting that some alien influence affected the northern islands. The earliest remains yet known in the southern Kuriles are assigned to the Middle Jomon period (Hokkaido Cylindrical pottery), although still older manifestations occur

in the adjoining portions of Hokkaido. The subsequent Hokkaido sequence seems to be represented in its entirety, as might be expected: the Late Jomon Zenhoku ware, the Kohoku pottery of the stage transitional to metal, and finally the maritime Okhotsk culture which is more or less proto-historic in this area.

MATERIALS

Full translations of the following Japanese publications are appended. The translations were carried out by Mr. Francis T. Motofuji, then a graduate student in the Department of Oriental Languages, University of California (Berkeley); supplementary work has been performed by Mr. Harumi Befu, Project Assistant in the Department of Anthropology, University of Wisconsin. Considerable editing was required in the interests of smooth reading and intelligibility, but some small part of the flavor of the Japanese text was retained. The value of the illustrations is regrettably limited by the quality of reproduction in the original publication. Where it seemed desirable, we have attempted to clarify the half-tones to some degree by supplementary line drawings based on the original illustrations.

Baba, Osamu. "The Northern Kuriles from the Viewpoint of Archaeology." Jinruigaku Senshigaku Koza, Vol. 10, No. 2; Vol. 11, No. 4. 1939. (154 pp.). p. 8

Baba, Osamu. "Archaeological Excavations on Shumushu Island, Northern Kuriles." Jinruigaku Zasshi, Vol. 49, No. 2, pp. 38-63. 1934. (only pp. 42-62 translated). p. 220

Baba, Osamu. "Hunting and Fishing Implements from Excavations in the Kurile Islands." Minzokugaku Kenkyu, Vol. 3, No. 2, pp. 295-337. 1937. p. 262

Hirako, Goichi. "Notes on Prehistoric Pottery from Bentenjima and the Kurile Islands." Jinruigaku Zasshi, Vol. 44, pp. 131-143, 192-200, 384-389. 1929. p. 319

Saito, Tadashi. "Pottery and Stone Implements Excavated on Etorofu Island in the Kuriles." Kokogaku Zasshi, Vol. 23, No. 6, pp. 333-344. 1933. p. 341

Takiguchi, Hiroshi. "The Earthenwares of Etorofu Island, Southern Kuriles." Kodai, No. 11, pp. 17-20. 1953. p. 361

Tani, Keiichi. "Bone Artifacts from the Eastern Coast of Etorofu Island." Shizengaku Zasshi, Vol. 3, No. 4, pp. 173-183. 1931. p. 367

Ueda, Sanpei. "Stone Implements and Pottery from Etorofu in the Kuriles." Kokogaku Zasshi, Vol. 24, pp. 777-778. 1934. p. 389

Note: A number of supplementary illustrations have been added to Translation No. 1, drawn from Baba's preliminary reports as follows: figs. 14, 16, 30, 31, 31a, 31b, 31c, 33, 35, 37, 37a, 37b, 51, 51a, and 51b from Minzokugaku Kenkyu, Vol. 4, No. 3; fig. 42a from Jinruigaku Zasshi, Vol. 51, No. 3.

THE NORTHERN KURILES FROM THE VIEWPOINT OF ARCHAEOLOGY

(Kōkogaku-jō yori Mitaru Kita Chishima)

by Osamu BABA

(JINRUIGAKU SENSHIGAKU KOZA, Vol. 10, No. 2; Vol. 11, No. 4. Tokyo, 1939)

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INTRODUCTION

The Kurile (Kuril) Archipelago is made up of twenty-four large and small islands which are scattered like steppingstones between the Japanese island of Hokkaido and the Kamchatka Peninsula. At present, /1939/ it is administratively divided into three sections: Kita-Chishima /the northern Kuriles/, Chubu-Chishima /the central Kuriles/, and Minami-Chishima /the southern Kuriles/. The distance between Cape Keramui on the southern tip of Kunajiri (Kunashiri) Island (which is at north latitude 43°40' and east longitude 145°33') and Kunihashi Point on the northern end of Shumushu (Shimushu) Island (which is at north latitude 50°52' and east longitude 156°29') is approximately 1180 kilometers. In relation to Hokkaido, the southern tip of Kunajiri faces Notsuke Point in the province of Nemuro, eight sea miles across the Notsuke Channel; while in the north, the distance between the northern tip of Shumushu Island and Cape Lopatka on Kamchatka is only six sea miles.

At various places in the archipelago Stone Age sites are found, and the problem assigned to me /in this survey/ is the study of matters relating to the prehistoric period of all of the Kurile Islands. The investigation of the southern and central Kuriles is not making much progress at the moment. Mr. Takemitsu NATORI investigated the two islands of Etorofu and Kunajiri in 1933; Mr. Sueo SUGIYAMA investigated the two islands of Shikotan and Etorofu in 1934; while I investigated the vicinity of Shana and Rubetsu on Etorofu Island in 1930. This is the extent of the investigations.

/p. 2/* In the northern Kuriles, however, it was our good fortune to have been able on five occasions between 1933 and 1938 to be accorded

*Indicates page in original text.

splendid opportunities for the investigation of sites on the islands of Shumushu and Paramushiro. Leaving aside the central and southern Kuriles as problems for the future, I will describe in this paper only the archaeological investigations made in the northern islands.

The northern Kuriles comprise the four islands north of Onnekotan, i.e. Paramushiro, Shirinki, Shumushu and Araido (Araito). The first person to make archaeological investigations in the Kuriles was Professor Ryūzō TORII, who, as an assistant in the Anthropology Department of Tokyo University, was sent /to the islands/ in 1899. His publication, "Etudes Archeologiques et Ethnologiques. Les Ainou des Iles Kouriles," is the most authoritative today, and is quoted by scholars all over the world. The next year, in 1900, the Hokkaidō Prefectural Government sent an investigating party to the northern Kuriles headed by Commissioner Naokichi TAKAOKA; anthropological and archaeological studies were in the hands of the late Tsunekichi KŌNO.

My archaeological investigations of the northern Kuriles, which began in 1933, were carried out on five occasions, the funds for the fourth and fifth field trips being furnished by Baron Takakiyo MITSUI, under the sponsorship of the Japanese Society of Ethnology. On the fourth trip Mr. Masao OKA joined me, and on both the fourth and fifth trips Mr. Yasuo KITAKAMA of Kokugakuin University accompanied me as assistant. Many specimens were discovered; about sixty pit dwellings were dug; and, as a result, we were able to establish the existence of sites of two different periods on these islands. One group of sites was that in which Okhotsk pottery was discovered; the other was that of the Kurile Ainu in which

naiji pottery was found. The following is a brief account concerning these sites and remains.

/ p. 3 /

THE FIRST PERIOD (THE OKHOTSK POTTERY PERIOD)

The Sites

The known sites which have yielded remains of the First Period, i.e. the Okhotsk-style pottery or artifacts of the type which accompanies this ware, consist of house pits and shell mounds, with the house pits being the greater in number.

Of those pits which we have judged to be of this period, we were able to excavate completely about twenty on Shumushu Island and nine on Paramushiro. The following notes are concerned with the results of these /excavations/.

The House Pits

The localities where these pits occur are near rivers, and very often they are found on diluvial hills surrounding coves convenient for the entry and egress of small boats. In some cases, such as at Nakanokawa on Shumushu and part of the site at Kabasato on Paramushiro, certain of the pits are found on sand dunes; but such examples do not appear to be numerous.

Clusters of several to dozens of pits apparently forming a community occur only infrequently; there does not seem to be, as in the Second Period, a crowding together of dwellings.

The people of the Second Period also selected for their dwellings the same spots favored by nature, with the result that we were often able

to discover in the same place pits and shell mounds of both periods. However, sites of the First Period are generally round or oblong in their present condition, with the pit being shallow and lacking the passageway which is always found /p. 4/ in the pits of the Second Period. These are the characteristics by which one can differentiate /between the two/ from outward appearances.

I shall report on the following ten pits as examples of our excavation:

Shumushu:

1. Pit No. 1 (excavated September 1935).
2. Pit No. 2 (excavated September 1935).
3. Pit No. 3 (excavated September 1935).
4. Oikawa Pit No. 2 (excavated August 1936).
5. Oikawa Pit No. 9 (excavated August 1936).
6. Oikawa Pit No. 10 (excavated August 1936).
7. Kodomari Pit No. 1 (excavated August 1937).
8. Kodomari Pit No. 2 (excavated August 1937).

Paramushiro:

1. Kabasato Pit No. 3 (excavated July 1938).
2. Kabasato Pit No. 4 (excavated July 1938).

Shumushu:

Pit No. 1 (fig. 1)

/p. 5/ This pit is on an elevated spot about thirty meters above sea level, at the foot of Mount Matsumura on the left bank of the Shiomi-kawa. The shape of the pit before excavation was oblong. After we had determined the outline of the pit beforehand, we set up six poles as permanent surveying points, in order to facilitate simple surveying. These are shown around the edges in fig. 1 as the numbers 1, 2, 3, 4, 5, and 6.

The major axis of the pit, running from 1 - 4, was 4.9m.; what could be called the minor axis, from 2 - 5, was 4.5m.; the depth, as shown in the cross-section in the same plate, was 55cm. in the center between 1 - 4; the area around the wall between the points 2 - 1 - 6 was high because there was a piling up of earth in addition to being on the higher incline of the slope; the walls, along the lines 3 - 4 - 5 were very shallow, it being very difficult to determine the outer edge of the wall.

Prior to excavation, the weeds in the pit were cut, and then we set about the work of excavating. In the center, we reached the hard, yellow-earth floor of the pit at a depth of about 35cm. As the result of excavation /we found that/ the original shape of the pit formed a square with four rounded corners; there were the remains of seven post holes inside, with the three posts labelled a, b, and c being located along near the inner wall in a somewhat straight line. The old wooden posts had almost completely rotted away; what remained were only occasional bits of wood about the thickness of tree bark on the walls of the pit which crumbled away at the touch.

In designating the diameter and depth of the post holes, the first numeral indicates the diameter in centimeters and the second the depth. Post hole a: 10, 65; b: 15, 47; c: 15, 45; d: 15, 45; e: 15, 73; f: 12, 43; g: 10, 25. (The latter is on the outside of the present pit walls.)

The fireplace was near the lower wall, toward the east of the pit, and was constructed by piling up a great quantity of natural rock; it

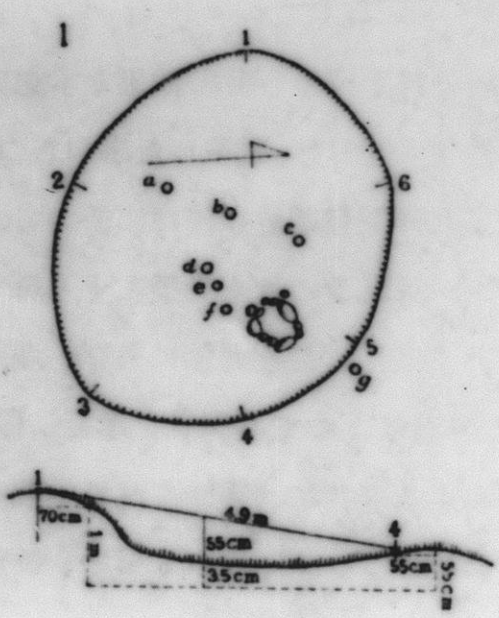


Fig. 1. Pit No. 1

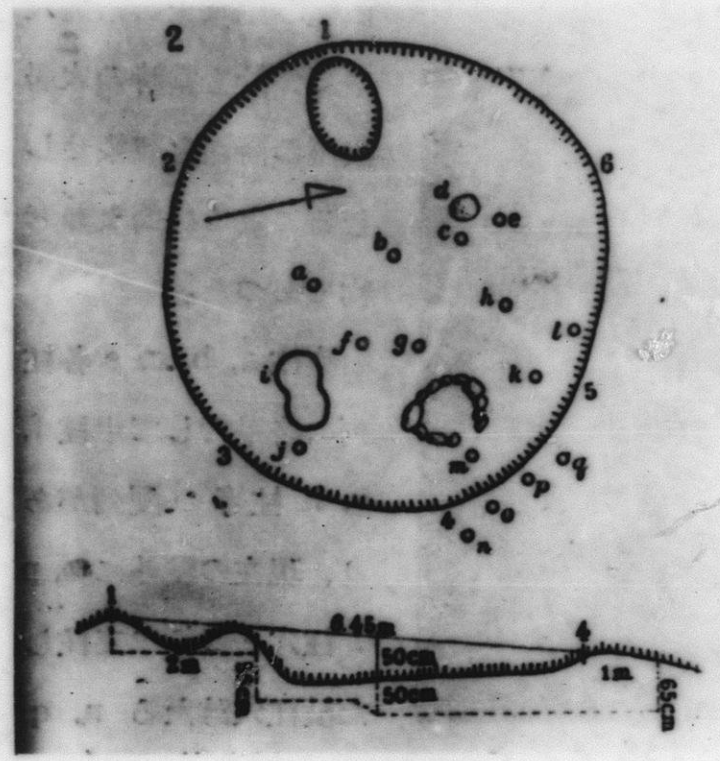


Fig. 2. Pit No. 2

had no opening and was rather square in shape, the length being 1m. and the width 80cm.; it was 50cm. deep, and was filled with charcoal.

/ p. 6 / Among the remains uncovered were shells discovered at various spots on the floor of the pit. Along the walls between 2 - 3 and 5 - 6 in particular, there was a shell-layer about 20 - 30cm. thick, but I think that this is food refuse which had been thrown outside of the pit dwelling and which fell in at the time the structure crumbled.

In this house we discovered a bone spear and a half-broken bone comb with carvings, two bone arrowheads, and, directly over the fireplace, a stone implement which looked like a knife. We found no traces of pottery - not even broken pieces.

Pit No. 2 (fig. 2)

This was located about two meters away from Pit No. 1, and was parallel to it. Its present shape is circular with the greatest diameter, between points 1 - 4, being 6.5m., and the lesser diameter approximately 6m.

The depth at the center is 55cm. That portion of the wall lying along 2 - 1 - 6 is high, being on the steep end of the slope and built up with earth; the pit walls, in this portion, rise abruptly between 2 - 6. Near point 1 there was an oval hollow 1.4m. long, 1m. wide, and 30cm. deep; what it was used for is not clear.

As in Pit No. 1, the walls adjacent to 3 - 4 - 5 were extremely low, and this portion, like the former, faces the banks of the river. Upon digging, the floor was reached at 50cm. at the center of the pit, and we were able to discover fifteen post holes, one stone place-lamp, a fireplace and a food-storage pit. Like the first pit, the shape proved to be

squarish; and what was especially interesting was that in the inner portion, where the post holes a, b, c, and e were located, there was a raised earthen floor higher than the other part; this was about 10cm. high /p. 7/, 1.5m. wide, and it adjoined the walls.

The arrangement of the post holes enables us to imagine how the pit dwellings of this period were constructed.

Approximately parallel to the inner row of post holes labelled a, b, c, and e, is the alignment of post holes f, g, and h; those outside of the present outline of the pit-walls, such as post holes o and p, and the oblique ones (indicated by n and q) which are thought to have supported them, are thought to be the remnants of the posts at the entrance.

j and l are also oblique post holes, but it is not known whether l was used to support, say, post k, or whether it was a rafter; but these two were dug considerably deeper than the other post holes; therefore they may have functioned as rafters. In indicating the diameter and the depth of the post holes, the first numeral as before indicates the diameter in centimeters and the second the depth. a: 15, 55; b: 21, 45; c: 20, 50; e: 15, 50; f: 22, 50; g: 12, 25; h: 10, 20; j: 20, 74; k: 20, 33; l: 15, 70; m: 10, 45; n: unmeasurable; o: 15, 40; p: 10, 35; q: 12, 30. The fireplace, as in the first pit, was a circular affair near the low entrance-wall facing the river banks; it was surrounded by countless natural stones, and its opening faced toward the entrance and was about 30cm. wide. The length of the fireplace was 85cm.; its width was 65cm., and its depth 65cm.; it was filled with charcoal. Behind the inner post hole c there was a plate-like object of stone with a hollowed

center; it was 35cm. long and 32cm. wide, and appeared to be of andesite. Judging from the fact that the inside was coated black, it was a place-lamp.

The hole labelled i was doubtless originally two small, separate holes; its length was 1m. and its depth about 60cm. When the inside was cleaned out, the bones of sea mammals were found at the bottom. This could have been a storage pit for meat.

As for the remains discovered: at different spots there was scattered a great number of shells; in these were discovered one bone lance, one bone adze, two bone harpoons, six bone arrowheads, and, in the shell layer at about the middle of the wall between 3 - 4, [p. 8] a complete human mandible and a used bone comb with its carvings intact. However, we were unable to discover the other parts of the skeleton.

In the way of stone implements, we found one knife, one arrowhead, and, in hole i, a round, gray stone with a hole run through the top, giving the impression that it may have been used as a plummet; attached to this was the bone of a sea mammal. Finds were comparatively numerous and we were able to discover a broken piece of undecorated Okhotsk pottery.

Pit No. 3 (fig. 3)

This was located on a part of the same plateau which falls steeply to the sea, and is round in shape, with the major axis (from 1 - 4) being 4.8m., and the minor axis about 5m. in length. The depth of the existing hole was 55cm. at the center, and, like the first two pits the wall along 2 - 1 - 6, being on the higher incline and built up with earth is comparatively high, while that along 3 - 4 - 6 is extremely

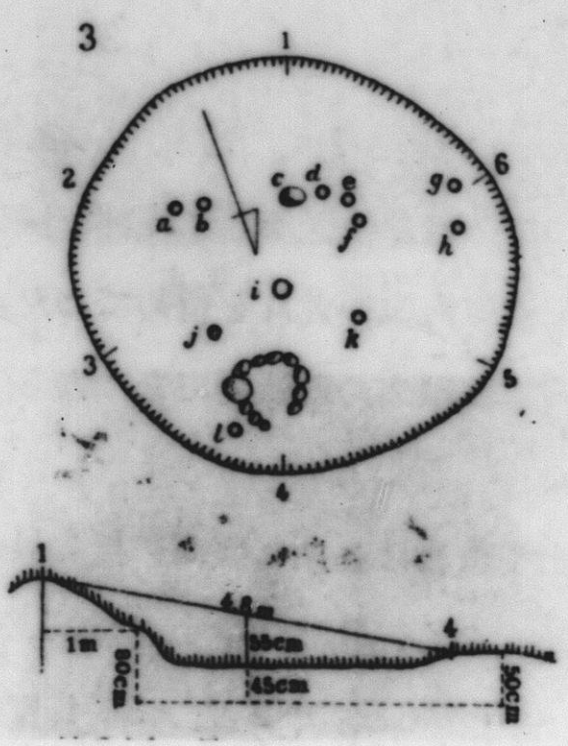


Fig. 3. Pit No. 3

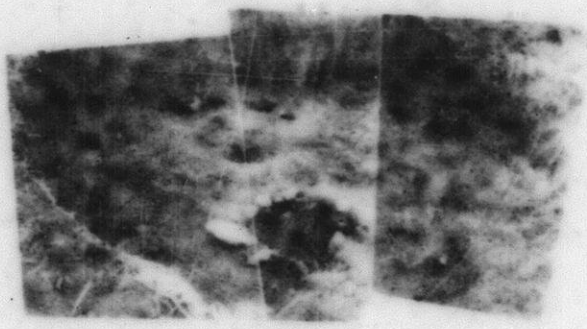


Fig. 4. Pit No. 3

low. About 45cm. down at the center we reached the yellow-earth floor of the pit. Eleven post holes were discovered.

Holes a, b, d, e, and f are near the rear wall, and were probably those for the inner posts; the three posts j, i, and k are in the center with post i having the greatest diameter and depth, and appearing to be the principal post. In indicating the diameter and the depth of the various post holes, I have followed the same system as heretofore. a: 10, 35; b: 12, 60; d: 20, 70; e: 30, 57; f: 12, 45; g: 10, 47; h: 15, 60; i: 30, 55; j: 7, 40; k: 10, 17; l: 10, 15.

The fireplace, as in the other two, was near the lower entrance wall; its opening faced directly north and was 30cm. in width. The greater diameter of the fireplace was 1m., the shorter diameter was 95cm., and it was rather circular in shape; [p. 9] the depth was 40cm., and it was filled with charcoal.

In this pit, as in Pit No. 2, an object was discovered near post d which seemed to be a place-lamp of stone. As in the other case, the stone was andesite and grayish in color. The length of the object was 30cm. and its width 29cm.; the length of the interior hollow was 17cm. and its width 15cm.

Judging from the fact that black sediment adhered to the entire surface of the hollow, this must have been some kind of place-lamp. According to Jochelson, in his investigations of the Stone Age pits in the Aleutians he frequently discovered large stone lamps, and he reports as follows [paraphrased]:

"The stone lamps of the Aleuts are of two types, one used for lighting and one for purposes of warmth. Their names and usage differed

according to their size, the lighting lamp being small and being called ixtax, while the heating lamp was large and called anūx. Although the word anūx means warmth in Aleutian, it can also mean 'method of becoming warm,' therefore, anūx is a verb which means to warm oneself over the fire.

"A shirt-like coat was placed over the lighted lamp, and the people either stood or sat over it and warmed themselves. The Aleuts of olden times wore only footwear, sometimes with a breechcloth, under their coats, so their naked bodies were quickly warmed. Sick people also were seated over the anūx and sweated. In general, the heating lamp was used as a steam (sweat) bath. The latter practice was unknown among them until after the arrival of the Russians on the islands...etc."

/ p. 10 / Jochelson reports that in the Aleutian Islands, the large-sized lamps attained a length of one meter. Jochelson reports that in Kamchatka, however, according to his investigations, there were no large-sized lamps, but practically only small ones, with all of these being used for lighting purposes, and that there were none in Kamchatka which were used for heating purposes like those of the Aleuts. On a previous occasion when I was making investigations at Kataoka, Shumushu Island, I saw an object like a stone plate which measured 35cm. in length and 24cm. in width, with the deepest point measuring 4cm.; I think that this was also a large-size lamp. Mr. Takemitsu NATORI of the Hokkaidō University Museum has discovered this type of stone lamp in an Okhotsk pottery pit at Rubetsu, on Etorofu Island in the southern Kuriles.

The artifacts were mostly discovered at the bottom of the pit. They were all of stone: one knife, one arrowhead, one adze, one scraper, and

one stone plummet of the same shape as that discovered in hole i of Pit No. 2. No pieces of pottery were discovered.

Oikawa Pit No. 2 (fig. 5)

This pit is located on high ground toward the sea and about 119 yards southeast of the establishment of the Takeda Codfish Factory at Oikawa on Shumushu. This is the highest /local?/ elevation, with the beacon of the Hydrographical Department, and over its entire surface are scattered between thirty to forty house pits.

The walls between 2 - 1 - 4 form a high incline, with the wall in the vicinity of point 1 being the steepest; the walls between 2 - 3 - 4 are low and in such a condition that the outline of the wall is very obscure. The difference in height between the points 1 and 3 is about 40cm. The wall between 1 - 2 - 3 faces the beach, which is approximately 90 feet away.

When we measured the pit before excavating, we found the distance between points 1 - 2, which could be considered the main axis, to be 4.2m., and the minor axis /p. 11/ to be 3.7m. The center of the pit prior to excavation was about 40cm. deep.

When we had dug down about 20cm., a feature appeared made by piling head-sized rocks in something of a circle; it was about 85cm. long and 65cm. wide. The stones gave no evidence of having been exposed to fire, but we discovered the presence of some charcoal between the stones, and this gave rise to the theory that it may have been a spot where fire was used. As for its function, the area covered seems a little small for a steam bath, so it is not clear just what use was made of it.

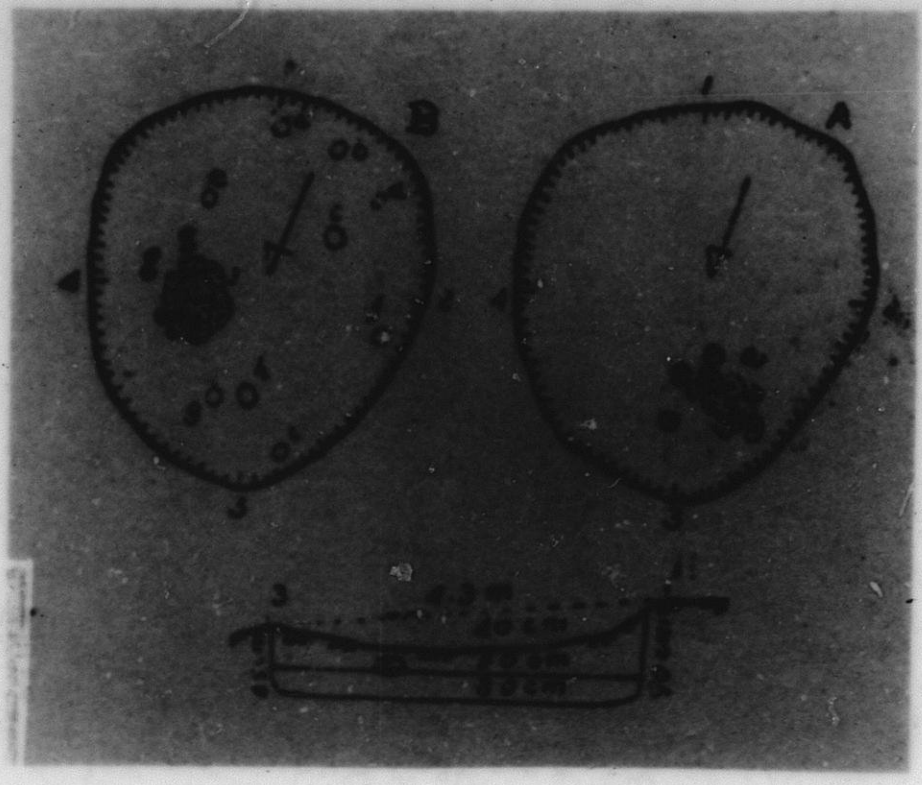


Fig. 5. Oikawa Pit No. 2
A: upper level; B: lower level

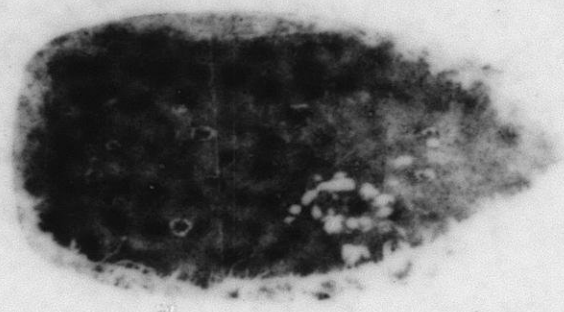


Fig. 6. Oikawa Pit No. 2

If we regarded this construction of stone as being situated on the floor of the pit, the hole would then be an extremely shallow one, not even reaching the true floor of hard yellow-earth. Therefore, we dug further after photographing and removing it, and were able to determine the existence of the floor about 20 - 30cm. beneath these stones.

After we had completed excavation, we discovered nine post holes, which were unevenly distributed, and a fireplace. The fireplace differed somewhat from the others, even the bottom being made of stones; the same type was noted later in the Kodomari Pit No. 2. The major axis of the fireplace was 85cm., and the minor axis 65cm.; there was a little bit of charcoal left.

The diameter and the depth of the various post holes are indicated as heretofore: a: 10, 30; b: 12, 21; c: 20, 35; d: 10, 35; e: 15, 21; f: 15, 24; g: 10, 15; h: 17, 25; i: ?, 40.

It was a pit with few artifacts; beneath the surface only a single stone hammerhead was found; but the great reward which were were able to gain from this pit was that /p. 12/ here were the remains of structures made by two groups at two different periods.

Oikawa Pit No. 9 (figs. 7 - 9)

This pit was even closer to the beacon of the Hydrographical Department than the previous one. There were small shell-mounds at various places around it, and the pit was located along the slope of the cliff which borders the seashore. That part of the wall labelled 1 is high and that labelled 3 is the lowest; and because the edge of the wall at the latter point blends into the slope of the hill, it is completely obscure. The difference in height between points 1 and 3 is about 35cm. The present

shape of the pit forms something of an oval. There was a depression about 35cm. deep at the center before excavation.

While the excavation was being carried on in such a manner that the entire pit was being uncovered layer by layer at an equal depth, we discovered, about 20cm. below the surface near the center of the pit, two features (labelled a and b in fig. 7A) consisting of a somewhat oval arrangement of small stones, and two rocks (labelled d and c). All of these were located on the same level.

a was an arrangement of eleven small stones; it was 40cm. long and 25cm. wide. b was made up of about fifteen to sixteen small stones; this was 45cm. long and 40cm. wide. We were able to determine that both were clearly man-made stone features. There was no charcoal here, and, compared with the feature in Pit No. 2, these were very small. The purpose of these was also unclear.

/p. 13/ In the light of the example of Pit No. 2, we were again cognizant of the fact that this was clearly a structure built over /another/ by a later people; therefore, in order to photograph the relationship between the upper and lower layers, we made a line of demarcation between points 2 - 4, and left the entire surface bounded by points 4 - 1 - 2, on which the remains of the top layer was located, as it was. Then, proceeding with our excavation of the area bounded by 4 - 3 - 2, we were able to determine that we had reached the yellow-earth floor of the first pit. Fig. 8 shows the situation as it looked when a stone-ringed fireplace was uncovered at a spot near the wall at 3.

Surveying the results of the excavation, we saw that the post holes were located around the walls of the pit and numbered about eleven; and

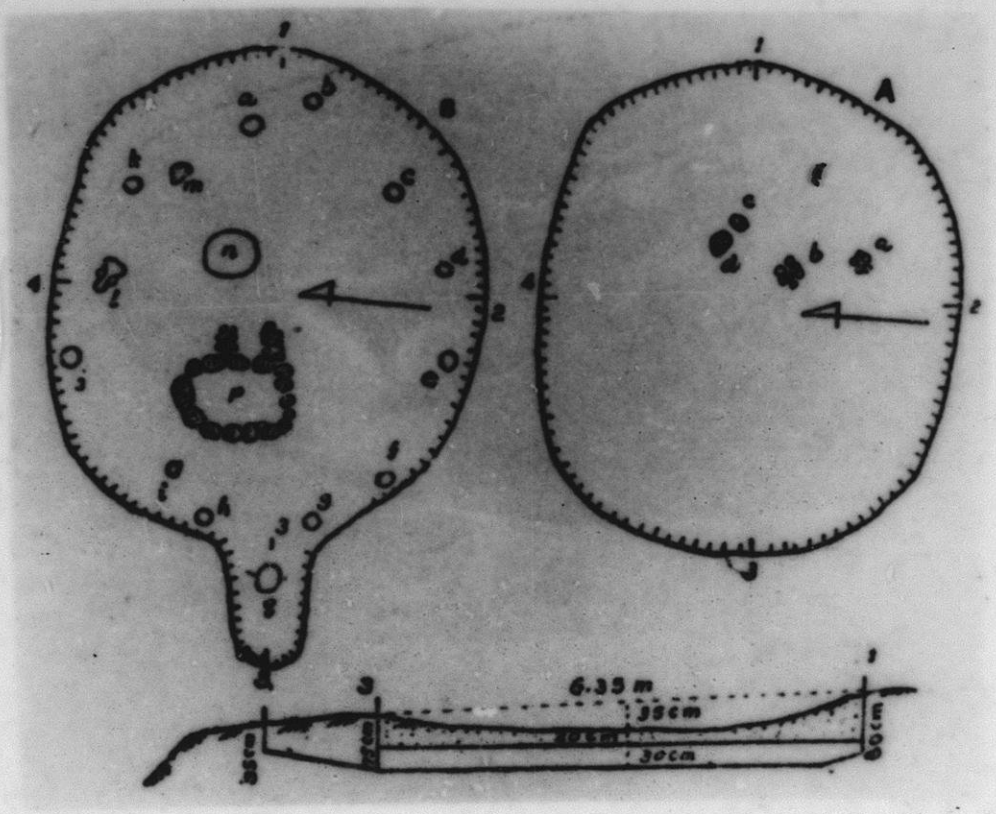
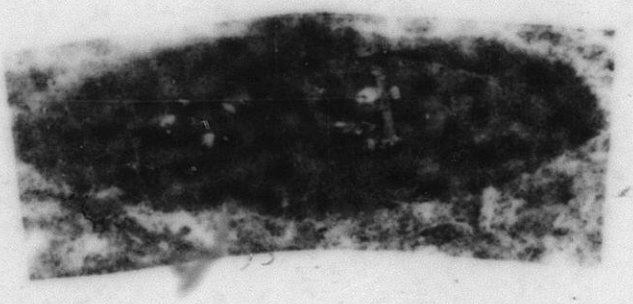


Fig. 7. Oikawa Pit No. 9
A: upper level; B: lower level



Upper level at right; lower level exposed at the left.

that the fireplace was situated near the entrance. At the wall by point 3, when we had removed the black earth which had crumbled and fallen over the yellow floor, there came to light what appeared to be a long, narrow passageway, approximately 1.5m. long and about 1.2m. wide. This was the first passageway to be discovered in pits of this period.

g in the passageway indicates a hole 45cm. long, 32cm. wide, and 35cm. deep, at the bottom of which were two or three pieces of animal bones.

The major axis, between points 1 - 3, was 6.35m.; with the addition of the length of the passageway, that is, from points 1 - 5, the major axis was 7.85m. The minor axis, between 2 - 4, was 5.62m. The fireplace, labelled P, was 1.55m. long, 1.55m. wide, and 75cm. deep; the interior was filled with charcoal.

n represents an oval hole 80cm. long, 32cm. wide, and 35cm. deep; it had a reddish coloration, and, judging from the fact that there were charcoal and ashes in it, we gathered that it was a second fireplace in which the embers from fireplace P were put.

l indicates the skull of a sea lion of the largest species; it had a small hole caused by a blow and the lower jaw was missing. Judging by the skull /¯p. 14_/¯ it must have been about as large as an ox; and we imagined that it probably was enshrined in this fashion as a symbol of pride in the capture of such a prize, or as a means of sending off its spirit.

The diameter and depth respectively, of the various post holes in centimeters are as follows: a: 23, 53; b: 20, 59; c: 20, 45; d: 18, 25; e: 25, 59; f: 20, 32; g: 25, 55; h: 23, 51; i: 15, 45; j: 30, 55;

Fig. 9. Oikawa Pit No. 9
Lower level completely cleared.

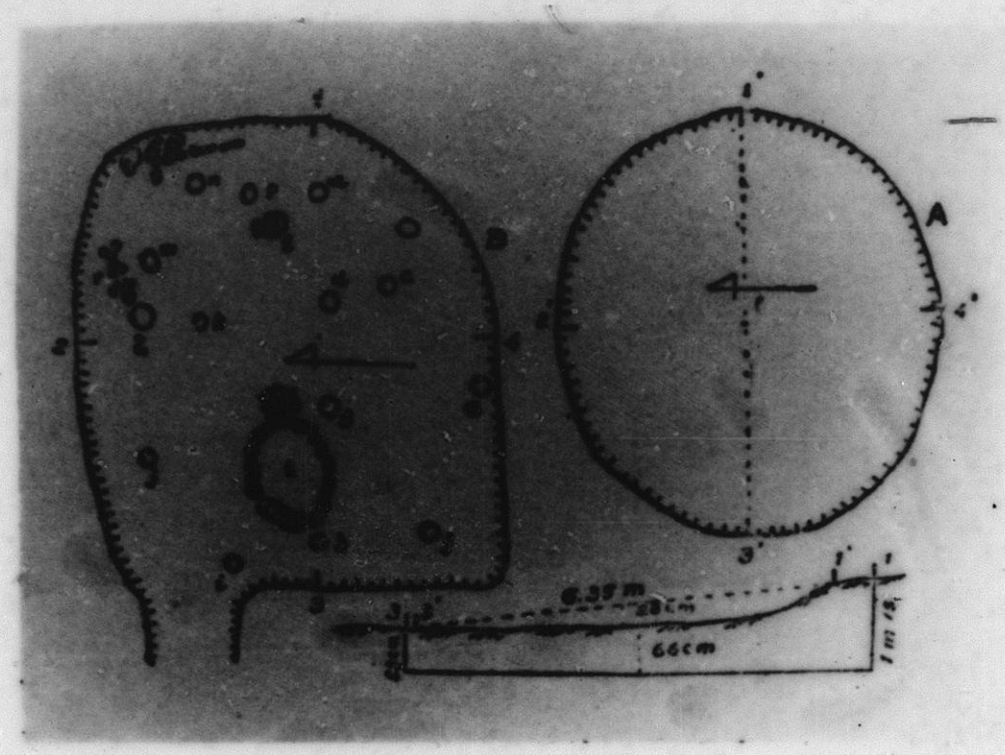


Fig. 10. Oikawa Pit No. 10

k: 21, 52. In the bottom of holes d, f, j, and k stones had been placed.

Among the remains were two bone harpoons and one stone arrowhead; and at the spot where, on the top level, the stone feature had been located, there was a human skull, almost intact but damaged; the rest of the skeleton was not discovered.

As with Pit No. 2, this pit also showed the remains left by two peoples of two different periods.

Oikawa Pit No. 10 (figs. 10 - 12)

This is located closer to the beacon than the previous one, from which it is separated by about 20 - 30 meters, and lies parallel to it on the cliff facing the seashore.

Before excavation it presented a rather oval shape. The wall labelled 1 (in A of Plate 10) is high, being on the uphill side, while the wall labelled 3 /p. 15/ merges with the down slope, making the determination of the edge of the wall extremely difficult. The edge of the cliff is 2.5m. away. The difference in depth between the walls at 1 and 3 is about 55cm.

After we had determined the edges of the wall prior to excavation, we found that what could be called the major axis (between 1 - 3) measured 5.77m.; the distance between the minor axis (2 - 4) was 5.2m., and the depth of the depression in the center was approximately 28cm.

Because there had been the example of the previous Pit No. 9, we proceeded cautiously in our excavation, stripping the entire surface layer by layer. When we reached a depth of about 50cm., we found a number of charred and rotted beams which had fallen from the center toward the walls,

showing clearly that this structure had been burned down. We removed these, and, as we dug further, we discovered that the whole floor was covered with charcoal and the remains of charred vegetable fiber; for this reason we were easily able to determine the location of the floor. Moreover, because we were able to discern the walls of the pit (particularly between 1 and 2) as a result of the heat of the fire, we were able to determine the exact edge of the walls, and the original shape of the structure became somewhat clearer. This was revealed roughly, as a square with rounded corners. After the completion of the excavation, the major axis, from 1 - 3, measured 6.35m.; the minor axis, from 2 - 4, measured 5.8m.; the depth at the center was about 94cm.; the depth of the wall at 1 was 1.15m. and at 3, 58cm. The passageway opened out at the corner between 2 and 3 and was about 1.5m. wide and about 2m. long; it led to the edge of the cliff.

The picture of the interior revealed as the result of excavation displayed fifteen post holes, a fireplace, a stone place-lamp, and three human skeletons. From the arrangement of the post holes [p. 16] as shown in B of Plate 10 it is difficult to determine just how the dwelling was constructed. In post holes c, d, f, h, k, l, m, and n, there were stones placed at the bottom. (In the previous Pit No. 9 there had been the examples of four such holes.) It is not clear for what reason the rocks had been so placed, but it may have been for the purpose of strengthening the pillars. The diameter and the depth, respectively, of the various pillars in centimeters are as follows: a: 25, 42; b: 21, 40; c: 20, 44; d: 25, 43; e: 20, 48; f: 21, 35; g: 26, 52; h: 12, 35; i: 18, 52; j: 13, 60; k: 17, 50; l: 30, 55;

m: 25, 47; n: 22, 48; p: 20, 68. In hole 1 there were the remains of a burnt post. The fireplace, made up of dozens of natural rocks, was located near the entrance; its length (running east-west) was 1.4m. and its width (north-south) was 1.15m. Attached to this fireplace, along the major axis, was a circular one made of small stones with a diameter of 70cm. The depth of the fireplace was about 70cm., and a great quantity of charcoal remained.

Of the three human skeletons, one was found near post 1. There was absolutely no trace of the skull and the upper portion of the body; they may have been either burned away or removed later. Only the hip-bone and the thigh-bones remained, and these were covered by the burned post. Judging by the position of the bones, the person must have fallen slightly toward the east, that is, facing toward the entrance.

The other two skeletons, shown in fig. 12, were discovered later. One had fallen face downward at the corner between ⌈ p. 17 ⌋ points 1 and 2; the other had fallen with its face to the east, its head resting on the back of the former. As a result of study by Professor Sakuzaemon KODAMA of the Medical Department of Hokkaidō University it has been established that the first skeleton was that of a middle-aged man and that the second two were those of middle-aged women.

g near the inner wall indicates the stone place-lamp, whose length was 32cm., width 28cm. and depth 4cm., with a blackened hollow.

Because this pit house had been burned down, we were able to discover remains which we had not heretofore uncovered; namely, wooden objects and various woven things made from vegetable fiber in great quantities. This was an important discovery enabling us to learn about handicrafts of this

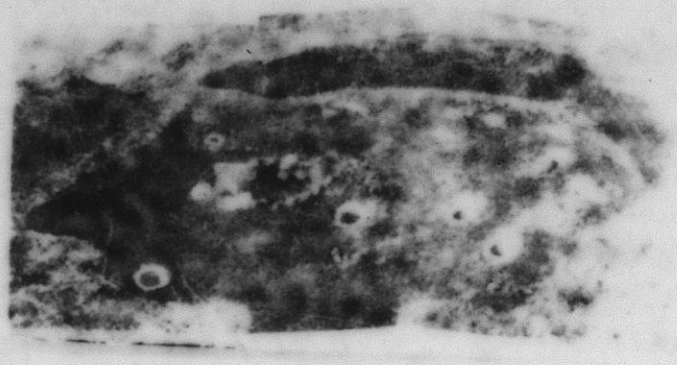


Fig. 11. Oikawa Pit No. 10

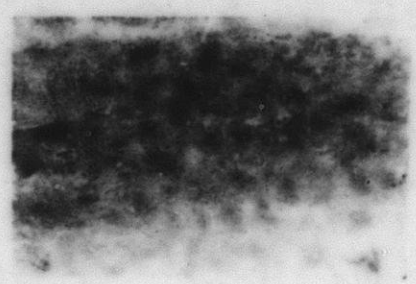


Fig. 12. Two human skeletons in a corner of Oikawa Pit No. 10.

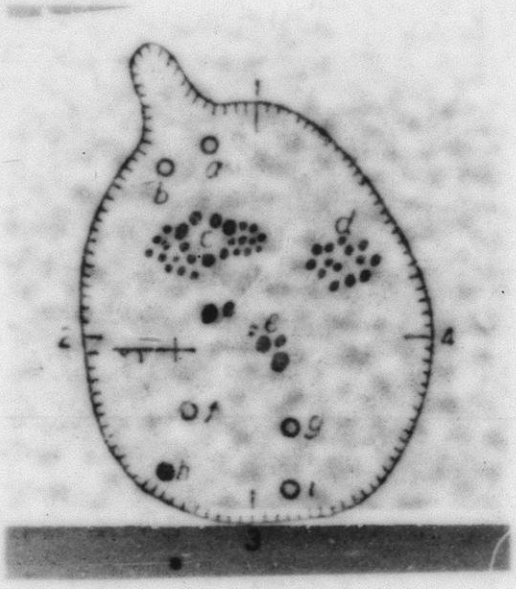


Fig. 13. Kodomari Pit No. 1

type which are otherwise unknown. The mats woven with vegetable fiber show an extremely skillful technique of weaving; these were placed on the floor along the whole length of the inner wall.

To summarize the objects discovered according to their location: a bone comb, burnt black, was found near the wall at point 2, next to the skeleton lacking the torso; there still remained in the hole the sea-mammal-hide thong which was used at that time as twine.

In addition, there was a bone comb with beautiful carvings, and three long bone tubes - cases for bone needles - all of which contained bone needles.

From beneath the thigh bone of the skeleton lying near post hole 1, toward the front, there was recovered a carbonized bag-like object woven in the azushi style, with a draw-string closing at the mouth. Inside this, there was a bunch of thirty barbed bone points with stone arrowheads inserted in the tips. Nearby there was discovered a long, narrow, blackened piece of wood to which was attached a string such as must have been used with bows. In the vicinity of the stone place-lamp were found four bone harpoons, a bone harpoon shaft, and a carbonized piece of a bowl-like object made of wood. We also discovered another oval, bowl-like object in its original form which was made of fibers and hardened into shape through the use of pine oil. A great many other bone and stone implements were recovered.

/ p. 18 / We discovered a hair-like mass on the surface of the stone-pile near the fireplace, and when we showed this to Mr. Keishi ISHINO, an engineer in the Oceanic Division of the Agriculture and Forestry Ministry, we learned that it was the fur of the sea-otter.

According to him, this was a sea-otter pelt which had been stretched over the fireplace to dry, or had fallen on the pile of stone.

In addition, we discovered at various places a number of different carbonized woven materials and carbonized pelts.

Finally, in setting forth our conjectures as to the reason for the conflagration in this pit house, two propositions can most sensibly be considered: (1) the dwelling was burned as a means of sending off the souls after death; (2) that death was caused by an accidental fire, or the place was burned by enemies after killing the inhabitants. Against the first proposition there is the fact that the corpses were not put in a burial position; in considering the second (accidental fire or arson), it is rather difficult to believe that a grown man and two women, even though they may have been fast asleep at the time, could not find a way out of a dwelling whose outer walls were made of twigs, grass, and heaped earth; if it were made of ferro-concrete, like today's warehouses, it might have been a different story. The most likely conjecture is that the inhabitants were killed and the building set fire to.

This conclusion is based on the position of the corpses and the objects found with the man who was at the front. It appears that he armed himself and fought the enemy who had burst in, for he had around his waist a bag containing arrowheads, and he had fallen face upwards in the direction of the entrance. The two women seem to have sought protection behind the man, but, after receiving mortal wounds, they had, in their agony, fallen one obliquely over the other. My conjectures were made on the strength of this picture.

Kodomari Pit No. 1 (figs. 13 and 14)

/ p. 19 / This pit is located on a high hill in the rear of the codfish factory of the Chishima Fishery at Kodomari on Shumushu. A small river, running through a valley, cuts the hill in two. The clusters of pits, numbering over twenty, are scattered in two places on the high cliff overlooking the river.

Pit No. 1 is located on the left bank. The original shape of the pit was an oval; the floor was very shallow, and there was a depression 24cm. deep at the center. The demarcation of the wall near point 1 was not clear as it had merged into the slope of the hill. After Mr. Kitagama had completed his digging, the length of the pit along what could be considered the major axis (from 1 - 3) was 5.6m.; the width (from 2 - 4) was 4.7 m. About 60cm. below the center of the depression the floor of the pit was reached. Near point 1 we cleared a probable buried entrance passage which was 78cm. wide, 35cm. deep and 1.25m. long.

In the pit there was a fireplace which had been left intact. Several post holes were visible, and near the inner wall a stone place-lamp had been set. The fireplace, at c, was rimmed by more than ten stones which formed something of an oval. Measuring from the outer edge of the stones, the fireplace was about 1.8m. long, with the inside length being 80cm.; it was 60cm. wide, and about 40cm. deep; it was filled with charcoal to about 20cm. from the bottom of the fireplace. d indicates the spot where an oval feature was made by the arrangement of small stones; its length was 80cm. and its width about 50cm.

Between the stone features at d and e there was a hole in a depression measuring 1m. long, 70cm. wide, and 30cm. deep. This depression stretches

Fig. 14. [illegible] Kodomari Pit No. [illegible]:
2: ashe hearth; 3-13: Stone artifacts
recovered (No. [illegible] them in length.

to a point where its rim is from e to post hole g. e indicates the spot where flat rocks 30cm. in diameter and two or three smaller rocks were arranged. It is likely that the embers from the fireplace were brought into this hole, for the entire surface of the bottom of the hole was discolored red.

The post holes a and b were parallel to the entrance; a had a diameter of 15cm., and a depth of 32cm.; b had a diameter of 15cm. and a depth of 26cm.; f had a diameter of 18cm., a depth [p. 20] of 37cm.; g had a diameter of 15cm., a depth of 40cm. (these were on rather high ground). The post hole i had a diameter of 15cm. and a depth of 23cm., and the stone lamp was located on the floor near this wall. This lamp was made by fashioning a depression on the surface of a flat, oval natural rock; its length was 17cm., width 13cm., and at its deepest point it was about 2cm., with black spots here and there. The artifacts were mostly found in the area running from the center of the pit to points 1 and 4. Four stone knives, three stone arrowheads, two chipped stone adzes, and numerous other stone implements were recovered here. [See fig. 14].

Kodomari Pit No. 2 (figs. 15 and 16)

This was located next to the previous pit and was rather round in shape. The demarcation of the wall near point 3 was unclear as it merged with the slope of the hill. The pit was shallow, forming a depression of about 24cm. in the center. The major axis of the pit (from 1 - 3) was about 4.4m.; the width (from 2 - 4) was about 4.2m. 50cm. below the center of the depression the floor was reached; the layers of soil in the center were clearly marked, as follows:

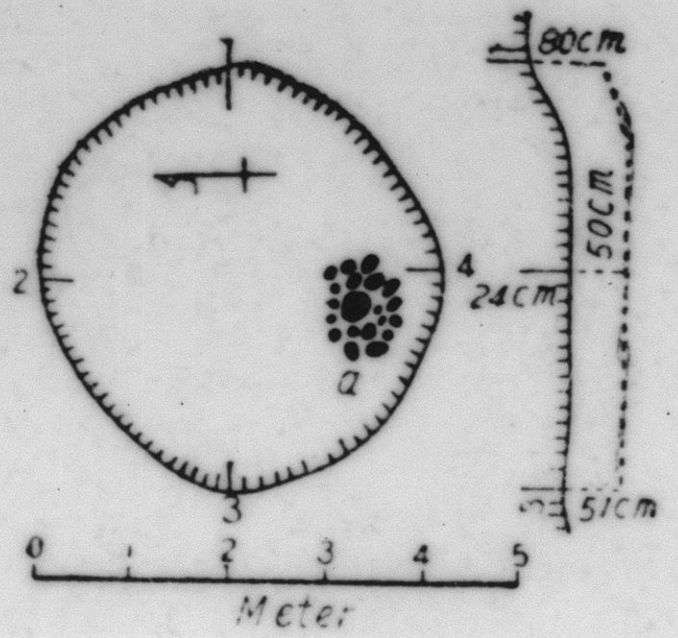


Fig. 15. Kodomari Pit No. 2

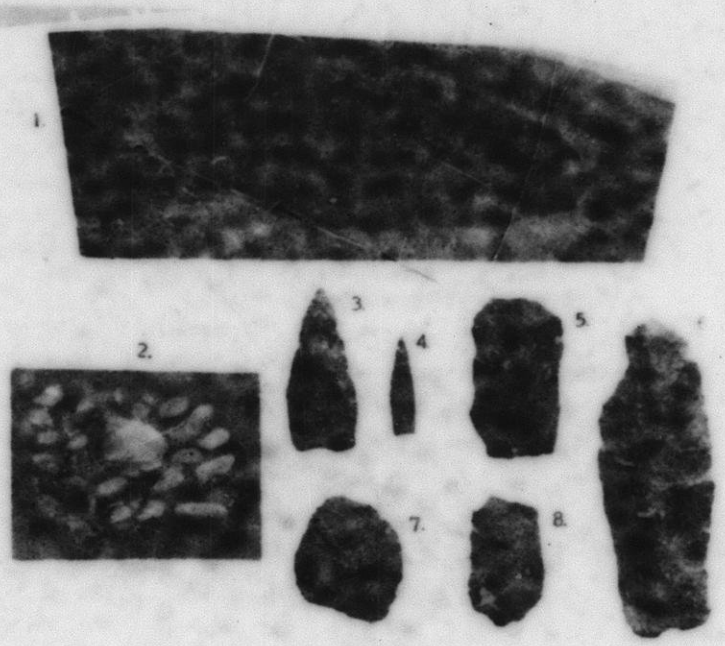


Fig. 16. 1: Kodomari Pit No. 2;
2: the hearth; 3-8: stone artifacts
recovered (No. 6 is 9.4cm. in length).

(1) a layer of soil mixed with sand and the roots of the kure. . . . . 15cm.
(2) a layer of sand. . . . . 16cm.
(3) a layer of black and yellow earth. . . . . 19cm.
(4) a layer of charcoal. . . . . 1-2cm.

/p. 21/ The floor of yellow soil was then reached.

The only feature which we discovered within the interior of the pit was the fireplace: about thirty or more stones with diameters ranging from 10 - 15cm. were arranged in an oblong shape, with the center somewhat deepened and lined with flat stones with a diameter of 30cm.; charcoal was scattered among the rocks. These flat stones in the center seem to have been heated in the fireplace and then used to cook meat. The Oikawa Pit No. 2 had exactly the same type of fireplace stones. The length of the fireplace was 1.04m. and the width 78cm.

The heights of the various walls were as follows: at point 1 it was 83cm.; at point 2 it was 79cm.; at point 3 it was 51cm.; and at point 4 it was 63cm. I have conjectured that the wall between 3 - 4 may have been the entrance.

Artifacts were discovered in small quantities at various places, but not amounting to more than several stone knives and arrowheads. /See fig. 16/.

/p. 22/

The Shell Mounds

With regard to shell mounds, those areas in which shells occur usually have them; but there were absolutely none like those in the Kantō District /around Tokyo/ covering a vast area with deep shell layers. For the most part, these were thin deposits covering a small area and associated with

with one or several pits. A relatively large number of these mounds accompany the pits of this period.

Shumushu:

Shiomikawa Shell Mound No. 1

This is located at the foot of a high hill (Mount Matsumura) on the left bank of the Shiomikawa opposite the present day Nishide Fishery, formerly the Takeda Fishery. It is associated with Pits Nos. 1 and 2, and the shell layer on the cliff toward the sea is shallow, being interspersed between clumps of earth. However, a great number of bone implements and pieces of Okhotsk pottery were unearthed. The side toward the river yielded a comparatively thicker shell layer which extended about 15m.; here, the layer of soil covering it was between 15 - 20cm. and the shell layer between 30 - 40cm. A large quantity of animal bones was discovered in the shell stratum, and occasionally we came across a thin layer composed only of the shells of the sea-urchin. A great number of bone implements were uncovered.

The Shell Mound in the Rear of the Old Takeda Fishery at Shiomikawa

This is located at the back of the old Takeda Fishery; that is, on the plateau on the right bank of the Shiomikawa. It covers about 100 square meters and was almost destroyed by our excavations in 1935. The shell stratum, overlain by a layer of dirt, was not of equal thickness, there being some variation; on the average the layer of soil was between 20 - 30cm. /p. 23/ What interested us most among the animal bones uncovered here were the several canine mandibles. We discovered a

very large number of broken pieces of Okhotsk pottery, with one perfect vessel.

Shiomikawa Shell Mound No. 2

There are quite a few shell mounds on the high ground in the vicinity of the slope which descends from the Shiomikawa plateau to the lowlands of Bettobu, and I have lumped these together and called them the Shiomikawa Shell Mound No. 2. In excavating this area we discovered many bone implements at various places. The thickness of the overlying layer of soil and of the shell layer were uneven at places, and in general they resembled the previous shell mound. A special note must be made of the fact that several reindeer antlers were discovered at this point. One piece of Okhotsk pottery was also discovered.

Shell Mound No. 4 (figs. 5 and 6, p. 234)

This is located on a sand dune on the left bank of the Bettobu River; the shell mound is exposed on the slope on the north side of the central hollow of the U-shaped dune. The covering layer of soil (the slope of the dune) was an extremely thick one of about 2 - 3m. The whole area of this dune was a small hill during the Diluvial epoch; but after the formation of the shell mounds it seems to have been covered with sand as a result of the shifting of the sand dune.

There was a layer of 35cm. in which shells were thinly scattered; the shell layer proper was about 30cm. and overlay the black-sand layer. At places in the shell stratum the layers were composed of fish bones. At some points the thickness of the shell stratum reached one meter. There were places where about 10cm. of the top layer was composed of the small

shell Littorivaga atkana (Dall). Animal bones were recovered in rather large quantities; there were also discoveries of bone and stone implements, but not many. The shells were scattered on the slope of the dune, and there was a vast amount of stone chips of the material used for stone implements; they were all black, unmottled basalt.

The Kataoka Shell Mound

/ p. 24 / There is a large number of pits located on the height on the left bank of the Kobayashi River at Kataoka Bay, and there are many small shell mounds attached to these.

Up to now I have excavated at several places. One of these which was formerly exposed on the slope of the hill in back of the present-day Memorial Hall for the late Captain Gunji had a covering layer of soil of 35cm. and a shell layer between 10 - 15cm. The base was next to a loam layer of yellow soil, and from this layer a large number of animal bones were uncovered. In the shell mound there was an especially large amount of the shell Serripes laperous (Deshayes) and a vast amount of bone and stone implements were among the objects recovered.

The Murakami-Misaki Shell Mound

What remains at the present time of the shell mound is located by the dwellings of those personnel of the Hakama Fishery who pass the year there. I did a little excavating here in 1937 and found a rather large number of bone and stone implements. It appears that there were small shell mounds in various places in the whole area, but these have all disappeared at the present time. During the time that the construction of the offices of the factory was under way a shell mound at a spot

toward the seashore was discovered, and several human skeletons were uncovered from it. The great majority of these skeletons are preserved in the Pathology Department of the Medical School of Hokkaidō University. These skeletons quickly caught the attention of the head of this department, Professor Kodama, and have been the subject of great discussion.

The Kunihashi-zaki Shell Mound

At Kunihashi-zaki also there were shell mounds at two or three places. These were sand-covered and the overlay of soil was uneven; the thickness of the shell layer was between 10 - 15cm. A great number of animal bones have been discovered here and, frequently, stone and bone implements, but these were not very plentiful.

The Oikawa Shell Mound

Shell mounds exist around both the Oikawa Pits Nos. 9 and 10. Taking Pit No. 9 as the northernmost extremity, these shell mounds were located on the cliff side over an area of about 30 meters toward the south as one faces the beacon. In 1936 I completed the excavation of eighty percent of this shell mound. Of great interest here was the fact that the position of the two shell layers - one above and one below - was clearly defined because of an interposition in between a layer of black soil.

/p. 25/ The shells of the lower layer were quite powdery and fragile; for the most part artifacts associated with the Okhotsk pottery were uncovered. The shells of the upper layer shed powder less than those of the lower layer, and were tougher. The finds here consisted solely of a great number of animal bones, and artifacts were almost

completely absent. The layers at the northern extremity (near Pit No. 9) were as follows:

The covering layer of soil	20cm.
The second layer of shell	15cm.
The intermediate black soil layer	10cm.
The first shell layer	5cm.
Layer of black soil	15cm.
Layer of yellow soil	

At the southern extremity (near the beacon) the situation is:

Covering layer of soil	24cm.
The second shell layer	5cm.
The intermediate layer of black soil	7cm.
The first shell layer	4cm.
Layer of black soil	14cm.
Layer of yellow soil	

/ p. 26 / in this order. This clearly showed that in the shell mounds, also, shell layers existed which were left by peoples at two different periods. Among the artifacts, bone implements were particularly plentiful.

Paramushiro:

The Tokkari Shell Mound

This is located on the edge of the rise about 1200 yards from Suribachi Bay, on the way toward the Ōma Codfish Factory at Tokkari. In this area there were a great number of pit clusters. At the time that Mr. Ito, an engineer for the Fisheries Division of Hokkaido, arrived in 1937 for the purpose of making surveys for a fishery, this area was called the "early peoples' mound" /sennin-dai: ancestor's mound?/. Occasionally shell mounds are found which are associated with pits. Those which I excavated in 1938 covered an area of about

10 square meters. The thickness of the overlay of soil was between 20 - 30cm., with the shell layer being between 10 - 20cm. The chief shell was Littorivaga atkana (Dall). Many animal bones were incorporated, and both bone and stone artifacts were discovered in large numbers.

This concludes the description of shell mounds. To determine the various types of shells of which these mounds are composed, I requested that a study be made of them by Mr. Kazuo KIBA, of the Zoology Department of the Bunrika University of Tokyo. His identifications are listed in the order of frequency:

/ p. 27 /

(1) Volsella modiola (Linne)
(2) Buccinum chishimanum (Pilsbry)
(3) Littorivaga atkana (Dall)
(4) Serripes laperous (Deshayes)
(5) Acmaea cassis pelta (Esch)
(6) Cardium califarnienes (Deshayes)
(7) Nucellalima freycineti (Deshayes)
(8) Mya arenaria japonica (Jay)
(9) Pododesmus macrochismus (Deshayes)
(10) Sea-urchin
(11) Clamys erythrocomata (Dall)
(12) Margaritana margaritifera (Linne)
(13) Fusitriton oregonensis (Redfield)

(1) was found in the greatest quantity; followed by (2), (3), and (4); (5), (6), (7), (8), (9), and (10) occurred in considerable quantity; only a few examples of (11) and (13) were found, while (12) was limited to a single specimen.

As for the animal bones found in the shell mounds, these can be divided into the following, according to the study made by Mr. Nobuo NAOYOSHI, of the Animal Fossilization Laboratory, Science and Engineering Department, Waseda University:

Land Animals:

Carnivora:

[p. 28]	wolf	Canis lupus
	a type of dog	Canis sp [sic.]
	Arctic fox	Alopex lagopus
	Chishima fox	Vulpes anadyrensis splendidissimus

Artiodactyla:

Kamchatka reindeer	Rangifer tarandus phylarchus

Aquatic Mammals:

Carnivora:

Sea-otter	Enhydra latis
Sea-lion	Zalophus lobatus
Largest species of sea-lion	Eumetopias jubat
Fur-seal	Callotaria ursina
Seal	Phoca largha
Whales	

The fish remains were completely unidentifiable, with the exception of what appear to be the bones of the cod.

The Artifacts

Stone Implements

The variety in the stone implements of this period in the northern Kuriles is not great; the representative types do not go beyond the polished stone adze, the stone knife, the stone lance, stone arrowhead, the stone hammerhead, and the stone lamp.

Polished Stone Adzes

There are only some twenty of these which have with certainty been uncovered at the sites, and this is hardly sufficient material to characterize the polished stone adze of this period. On these specimens, almost

the entire surface has been polished, there being only one which was chipped with only the cutting edge polished.

In all of these, the cutting edge is unifacial; there were none at all like those seen in the sites in Japan proper which have both sides symmetrically curved. In most of the stone adzes the body was relatively flat, with a great number of them being rather oval in shape when seen in cross-section. The type frequently discovered in the sites of the Second Period in which the rear end tapers to a point and the body is rounded and would, in cross-section, show a triangle with slightly rounded points, has heretofore been thought of as being confined to that period; but, last summer, a large polished stone adze was discovered in a pit of the early period at Kabari, on Paramushiro, and we were able to ascertain that though few in number, the prototype of this variety of stone adze already existed in the First Period. Nos. 1, 6, 10 of fig. 18 show the type just described; No. 1 was discovered in the Shiomikawa Shell Mound No. 2, on Shumushu; and Nos. 6 and 10 were discovered in Pit No. 10 at Oikawa on the same island [p. 31]; No. 10 was made out of a beautiful stone, milky-white in color with green speckles.

Stone Knives

This type of object has heretofore been regarded as a stone lance; but considering that the curves of both edges are not even, that a depression for grasping is frequently found at the end, and that the shape somewhat resembles metal knives, I have classified stone lances separately and have considered these objects as stone knives. The forms of those of this period have features which do not fit this view,

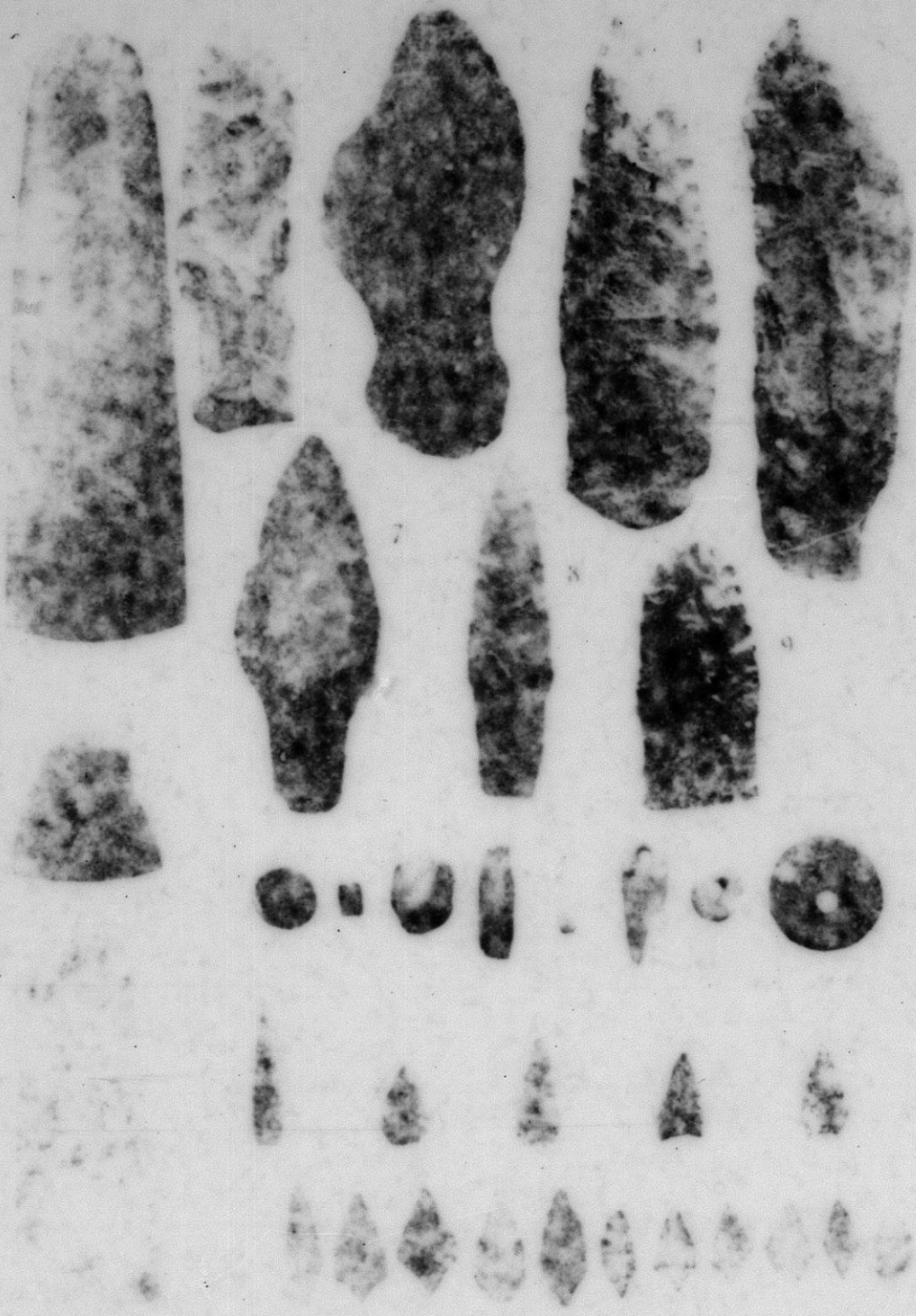


Fig. 18. Stone implement types of the Okhotsk Pottery Period.

but among those of the Second Period there are examples which have the typical form. I have shown several examples of them in fig. 18: No. 2 was discovered at the Oikawa Shell Mound, on Shumushu; No. 3 was discovered at the Bettobu Pit No. 1; No. 4 was discovered in Kodomari Pit No. 1; No. 5 was unearthed from the Kodomari Pit No. 6.

Stone Lances

Artifacts which we consider to be stone lances are few in number, but are sometimes found. The examples shown as Nos. 7 and 8 in fig. 18 could be considered as being this type of stone implement. No. 7 was discovered at the Kabasato Pit No. 9 on Paramushiro; No. 8 was unearthed from the Oikawa Pit No. 10, on Shumushu.

Stone Arrowpoints

These have been discovered in the greatest quantity. The number of those which were excavated with certainty from the sites of this period amounts to a hundred or more; therefore, we were able to learn relatively more about their characteristic form than was the case with other stone implements.

Points with and without a tang occur. On Shumushu they were nearly all without tang; of the type with tang, as shown in Row C of fig. 18, we were able to find only two on the surface at Kataoka and Kunihashi-zaki, and we were not able to obtain any examples which were discovered with certainty in sites of this period. On the other hand, several dozen of this type were discovered in the pits of this period at Kabasato on Paramushiro, where this type was definitely greater in /p. 32/ number than those without tangs. This type is identical with that discovered

in great numbers on Etorofu in the southern Kuriles. The twelve shown in Row C were all discovered in the Kabasato Pit No. 9.

Of the type without tang, some were used as harpoon tips, and some were attached to the tips of bone arrowheads, as I will relate later; these are illustrated in Nos. 12 - 14 of fig. 20. An example of the former is shown in /fig. 18:9? word missing/, and appears to have been attached as a tip of a large swallow-tail shaped harpoon. Those shown in Row B, fig. 18, were all attached to the tip of bone arrowheads; several in the shape of an isosceles triangle were discovered like the one on the extreme left. This type of stone arrowhead resembles those which mainly accompany the Later Period Hokkaidō Usude Jōmon pottery (another name for this being the Ebetsu-style pottery); these have been discovered in great quantity in the southern Kuriles. No. 9 and those in Row B were discovered in the Oikawa Pit No. 10.

Stone Plummets

Round river stones the size of an infant's head have occasionally been discovered with a thong-groove in the center or with a small hole in the upper portion. These seem to have been used more as anchors than as stone plummets. There have occasionally been discovered small round stones which had been used as stone plummets and which had a small hole at one end.

Stone Lamps

The majority of the stone lamps of this period were made by hollowing out one surface of a natural piece of rock, and most of them are placed at a fixed spot. These were used as stone place-

lamps and measured from about 17 - 35cm.; they have been discovered in house pits, and most of them were found along the inner wall. In the summer of 1937, when a boring excavation was done on a pit of this period, I saw a fireplace being taken out, and I was able to see an unusual instance of a natural-stone lamp placed near the fireplace. I have come across only one stone lamp on which some work had been done; this was discovered in the shell mound in the rear of the old Takeda Factory at Shiomikawa, on Shumushu. It was round, with a diameter of [p. 33] 8cm. and a height of 4cm., and had a single groove cut into the bottom.

Beads

None was discovered on Shumushu, but several were discovered from the Kabasato house pits on Paramushiro; these are shown in Row A of fig. 18. They were all of a red stone, with No. 1 (reading from left) being in the shape of an abacus bead and seemingly an ornamental bead; it was discovered in the Kabasato Pit No. 4. No. 2 looks like a tubular bead and was discovered at the same place; Nos. 3 - 6 are beads for ornamenting the ears. No. 3 was discovered in the Kabasato Pit No. 7; No. 4 from Kabasato Pit No. 2; Nos. 5 and 6 from Pit No. 3. Nos. 7 and 8 look like ornamental beads; No. 7 was from Pit No. 3; No. 8 was from Pit No. 4 of the same place. Beads of this type are frequently unearthed on Etorofu Island in the southern Kuriles.

Pottery

The pottery of this period is called the Okhotsk pottery. It is a ware of the period of simultaneous use of iron and stone, and is distributed from the eastern and western coasts of southern Sakhalin to

the Okhotsk Sea coast of Hokkaidō and beyond, in the Kuriles, up to Shumushu Island; in other words, that entire area of Japan which is called the Okhotsk seacoast. As a result of the early work by Hiromichi KONO and Takemitsu NATORI, we know that this ware came after the "First Period Hokkaidō-style Usude Jōmon Pottery" or the "Rebun-style Jōmon Pottery" in southern Sakhalin, and that it existed simultaneously with the Satsumon /brushed design/ pottery found near Ebetsu, or with the very last phase of the "First Period Hokkaidō-style Usude Jōmon Pottery" in northeastern Hokkaidō. The classification of this type of pottery is made today according to the design, and Mr. Takemitsu NATORI, in his thesis "Relics with Animal Designs in Northern Japan and their Distribution", recently classified it into eight types: a: the tsuki-kobu (indented) design /i.e. raised protuberances made by punching from the reverse side/; b: jomoku (rope) design /i.e. impression of a rope encircling the vessel/; c: kizami (incised) design; d: kataoshi (stamped) design; e: masatsu-shiki (incised relief) design /incisions by comb-like implement creating parallel relief/; f: haritsuke-shiki (string-pasted) design /thin roll of clay pinched on before firing/; g: shiatsu-shiki (pinched relief) design /made by pinching the clay with the fingers/; and h: kobu-jō (notched) design /series of small notches along the rim/. In various places in Sakhalin, Hokkaidō, and the southern and northern Kuriles, these different designs are present in varying degrees.

/p. 35/ In the northern Kuriles, especially in the Shumushu sites of this period, the amount of pottery has been extremely limited as compared with the other remains that have been discovered. What little

was found was unearthed from the Shiomikawa Shell Mound No. 1, the shell mound in the rear of the old Takeda Fishery at Shiomikawa, and the Kataoka Shell Mound; we were unable to discover a single specimen from either the house pits or shell mounds at Oikawa or from the Kodomari pits. For this reason, intact pieces discovered up to now are very few in number, probably limited to the one discovered at Kataoka and now owned by Mr. Chihaya GUNJI, and the two I excavated at the Shiomikawa Shell Mound. Sherds are not too plentiful either. However, last summer, when I excavated the Tokkari Shell Mound on Paramushiro, I unearthed a considerable amount; while from the group of pits at Kabasato I unearthed several dozen sherds, and so ascertained that there was a greater amount of pottery here than on Shumushu.

At Tokkari especially there was a great amount of sherds, which, when mended, would form near-perfect specimens. The materials are too scant at the moment to enable me to discuss the form or the designs of this type of pottery - I will discuss this in further detail later in the "Special Pottery Issue: the Pottery of Chishima"* - but the form and the method of firing is almost identical with that of the southern Kuriles and of Kitami and Nemuro on Hokkaidō. I base this view on the examples of Nos. 1 and 2 of fig. 19, which were discovered in the Shiomikawa Shell Mound; on the specimen owned by Mr. Gunji which was discovered at Kataoka (fig. 10 in my article "Archaeological Investigations on Shumushu Island, Northern Kuriles" /See translation No. 2, below - Ed./, and on other sherds.

*Apparently never published - Ed.

Fig. 19. Pottery types of the Okhotsk Pottery Period.

If we group the designs according to Mr. Natori's classification, the most common one is type c, or the incised design, which is found on almost all of the specimens. The pattern of this is that most common among the incised designs on this type of pottery: it is like the itoppa designs incised on the ikupashi of the Ainu, that is, the willow-leaf form. When this is incised in a row it becomes oblong in form or a straight line; this is applied in various styles, such as horizontally or diagonally; the most common form is the incision in a straight line, with diagonal applications on both sides. There are others with geometric lines with round forms applied over the line. Nos. 1, 4, 5, 6, and 7 of fig. 19 are all examples of these. They were all discovered in the Shiomikawa Shell Mound.

/p. 36/ The other designs were extremely scarce, being discovered only rarely. Only one sherd showing the b (Jomoku) design was discovered in the Shiomikawa Shell Mound.

The e (masatsu-shiki) design /parallel relief, according to the original definition, created by a comb on wet clay; here, it apparently describes a single protruding ridge - Ed./, as shown in 8, was discovered in the Shiomikawa Shell Mound; over a protruding, belt-shaped ridge, there is a horizontally incised willow-leaf design. I uncovered one from the Tokkari Shell Mound on Paramushiro which, like this one, had a protruding, belt-shaped ridge, and which had countless small lines applied diagonally. No. 7 is of this type, with raised designs with a circular depression in the center.

The d (kataoshi or stamped) design is not abundant; only one appeared on a sherd which was discovered at Kabasato on Paramushiro, and on it was

applied a bear's footprint (this is shown in 3). A perfectly preserved piece of pottery with such a bear's foot imprint was discovered from a shell mound of the Okhotsk pottery type at Toshimoe in the southern Kuriles. Not a single specimen has been discovered among the Okhotsk pottery on Hokkaido, although they have been uncovered rather abundantly on Sakhalin.

That exhausts the designs; there are also many examples without designs. Frequently, on the rims there are small holes which have been made after the pottery was fired; these holes are mainly in pairs one opposite the other. With the aid of these, broken portions were tied together with thongs, indicating that the manufacture of new pottery was probably very difficult. On the surface of these pots are found carbonized deposits.

In short, the most ubiquitous of the designs are the combinations of the incised willow leaf and the incised geometrical lines, these being the universal design of this type of pottery; the other designs are extremely rare.

The jomoku and the kataoshi designs, which reached their zenith in Sakhalin, are extremely rare; while the f (haritsuke style) raised design (noodle-shaped design is another name for this) which was most popular at Kitami and Nemuro on Hokkaido and in the southern Kuriles, has not been discovered at all so far.

/ p. 37 /

Bone Implements

In this period there is a considerable variety of bone implements; they are the artifacts which were most commonly made. The implements

used in the manufacture of these bone artifacts, judging by their cross-sections and other aspects of their manufacture, were clearly not stone implements, but edged tools made of metal. Because there has not been any discovery of metal in the sites of this period on Shumushu, we have not been able to prove this; but last summer there was frequently unearthed bits of corroded metal within the pits of this period at Kabasato on Paramushiro. Thus, seeing that they had edged tools of metal, the manufacture /of the bone implements/ was easy; and, because bone materials were very plentiful, it is surmised that /these reasons/ account for the large quantity of bone implements, most of which were found in shell mounds. Only a small number have been recovered from house pits, for the reason that most of them have decayed. Figs. 20 and 21 show a general view of the finds uncovered. Because the life that /the inhabitants/ led was essentially that of a hunting people, what they had for tools were mostly hunting implements with one of the most representative items being the harpoon. From the standpoint of function there are two varieties of bone harpoon: one is the barbed style; the other variety is the so-called toggle type, in which the harpoons that enter the body of the animal toggle, thus forming a right angle to the line fastened in the hole in the harpoon; in this way the harpoons themselves perform the role of a hook.

Nos. 1, 2, and 3 of fig. 20 belong to the barbed type; and the harpoons shown in Nos. 4, 5, 6, 7, 8, and 9 are of the toggle type.

In No. 1, there are four barbs on each side /viewed end on in the illustration/; the hole through which the line is passed is drilled on the same side as the barb surface. There was only one of this type

Fig. 20. Bone artifacts of the Okhotsk Pottery Period.

unearthed; all of the others had, as in Nos. 2 and 3, holes which were drilled at right angles to the barb surface.

No. 2 has two barbs on each side. Both Nos. 1 and 2, in size and thickness of the harpoon and in the size of the hole, far exceeded No. 3 [p. 39] and were used in hunting sea animals, while No. 3 was, in my opinion, probably used for fish. The No. 3 type is unearthed in great quantity in the shell mounds of this period in the southern Kuriles and along the Okhotsk Sea coast of Hokkaido at Nemuro and Kitami. In the northern islands this type was first discovered last summer when it was unearthed at the Tokkari Shell Mound on Paramushiro. Nos. 1 and 2 were unearthed from the shell mound in the rear of the former Takeda Fisheries at Shiomikawa on Shumushu.

Nos. 4, 5, 6, 7, 8, and 9, which belong to the toggle variety of harpoons, also have another name: swallow-tail harpoons. They have various structural arrangements and forms. The harpoons of this sort unearthed in the northern Kuriles are generally of three types: the A type, as shown in Nos. 4, 5, and 8; the B type, as shown in 6 and 7; and the C type, as shown in No. 9. In the A type, Nos. 4 and 5 are large in size, with a groove at the point made for the insertion of stone points. No. 4 was unearthed with the stone point attached to it; No. 5 has barbs; both were uncovered from the Tokkari Shell Mound on Paramushiro. No. 8 is the small-sized type; it has no groove for the insertion of a stone point; instead, the tip is sharpened. This was discovered in the shell mound in the rear of the former Takeda Fisheries at Shiomikawa on Shumushu. The way in which these differ from type B, as shown in Nos. 6 and 7, is that the position of the

socket in which the foreshaft is inserted is not in the center of the major axis of the harpoon as in Type B, but near the side where the line hole is situated.

No. 6 (discovered at the Oikawa Shell Mound, on Shumushu), and No. 7 (discovered in the Shiomikawa Pit No. 2, on Shumushu) are the B type. In order that the foreshafts shown in Nos. 10 and 11 can be attached to the B-type harpoons, and in order that the protuberance at their points can be inserted, the socket of the harpoon is made at the center of the major axis of the harpoon. This type is one in which the harpoon and the foreshaft are combined, and it is only on this that designs are incised and which has a characteristic foreshaft; I imagine that this was probably used in the hunting of the sea-otter. How this type revolves within the body of the animal and how the game is pulled in is something I do not have the space to go into here; the reader is referred to my article "Hunting and Fishing Implements from Excavations in the Kurile Islands" /Translation No. 3, below/.

In Type C, as illustrated in No. 9, the center of the swallow-tail-shaped end has a dug-out groove which passes through both sides /meaning not very clear here. T.N./; this type of harpoon is extremely rare. /p. 40/ This is a perfect specimen unearthed from the Shiomikawa Shell Mound No. 1, on Shumushu; and because the spur of the dorsal side of the socket for inserting the foreshaft is rather long and thick, whereas the spur on the ventral side is short and thin, in most of the other finds unearthed this is broken off and is missing.

Nos. 10 and 11 are foreshafts which are inserted in B-type harpoons; No. 10 was unearthed from the shell mounds located in the

vicinity of the Oikawa Pit No. 10; it has a shallow groove and a hole running vertically through it; this part and the hole in the harpoon were tied together; No. 11 is from the Kunihashi-zaki Shell Mound on Shumushu; it has a horizontal hole at the bottom.

In the foregoing, I have described the general types of hunting implements used in the chase at sea. When we come to the bone arrowhead used as a hunting implement on land, this has been found in greater numbers. There are four general types of bone arrowheads of this period that have been found up to now in the northern islands. The first type is illustrated in No. 16. The front end is pointed and is made in the form of a thin, long bone needle, round in cross-section; the bottom end is cut from both sides in a V-shape so as to facilitate its joining with the arrowshaft; this was unearthed from the Shiomikawa Shell Mound. Type No. 2 is shown in 15, and is exactly like the first except that it has barbs; this, too, was discovered in the afore-mentioned shell mound. Type 3 is exactly like Type 2, except that there is a groove at the point where the stone arrowhead can be inserted. No. 12 was discovered in the Oikawa Pit No. 10 with the stone arrowhead still attached to it. No. 13, which is one of thirty bone arrowheads, was also unearthed at the same spot; No. 14 was from the Shiomikawa shell mound.

No. 17 was the only bone arrowhead with a tang, and was unearthed from the Shiomikawa Shell Mound No. 2. This type of bone arrowhead was used mainly in hunting foxes and eagles; some of them bore various symbols.

In the fishhooks made of bone, which form one part of the fishing implements, the simple type has almost never been found up to the present; instead, they are made of two bone pieces, the shank and the barb, which were joined together.

/p. 41/ Type 1 is indicated in 21. In this, a small hole is made at the bottom of the slightly curving shank, not perpendicular to the axis of the shank, but oriented in the direction that the barb would face; and into this hole was firmly fitted the curved and pointed barb, thus forming a fishhook. This type of fishhook is found among the primitive implements of the Eskimo. This rare article was discovered and given to me by Mr. Shintaro MAFUJI, president of the Kita Chishima Marine Products Corporation, when, in 1936, Mr. Mafuji and I were excavating the Kataoka Shell Mound on Shumushu.

Type 2 is shown in No. 18; in this the fishhook is formed by lashing with twine at the point of juncture of the shank and the barb. The bone fishhooks of the Aleuts are almost all of this type, while this method is widely used among South Pacific natives. This type came to light in the Kunihashi-zaki Shell Mound. Type 3 has a small hole at the bottom of a curving shank, or a shallow groove is dug on one side at the bottom of the shank and the end of the barb is joined obliquely at this point and made firm with twine, thus forming a fishhook. This type of bone fishhook appears to have been the most widely used, for the number uncovered has been large.

No. 20 shows a tube made of bird bone, popularly called "bird-bone-tube", and is a needle-container made of bone. Up to now this has been found almost always by itself; but three were discovered in the Oikawa

Pit No. 10, all of which contained needles, some with tiny holes about the size of those found in modern steel needles; so it appears that even in this period, extremely small thread was used. No. 19 shows one of the bone needles found in these tubes. Among the bird-bone tubes of this period we have not discovered any with incised designs; but among those of the end of the Second Period, we have found some with very beautiful carvings. No. 22 shows what appears to be the sharpened end of a bird bone; this type of bone implement is discovered in considerable quantity. It is not a bone needle, but is thought to be a type of implement used to remove the meat from shells. This is from the Shiomikawa Shell Mound.

Nos. 1, 2, 3, and 4 of fig. 21 show bone combs. These have almost never been found in the Okhotsk Pottery sites in Sakhalin, Hokkaido, and the southern Kuriles but have been found in relatively great quantity in the northern islands. /p. 42/ These are almost all vertical combs, and those which are horizontal are thought to be those of the end of the Second Period. No. 1 has a half-oval handle of net-mesh openwork, and represents one type of bone comb; this was discovered in the shell mound to the rear of the former Takeda Fisheries in Shiomikawa. No. 2 has a rectangular handle with designs of geometric appearance incised in it. This was unearthed from the Oikawa Shell Mound, and is the shape most commonly found among the bone combs discovered up to the present. No. 4 is like No. 2, but the teeth are comparatively short. The handle is rectangular, with designs representing bird heads incised on it; this type of design is most frequently found. A broken comb of the same type

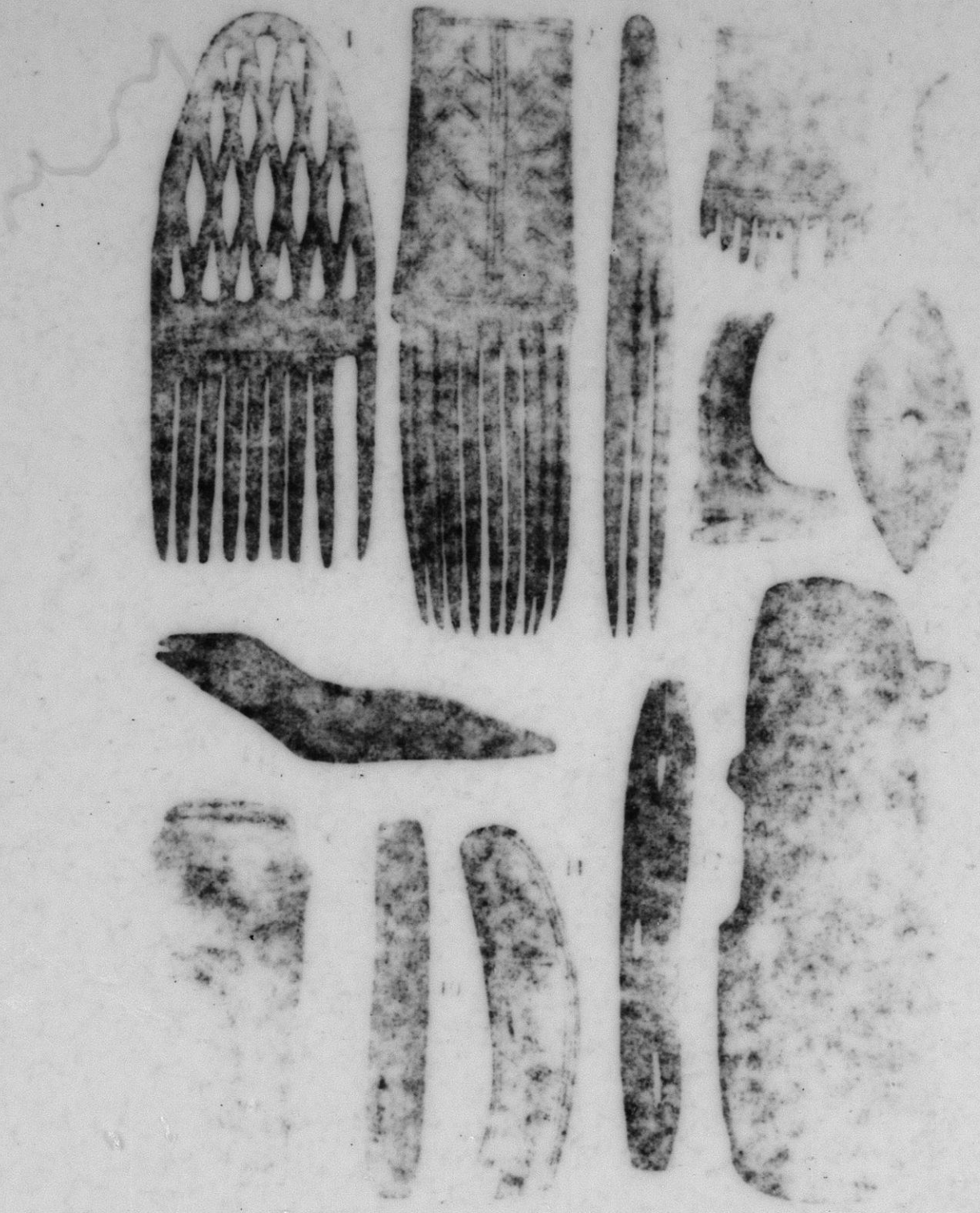


Fig. 21. Bone artifacts of the Okhotsk Pottery Period.

which was discovered in the central Kuriles, north of the island of Chiriho, is owned by Mr. Sueo SUGIYAMA.

No. 3 shows another type of bone comb; this was discovered in the shell mound at Shiomikawa. No. 5 shows a fox canine with a hole drilled through the root; it is a type of ornament. It is my opinion that there must have been some belief regarding the fox, judging by the fact that when the teeth of animals are used for ornamental purposes in the sphere of the Okhotsk pottery culture, the selection is restricted in most cases to the teeth of the fox.

No. 6 shows a reindeer horn with incisions; lines are drawn on both sides, with a great number of diagonal incisions. It also has zig-zag lines carved on it. What purpose it served is not clear; like No. 5, it was unearthed from the Tokkari Shell Mound on Paramushiro.

No. 7 is thought to be either an ornament or an accessory for a harpoon; it is made of the tusk of the sperm whale and is of a rounded diamond shape with simple line designs and grooves on both sides to receive the line. It was uncovered in the shell mound in the rear of the Hakama Fishery at Murakami-misaki, on Shumushu.

No. 8, discovered at the Oikawa Shell Mound, is a representation of a seal; it has a small hole at the tail, and is thought to have been a dangling ornament. A considerable number of bone objects made in the form of animals have been found in the sphere of the Okhotsk pottery culture. Mr. Keiji TANI has discovered objects similar to these from the Uebetsu Shell Mound on Etorofu Island in the southern Kuriles. [p. 44] No. 9 is an object discovered in the Tokkari Shell Mound, on Paramushiro, and is a representation of a bear; though roughly

hewn, it is very well expressed. Such figures have been found not only in the above-mentioned Uebetsu Shell Mound; there are also examples now in the possession of Mr. Yonemura which are said to have been discovered at the Moyoro Shell Mound at Abashiri, Hokkaidō.

Nos. 10, 11, and 12 shown a type of bone object which has been discovered in considerable numbers but the use of which has not been ascertained up to the present; my guess is that they were probably a reed for weaving. Most of these have three holes. No. 10 was discovered at the Oikawa Shell Mound; Nos. 11 and 12 were discovered at the Shiomikawa Shell Mound. No. 13 is a bone adze with the protuberances on both sides characteristic of the bone adzes of this period; it was unearthed from the Shiomikawa Shell Mound No. 1. There are also many which do not have the protuberances; the cutting edge is wedge-shaped (bifacial) and not bevelled like the blade on the ground stone adzes of this period. In the great majority of the bone adzes the butt ends bear traces of having been hammered by something; they seem to have been used as wedges for splitting timber. An adze made of the tusk of a walrus was excavated from the Shiomikawa Shell Mound No. 1.

The Okhotsk Pottery People of the Northern Kuriles

We shall call the inhabitants of these islands who are responsible for the sites and remains of the First Period, the Northern Kuriles Okhotsk Pottery People, after the name of the pottery which they have left behind.

To imagine exactly who they were, from what direction and at what period they entered the islands, and what their fate was, is without doubt an extremely interesting problem; but on the other hand, it is one extremely difficult to solve.

/ p. 45 / The chronological position of the Okhotsk Pottery in northeastern Hokkaido is, as I have stated earlier, at the very end of the Early Period Hokkaidō-Style Usude Jōmon Pottery, or contemporary with the latter half of the Rubbed Pottery found near Ebetsu. It has been known for some time that this jōmon pottery is found in the Kuriles as far as the three southern islands of Kunajiri, Shikotan, and Etorofu, and there is a possibility that the distribution might extend to the vicinity of Urup Island. However, I have heard that Mr. Keinosuke ISHINO, an engineer of the Maritime Division of the Agriculture and Forestry Ministry, has in his possession jōmon pottery which he is said to have discovered on Rasawa Island in the central Kuriles. Even if we accept this report, the northernmost limits of the distribution of jōmon pottery as known at the present day does not extend further north than Rasawa Island.

During our field trips in the northern Kuriles, which numbered five in all, we made every effort to discover this jōmon pottery, but up to now we have not been able to find even a single sherd. Moreover, I firmly believe that even in the future, the chances of discovering it are very slim. Therefore, since jōmon pottery is non-existent in the north, the oldest pottery in this area is of the Okhotsk Pottery Period which occurred toward the close of the Stone Age in Hokkaidō. Therefore, the Okhotsk Pottery people must be regarded as the oldest inhabitants.

As previously mentioned, the Okhotsk pottery, which seems to have entered Hokkaidō from Rijiri and Rebun Islands and in turn from both the eastern and western coasts of Sakhalin, is distributed south on the Japan Sea coast; while on the Pacific coast it is found down to the

vicinity of Tokachi, then proceeds north into the southern Kuriles, and up to Shumushu.

The sites are located only along the seacoast and are never found in mountainous areas; unlike the jomon pottery people, who were found along the seacoast as well as in mountainous areas, these were out-and-out maritime people: a hunting people who were accustomed to traversing vast expanses of ocean in small craft.

Now, when we come to the question of what race of people they were, we have hitherto regarded them as being the ancestors of the present-day Ainu: the major arguments /p. 46/, being simply that the pressed designs of the bear's paw on the Okhotsk pottery is also found on the ikupashI (beard ornaments) of the present-day Ainu, and that the method of opening a small hole in the bottom of the pottery urns containing the accessory burial objects (possibly to send the soul off), as seen in the human burials around Abashiri, is identical with the method of the Ainus in sending off their dead.

The various scholars of Hokkaido /culture/ have all thought them to be Ainu, in particular Professor Hiromichi KONO, who wrote in his "Outline of the Stone Age in Hokkaido" in the special issue of Dolmen, the "Japanese Stone Age Issue": "The rubbed-design-pottery-type culture is that of the so-called Hokkaido Ainu, and the Okhotsk pottery culture appears to be that left by the so-called Sakhalin Ainu. The northern Kurile Ainu are a branch of the Sakhalin Ainu who travelled south and crossed over into the Kuriles, and who, having later been cut off, mixed with other races and probably lost their original traits."

Mr. Shozo NISHIDA, an instructor at the Otaru Higher Commercial School, in a thesis entitled "A View of Stone Age Pottery on Hokkaidō, which was published in the Hokkai Times, wrote, in part, as follows: ".....at the present time, the northern Kurile Ainu are regarded as having the closest connection with this type of pottery /meaning the Okhotsk pottery/ for the reason that their route of migration coincides extremely well with the points at which this Type D 'plain-surface raised design pottery' /muji fumon-shiki doki/ has been found. Of the research on the northern Kurile Ainu, Professor Torii's 'Study of the Kita-Chishima Ainu' (Tokyo Imperial University Bulletin) is the most detailed; but in it he simply states that the northern Kurile Ainu have a great number of continental elements in them and could be considered rather as the original Ainu, and makes no assertion regarding the route of their migration. A great many scholars in addition to Professor Torii appear to think that they are original Ainu, older than the Hokkaidō Ainu; but, reasoning along the lines set by the recent discoveries in pottery, this theory must, regrettably, be rejected.

"And for this reason: there is no evidence of their having passed through Japan Proper. I think that they entered Hokkaidō via Sakhalin from the continent, and then proceeded on to the northern Kuriles. Therefore, it is for this reason that continental customs persisted so strongly with them: their dress, their continental embroidery, their sculpture - these arts /p. 47/ are of markedly continental style. Of course, even they must not have had deep roots on the continent, since only in a small portion along the lower reaches of the Amur River is Hokkaidō-style pottery found; but in Siberia, especially in the

regions along the Amur River, terms based on Ainu are plentiful. There is reason to believe that they could have drifted toward the Maritime Province /of Siberia/ from Hokkaido. There, they took on a marked continental color, mixed with the Tungus, and lost the appearance characteristic of the Ainu; they then crossed into Sakhalin and entered the northern Kuriles via Hokkaido. Is it not for this reason that they resemble the Japanese more strongly than the Sakhalin Ainu?"

He takes the Sakhalin Ainu who, according to Professor Kono, left the Okhotsk pottery culture behind them, and has them coming again across from the continent. But both have pointed out one thing: that there is a close connection between the northern Kurile Ainu and the Okhotsk Pottery People.

As the result of the anthropological investigations of Ainu skulls started in 1934 by members of the Anatomy Department of the Medical School of Hokkaido University led by Professor Sakuzaemon KODAMA, the hitherto obscure regional differences in the Ainu and other problems gradually became clear. Although the work has been carried on for only a short while, the results have considerable significance. In connection with this, Professor Kodama has given an unusual amount of time to the study of the skulls discovered in the vicinity of the Hakama Fisheries at Cape Murakami on Shumushu,* a study which has brought about extremely interesting results. The characteristics of these skulls were as follows:

*These were apparently not excavated by Baba, and the basis for their attribution to the Okhotsk Pottery Period is not clear. However, crania from the Moyoro Shell Mound in Hokkaido associated with Okhotsk pottery have impressed qualified observers (e.g. Coon) as showing Eskimoid features - Ed.

in contrast to the mesocephalic Ainu they were brachycephalic, and their zygomatic arches were broad. The ascending ramus was rather low and broad; the mandibular notch was shallow, and the projection of the chin was slight. In April 1937, at a meeting for the special study of the problem of the modern Ainu race, at which the Anthropological Society of Tokyo and the Japanese Society of Ethnology met for their second convention, Professor Kodama spoke as follows in a speech entitled 'Concerning Ainu Skulls': ".....what I wish to add is that the width of the ascending ramus becomes greater as one proceeds north, and at the same time the mandibular notch also becomes shallower. In the Hokkaidō male Ainu, the measurements of the ascending ramus are, on the average, about 58, and are slightly larger than those of the Japanese and the Tsukumo Stone Age Man; but that of the Ainu of Rorei, in Sakhalin, measures 62.5 and is larger. Further, the Ainu skulls excavated on Shumushu, in the Kuriles all show an even larger figure (average 78.8). Therefore, two of the characteristics of the skulls excavated from the Okhotsk seacoast can be said to be mandibles of the type I have described and the great width of the zygomatic arch; and if we seek similarities elsewhere, I think at present that the Eskimo (including the Aleut) enter the picture."

Adding further strength to Professor Kodama's theory is the excavation in the northern Kuriles, of three stone labrets. Two were found at Kataoka on Shumushu and the third was found at Ruizan [illegible] on Paramushiro. One of the two dug up at Kataoka along with various relics at the time of the enlargement of the Kataoka plant of the present-day Kita-Chishima Fisheries Corporation was given to me by Mr. Hishinuma, the manager of

the Hetsuka Fisheries Corporation, when I made my first field trip to the islands in 1935. It is /made/ of a reddish silica-type stone (No. 1 of fig. 22), and though I thought of it at first as some sort of ornament, it did not occur to me that it was a labret. I wrote in my "Archaeological Investigations on Shumushu Island, Northern Kuriles" /Translation No. 2 - Ed./ as follows: 'The stone ornament (?) — No. 12 of figure 18 — was excavated at Kataoka, and appears to be of a silica-type stone of a slightly reddish aspect, 3.5cm. long.'

The second /Kataoka find/ belongs at present to Mr. Mataroku NAGAO of Nemuro, and was secured at Kataoka by Division Chief Oya of the Nemuro Branch Office. It is flat and long (No. 2 of fig. 22), about 3.7cm. in length, and is made of a white stone with blue spots.

It is a matter of great regret that the conditions relative to their excavation are completely unknown, including the fact that we do not know what types of relics they were associated with or what remains they were unearthed with.

Among peoples who have such labrets are the Aleuts; and they have been discovered in shell mounds in the Aleutians by Jochelson. In the "Investigation Report of Floating Adrift" (Hyoryu Torishirabe-sho), which concerns the drifting of Kōdayū, Isokichi, and others, to Amchitka in the Aleutians about 156 years ago (1783) we find the following: ".... twenty or thirty women with horn-like objects in the septum of the nose, and on their lower lip, and with blue lines on the sides of their faces came, etc." The later report "Strange News of Circling the Sea" (Shirabe-gaki Kankai Ibun) written after the return of sixteen fishermen (including Sahei, Tsudayū, Gihei, Tahei, of Ōshu, Miyagi-gun, Sabusawa-

hama) who had drifted to Unalaska in the Aleutians /p. 50/ in 1794 also contains a record of this fact. Judging by these reports, it is seen that the Aleuts adorned themselves with labrets from the Stone Age to the close of the Tokugawa Period.

Now, Aleuts were transferred to the Kuriles after the penetration of the Russians into the region - chiefly to Urup and Shinshir Islands. This took place in 1772 and occurred prior to the casting ashore in the Aleutians of Kōdayū, Sahei, and the others.

The problem is whether Aleuts were also transferred onto Shumushu. Among the remains uncovered there to date, virtually nothing has come to light which appears to have been left by the Aleuts; materials which would provide archaeological proof /of their presence/ have not yet been discovered. The only data concerning the existence of Aleuts on Shumushu are found in the works of Professor Torii. An article which was given as a lecture at the Geological Association about 1913, entitled "Concerning the Indigenes of the Kuriles" (Chishima Dojin ni Tsuite), contains the paragraph: "Furthermore, there is one point to be noticed: On Urup and Shumushu there lived some people who were not native to the Kuriles, and who were transferred from the Aleutian Islands. These people were Aleuts. Moreover, there were four or five Aleut families at Kataoka. However, after the Kuriles changed hands these people moved elsewhere, so Urup and Shinshir became uninhabited islands." In another publication, "The Ainu of the Kuriles" (Chishima Ainu), Professor Torii writes: "The Aleuts did not formerly live in the Kuriles, but the Russian Government had transferred them from the Aleutians to the two islands of Urup and Shinshir. According to the statements of Kurile natives, Aleuts were

also moved by the Russians to Mayoroppu-wan (Kataoka) on Shumushu. Their graves are still extant." Thus, if we accept as true the words of the natives as reported by Professor Torii, we can conjecture that at one time Aleuts also lived at Kataoka on Shumushu. The period in which they may have been transferred to Kataoka is completely unknown, but I think it may have been about the time of their transfer to Shinshir and Urup. The Aleuts of that period adorned themselves, as I have previously said, with labrets; therefore, as long as the circumstances of discovery are unknown, it is not excluded that the labrets unearthed at Kataoka were left there by these Aleuts, and not by the Okhotsk pottery people.

However, a reddish stone labret (resembling No. 1 of fig. 22 from Kataoka) was recently excavated at Ruizan on neighboring Paramushiro Island, which was completely unaffected by the transfer of the Aleuts. Of course, it may be argued that it was left by the contemporaneous Kurile Ainu who got it from the Aleuts; this is possible, since the age of the relics and the circumstances of the excavation are unknown. But it is probable that further discoveries may be made in the future in places which were completely unconnected with these Aleuts.

If we should be able, in the future, to discover these /labrets/ among remains of the Okhotsk pottery culture, this would indeed be a matter that would throw a great light on Professor Kodama's contentions, from the cultural standpoint. I hope to devote my energies to such a discovery in the future, and for this reason I have a great interest in these three stone labrets.

/p. 51, line 11/ Lastly, I would like to put forth one more interesting fact with respect to the hint dropped by Professor Kodama. And this is the statement that appears in a pre-Keicho era /1596-1615/ document, in which it is stated that on an island near Hokkaido, probably near the southern Kuriles, there lived a people who were completely different from the Ainu, and who were a hunting people.

This is quoted in "A Study Concerning the Investigations of Yezo by the Society of Jesus" by Mr. Akio OKADA, in Rekishi Chiri /History and Geography/ Vol. 68, Nos. 1 and 2. The original material is in the reports by Hieronomius de Angelis of the fourth year of Genna (1618) (from Morehon's /phon/ Japanese History) and of the seventh year of Genna (1621). In these reports, particularly the latter, /he writes that/ he arrived in Yezo /i.e. Hokkaido/ and learned Japanese from the govenor of Matsumae and several Japanese living at Matsumae, and also from several /p. 52/ Ainu who came to Matsumae to trade and who spoke Japanese well; therefore, confidence may be placed in his reports as contrasted to those of other missionaries which were based on hearsay. The extremely interesting passages dealing with the sea-otter in de Angelis' report are the most important to us; here he has written as follows: "According to the statements by the governor of Matsumae, the skins of the fish called the sea-otter, which are brought over to Yezo, are not found on Yezo; the Yezo people go over to three islands located near their country to buy them. The people of these islands do not have beards and have a language that is completely different from that of the Yezo people. However, even the governor cannot learn from the Yezo people if these islands are to the south.

Those Yezo people who go to these islands to buy the sea-otter skins are people who live in the eastern portion. For this reason the natives who live in the west do not bring such skins when they come to Matsumae." /This is a translation of the Japanese translation, and not a quotation from the original. The underlined emphasis is Baba's. T. N./*

The problem is: exactly where were the three islands inhabited by people who were beardless and whose language was completely different from that of the Yezo people, as stated in the report just quoted? What must be borne in mind here is that the Yezo people who went to these islands to buy the pelt of the sea-otter were people who lived in the east, that is, eastern Yezo people; also the fact that from ancient times Sakhalin has had no sea-otters. So when we combine all this with the fact that the famous locality for sea-otter is Urup, which is near the eastern coast of Yezo and was called "Sea-Otter Island", we can surmise that the three islands were in the southern Kuriles, around Urup, Shinshir, and Etorofu.

There is reason to think that since the Kilitap Ainu were the leading traders in the Kurile Islands, the eastern Yezo people bought the pelts of the sea-otter through the former. The "History of the Unification of Tsugaru" divides Matsumae into the jōkō /lit. "upper mouth"/ and the gekō /lit. "lower mouth"/; and in a list of the goods in the gekō, that is, the eastern area, is found "sea-otter pelts." Moreover, the statement found in the Yezo Kōki /Travels in Yezo/: "Sea-otter pelts: there is an island of the sea-otter in the eastern sea; the Yezo of the island come to Kiitaffu to barter", is additional reason for thus thinking.

*T. N. - Translator's Note.

/p. 53/ In reviewing what we have said above regarding the Okhotsk pottery people who were distributed along the Japanese territories on the Okhotsk Sea - namely, their non-Ainu-like characteristics (on the strength of the recent anthropological studies made by Professor Kodama); the problem of the labrets discovered in the northern islands; and the existence of a non-Ainu people early in the Tokugawa Period at some place which appears to be in the southern Kuriles (as recorded in de Angelis' record) - I feel that I want to re-examine the existence, in Ainu legend, of a non-Ainu people called korobokkuru /Phonetic. T.N./, a matter which was formerly dismissed with a laugh.

Briefly summarized, the Ainu legend concerning the korobokkuru is as follows: "When we Ainu crossed over onto Hokkaidō, this place was not an uninhabited place. Before us had come the men who lived under the coltsfoot plant, that is, the korobokkuru (Korokoni (coltsfoot), pokk (under), unkuru (men)). At first they traded with us in a friendly manner, but, in the province of Tokachi, when a korobokkuru went to an Ainu's house to trade one day, young Ainus dragged the korobokkuru in through the window to take a look at it; but it turned out that this was a young girl with tattoo marks around the lips. The korobokkuru became angry at the deed of the Ainu, and afterward went to the north, and were never seen again. The tattoo around the mouth found on Ainu women today is in imitation of that, etc."

The Okhotsk pottery people of the northern Kuriles were, like the Eskimo and the Aleut, maritime people, and in their manner of life they were mainly hunters, particularly of sea animals; but in their rites with respect to sea animals, the two groups had great differences.

Concerning the worship of animals by the Eskimo, Collins, who has excavated the sites of the ancient Eskimo on St. Lawrence Island, has written, in his book Archaeology of St. Lawrence Island, as follows /paraphrased/:

"Compared to the large numbers of walrus skulls found in the old sites, skulls of seals are exceedingly rare. This is not simply because the skulls of the seals were thrown away; they were disposed of in some particular manner; probably they were thrown into the sea. /p. 54/ The discovery of such items as seal muzzles tied with baleen thongs and a seal skull with suspension cord of baleen indicates some ceremonial rite with respect to the animals." Moreover, concerning the worship of animals of the ancient Aleut, Jochelson, in his Archaeological Investigations in the Aleutian Islands, has this to say /paraphrased/:

"It is an interesting fact that among the bones of aquatic mammals found in the shell mounds, the skulls other than the lower jaws of whales which were used as posts and beams for the pit dwelling, are not found. That the skulls of sea mammals are not found may be explained on the basis of some religious concept toward the animals on the part of the ancient Aleuts.

"It was with the belief that the skulls of sea animals would come back to life that they were thrown into the sea. According to Krasheninnikoff, all of the bones of the first animal killed while the Aleuts were on a hunting trip were gathered with care and thrown into the sea. Because they were so disposed of, most of the remains are not found in the shell mounds." /Translation of the Japanese. T. N./

In the case of the Okhotsk pottery people, however, it appears that they did not have this worship of sea animals, for these have been found in all of the shell mounds, particularly in the shell mounds of this period in the northern Kuriles from which many skulls have been unearthed. The fact that there was a sharp difference between the two groups of people with respect to religious concepts toward the sea animals which formed the the main aspect of their daily life, is one which I believe should merit careful attention.

As previously stated, the physical characteristics of the Okhotsk pottery people, such as their brachycephaly, and peculiarities of the mandible and cheekbone, are most pronounced in the inhabitants of the northern Kuriles, especially Shimushu. Professor Kodama has hinted that if similar types are to be found elsewhere, the Eskimo (including the Aleut) would, at the moment, enter the picture; while Professor Weidenreich has clearly stated that they were Aleuts. On this point the observations of both the professors agree.

/ p. 55 / Now, as to the route the Okhotsk pottery people followed to get to the northern Kuriles: if we base our supposition on the skeletons, we can postulate the following two routes:

1. That they arrived directly from the Aleutians.
2. That they crossed over to Kamchatka from the Aleutians, then proceeded south.

The first would seem to be most probably impossible. Since shipwrecked ships from Japan frequently drift to Kamchatka or the Aleutians, and, according to Mr. Keinosuke ISHINO, an engineer with the Agriculture and Forestry Ministry, wooden clogs from Japan and

wooden fishing implements and boxes from Hokkaidō are frequently washed ashore on the various Aleutian Islands, we see that the current is completely adverse; so we must agree that it would be an extremely difficult task for boats made of skin and holding only two or three people to successfully ride through such a long sea voyage.

Before we consider the second supposition (that they crossed over to Kamchatka from the Aleutians and then travelled south), it is necessary to discuss whether the Aleutians formed the bridge for mankind from Asia to America. Among present-day scholars, there is almost nobody who favors this viewpoint; the only one who imagines such a possibility is the chief of the Anthropology Department of the National Museum of Washington, Mr. Hrdlicka. Most of them think that the Bering Straits formed the gateway for the movement.

The distance between the Kamchatka Peninsula and the Commander Islands is 138 miles; the distance from this point to the westernmost island of the Aleutians, Attu, across the vast expanses of open sea, is even greater: 253 miles. There is only a slim possibility that the small boats of that time could cross the foggy, rough and turbulent seas to distant Attu. When the Commander Islands [p. 56] were discovered in 1741 by Bering, there were no inhabitants on the island, and it is reported that there were no remains of any previous occupation by man.

Further, as a result of the archaeological investigations in the Aleutians by Messrs. Dall and Jochelson, it was found that there was not a single piece of pottery in this area. If people from Kamchatka (who possessed pottery) had migrated, you would expect that there would

be pottery in the Aleutians; also, it is clear that the Aleuts, who are a branch of the Eskimo, had crossed over to these islands from Alaska and spread out to the western island of Attu, and are not people from Asia - that is to say, from Kamchatka.

Now, if we consider the possibility that they could, on the other hand, have gone from Attu to the Commander Islands and then to Kamchatka, we should note that Jochelson, for the geographical reasons mentioned above, rejects this completely and clearly states that it would be impossible - using such arguments as the fact that the Kamchadals and the northern Kurile Ainu had no knowledge of the skin boats of the Aleuts prior to the invasion of the Russians.

However, on the other hand, Collins, the head of the Ethnology Department of the Washington Museum, has argued with great warmth the necessity for re-examining the sites on the Commander Islands on the basis of such facts as: that the pit dwellings in the Aleutians have their entrances in the roof, the resemblance of this to similar dwellings in Kamchatka, the similarity of such cultural remains as the stone lamp and other objects. Moreover, Collins has faith in the outstanding navigation skill of the Aleuts, and has therefore left his problem for future solution.

However, the view of most of the scholars is that the migration of the Aleuts to other islands was accomplished by their removal by the Russians after the latter's arrival.

An interesting fact in this connection is recounted by the modern Ainu who live on the eastern coast of Sakhalin: In the early years of the Meiji Period, the Aleuts of the Kuriles, carrying with them food enough for ten days, [p. 57] crossed the Okhotsk Sea in their skin boats.

and came to Sakhalin to hunt sea animals; but in this case also they had been taken by the Russians to the present Robben Islands and had been traveling about in various directions in the vicinity in their skin boats. The facts of the matter are stated in the following manner in Stejneger's The Asiatic Fur Seal Islands and Fur Seal Industry, Vol. 4, History of Robben Islands: "In 1869, at the time of the dissolution of the Russian-American Company, the various entrepreneurs in California and Alaska turned their attention to the Pribolof Islands, the Commander Islands and the Kurile Islands; Captain Limachevski took a crew of Aleuts (natives of Kodiak?) from Urup, where there was a branch of the Russian-American Company, in a sailboat and set out for the Okhotsk Sea, arriving in 1869 at Robben Island (the Fur Seal Island). There had been a fourteen-year respite from hunting since the Crimean War, so the animals had again increased in number to the limits of the available space along the seacoast; it was exactly the same awesome sight as reported by D. Webster in 1780 when he said that the hills were crowded with male animals. The Aleuts of Urup, who had had no experience in skinning animals that had been beaten to death, were afraid, and because a great number of them were unable to work, they were of no use even after they had disembarked, so the captain had no recourse but to sail away from the island.

"In 1880, Captain Blair of the company's sailing ship Leon arrived at Fur Seal (Robben) Island with Aleut laborers on June 13; but because the animals had not yet visited this place, he was unable to do anything; he learned that two sailing ships, the North Star and the Otsego had already arrived at the island." Thus, in 1869 and 1880, there were groups

of Aleuts who had been brought to Fur Seal (Robben) Island on these two occasions by Westerners; and because they cruised around in the vicinity in the skin boats which they had brought with them, such tales as we mentioned are prevalent today among the Ainu.

No matter how skilled the Aleuts were in navigation, we have no evidence to prove the hypotheses that they came either directly to the northern Kuriles from the Aleutians, or else went south via Kamchatka /p. 58/ and then crossed over to the Kuriles. It is my firm belief that the most realistic view would be to state that this would have been virtually impossible at that time.

The routes remaining must therefore be one of the following:

1. That they proceeded south via Kamchatka from the north.
2. That they proceeded north from the southern Kuriles.

When we view the problem on the basis of the cultural remains, there is an overwhelmingly closer relationship with the Okhotsk Pottery Period remains found in the southern Kuriles and around Nemuro and Kitami on Hokkaidō than with those unearthed in Kamchatka or in the Aleutian Islands; culturally, there are many evidences which confirm a northward migration in the Kurile Islands. This connection can be seen from pottery on down to various other relics. On the strength of what has been done up till now, I believe that the supposition based upon cultural evidence, that the route taken by the Okhotsk pottery people into the northern Kuriles was a northward one from Hokkaidō via the southern islands, is the most sensible view. As regards intercourse with the continent (Kamchatka) after the Okhotsk pottery people had arrived at the northernmost island of Shumushu: since they had become skilled in navigation after having

hopped from island to island which dotted the turbulent sea, it is not surprising that they then crossed over from Shumushu to Kamchatka - a fact which is attested by the discovery of reindeer antlers in the shell mounds of this period.

The reindeer, initially, was not an animal which inhabited the northern Kuriles. While they exist today on Shinshir, in the central Kuriles, these were transplanted from Sakhalin. On the basis of this fact, the reindeer antlers unearthed in the shell mounds were clearly either captured by the islanders when they crossed over to Kamchatka or were secured from the natives of Kamchatka through barter. I am of the opinion that they themselves crossed over to Kamchatka and brought them back. [p. 59] Thus, because there was travel to and from Kamchatka, there is always the possibility that some of their group settled on the peninsula. Many aspects of the archaeological investigations in Kamchatka are not clear for the reason that the land is so vast; but I believe that in future investigations sites and relics of these islanders will certainly be found from south to central Kamchatka.

Among the finds uncovered in the northern Kuriles which seem to testify to a connection with the continent is the stone lamp; and I have the feeling that the bone arrowhead with barbs (Nos. 12 - 15 of fig. 20) also has possible connections.

Next, I would like to advance a theory as to the period when the Okhotsk pottery people crossed over to the northern Kuriles; in other words, when man first came to these islands.

In general, the temporal position of the Okhotsk pottery within the Stone Age was contemporaneous, as mentioned earlier, with the brush-design (satsumon) pottery of the vicinity of Ebetsu, or with the very end of the First Period Hokkaidō-style Usude Jōmon pottery; so we may say that it was at the end of the Stone Age Period, at the Metal-and-Stone Period. But the actual year cannot be fixed by this. Fortunately, in the Moyoro shell mounds at Abashiri (Hokkaidō) there exist a great number of burials, and from these have been discovered accessory burial objects, such as noodle-design /applique/ pottery, stone objects, bone objects, and associated with these the fern /design?/ hand sword and iron lances with bamboo fronds and other metal objects; for this reason we are able to estimate the actual date of the noodle-design pottery. Mr. Nobuo ITO has exhaustively treated this subject in his thesis "Concerning the Fern /design?/ Hand Sword" in the Kōkogaku Zasshi, Vol. 28, No. 7.

The fern /design?/ hand sword has from the first been discovered in great quantity in the Ōshu District /Northern Japan/, and its use between the Nara Period /646 - 794 A.D./ and the Heian Period /794 - 1185/ is a matter of agreement by many scholars; the fern /design/ hand swords of Abashiri are very much later than this, and must be viewed as having come into the possession of these Okhotsk pottery people of the Moyoro shell mounds.

However, on the other hand, since the present location of the Moyoro shell mounds is at the mouth of the Abashiri River at a place which appears to have been built up by the silt of the river in recent times, there is need for a geological study. Moreover, Mr. Sueo SUGIYAMA

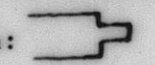
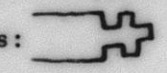
owns an Ainu sword on which fern designs appear; it is thought that they may have had these /p. 60/ swords made in the so-called Yezo fashion.

However, with regard to certain of the metal objects unearthed along with these others, Mr. Ito says that "the same type of relics as are found in the Nara and early Heian Period mounds in northeastern Japan have not been discovered here. Therefore the graves of the Moyoro shell mounds are slightly later in time than those of Ebetsu and Eniwa, but not, I think, later than the Kamakura Period" /1185 - 1392/. Judging by these facts also, the actual date of the Okhotsk pottery people in the northern Kuriles was without doubt much later - perhaps no earlier than the Muromachi Period /1392 - 1568/. I await with pleasure the future discovery in the northern islands of data which will lend themselves to the solution of this problem.

THE SECOND PERIOD (THE NAIJI POTTERY PERIOD)

In the foregoing I have given an account of the culture of the First Period - the Okhotsk Pottery Culture. Here and there among the ancient house pits of this period, whether clustered in one place or built singly, there were discovered occasional ones with traces of an entrance-passage; and excavation of these revealed construction methods and artifacts which differed somewhat from those of the First Period and displayed, on the contrary, similarities with the most recent pits. They clearly appear to be the prototype of the latter.

/p. 61/ In ground plan these pits are square with a slight roundness to them. Adjoining the wall on the side where the entrance was evidently

located there is a passage. On Shumushu, this passage joins the pit approximately in this fashion:  ; the majority of these passageways run along the major axis of the pits and are built into the center of the wall. There was only one example of the passageway being built in the form of a cross, thus:  . At Kabasato, on the southern tip of Paramushiro, passages in the form of a T were frequently found. The arrangement of the pits of this period clearly reveals a settlement pattern. In the case of Pit Dwelling No. 5, excavated in 1936 at Bettobu, the "mother-pit" was a large one 10 meters in length located on a small hill across a stream; in front of this were two pits about 5 meters long laid out in a row; and behind it was the pit in question (Pit No. 5). In Kabasato, which was excavated last summer, a group of some dozens of pits which had the passageways characteristic of this period was located on a sand dune. They were all laid out in a row, with their entrances facing the seashore; there was thus clear evidence of arrangement of the pits.

In describing the circumstances of excavation of the house pits of this period, we can adduce the following examples:

On Shumushu:

1. Pit No. 5 (excavated August 1935).
2. Oikawa Pit No. 1 (excavated July 1936).
3. Oikawa Pit No. 4 (excavated July 1936).
4. Oikawa Pit No. 8 (excavated July 1936).
5. Bettobu Pit No. 1 (excavated July 1937).
6. Bettobu Pit No. 5 (excavated July 1937).
7. Bettobu Pit No. 6 (excavated July 1937).
8. Shiomikawa Pit No. 1 (excavated July 1937).

On Paramushiro:

1. Kabasato Pit No. 10 (excavated July 1938).
2. Kabasato Pit No. 11 (excavated July 1938).

The Shumushu Group:

Pit No. 5. (fig. 23)

On a small, low hill at Bettobu there are situated four pits; the pit in the middle is a large one measuring ten meters lengthwise and eight meters in width, and forms the central pit in front of which is a row of two small pits and in the rear of which is located Pit No. 5. The whole gives the impression of the site of a small village community or of the dwelling place of some primitive kin group. The motive behind our excavation of these pits was our theory that the large pit in the center was the "mother-pit" and that the others were storage pits; so with great expectations we set about our task. The shape of the pit before excavation was clearly rectangular, and the passageway to the entrance was plainly evident on the south side. The length and width of the passage were both approximately one meter. The walls from 1 - 2 measured 3.15m.; from 2 - 3, 3.7m.; from 3 - 4, 2.7m.; from 4 - 1, 3.65m. From A - B, the minor axis, was 3.3m.; the depth, at the center, was 60cm. In the center, /at a depth of/ approximately 35cm. we reached the yellow-earth bottom of the pit. There were four remains of post holes with /portions of/ the posts preserved; these /p. 63/ have been labelled a, b, c, and d; each of the post holes had a diameter of about 10cm. and was from 20 - 30cm. deep. The best-preserved remnant of a post was found in b, and was 60cm. in length; post c was broken in two, with one half (measuring about 40cm.) standing in its original hole, and the other half (measuring about 60cm.) fallen and pointing toward post a. In post hole a there was a post measuring about 50cm. All the post holes ran parallel to the walls, and were ranged about what appeared to be the site of a fireplace

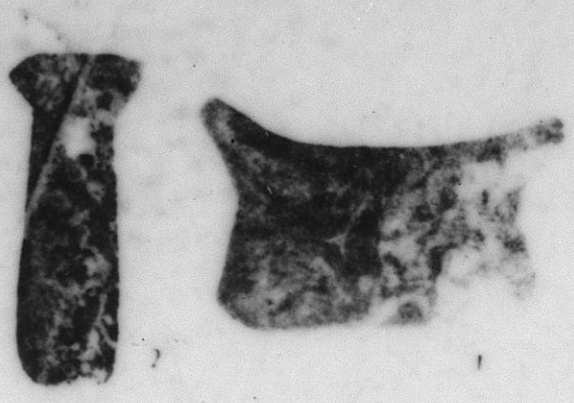


Fig. 22. Labrets unearthed at Kataoka, Shumushu Island.

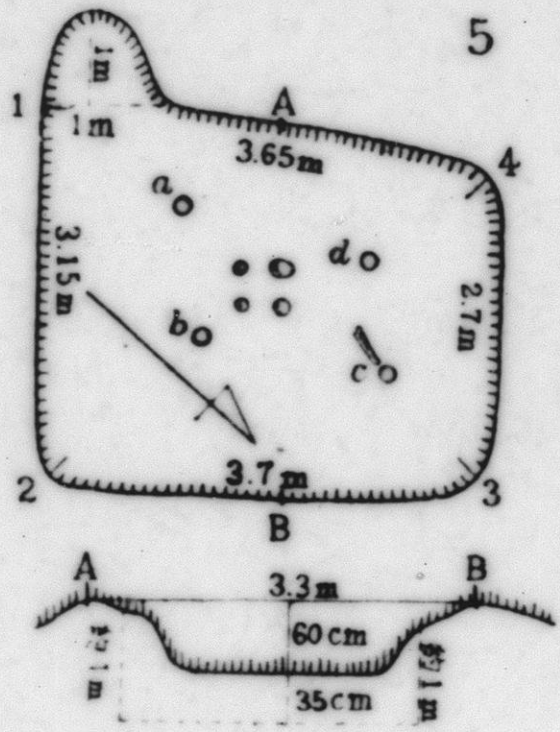


Fig. 23. Pit No. 5

in the center. Here several natural stones had been placed, and the fact that remains of charcoal were found led us to conjecture that this was the remains of a hearth. Since there were no traces in the four corners of the pit of either decayed posts or of post holes, this led us to conjecture that the four posts in the center of the pit were built in the style of the Sakhalin Ainu, who used such posts /to support the roof/; and to further conjecture that this was probably a small residence or the storage house for some objects. Among the finds uncovered were one lower jaw of a sea mammal which had been cut in two; two or three pebbles; and some red powder the color of red ochre. This was all that was found; it was an unproductive pit.

Oikawa Pit No. 1 (figs. 24, 25)

This is one of the cluster of pits located on top of the hill by the Takeda Fishery at Oikawa on Shumushu. As fig. 24 shows, the front wall (i.e. 3 - 4) is slightly wider than the back (1 - 2) wall. The entrance passage is located in the center of wall 3 - 4 and is oriented in a southwesterly direction. The depth at the center of the pit, before excavation, was 93cm.; 20cm. farther down at this spot and the floor of the pit was reached. The distance from 1 - 2 is 4.2m.; from 2 - 3, 4.4m.; from 3 - 4, 5.35m.; from 1 - 4, 4.7m. The passageway was approximately 1.5m. long and 1m. wide. There were remains of nine posts, and from these we were able to ascertain the typical distribution of pillars, /p. 64/ and thus to know the pit-dwelling construction methods for this period. Between what appear to be the main posts at the four corners (which we have labelled a, c, e, and g) are posts f, d, and i. Toward the front, two posts (h and f) have been situated in something like a

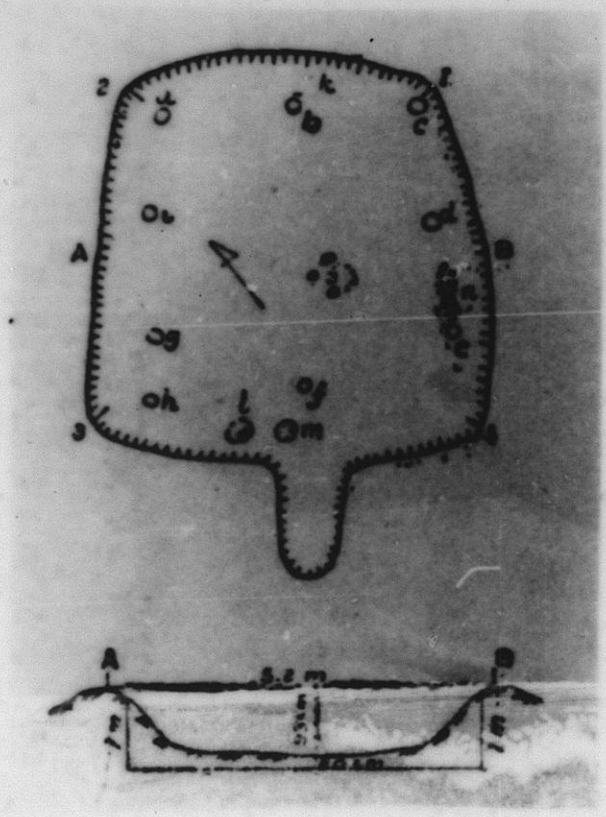


Fig. 24. Oikawa Pit No. 1

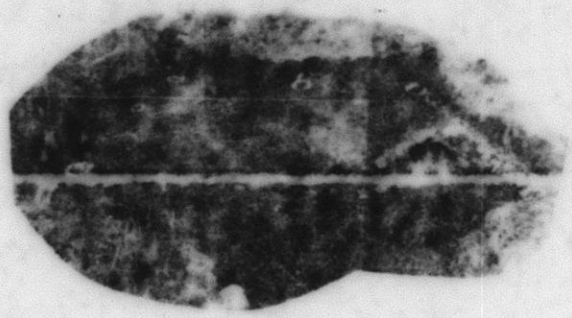


Fig. 25. Oikawa Pit No. 1

line; but in the light of the fact that these post holes are not very deep, they could not be considered major posts. In giving the diameter and the depth of the post holes, the first figure indicates the diameter in centimeters and the second the depth. Post a: 11, 45; b: 15, 35; c: 20, 55; d: 20, 50; e: 15, 50; f: 10, 20; g: 20, 60; h: 15, 20; i: 15, 55. l, m, k are rather large stones; n is some sort of object like a stone pavement, with pebbles from 5 - 10cm. in diameter being laid down in a thin line; this was 75cm. in length and 30cm. in width, and lay along the left wall facing the entrance. In the spot marked j there were three or four small stones which looked as though they might have formed the site of a fireplace, but this was not certain. No finds were unearthed other than two or three pebbles; but this pit was very instructive in that, in showing us the arrangement of the posts, we were able to ascertain the method of construction of the pit dwellings of this period.

Oikawa Pit No. 4 (figs. 26, 27)

This was roughly oval in shape, with a passageway facing approximately toward the west 1.3m. in length and 1m. wide. The minor axis of the pit (2 - 4) was about 3.9m.; the major axis (1 - 3) was about 4m. The depth of the pit near the center, prior to excavation, was 35cm.; 45cm. below this was the floor of the pit. As the result of further excavation we found the remains of three post holes, a and b being at the mouth of the passageway. In post hole a there were remains of a wooden post with a diameter of 8cm. projecting 20cm. above the floor. The diameter of post hole b was 13cm., with a depth of 38cm.; post hole c had a diameter of 10cm. and a depth of 28cm. A stone-paved feature similar to that / p. 65 /

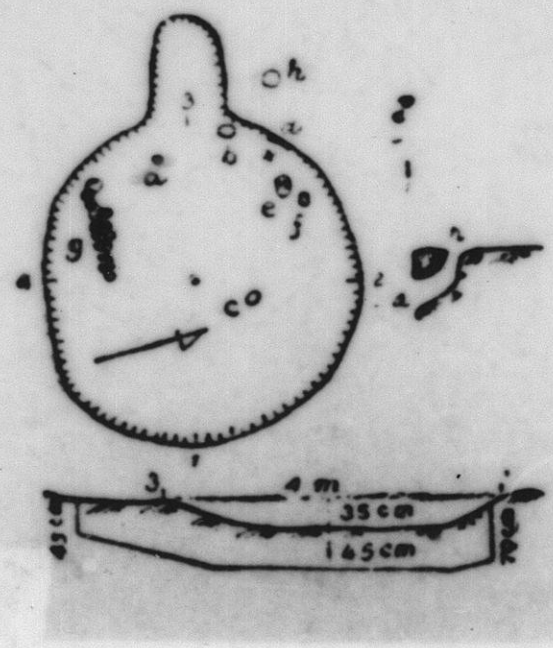


Fig. 26. Oikawa Pit No. 4

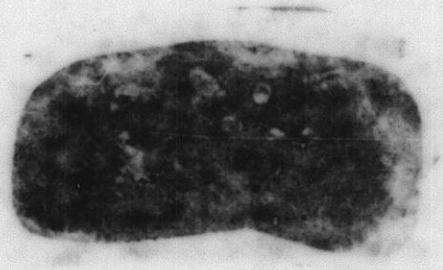


Fig. 27. Oikawa Pit No. 4

discovered in Pit No. 1 was found (labelled g); like the other, it was situated on the left of the pit facing the passage. It was 1.2m. in length and 28cm. in width. We discovered several pieces of what appeared to be decayed pelts and bits of iron. In the right wall facing the passage, at the point marked d, was the hole for the flue of the "oven" (kamado); it was an oval-shaped hole 30cm. in diameter situated 30cm. below the surface of the earth, with its mouth located outside at h about 45cm. away. Virtually nothing remained of this oven except the two rocks labelled e and f. At these points there were discovered broken pieces of naiji pottery which, however, retained much of their original shape. From within the flue we discovered one piece of naiji pottery. Other than this, we discovered nothing more than one chipped stone axe.

Oikawa Pit No. 8 (figs. 28, 29)

This is located in the vicinity of the mouth of the Oikawa, and is rectangular in shape. The earthen embankments on the four sides were perfectly preserved. The entrance passageway was not situated in the center of [p. 66] [the wall] but was nearer a corner; it faced in a southeasterly direction. The depth of the pit at the center, before excavation, was 75cm.; and 20cm. below this point we reached the floor of the pit. There were the remains of five posts: c, d, and e were arranged in an irregular line along the back wall, while in hole b were the remains of a post. The first figure indicates the diameter of each hole in centimeters, and the second the depth: post a: 10, 35; b: 15, 60; c: 10, 55; d: 13, 50; e: 10, 45. We were not able to find the typical arrangement of post holes here. As in the others, we discovered

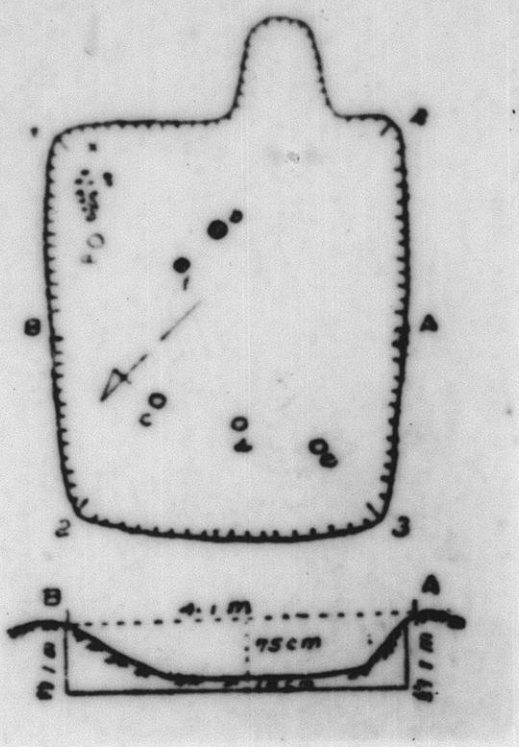


Fig. 28. Oikawa Pit No. 8

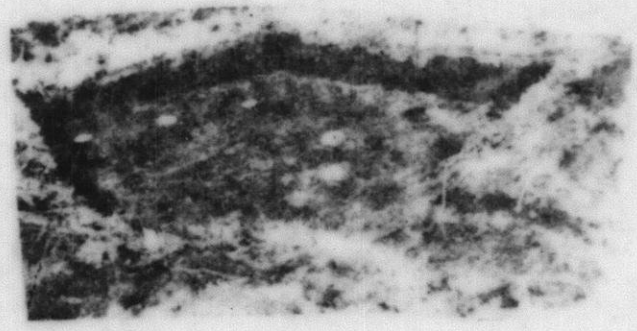


Fig. 29. Oikawa Pit No. 8

along the wall to the left, near and facing the passageway, the same stone pavement, which was here 65cm. in length and 25cm. in width. At the spot marked X in fig. 28, we found a piece of naiji pottery broken in two, and what appeared /¯p. 67_/ to be a stone arrowhead with a tang but is more likely a stone knife. The length of the passageway was about 1.3m. and its width about 1m. The size of the pit was as follows: the length of the wall from 1 - 4 was about 4m.; from 1 - 2 was 4.7m.; from 3 - 4, 5m.; the back wall (2 - 3) was about 3.65m.

Bettobu Pit No. 1 (figs. 30, 31, 31a, 31b, 31c)

/¯p. 68_/ This pit is located on high ground bordering on the Bessho Marsh (a small marsh located at the point where the Bettobu River branches off (?) from the Shiomikawa; it is named after the son of the late Sakichi BESSHO, Jirozo BESSHO, one of the men under the late Captain Gunji, who lies buried here). The appearance of the main pit prior to excavation was as follows: it had a rectangular shape with rounded corners, was extremely long, and faced east. Leading from it was a passageway which turned slightly northward, and ended in the form of an uneven cross. It was a rare example of a giant pit - an exceptional one which struck us as being one used for gatherings. Its appearance after excavation was as follows: its major axis, from Q to 5, was 9.8m. (Q designates the center of the wall 3 - 4; 5 is the point of intersection of the line running down the center of the pit and the line running between points 1 and 2); its minor axis A - B was 6.6m. (A is the center of the wall 1 - 3; B is the center of the wall 2 - 4); the passageway, measured from 5 to the middle of the line running from O to P, was extremely long: 8.7m. It was unusual to find such a pit in the northern Kuriles; rather,

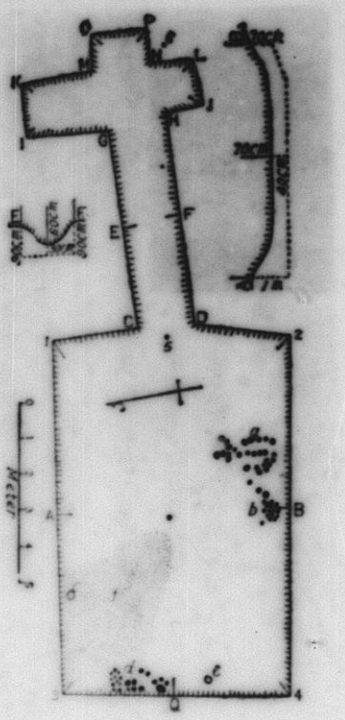


Fig. 30. Bettobu Pit No. 1

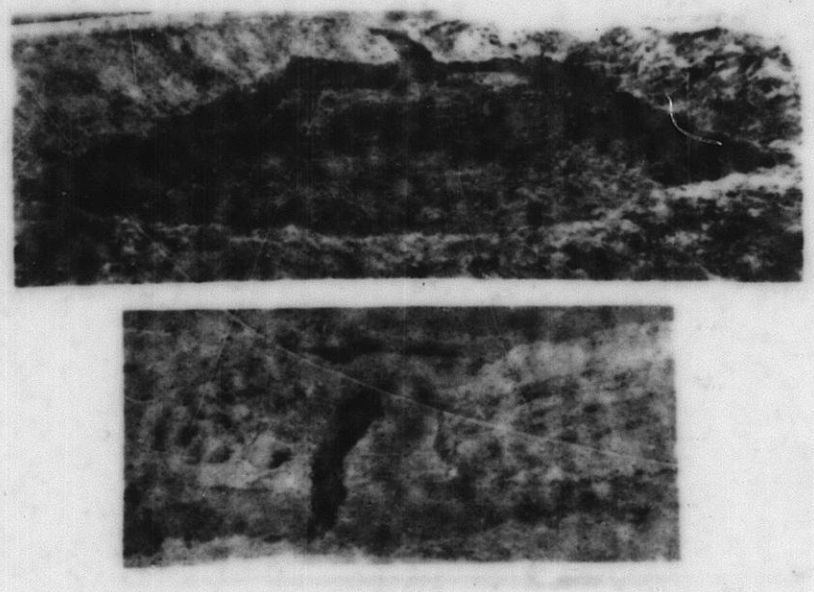


Fig. 31. Bettobu Pit No. 1.
1: view of the main room; 2: main room seen from the entrance passage.

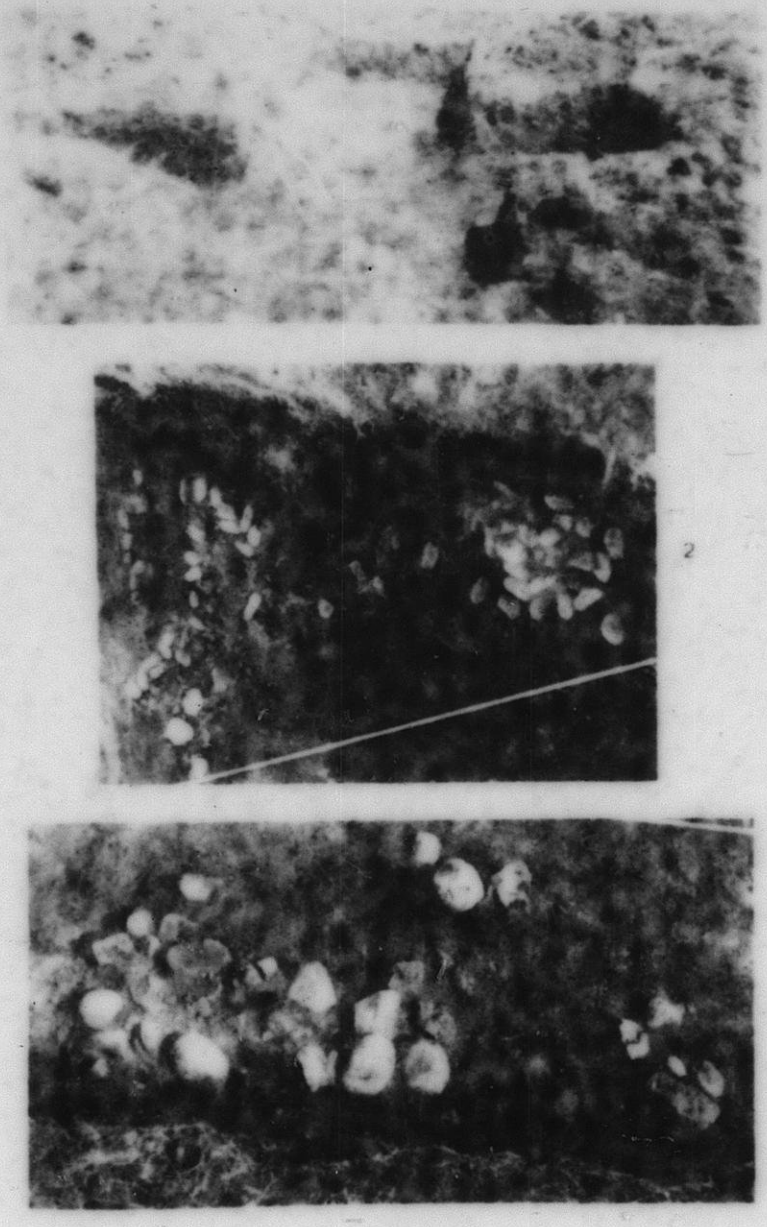


Fig. 31a. Bettobu Pit No. 1.
1: view of the entrance; 2-3: stone features in the main room.

it strongly resembled, in outline and length of the entrance passageway, those found on southern Kamchatka. The length /of the "crosspiece"/ of the cross was about 5.2m.; its width was about 1.8m. At the point marked E - F the depth, before excavation, was 60cm.; the floor was located about 30cm. below that. The depth at the center of the main pit before excavation was about 70cm., and at about 40cm. below that the floor was reached. The depth of the walls was as follows: about 1m. at A; 70cm. at B. Layers of shells were scattered from the wall between A and 3 toward the center; the thickness of these layers reached 10cm. in some places. The area of distribution of these shells is indicated by f in fig. 30. The stratigraphy in the vicinity of post C showed a 6cm. layer of a black-earth overlay; a 40cm. layer of a mixture of ash, shells, and animal bones; and a 5cm. layer of black charcoal. Within the pit, the floor was slightly raised from walls 2 - 4 toward the center. In thi it also, as in the others I have described, there were the features composed of small pebbles /See fig. 31a/; at the point marked a was a purposeful arrangement of pebbles about 10cm. in diameter. The length of this feature was about 2m.; its width about 1m. The point marked b was contiguous to a; here /p. 69/ stones of about the same size were piled up in a rough circle about 50cm. in diameter. Both of these features were found on the raised portion of the floor. At point d, there was an arrangement of a pile of rather large stones, about 25cm. in diameter, along the wall marked 3 - Q; the length was about 1.6m., and the width 72cm. These stones had become discolored from heat, and since we found evidence of a great quantity of charcoal, this led us to believe that this was probably the site of the fireplace. Post holes were

Fig. 31b. Stone artifacts from Bettobu Pit No. 1 and Naiji sherd (No. 8). (No. 2 is 9.4cm. in length).

Fig. 31c. Bone artifacts from Bettobu Pit No. 1 (Scale: No. 7 is 10.5cm.).

discovered only at the points marked C and E; both were 10cm. in diameter and 70cm. in depth. Numerous artifacts were recovered /figs. 31b, 31c/: four polished stone adzes; three stone knives; two stone objects that look like lances (or knives?); five stone arrowheads, etc. Potsherds were all of the naiji pottery: several were discovered about 25cm. below the surface near the passageway; others along the F - D wall in the passageway, and along the walls labelled L, I, and J in the "crosspiece" of the entrance passage. In the shell-layers at f were found bone implements, such as harpoons, arrowheads, bird-bone tubes (containers for bone needles); and among animal bones, several well-preserved mandibles of dogs were unearthed. According to the researches of Mr. Hiroshi SAITO, the dogs were of the Eastern Siberian type which had come by way of Kamchatka.

Bettobu Pit No. 5 (figs. 32, 33)

This is located close to Alexander Hill, about 20 meters from the entrance to the cross-shaped passageway of the No. 1 pit described above. The length from A to B was a little more than 7m. (B being the center of wall 3 - 4; A being the point of intersection of the entrance passageway and a line extended from B through the center of the pit). The width was more than 5m. The entrance passageway, before excavation, was about 1.5m. long and about 1m. in width; it was a depression about 17cm. deep and faced in a northeasterly direction. After excavation it proved to be about 2m. in length and about 2m. in width; the floor of the passageway was reached at 70cm. The center of the pit was 60cm. deep before the excavation; 35cm. below that was the floor. The depth /p. 70/ at the entrance, at point A, was 75cm; this is rather shallow.

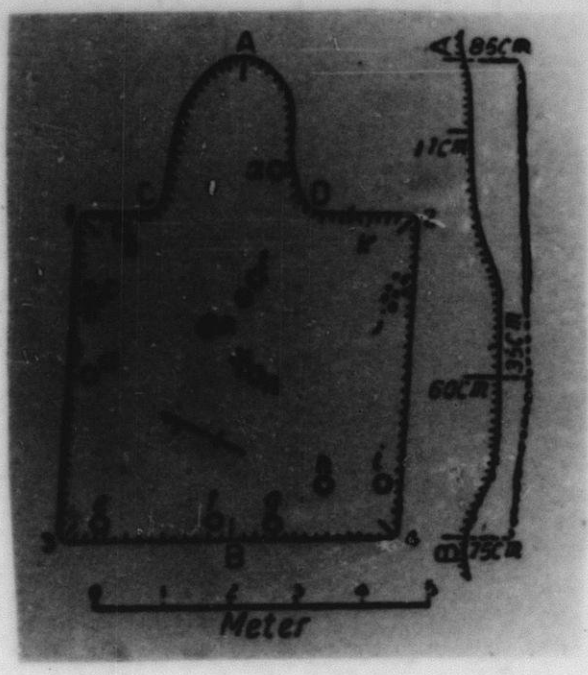


Fig. 32. Bettobu Pit No. 5

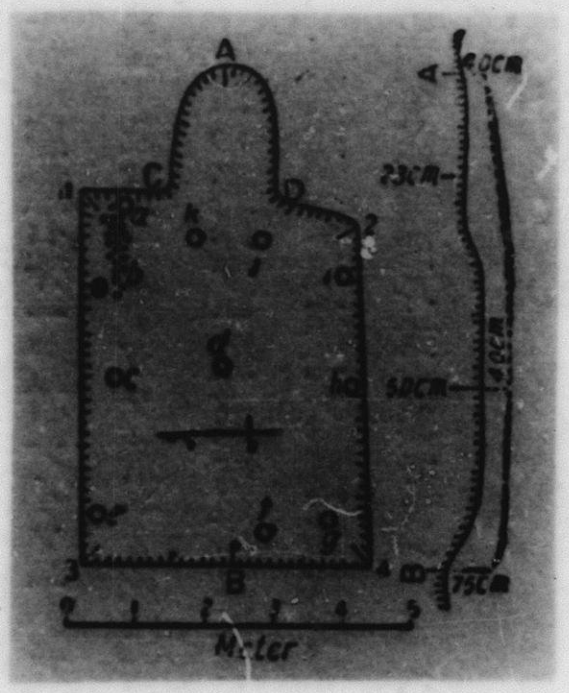


Fig. 34. Bettobu Pit No. 6

In the interior, a skull was found near the main room on the left side facing the entrance, but the skeleton was not discovered. In this pit the typical pebble feature did not occur, but at c and j two scattered lines of pebbles were found; while at m, in an area one meter square, there were three stones 20cm. in diameter. Near post hole n there was a heap of pebbles, and at first glance this /¯p. 71_/ appeared to be the site of a fireplace, but there was no evidence that it was; rather, about one meter in the direction of the entrance, there was a slight hollow, the bottom of which had been burned and which had turned a reddish color. Fortunately, in this pit we were able to discover ten post holes (labelled b, d, e, f, g, h, i, k, l, n) which gave us some clue as to the construction of the pit dwellings. The first figure indicates the diameter of the post holes in centimeters and the second their depth: post b: 20, 40; d: 25, 30; e: 5, 30; f: 10, 20; g: 7, 45; h: ?, 40; i: 24, 40; k: 15, 25; l: 17, 35; n: 25, 25. Among the artifacts uncovered were one polished stone adze, one stone knife, and two stone arrowheads, all in perfect condition. In addition there were found one arrowhead tang made of bone in the same shape as the chirosh of the Ainu /¯Chirosh: blunt arrows used to irritate bears in bear feasts._/; two or three other bone objects; two glass beads; and a type of glass bead called Nankin-dama. After inspection by Mr. Moriichi GOTO of the Imperial Household Museum, and Mr. Sueo SUGIYAMA, the beads were said to be European, probably Russian. The skull unearthed is being studied at the moment by Professor Kodama of the Medical School of Hokkaido University; it appears to be the skull of a woman. Corroded bits of a small metal knife /¯knives? T.N._/ were also discovered in

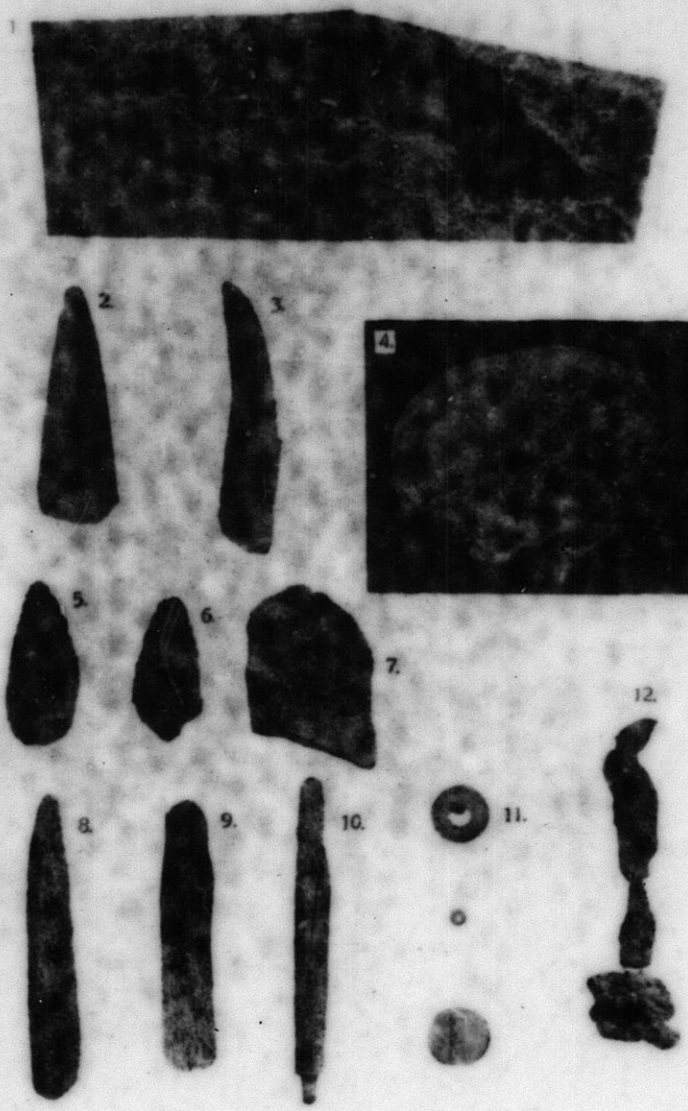


Fig. 33. 1: Betobu Pit No. 5; 2-3, 5-7: stone artifacts recovered; 4: human skull; 8-10: bone artifacts; 11: glass beads; 12: iron object (Artifact scale: No. 2 is 6.9cm. in length).

this pit. All the pottery was naiji ware, with several sherds being found at both the spots marked C and D, at the entrance, and also near m.

Bettobu Pit. No. 6 (figs. 34, 35)

This is at a distance of about 30 meters from Pit No. 1, and is located at a spot near Bessho Lake /There is, apparently, no difference in Baba's view between a lake and a marsh - Ed./ The pit prior to excavation presented a rectangular shape; its entrance was a depression of 23cm., and the depth at the center was about 50cm. The length of the pit from A - B is approximately 7m. (B being the center of the wall 3 - 4; A is that point where a line extended from B through the center of the pit intersects the entrance-wall). Its width is about 4m.; its depth at the center of the pit is about 40cm. /p. 72/ The floor of the entrance, at its center, was reached at 30cm.; the opening C - D was 1.6m. wide and faced east; it sloped gently into the main room. The depth of each wall is as follows: 1 - 3 and 2 - 4 are both 90cm.; on wall 3 - 4, the point marked B is 75cm. deep; the point marked A, at the entrance, is 40cm. Near wall 1 - 3 is an area marked b about 1.4m. in length and 30cm. in width, within which pebbles about /p. 73/ 10cm. in diameter are arranged. This, like the above-mentioned Oikawa Pits Nos. 1, 4, 7 and 8 appears to be a paving of stone, and like the others, is at the left of the pit facing the entrance. In this pit were remains of ten post holes, and these have been marked a, c, d, e, f, g, h, i, j, k in fig. 34; the arrangement of these holes strongly resembles that of the previous pit and the Oikawa Pit No. 1. The first figure indicates the diameter of the post holes in centimeters, the second in depth: post a: 15, 42; c: 20, 40; d: 20, 50; e: 17, 39;

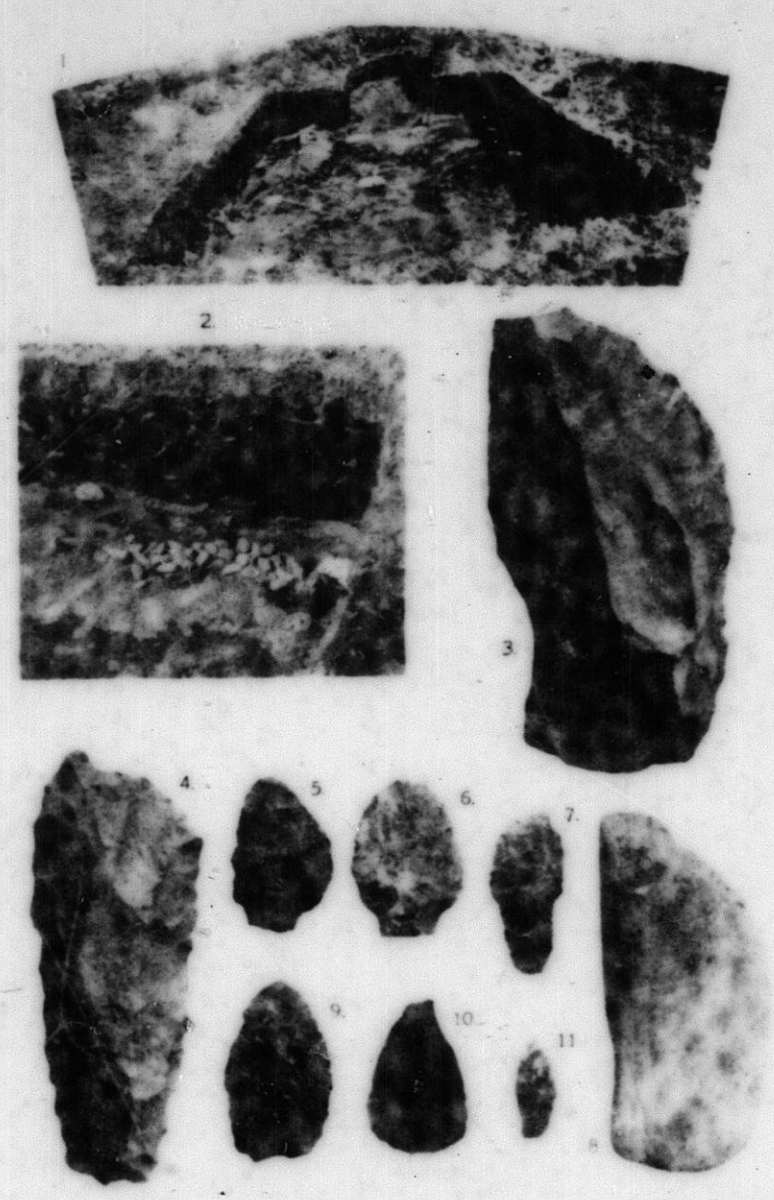


Fig. 35. 1: Bettobu Pit No. 6; 2: stone feature; 3-11: stone artifacts (Scale: No. 3 is 13.4cm. in length).

f: 15, 45; g: 20, 50; h: 20, 38; i: 15, 42; j: 15, 60; k: 15, 53. The artifacts consisted of two stone knives, six stone arrowheads, one whetstone, and several corroded items of bone.

Shiomikawa Pit No. 1 (figs. 36, 37, 37a)

This pit is one of a cluster of pits located on a hill adjacent to Shiomikawa near the Nishide Crab Canning Factory. In the rear of the main pit and close to it is a smaller pit. The entrance passage into the main pit appears to form a small room. The pit had an original oval shape with rounded corners. In the course of excavations, the floor of the pit was reached at a depth of 50cm. (the depth prior to excavation was 23cm.). The major axis, along the line from 1 - 2, was 7.7m.; the line 3 - 4, which could be called the minor axis, was 3.6m.; and as for the passageway, C - D was 1.2m. and A - B 2.7m. The depth of the walls was as follows: at point 1 it was 54cm.; at 2 it was 50cm.; at 3 it was 70cm.; at 4 it was 60cm. At the bottom of the pit there were places strewn with pebbles, as at a in the entrance passageway, where, in an area 85cm. long and 25cm. wide, two rows of stones were arranged. At /¯p. 73_/¯ point b three flat stones about 20cm. in diameter were placed; at point c, small pebbles (the largest of which were 25cm. in diameter and the smallest 10cm.) were placed in an arc-shaped pattern in an area that measured 1.8m. in length (east-west direction) and 1.15m. in width (north-south direction). Ashes /¯p. 74_/¯ were discovered in several places. Point d is the location of a post hole; its diameter was 10cm. and its depth 70cm.; it was the only post hole discovered in this pit. A man-made object uncovered in this pit was a naiji pot with four lugs; although broken, all the pieces were present; it was excavated

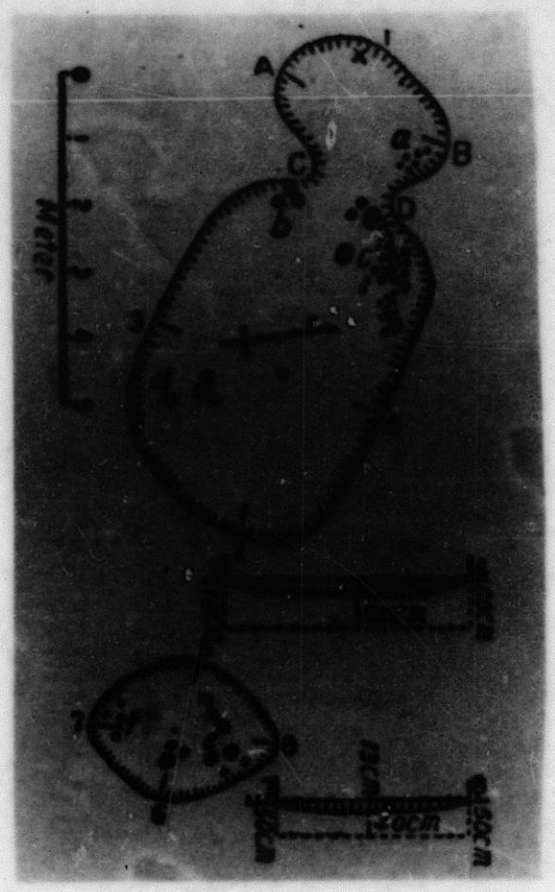


Fig. 36. Shiomikawa Pit No. 1

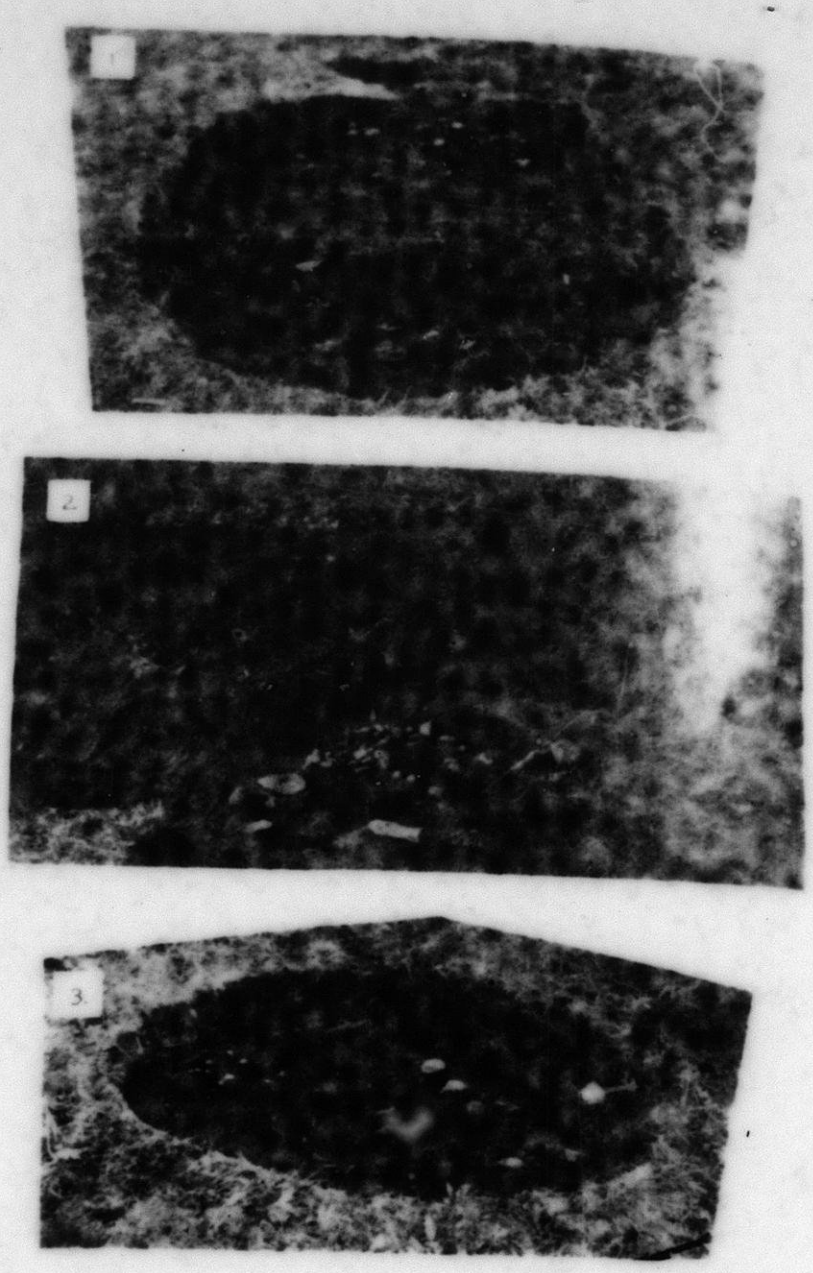


Fig. 37. 1: Shiomikawa Pit No. 1;
2: stone feature; 3: small adjoining pit.

directly under the surveying pole placed at point 2. At the spot marked X over the stones at point C, a naiji pot with two ears was found which had broken in two. At the rear wall two polished stone adzes were found on the floor: one was single-edged, flat, and made of andesite; the other was made of porphyrite and was lacking the point; it was rounded at the center and a cross-section would show a crude round triangle. The smaller pit adjoining the larger was oval in shape; it was very shallow, with a center 13cm. deep. After excavation, the center reached a depth of 40cm.; its major axis (7 - 8) was 2.9m.; its minor axis (5 - 6) was 2.2m. At a point near the marker labelled f were found several dozen pebbles in an area which measured 45cm. in length and 25cm. in width. At point l /typographical error for e? T.N./ in an area measuring about 1.57m. in length (north-south), about 1.5m. in width (east-west), were found numerous small stones, the largest having a diameter of 25cm., the smallest 10cm.; some gave evidence of having cracked because of heat, and there were also traces of charcoal; therefore it was thought that this might have been the site of the fireplace. No artifacts were discovered. It cannot be said for a certainty that this pit was connected /with the main one/; but because other examples exist where such small pits are situated very close to larger ones, I have dealt with this one on the supposition that it was probably connected. I would like to /suspend judgment/ until the discovery of examples in the future.

The Shell Mounds

Shell mounds that appear to belong to this period were not as plentiful as in the case of the previous period; on Shumushu we were able to discover three at Bettobu and one at Kodomari.

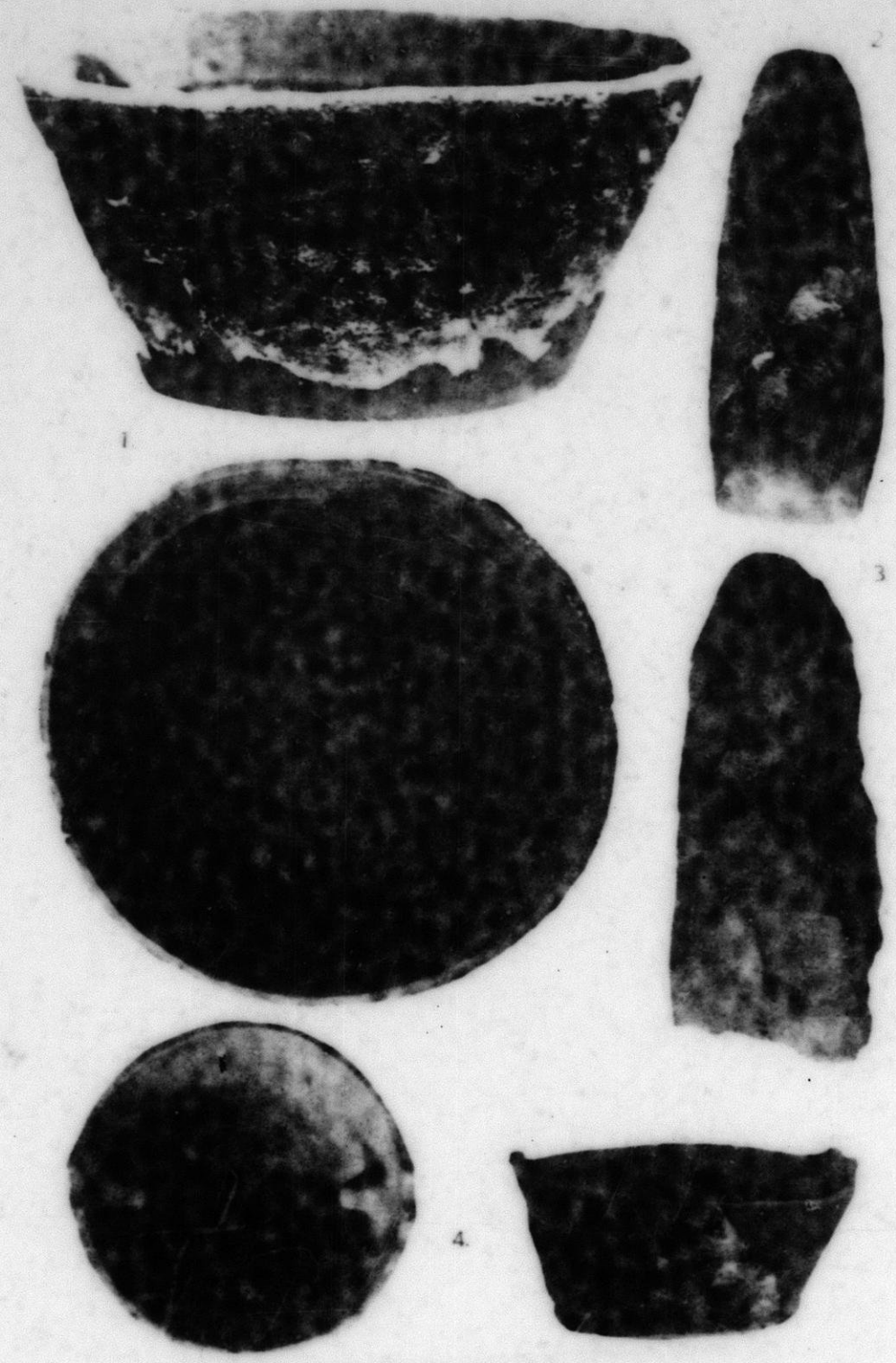


Fig. 37a. Naiji pottery and stone adzes from Shiomikawa Pit No. 1. (No. 2 is 11.6 cm. in length).

/p. 76/ Those at Bettobu I discovered in 1933 at the time of my first investigations in the Kuriles. The results are in my "Archaeological Investigations on Shumushu Island, Northern Kuriles." For the locations and further details, the reader is referred to this article. /See Translation No. 2 - Ed./ Because the sites were all on sand dunes, it was difficult to determine any standard thickness of the overburden, which was, in some places, over one meter and in others about 50cm.; but the shell layers were very thin, with thicknesses between 5 - 10cm., and their area was very small. The chief shell found was the ezo-irigai; /Japanese name; we were unable to identify the species - Ed./; the bones of sea mammals were numerous, and bone implements and naiji pottery were uncovered, but the proportion of bone implements recovered was not as great as in the shell mounds of the First Period. Stone implements are also frequently found.

The shell mound at Kodomari is located beneath the cliff near the so-called Kodomari Misaki (Point) on the side toward Kunihashi-zaki about 1.22 miles from the codfish factory of the Chishima Fishery at Kodomari. The site, in 1936, was near the codfish /processing/ factory operated by Mr. Yoshito UTSUMI, and the shell mound was destroyed at the time this fish-drying plant was constructed; its remains today are at the foot of the cliff. The overlay of sand and soil was about 10cm.; the shell layer was an extremely thin one of about 20cm., with the principal shell being Volsella modiola. A small quantity of animal bone was found. Artifacts recovered comprised pieces of naiji pottery, stone adzes, combs, and the tangs of bone arrowheads which looked like chirosh. /See fig. 37b/

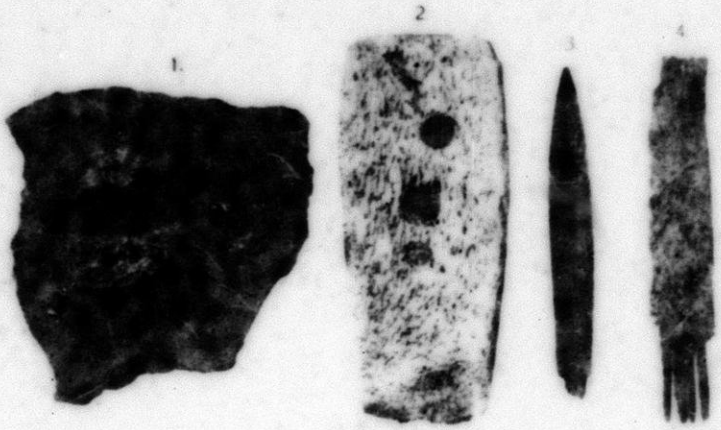


Fig. 37b. 1: Naiji sherd; 2-4: bone artifacts from shell mound at Kodomari.

Among the cases in which shell mounds were discovered in the house pits were the Bettobu Pit No. 1 and one pit at Oikawa which had a passage-way. When the latter was tested by sinking a pit at the left side facing the entrance, a shell heap was discovered at this spot; and in this deposit we discovered two or three pieces of naiji pottery.

Up to now the number of shell mounds of this Second Period which have been discovered is very small. While serious excavations of them have not been carried out, it appears that artifacts are not very plentiful in them.

Possible Graves

At Shiomikawa on Shumushu, near the base of the slope of the sand dune where the so-called Shiomikawa Shell Mound No. 2 is located, an employee of the Takeda Factory discovered, beneath two or three inches of soil, several /- p. 77_/ human skeletons along with a great number of bone objects which had been buried with them. According to the discoverer, the skeletons were buried extended with their heads facing the east. Among the grave goods were a broken piece of a short sword, more than ten bone arrowheads bunched together; and the "head" of a musical instrument of bone copied from something that looks like a Russian violin. This was seen to be a relic of the period after the influx of Russian culture and therefore was surmised to be from the middle of the Second Period.

In summarizing the above: the pits of the previous period, or the Period of the Okhotsk Pottery Culture, were originally rather square in shape; but, in their present condition, they have turned round or oval-

shaped and they have become extremely shallow due to the crumbling of the walls, the putrefaction of organic matter, and the accumulation of dirt and sand over a long period of time. Some were so shallow that it was difficult to judge whether the pits were naturally made by the force of the winds or whether they were the remains of houses. It must be borne in mind that these examples are not located on sand dunes but on hills of diluvial soil.

The pits of the Second Period always had a passageway-entrance; most of them were of a rounded square shape, and they are slightly deeper than those of the previous period. As for the position of the passageway it was almost always joined approximately at the center of the wall where the entrance was, but in some cases the passageway was situated toward one corner (as in the example of the Oikawa Pit No. 8) or put exactly at the corner of the wall (as in Pit No. 5).

As for the length and the width of such passageways, the length in the majority of the examples appears to be about 1.5m. and the width between 1m. - 2m. The sole exception to this was the Bettobu Pit No. 1, in which the length of the passageway was about 8.7m. Such an example is rare in the northern Kuriles, and in its ground plan it strongly resembled those on Kamchatka rather than those in the Kuriles.

Regarding the pits on Kamchatka I will write later, but the remains of the passageway in the northern Kuriles represents the remains of the entrance, while those on Kamchatka are not the remains of the entrance but are tunnels which acted as flues for the fire; and since a length longer than that of the pit was necessary for this purpose, an extremely long and narrow passageway was added. The examples of an entrance-

passageway on Shumushu were appended to the entrance wall in this manner: but on Paramushiro some which were in the form of a T, thus: , were often encountered.

/p. 78/ There was no set rule as to the direction in which the passageway faced; they appeared to have been appended toward some convenient direction, such as the seashore, river, or lake. This is in contrast to the set rules which the Ainu have about the windows and entrances of their houses.

When compared to the Iron Age house pits near Higashi-Taraika on Sakhalin and the cluster of square-shaped pits near Poromushiri at Nemuro (Hokkaido), all of which have their entrance on the south side, /these pits/ had no set rule regarding direction, with the exception that the entrance to the dwelling was, I imagine, built so that it would face in a direction which would expose it to the winter winds. Otherwise the snow would drift and pile up at the entrance causing great inconvenience in going out and in. The clusters of pits with passageways in southern Kamchatka show that these passages are not arranged according to any rule; the majority of them are placed in a convenient location. Jochelson has this to say on the subject:

"We know that many of the Siberian tribes, for instance the Yakut and Buryat, have the entrance of their dwellings facing the east, where the sun rises. The sun is regarded as a benevolent deity, and it is advisable to have the door facing the sun in order to get its benefits. The back of the dwelling is turned to the west, the abode of evil spirits. The entrance to the tents of nomadic peoples (Chukchee, Koryak, Tungus, Yukaghir and others) faces the east for the same reason. On the other

hand, the door to the dwellings of maritime peoples faces the sea in order to give free access to sea mammals, as though they were visitors. For the same reason the entrance in summer tents of Siberian fishers faces the river. According to Professor Petri, the dwellings of the Neolithic people of the Baikal region, the remains of which he discovered, had entrances facing the south, the side of the sun's highest position. Thus we can comprehend why the passage of the old Kamchadal dwellings faced, in some cases, the sea, in others the lake or a river, in accordance with the food which one or another water basin supplied." /Waldemar Jochelson, Archaeological Investigations in Kamchatka, Carnegie Institution of Washington, 1928; pp. 64-65./

We can surmise from this that the relation must have been the same in the northern Kuriles.

/p. 79/ In the majority of cases these passageways are joined to a wall forming the minor axis of the pit; the one case discovered to date in which it was attached to the wall forming the major axis was the Oikawa Pit No. 11 — but such examples are extremely rare.

As for the size of the pits, those measuring 3 to 6m. in both their major and minor axis were numerous; few measured over 7m. The largest example excavated to date was the Bettobu Pit No. 1 which measured 9.8m. x 6.6m. with a passageway reaching a length of 8.7m. Its entire length from the inner wall to the entrance actually measured 18.6m.; it actually looked like an assembly house.

Almost all were single-unit pits; but occasionally there were some in which the entrance passageway gave the appearance of forming a small room. Bettobu Pit Nos. 1 and 2, and the Shiomikawa Pit No. 1 are examples

of this type; but in the Kabasato Pit No. 10, there is, between the passageway entrance and the main room, a complete small room. These rooms, which appear to form a front room, are extremely small, and it is suggested that they are the forerunner in a gradual evolution toward the dumbbell formation found in the pits of the subsequent or modern period.

In contrast to the previous Okhotsk Pottery Period dwellings, where it was very difficult to discover a typical arrangement of post holes which would give us a clue as to the construction of the pit houses at that period, we have now several examples of the arrangement of post holes; these provide fairly good evidence from which to study the construction of the pits of the Second Period. The best example of these was the Oikawa Pit No. 1; and, judging by the other examples, it appears that this is actually typical of the arrangement of the post holes in dwellings of this period.

In contrast to the arrangement of the post holes in the First Period, in which the holes were dug toward the center, those of this period were dug along the walls. It is thought that the pattern was as follows: the main posts were erected in the four corners of the pits roughly in the shape of a square; and, approximately in the center between each two pillars another pillar was erected. As for the features in the interior, the fine fireplace made of stone found in the previous period disappears; it occurred in only one example, the Kabasato Pit No. 10. In the great majority of the cases a stone paving made of pebbles 10 - 15cm. in diameter [p. 80] was arranged in a purposeful formation at the right of the pit facing the entrance. The Shiomikawa Pit No. 1 and the Bettobu Pits Nos.

1 and 2 are examples of this. On the opposite side, that is, on the left side, is a feature made of pebbles laid down in the form of a belt in two or three lines. This type of structure in this location was found in the Bettobu Pit No. 6 and the Oikawa Pits Nos. 1, 4, 7, and 8.

We have not been able so far to determine the use to which these two forms of stone pavements were put; but that on the right side may, I suspect, have had some relation to the site of the stove /kamado: kitchen? T.N./; however, I would like to await the discovery of other examples.

The Artifacts

Stone Implements

Stone Adzes — The stone adzes are of two types: chipped and polished. The chipped adzes excavated are very few in number. No. 5 (of fig. 38) is a chipped adze, and was excavated from the Oikawa Pit No. 4. The polished stone adzes of this period do not differ from those of the First Period in the sense that they are single-edged; but their butt is slightly pointed, the body of the adze is rounded, and their cross-section would give the appearance of a rounded triangle. Many of this type have been excavated. As was previously stated, these have heretofore been thought of as being a product peculiar to the Second Period, but last summer a large polished stone adze of this type was discovered in a First Period pit on Paramushiro, and we were thus able to ascertain that the prototype was already present in the First Period.

Nos. 1, 2, and 4 are of this type. The first two were excavated from the Bettobu Pit No. 1; No. 1 is made of porphyrite, No. 2 of quartzite

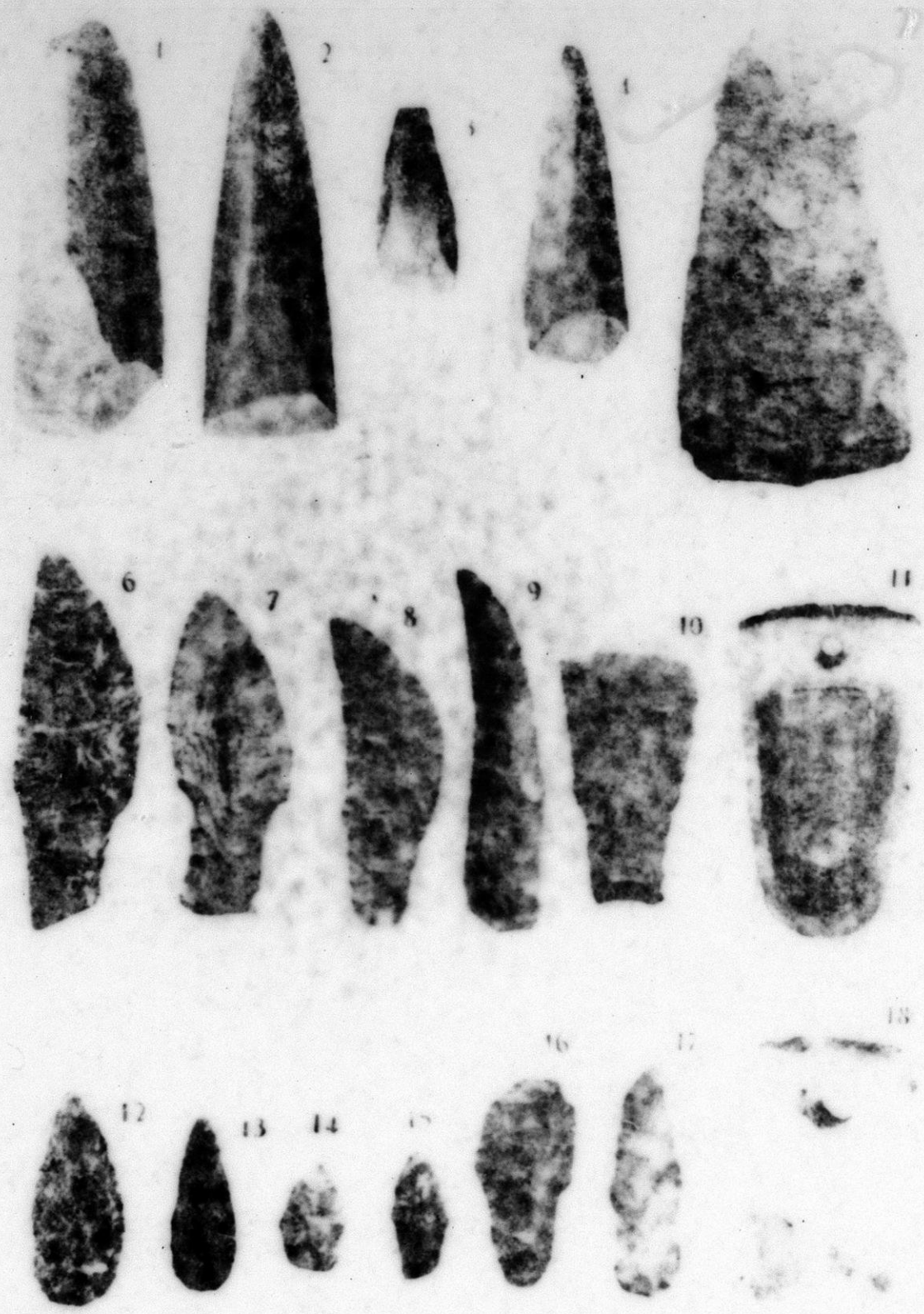


Fig. 38. Stone implement types of the Second Period.

and was excavated from the Bettobu Pit No. 5. No. 3 is small, with a flat body, and is of a rock-quartzite composition; it was excavated from the Bettobu Pit No. 1.

Stone Knives — As previously stated, stone knives were also excavated from the sites of the First, or Okhotsk Pottery Period; but in the Second Period the forms appear increasingly to have been modeled on metal knives. In either case, they seem to have been used with a handle affixed to them; the examples in Nos. 6, 7, and 8 appear to be modeled on small metal knives, the so-called machiri. As for their material, No. 6 is made of obsidian, Nos. 7 and 8 are of red chert (all were excavated from the Bettobu Pit No. 1). No. 9 is made of red chert and was excavated from the Bettobu Pit No. 5; it has somewhat the appearance of having been modeled after the Ainu sword called inaukemakiri /ā phonetic equivalent was not found in Batchelor's Ainu-Japanese-English Dictionary - T.N./. No. 10 is a variety of stone knife with a square end; it was recovered from the Bettobu Pit No. 2.

Stone Arrowpoints — Very few of these have been excavated - not enough to provide sufficient evidence for establishing their characteristics. Nevertheless, of the two types (with or without tangs), there is a tendency for arrowpoints with tangs to occur slightly more frequently and for the tangs to be of the type that is long and thin.with the rear end being slightly more than the front part. No. 16 shows an arrowpoint of red chert with tang which was excavated from the Bettobu Pit No. 6. No. 17, discovered in the Oikawa Pit No. 7, is (like 14 and 15) of the type with tang. No. 14 is made of red chert and was dug from the Bettobu Pit No. 1; No. 15 is made of obsidian and is from the Bettobu Pit No. 6.

Nos. 12 and 13 are without tangs and their ends do not curve in; they are roundish and, particularly in the case of No. 13, have shapes that strongly resemble the stone arrowpoints which were unearthed in great quantity from a group of pits in the vicinity of Kuril Lake in the southern tip of Kamchatka — pits in which passageways were found and from which naiji pottery was excavated. [p. 83] The obsidian arrowpoint excavated from the Bettobu Pit No. 1 is of the same type as No. 13; the latter was excavated from the Bettobu Pit No. 5 and is also made of obsidian.

Stone Lamps — The majority of the stone lamps of the First Period were made by hollowing out natural stones, and these were used as place lamps at the back wall of the pits; the smaller-sized ones were those fashioned from round-shaped stones. Boat-shaped forms like Nos. 11 and 18, which had holes at the end through which a rod could be inserted as a means of keeping them secured, have often been found previously in the northern Kuriles, but the sites to which they belonged have not been clear. However, this type was unexpectedly excavated in the Kabasato Pit No. 11 on Paramushiro, which is a site of this period. Something unidentifiable was inscribed at the rear ends like a design or a symbol; it strongly resembles Ainu designs. Furthermore, this type of boat-shaped stone lamp has been excavated from the recent Kabasato shell mounds of the end of this period, in which European porcelain ware and ironware are found. Stone lamps of this form are not products of the First Period, but are thought to have been introduced and manufactured at the beginning of the Second Period, and to have been used until the end of this period. No. 18 was discovered by Mr. Daikai SHINAGAWA, the chief of the Nagasaki Factory

of the Kita-Chishima Fisheries Corporation, from a site of this period at Nagasaki on Shumushu; it had designs on it as shown in the illustration, and is an unusual type of stone lamp.

Pottery

The pottery excavated from the sites of this period is the so-called naiji pottery, which has, on the inside, two or four lugs ("ears"); that is, rings through which the suspension cord was passed. Most of these have four lugs.

Restorable pots were recovered from Pit No. 1 at Shiomikawa and the Oikawa Pit No. 4. [p. 85] The Bettobu Pits Nos. 1 and 5, the Oikawa Pit No. 8 and the Kabasato Pit No. 10 yielded sherds. The Okhotsk pottery almost completely disappears now, and the forms of the pottery change completely, becoming pot-shaped with a flat bottom. Methods of manufacture degenerate considerably; fiber is added, and the pots are made by the coiling method. Only the position of the design remains the same as in their predecessors: at times a twisted thread design is made on the lip, sometimes a half-moon-shaped or round-shaped design is pressed into the pot; but most of the pots are without design.

Because I have written about this type of pottery in another article, "The Chishima Pottery Section in the Special Pottery Issue,"* I will very briefly mention [their characteristics]: among the complete specimens excavated from the Oikawa Pit No. 4 was one with four lugs, shown in 1 (fig. 39), one pair facing the other; there is a square protuberance above each lug. The diameter was 32cm., the height 16cm., and a thick layer of

*Apparently this was never published - Ed.

Fig. 39. Naiji pottery of the Second Period.

black sediment adhered to the outer surface. The specimen from the Shiomikawa Pit No. 1 did not have the protuberances. It had four lugs; its diameter was 29cm., height 16cm., base 21cm.; and on the outer surface of this also sediment adhered. This is shown as No. 2. No. 3 was also excavated from the same pit; it is small, and has two lugs; its diameter is 14cm., height 6cm., and base 10cm.; on the rim, above the lugs, there are two round protuberances.

Bone Implements

Shell mounds which could be considered to be of this period have not been discovered very often, and even when they have been discovered they have not been rich in bone implements. Discovery of bone artifacts in pits has been correspondingly meager; there have been only those finds which have come from genuine sites, such as the shell mound at Kotomari and the shell mound found within the Bettobu Pit No. 1; most of the others have been picked up off the surface of the ground in the vicinity of the sites of this period. Fortunately, the shell mounds of the previous period, the Okhotsk Pottery Period, had been rich in bone objects, and because we had been able to determine the types of artifacts, those found that did not belong to the Okhotsk Period / p. 87 / I considered to be of the Second Period; therefore, there will be, in the future, room for further study on this point.

No. 1 (of fig. 40) is preserved at the present time at the Hokkaido University Museum; it was collected by the late Tsunekichi KONO at Bettobu on Shumushu when he crossed over to the island in 1900 as a member of the Kita-Chishima Investigation Expedition of the Hokkaido Prefectural Office.

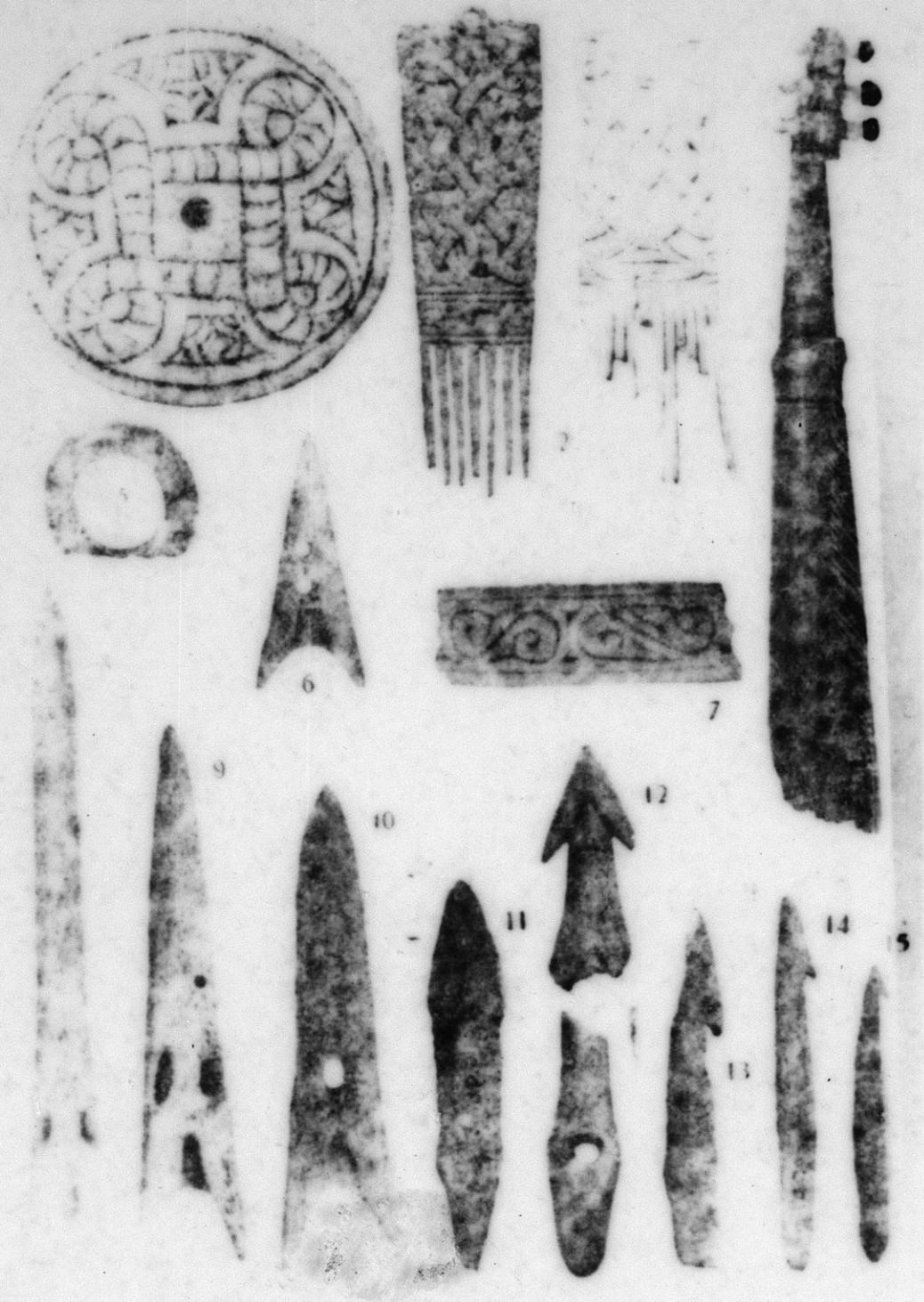


Fig. 40. Bone artifacts of the Second Period.

It is a woman's sash-clip (or kukkurukeshi) of the Kurile Ainu. These are numerous and most of them have been excavated from the sites of the stage toward the end of the Second Period (such as shell mounds and graves), but judging from the fact that the design is simple and primitive as compared to those of the end of the period, this is thought to date from a comparatively early stage of the Second Period.

No. 2 is a bone comb which was also collected by Mr. Kōno and is, like those of the previous Okhotsk Pottery Period, a vertical comb; but in the light of the fact that the designs of the previous period were only engravings, that is, non-dimensional incisions with absolutely no relief; /and in the light of the fact that/ the design is of the ribbon-type commonly found in the carvings of this /later/ period, we may say that it was an article which did not exist in the First Period. No. 3 was also collected at Bettobu on Shumushu by the late Kichisaburo ENDŌ, D.Sc., toward the end of the Meiji Period, and is now preserved in the Anthropology Department of the Faculty of Sciences at Tokyo Imperial University; like No. 2, it has a ribbon design. I myself once discovered on a sand dune at Bettobu an object which I think is a brooch and which had this type of design incised into it /apparently this is the object pictured in fig. 18:6 of Translation No. 2, below - Ed./. No. 4 was discovered by an employee of the Takeda Fishery at the place which is called the Shiomikawa Graves (?) associated with human skeletons together with a corroded piece of iron sword. It is probably a model of a five-stringed instrument much like a violin /which must have come from/ Russia. The astounding thing is that it was made by carving a single piece of bone; the knobs at the top of the piece, to which the five strings would be

wound, were not inserted into holes but were carved out /of the single piece of bone/. This is thought to be the upper part of some musical instrument, and it is thought that by joining it with other pieces, a whole /instrument/ would be formed. No. 5 is a ring made from the tusk of some animal; this, too, was dug up from the grave site.

/p. 88/ No. 7 is a thin piece of bone on which spirals are carved; it is some sort of decorative ornament, and was discovered at Bettobu. Nos. 6, 8, 9, and 10 are toggle harpoons which were found on a sand dune at Bettobu. Their shapes show an increasing resemblance to the Ainu kite /Batchelor: "kite: the bone part of a fish spear, or harpoon to which the iron point is fixed." T.N./. This type is not found among the harpoons of the previous Okhotsk Pottery Period; on the other hand, their basal portions have been excavated from pits dating from the end of this (second) period, so we see that they were in use at this general time.

No. 6 shows two line holes, one above the other, and approximately at the center of the body; but in No. 8 the holes do not pierce /the body/ from front to back but are bored into the body to a point which is in line with the tip. The position /of the holes/ is somewhat asymmetrical. Nos. 8 and 9 are of the same type. No. 10 has only one hole. All the above types formed heads for the harpoons themselves, but at the front end they often have a groove into which the blade was inserted. No. 11 is a type of harpoon related to the toggle harpoon; this type is excavated in considerable numbers in the Okhotsk Pottery Period shell mounds in the southern Kuriles and at Kitami and Nemuro in Hokkaido. This specimen was excavated from the shell mound in the Bettobu Pit No. 1 on Shumushu. The

type has not been discovered so far in the shell mounds of the previous (Okhotsk) period in the northern Kuriles, but is prevalent instead in those of the Second, or Naiji Pottery, Period. This find appears to be incomplete, for the body of a complete specimen is slightly curved. The back of this one has a thin, belt-shaped and shallow groove; the body, or that part on the other side which corresponds to this portion, has a groove cut into it which appears to be the place where the shaft of the harpoon was inserted. For a complete specimen /of this type of/ harpoon, see fig. 21 in /Translation No. 3, below/.

Nos. 12 to 15 are harpoons of the barbed variety and were all found in the shell mound of the Bettobu Pit No. 1. No. 12 strongly resembles the barbed harpoons of the previous period. Nos. 13 to 15 have a slight barb on only one side at the point, and were probably used in fishing. This type of harpoon has also been found in the shell mounds of the close of this (second) period.

/p. 89/ Nos. 1 to 7 (fig. 41) show bone arrowpoints of this period. Nos. 1 to 5 were excavated from the grave-site (?) at Shiomikawa. In No. 1, the tip of the arrowpoint forms an isosceles triangle, with the shoulders forming right angles with the shaft. In Nos. 2 and 3, the point is willow-leaf shaped and both appear to have been made of the bones of birds. In No. 4 the barbs are placed alternately, one above the other /on opposite sides/; it appears to be made of antler. At the end there is a raised ring; it also carries an X mark.

In No. 5 the raised ring at the end is larger and wider than the one in No. 4; both seem to be devices for the purpose of fitting /the point/ tightly into the socket of the shaft. At the tip of the arrowpoint are

Fig. 41. Bone artifacts of the Second Period.

four marks consisting of short lines. This type of arrowhead was excavated from sites of the end of this (second) period; and in these later examples the part at the very end of the tang which is inserted into the shaft, as illustrated in Nos. 7 and 8, is shaped like an awl stuck into a wooden handle. From the grave-site (?) over thirty such types of bone arrowpoints were recovered; most of them bear inscriptions, and these inscriptions strongly resemble those of the Ainu. Bone arrowheads of this sort which Jochelson excavated from pits with passageways and naiji pottery at Kuril Lake in the southern end of Kamchatka were entirely of precisely this type — the type which has been found in the sites of the end of this period in the northern Kuriles and which are shaped somewhat like an awl attached to a wooden shaft. No. 7 was found on a sand dune at Bettobu in 1897 by Mr. Tsunekichi KŌNO and is preserved in the Hokkaido University Museum at Sapporo; it is a type of bone arrowpoint, and identical points have been found in great quantity among the objects excavated from the pits at Kuril Lake by Jochelson. The slot at the tip into which the blade is inserted is obviously intended for a metal blade and not a stone one. Just below this is a spoon-shaped hollow in which poison was placed; in the back is a narrow groove.

Nos. 8, 9, 10, and 11 are identical with the native artifacts of the Ainu called chirosh /Batchelor: "blunt arrows used to irritate bears in bear feasts." T.N./. Blades are inserted in their tops and the whole is attached to a shaft. In the Ainu examples the arrowpoints are made of bamboo; but occasionally those made of bone have also been excavated. /p. 90/ Nos. 8 and 9 were excavated from a sand dune at Bettobu; No. 10 is from the Bettobu Pit No. 5; and No. 11 from the shell mound at Kotomari. There are arrowpoints similar to these among Jochelson's finds.

Nos. 12 and 13 were discovered in the Bettobu Pit No. 1 shell mound and appear to be foreshafts for harpoons. No. 14 was also discovered at the same place, and is a tube of bird-bone, that is, a needle-container. There are many of those from the later phase of this period which have beautiful designs incised on them.

Nos. 15 and 16 are bird-bones, one end of which has been sharpened so as to resemble arrowheads; many of these have been excavated from the shell mound in the Bettobu Pit No. 1. Many identical objects were excavated at Kuril Lake by Jochelson.

No. 17 is a bone adze. Those of this period, unlike those of the previous period, have no projections on the side, but have from one to three round holes /depressions?/. It is not known for what reason these were made. In the light of the fact that bone adzes with small round holes in them have been excavated in the pits of the end of this period, it would appear that objects with such round holes in them were prevalent throughout this period. This particular one was excavated from the Kotomari shell mound.

Metal Objects

Samples of the pieces of iron implements which we excavated from the pits of this period were those from the Oikawa Pit No. 4 and the Bettobu Pit No. 5. All of the pieces were corroded to such an extent that their original forms were lost. That from Oikawa appears to be an iron arrowhead; that from Bettobu appears to be a short sword.

No copper implements were discovered, but a Japanese Kan'ei Period coin was discovered in the Kabasato Pit No. 11 on Paramushiro, and, upon

investigation, it was discovered to have been struck at Takata, in Echigo, during the Kan'ei Era. It is illustrated in fig. 42. Among iron objects discovered intact and in locations other than pits [p. 92] were two naiji iron pots, one large and one small. The site was a spot contiguous to a seashore cliff near the high ground, a little toward Bettobu from the Shiomikawa Pit No. 1. The small one was discovered first; it had a diameter of 27cm. and its height was 12cm. About four meters from this spot the large one was discovered about 30cm. below the surface, its diameter measuring 37cm. and its height 18cm. 55cm. south of this point a skull was discovered. Both pots had a pair of lugs, one facing the other. These naiji iron pots are thought to have been imported at approximately this period, and are considered the forerunners of the naiji pottery. The corroded remnant thought to be a broken Japanese sword was discovered by an employee of the Takeda Fisheries at the place considered to be a grave near Shiomikawa buried alongside human bones and associated with the remnant of a bone musical instrument previously mentioned. For an illustration of the naiji iron pot, see fig. 42a.

Glass Beads

Glass beads known to have been excavated for a certainty from the pits of this period came from the Bettobu Pit No. 5. They consist of an undamaged glass bead of a blue color; one of a green color broken in half; and a Nankin-dama light purple in color. As the result of examination by experts, these have been determined to be of European, probably Russian, origin. (See fig. 33:11)

Fig. 42. Kan'ei Era coin unearthed in Kabasato Pit No. 11, Paramushiro.

/p. 93/

Relationship of the Northern Kurile Sites of This Period to Those on Kamchatka

The group of pit dwellings in the vicinity of Kuril Lake in southern Kamchatka investigated by Jochelson in 1910 and 1911, and those examined by Professor Eiji NAKAYAMA of the Department of Pathology, Kyoto University School of Medicine, in 1933 in the vicinity of Ust Kamchatsk on the central east coast of Kamchatka, still had vestiges of a passageway such as is seen in the northern Kurile pits of this Second Period. In particular, the 1m.-long passageway illustrated in Nakayama's report /reproduced here as fig. 42b./ gives the impression of being identical with those of the northern Kuriles in ground plan.

However, the passageways investigated by Jochelson are relatively longer than those in the northern Kuriles. According to his measurements they attained a length of 7 to 15 feet, and he reports that there were even rare examples which were longer than the major axis of the pit.

The longest passage of this period in the northern Kuriles is the Bettobu Pit No. 1 described above, which measured about 9 meters; and this was a conspicuous exception; the others were almost all from 1 to 2 meters. The pits of both areas look very much alike in ground plan; but there were marked differences between them in the role of this passageway. The passageway in the northern Kuriles was, as the word indicates, the entrance where people went in and out. But the passageways of the Kamchatka pits were smoke-outlets and acted as flues /They were air ducts - Ed./. In the Kamchatka pit dwellings there was no other passageway, and the opening in the roof acted as a skylight and, concurrently, as the

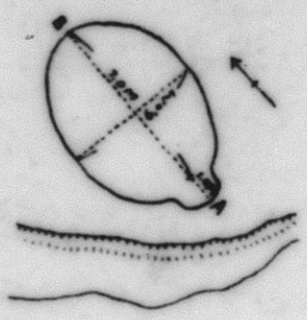


Fig. 42b.

entrance. [Women and children on occasion used the air duct for access - Ed.] The report by S. P. Krasheninnikoff on the Kamchatka pit dwellings states as follows:

[p. 94] "Under the name of Ostrog we understand every habitation consisting of one or more huts, which are all surrounded by an earthen wall or pallisade.

> "The huts are built in the following manner: they dig a hole in the earth about five feet deep, the breadth and length of which is proportioned to the number of people designed to live in it. In the middle of this hole they plant four thick wooden pillars; over these they lay balks, upon which they form their roof or ceiling, leaving in the middle a square opening which serves them for a window and chimney; this they cover with grass and earth, so that the outward appearance is like a round hillock; but within they are of an oblong square, and the fireplace is in one of the long sides of the square: between the pillars round the walls they make benches, upon which each family lies separately; but on that side opposite to the fire, there are no benches, it being designed for their kitchen furniture, in which they dress their victuals for themselves and dogs. In these huts where there are no benches, there are balks laid upon the floor, and covered with mats. They adorn the walls of their huts with mats made of grass.
>
> "They enter their huts by ladders commonly placed near the fire hearth, so that when they are heating their huts the steps of the ladder become so hot, and the smoke so thick, as almost to suffocate any one who is not inured to bear it: but the natives find no difficulty in going out or in; and though they can only fix their toes on the steps of the ladder, they mount like squirrels; nor do the women hesitate to go through this smoke with their children upon their shoulders; though there is another opening through which the women are allowed to pass; but if any man should pretend to do the same he would be laughed at. The Kamtschadales live in these huts all the winter....." [The History of Kamtschatka, and the Kurilski Islands, with the Countries Adjacent, by S. P. Krasheninnikoff, and translated into English by James Grieve, M.D.; pp. 181-182.]

According to the report by M. de Lesseps [the following is the translation of Baba's translation of the original text. T.N.]: "These strange houses are square, with widths from 12 to 14 yards and a depth of about 8 feet; these form a round mound on the surface of the earth something

like a round roof. The walls of the four sides are covered with small cross-beams and boards; the spaces /in the roof/ are filled in with straw, dried grass, pebbles and earth, and rounded off; within the pit, at a point about 4 feet from the floor, several beams are placed so as to support the beams which intersect underneath the roof. The side walls are built in the same way. In the roof, there is an opening measuring about 4 feet in length and about 3 feet in width; this serves as a chimney, and, /p. 95/ with a ladder or a log with steps cut into it, as the entrance to the pit as well. To enter or exit by the door /i.e. the passageway/ located in the lower part of the pit is considered a kind of dishonor. The outside of the pit is surrounded by a high fence which serves as a windbreak or as protection against drifts; but it is said that these were used by the natives in ancient times as protection against enemy attacks. If one so much as entered these native huts, one would never want to enter them a second time because of their appearance and their smell. The pits consist of one room about 10 feet high; they protrude one foot from the surface of the ground and are 5 feet wide. There is a kind of bed at the sides, and, by spreading the half-tanned hides of all kinds of animals on them, these are used as sleeping places by the natives. Sometimes there are about twenty people — men, women, and children — who sleep and eat in one room. They are completely indifferent to such things as cleanliness or good manners. They never let the fire of the hearth, which is located either in the center or to one side, go out. At night firewood is piled up high, and when the hole in the roof is closed, the heat does not escape, and is maintained all night."

In addition, according to the accounts heard by Professor Ryuzō TORII from the northern Kurile Ainu, one of the incidents in the legend of the Fujiru is as follows: "An Ainu who had spent the year in Kamchatka and who got lost while hunting discovered a small house. From the roof of the hut he climbed down into the hut by grasping the small cross-beams which acted as a stepladder; on entering, he discovered that this very house was that of the chief of the Fujiru, and this Ainu was captured by the Fujiru....." In this legend, too, one can see that in the Kamchatka pits people entered down ladders from an opening in the roof, and this is a point of interest in view of the reports previously quoted.

S. P. Krasheninnikoff's record was compiled in 1770; and the quotation from M. de Lesseps was from his famous record of the journey with Laperouse between 1787-1788. The reason I quoted these two men is that they furnish information for a comparison of the methods of constructing houses in both areas. Particular attention must be paid to the fact that the passageways of the pits on Kamchatka were tunnels which acted as flues for the fireplace, and that entrance and exits were both effected by ladders through the opening in the roof.

/ p. 96 / In the foregoing I have said that although the pits of both areas strongly resemble each other in ground plan, there are differences in the methods of construction of the pits and in the role of the passageway. However, among the artifacts excavated from these sites on Kamchatka there are many that are almost identical with those that have been recovered from the pits of this Second Period in the northern Kuriles. The most striking resemblances are in the pottery vessels, which are both of the naiji type; many have been discovered which, like those on the

northern Kuriles, have two sets of lugs, that is, four in all. The greatest number of these were excavated by Jochelson from the group of pits on the shores of Kuril Lake; and from one of the pits at Cape Nalacheva, he secured an intact pot which had three lugs.

Among the bone implements which have been excavated along with naiji pottery are objects which look like chirosh: these have slots into which stone arrowpoints may have been fastened, there are holes in which poison was inserted, and the tang resembles the chirosh in that it looks like an arrow and was made to fit into a socket. These were excavated from the shell mounds in the pits in the northern Kuriles, and are all identical with the bone arrowheads shown in the bottom of Plate No. 12 in Jochelson's Archaeological Investigations in Kamchatka. Moreover, an example of the brooch (kukkuruken) peculiar to the women of the Kurile Ainu and made of bone was dug up from a Kamchatka pit.

In stone implements, too, there are similarities. The artifact which shows the closest resemblance is the oval-shaped stone lamp with a hole for the stand; this type of stone lamp has been excavated in the northern Kuriles in the shell mounds of the pits of this period and also in the most recent sites. On Kamchatka, this type of lamp was found in great quantity, particularly in the Kuril Lake pits associated with artifacts which resemble those of the northern Kuriles.

Jochelson has stated that he discovered, in the Kuril Lake pits, three Japanese coins with holes in them, associated with other relics resembling those of the northern Kuriles; and that, upon showing these to Professor Ryōsei KOGANEI, they were judged to be eleventh century coins. A few years ago when Mr. Ichiro YAWATA and I called on Professor Koganei,

he stated that he had never been shown the coins in question and had not even considered the matter. Hearing this, we learned for the first time that Jochelson was in error.

/p. 97/ On the evidence of /these alleged/ Japanese coins of the eleventh century, Jochelson considers the Kamchatka naiji pottery to be surprisingly old.

Jochelson considers the naiji pottery on Kamchatka to be Kamchadal pottery which was patterned after the methods of the Kurile Ainu. There is no mention either in the account of Krasheninnikoff or G. W. Steller about the pottery of the Kamchadal; but in the report by the Cossack, Atlasov, it is clearly stated that the Kamchadal at that period were making pottery. /There is some question as to whether Atlasov's statement refers to the Kamchadal or to one of the other groups on Kamchatka - Ed./ At that time sables were levied as tribute on the Kamchadal; there were discovered to be a large number which did not have tails, and upon investigation it was discovered that the fur of the tails was mixed into the clay at the time of the making of pottery. Thus they did the same thing as the Kurile natives who mixed in the fibers of the nokkanki grass.

Unfortunately, there is no indication as to whether this was naiji pottery; nevertheless, in the light of the fact that fur was mixed in for the purpose of strengthening the clay which was shaped in coils, as nokkanki was similarly added, we are led to believe that it may have been naiji pottery much like that of the northern Kuriles. Atlasov came to explore Kamchatka between 1697-1699, and we can imagine that at that time the natives of Kamchatka were engaged in making pottery in great amounts.

The naiji pottery of the northern Kuriles, as well as the associated artifacts such as the bone arrowpoints and brooches, and the oval stone lamps with a hole for the stand, are all of very recent date, and no matter how one looks at it, it is not possible to push them as far back as the eleventh century, as Jochelson does.

Cultural intercourse between these two areas must have been very close in view of the following facts: the pits of both areas are rather square and the passageways have not been obliterated but still remain visible; chronologically, therefore, there was not much difference between the remains; a great quantity of artifacts have been excavated from the Kamchatka pits which are identical with those of the northern Kuriles from this period. So the periods, judging also from the artifacts, were contemporaneous.

The Introduction of Russian Culture, and the Oldest Russian Accounts of the Natives of the Kuriles

Among the artifacts of the previous (Okhotsk) period there are none which could be considered as having been acquired from the Russians; rather, the situation seems to reflect the transmission of Japanese culture in the form of iron articles.

Among the artifacts of this (second) period, the Russian glass beads and the Nankin-dama found in the Bettobu Pit No. 5 can with absolute certainty be said to have been introduced by Russian contact.

The Shiomikawa grave (?) is thought to be of this period, since it contrasts with the rather deep burial pits made according to the practice of the Greek Orthodox Church and marked by crosses, which were found at one time at Bettobu and Kataoka on Shumushu, while, on the other hand,

the burial method resembles that of the Ainu because the skeletons were discovered only 3 or 4 inches below the surface of the earth; also, the accompanying artifacts appear to be rather older than those of the next (final) period. The neck of the five-stringed musical instrument which was excavated from this place is clearly a copy of a Russian musical instrument. There was also discovered at Musashi Bay on Paramushiro, along with naiji pottery of this period and obsidian implements, Russian copper coins struck in 1748. These occurrences have been regarded as rather dubious; but the discovery of Russian beads in the pits of this period has strengthened the conjecture that the other objects may possibly be genuine.

The exact year of the advent of Russian culture, in other words of the arrival of the Russians on Shumushu, was in 1711; on Paramushiro /p. 99/ it was in 1713. These dates mark some phase of the Second Period; and although I have conjectured that they correspond, in all likelihood, to the middle or a little later stage in the Second Period, I would like to wait for the appearance of more materials of this type and then carry out a more definitive study.

The early period of the arrival of the Russians corresponded to some stage in this Second Period, and the contemporary record by S. P. Krasheninnikoff is probably the oldest account of the northern Kuriles and their inhabitants. Because it would serve as material for comparison, and to show what differences of view there are between the contents of this book which contains his observations, and the study we have made of this same period through our excavations at the sites and the articles discovered, I have here quoted passages from his record.

The following selections I have translated from chapters on the Kuriles and the Kurile people from The History of Kamtschatka and the Kurilski Islands with Countries Adjacent as translated from the original Russian into English by the English doctor, James Grieve, in 1764. The copy belonged to the late Ryo MATSUMURA, D.Sc.

"Of the Kurilski Islands.

"Under the name of Kurilski islands are understood all those islands which extend from the Kurilskaya Lopatka, or the southern end of Kamtschatka, in a row south-west quite to Japan. They derive their names from the inhabitants of those islands which lie nearest to Kamtschatka, who are called by the natives Kushi, and by the Russians Kuriles (translator's /i.e., Baba/ note: this probably refers to the Kuriles living in southern Kamchatka). The exact number of those islands cannot be ascertained; but, according to the verbal accounts which were gathered from the Kuriles, and the natives of the southern-most islands, and from the Japanese, who were driven by distress of weather upon the coast of Kamtschatka, they are reckoned to be twenty-two. Perhaps they do not take the small ones into this number: for by the account of Captain Spanberg, who went as far as Japan, there appears to be a great many more: but as the said captain found it difficult to give them Russian names, all of them that had any relation to the Kurilskoy names, except the two that lay nearest to Matma /probably refers to Matsumae/ Kunatin /Kunashiri, probably/, were allowed to keep their former appellations.

/p. 100/ "Schumtschu is the nearest island to the Kurilskaya Lopatka, and extends in length from the north-east to the south-west 50 versts, and in breadth about 30. This island is full of mountains, out of which, as also from the small lakes and marshes, many little rivers run out into the sea. In some of them are found different kinds of salmon, and several other fish, but not in such plenty as to furnish the inhabitants with provisions for a winter. Upon the south-west point, near the strait that is between this and the second Kurilskoy island (Paramushiro), are three Kurilskoy settlements, that contain only 44 inhabitants; some of whom pay the taxes in sables and foxes, but the majority pay them in sea-beavers' skins.

"The inhabitants of this island, as well as those of the Kurilskaya Lopatka, are not the right Kuriles, but are of the race of the Kamtschadales: for some dissensions having arisen between the inhabitants of that nation, soon after the Russians entered the country, a large party of them retired here and to the Lopatka; where they became connected, by mutual inter-marriages, with the people of the second island, whose particular customs they have adopted, and from thence have received the name of Kuriles.

"The channel between the Kurilskaya Lopatka and this island is 15 versts in breadth; over which they pass in small boats, when the weather is fair, in three hours. This passage requires not only fair weather, but likewise a flowing tide. In the time of the ebb, the waves spread for some versts, are rapid and white, and so large that even in calm weather they rise two or three fathoms high. Both the Cossacks and Kuriles have a superstitious awe and veneration for these waves; and when they row over them, offer them a sacrifice by throwing chips /probably the inau/ made on purpose, imploring a safe passage; the pilots also use conjurations the whole way.

/p. 101/ "The second Kurilskoy island, Paromusir, is twice as large as the first. It lies north-east and south-west, and is separated from the first by a channel two versts broad, where one vessel may lie in time of necessity, but not without danger, there being no proper place for anchorage: and if a vessel parts from her anchor, she will be in very great danger; for the shore here being steep and rocky, and the channel narrow, it is next to impossible for her to escape. There was a melancholy example of this in the year 1741, when one of our vessels was cast away here. This island is also mountainous, and has as many lakes and rivulets as Schumtschu; and on both of them, there is no other timber than Slanetz and Ernick which are used by the inhabitants for fuel, and they build their huts of different kinds of wood which they find thrown on the shore by the waves from America and Japan; among these are sometimes found pieces of ranfarn wood, of which several large ones were brought thence to me. The inhabitants of this island are right Kuriles, who came there from the island Onneckoot /probably Onekotan/; but upon what account is not known. All affirm, that between the inhabitants of the two above-mentioned islands, and the most remote, commerce was formerly established: those of the remote islands brought to them all sorts of lacquered wooden ware, scimitars, silver rings which they wear in their ears, and cotton stuffs; and from them in return, they used to take chiefly eagles' feathers, which are used in ornamenting their arrows: this seems very probable; for I had from this island a lacquered waiter, a basin, a Japanese scythe, and a silver ring; all which I have sent to the Imperial Chamber of Curiosities. These articles the Kuriles could have from no other place then from Japan.

"The Kuriles of this island have their habitations near the south-west point, upon a lake five versts in circumference, out of which a small rivulet, called Petpu /the present-day Bettobu River on Paramushiro/, runs into the sea.

"Both these islands are subject to frequent and terrible earthquakes, and inundations: one of these calamities happened in the year 1737 about the time of my coming to Kamtschatka; and another in November,
/p. 102/ 1742. We shall relate the first circumstantially in its proper place; but as for the second, though it was great, yet I have not been informed of the mischief and destruction it occasioned; for it happened

after my departure from Kamtschatka; and Mr. Steller makes no mention of it in his account." /The above quotation is from pages 33 to 36 in Grieve. The material in brackets is Baba's. T.N./

"The manners of the Kurales resemble those of the Kamtschadales so much, that we should have taken no notice of them separately if their appearance and language were not very different. We can give no account of their origin more than of the other inhabitants of Kamtschatka.

"These people are of a small stature, black haired, round visaged, somewhat swarthy, and withal more well-favoured than any of their neighbors. Their beards are thick, and their whole body is covered with hair, in which they particularly differ from all the other Kamtschadales. The men shave their heads as far back as the crown, allowing the other hair to grow to its full length. This custom they have probably taken from the Japanese, with whom they have some commerce. The women only cut the fore part of their hair, that it may not fall into their eyes. The lips of the men are blackened about the middle; the women's are entirely black, and stained round; their arms are likewise stained with different figures as far as the elbows. This custom they have in common with the Tchukotskoi and the Tungusi. Both men and women wear silver rings in their ears, which they get from the Japanese.

"Their cloaths are made of the skins of sea fowls, foxes, sea beavers, and other sea animals; and are generally composed of the skins of very different creatures, so that it is rare to see a whole suit made of the same sort of skins. The fashion resembles more that of the Tungusi, than the Kamtschadales. Though they are so little regardful of uniformity in their own country cloathing, they are very proud to acquire such as are made of cloth, serge, or silk, particularly those of a scarlet colour; but so little care do they take of them when they have got them, that they will wear them when employed about the dirtiest work.

/p. 103/ "Their huts are much the same as those of the Kamtschadales, only they keep them a little cleaner, covering generally the floor and walls with mats made of grass. They feed for the most part upon sea animals, and very little upon fish.

"They are as ignorant of a deity as the Kamtschadales. In their huts they have idols made of chips or shavings curiously curled /these are the inau of the Ainu/. These idols they call Ingool, and are said to venerate them in some degree, but whether as good or evil spirits I never could learn. They sacrifice to them the first animal which they catch; eating the flesh themselves, they hang up the skin before the image; and when they change their huts they leave the skin and the idol there. If they make any dangerous voyage they take their idol along with them; which, in case of

imminent danger, they throw into the sea, expecting by this method to pacify the storm; and with this protector they think themselves safe in all their excursions.

"They travel in the summer time in boats, in the winter in snow shoes. The men are employed in catching of sea animals, the women in sewing, during the winter; but in the summer they go out with their husbands to hunt.

"They are more civilized than the neighbouring people, being steady, honest, and peaceable; their way of speaking is soft and modest; they have a respect for old people, and an affection for each other, particularly their relations. It is a pleasure to see with what hospitality they receive such as come to visit them from other islands: those that come in boats, and those that receive them from the huts, march in great ceremony, dressed in all their warlike accoutrements, shaking their swords and spears, and bending their bows, as if they were going into an engagement, and dancing up to each other 'till they meet, shewing the greatest signs of delight, embracing and hugging one another, and shedding tears of joy. The people of the huts then carry the visitants into their habitation, where they entertain them in the best manner, standing and hearing them relate all the adventures that have happened to them in their voyage. The honour of this relation is reserved for the oldest, who is always the orator; he informs them of every thing that has happened since the last meeting, how they have been employed, how they lived, where they travelled, whom they saw, what good fortune or misfortune has happened to them, who have been sick, or who was dead. This relation sometimes continues for three hours. When the stranger has ended, the oldest of the people who are visited gives him an equal information of every thing that has happened to them. Before this the rest must not speak to one another; then, according as circumstances are, they either condole with, or congratulate, each other, and finish the entertainment with eating, dancing, singing, and telling of stories.

/ p. 104 /

"In their courtships, marriages, and the education of children, they differ very little from the other Kamtschadales. They have two or three wives, with whom they never publickly sleep, but steal to them privately in the night time. They have an extraordinary way of punishing adultery: the husband of the adulteress challenges the adulterer to a combat, which is performed in the following manner: both the combatants are stripped quite naked, and the challenger gives the challenged a club about three feet long, and near as thick as one's arm; then the challenger is obliged to receive three strokes upon his back from the challenged, who then returns him the club, and is treated in the same manner; this they perform three times, and the result is generally the death of both the combatants; but it is reckoned as great dishonour to refuse this combat, as to refuse an invitation to a duel among the people of Europe. If any one prefers his life or safety to his honour, the adulterer then is obliged to pay to the husband of the adulteress whatever he demands, either in skins, cloaths, provisions, or other things.

"The women have a harder time in child-bearing than the Kamtschadales, for they say, the Kuriles women do not recover after child-bearing for three months. The midwives give names to the children when they are born, which they always keep. If they have twins they destroy one.

"Such as die in the winter they bury in the snow; but in the summer they are buried in the earth. Self-murder is as frequent here as among the Kamtschadales." [Grieve, pp. 235-238.]

The Naiji Pottery People

Because we have given the provisional name of Okhotsk Pottery People to the people who left the sites of the First Period, we will temporarily call the people of the Second Period the Naiji Pottery People after the naiji pottery which has been found at these sites. I will leave for later discussion what race of people they were. What sort of link was there between the First Period, or the period [p. 105] of the Okhotsk Pottery People, and the Second Period, or the period of the Naiji Pottery People? Between the first half and the end of the Second Period (about which I will write later) there is, on the evidence of the pits and artifacts, a clear link; but between the First Period and the Second Period, the materials discovered so far do not show a definite link between the two but give the appearance of having come in as waves, each at a different period.

As for the pits, we see that those of the First Period, being of an older time, have changed from their original rounded square shape to a circular or oval form. Passageways have been discovered by excavation, but these are for the most part indistinct. In the plan of the pits the evidence indicates that there was a fireplace rimmed with stones located near the wall which appears to be the entrance. The arrangement of the

post holes is slightly toward the center, but there has not yet been discovered a good example of this arrangement sufficiently /clear/ to give evidence as to how the pit-dwellings were constructed; so it is quite impossible to ascertain the structure of the houses. But when we come to the Second Period, the pits for the most part show a rounded four-cornered shape, and there is invariably a passageway; and, while the stone-rimmed fireplace was seen only in the Kabasato Pit No. 10 on Paramushiro, the majority of dwellings seem to have had two types of stone features at the entrance-passageway. One type, the commoner one, had a purposeful arrangement of pebbles at the right of the entrance; the other type was the piling up of pebbles in a belt-shaped line at the left of the entrance. The post holes are close to the walls, with one in each of the four corners, and a post between each two; this was the method of construction of the houses, and it was the style until the end of the period (about which I will speak later).

In studying the artifacts, there is again some resemblance in the bone and antler implements, but unless there are some outstanding characteristics in each there is difficulty in establishing the link. It is somewhat safer to compare the pottery. A study of this shows that the shape of the vessel, the methods of modelling, firing and decoration /p. 106/ are entirely different; from every standpoint it must be said that the naiji pottery represents a degeneration.

It is extremely difficult to explain why a people who knew the methods of making Okhotsk pottery would go to the trouble of making such primitive pottery.

Even when the pottery is studied, the establishment of any link is extremely difficult; therefore, it is thought that the First Period and the Second Period people, that is to say, the Okhotsk Pottery People and the Naiji Pottery People, came in separately and at different periods. What indicates this best is the instance at Oikawa on Shumushu.

As previously related, in the upper layer of the Oikawa Pits Nos. 2 and 9, there was discovered a construction of stone of the style seen in the Second Period. From the lower of the two shell layers, which were separated by a layer of black earth between, relics of the Okhotsk pottery type were excavated. From this, it may be inferred that the Okhotsk Pottery People must have come first to Oikawa, the center layer of soil accumulating after the withdrawal or annihilation of this people. After some time, the Naiji Pottery People of the Second Period must have moved in; /the soil/ clearly shows a definite gap between the two. Such examples will probably be discovered at various other places in the future. The results of the investigations made up to now do not show a clear link between the two peoples.

However, from the standpoint of common sense, it may be thought natural that as long as the Okhotsk Pottery People were not completely wiped out, and remained in the northern Kuriles or on some southern island, their descendants must have had various contacts with the Naiji Pottery People. What serves as proof of this in actuality is the point brought up by the anthropological studies of the Kurile natives on Shumushu at the end of the Second Period by Professor Kodama, in 1937 and 1938: they seemed to have been infused with the blood of the Okhotsk people to a considerable degree. Culturally, also, both of these people

had stone lamps and knives; and the pointed end, the thick body, and the triangular cross-section /of the adzes/, all considered to be the characteristics typical of the polished stone adzes of the Second Period, are also found in those of the First Period, so some link can be found between them. Though they came in as the first and second waves, somewhere, sometime, the two peoples appear to have come in contact.

The people to whom I have referred as the Naiji Pottery People are clearly Ainu who have come north from Hokkaido through the southern Kuriles; these are the so-called Kurile Ainu, and are the ancestors of the Shikotan Ainu of today. Although they mixed later with the Kamchadal and the Russians, I think that they had also mixed to a considerable degree with the Okhotsk Pottery People.

Just as the Okhotsk Pottery People of the First Period crossed over to Kamchatka from the northern islands and carried on activities there, so the Naiji Pottery People of the Second Period also crossed over to Kamchatka in great numbers; and they mixed to such an extent /with the local inhabitants/ that it is almost impossible to separate their cultural remains.

In some stage of the Second Period, but probably during the latter half, the Russians crossed over /to the Kuriles/, and they were subjected to Russian culture.

THE THIRD PERIOD (THE FINAL PERIOD)

The Sites

The recent sites are, as in the Second Period, pit dwellings and shell mounds, and, in addition, burials. I have examined dozens of the

latter; but since I am not at liberty to publish my findings, I must regretfully omit these, and devote myself only to the pit dwellings and the shell mounds.

The House Pits

In their present state the pits show a distinct square outline, many of them having the earthen embankments about the walls intact; and because the covering layer of soil is thin, the depth of the pits /p. 110/ is relatively great. Most of them were multi-roomed, rather than single-roomed, with passageways connecting the two, three or four rooms, all of which formed one single pit dwelling.

Some people have claimed that there were five or six rooms connected together, but this was a misjudgment on the basis of a superficial inspection when summer grasses were growing luxuriantly. According to our investigation of the pits of this period, which involved actual excavation, we have not encountered pits with over four rooms. The number of pits of this period which we excavated in the five field trips undertaken so far in the northern Kuriles total nine; but I will discuss only five of these. On Shumushu, the sites are at Bettobu, Kataoka, and Nagasaki; on Paramushiro, they are at Bettobu, Mibettobu, and Kabasato (near Musashi Bay on the southern tip) and in the vicinity of Murakami Bay on the northern tip. Most of them are located at Bettobu and Alexander Hill on Shumushu, and at Bettobu, Kabasato and Mibettobu on Paramushiro.

Shumushu:

1. Pit No. 6 (excavated August 1935).
2. Pit No. 7 (excavated September 1935).
3. Bettobu Pit No. 2 (excavated August 1936).
4. Bettobu Pit No. 3 (excavated July 1937).

Paramushiro:

1. Kabasato Pit No. 14 (excavated August 1938).

Shumushu:

Pit No. 6 (figs. 43, 44)

/ p. 111 / This is located at the site of the former native village on Alexander Hill. The house posts are still extant. This is the small, single-room pit which we selected for excavation from among the last pits made by the Kurile Ainu. In this pit the posts at present do not show outside; it is almost square, and the passageway is at the east. The distance between 5 - 4 is 1.4m., with a length of 1m.

The wall 1 - 2 is 4m.; from 2 - 3 4.2m.; 3 - 4 is 3.3m.; 1 - 5 about 3m.; the distance between A - B is 4.4m. The present depth of the pit, at the center, is about 75cm. About 25cm. below this the yellow clay of the fireplace was reached. After the excavation, there were, as the illustration shows, eight posts, with those marked a, b, and c rotted and standing upright against the 1 - 2 wall; posts d and e were prone on the floor; post f was a long one measuring about 2m. and reaching into the mouth of the fireplace. Post g lay slantwise across f, and was 80cm. in length. h indicates a door from a Western sailing ship which must have drifted ashore in distress; a plate of iron was fastened to the surface of the door which was 1.5m. long and about 30cm. wide. Judging by the fact that it lay at the foot of the passageway, it must / p. 112 / have been used as a door. Post i was at the edge of the fireplace, and about 30cm. of it remained. The fireplace was almost in the exact center of the room and consisted of five pieces of natural rock forming a square;

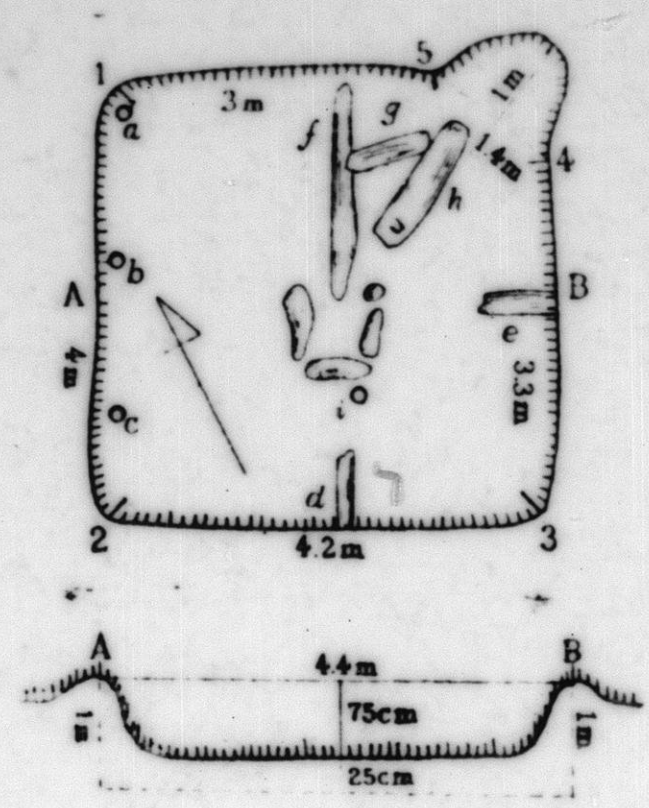


Fig. 43. Pit No. 6

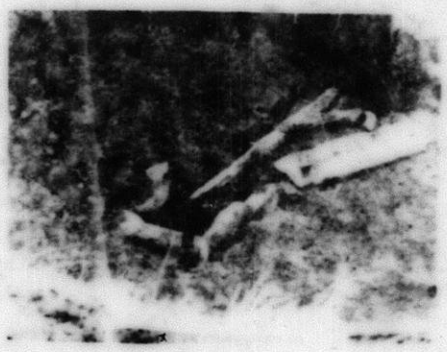


Fig. 44.

the mouth of the fireplace opened toward the 1 - 5 wall and was 45cm. wide; its major axis was 85cm., its minor axis 60cm., and it contained charcoal.

There were almost no shells or animal bones among the remains recovered. At various places on the pit floor were found sixteen broken pieces of European chinaware, six broken pieces of glass, and over ten glass beads. Directly over the fireplace was a fireplace hook in the form of a S made from an iron plate from the shipwrecked vessel. In addition there were several iron objects, a piece of black wool cloth, thick European paper /cardboard/ which was crumbling, a fragment of a stone vessel, and a piece of stone.

Pit No. 7 (figs. 45, 46)

Pit No. 7 is on Alexander Hill to the south of Pit No. 6 and distant about 50 to 60 meters. At present no posts are visible on the surface. The pit has three rooms, all of which are square. I drew up a rough sketch after surveying the length of each wall, etc., but because measurement was difficult I must add a word of caution as to the accuracy. For the length of each wall, and other matters, the reader is referred to the sketch.

The depths of each room were almost equal, with each being between 50 - 60cm. at the center. The passageways and the west and north walls of Room No. 1 were shallow, while the other walls had earth-banks and were high. At the floor of the pit the walls were rather perpendicular.

As the result of actual surveys made in the center of Room No. 2, we reached the floor of the pit - hard yellow earth - at about 20cm. Seven

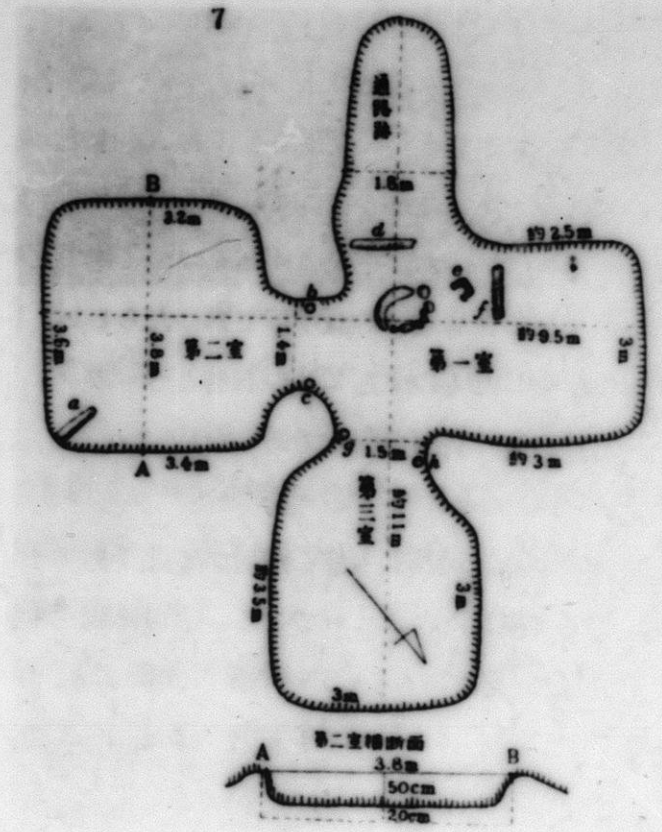


Fig. 45. Pit No. 7

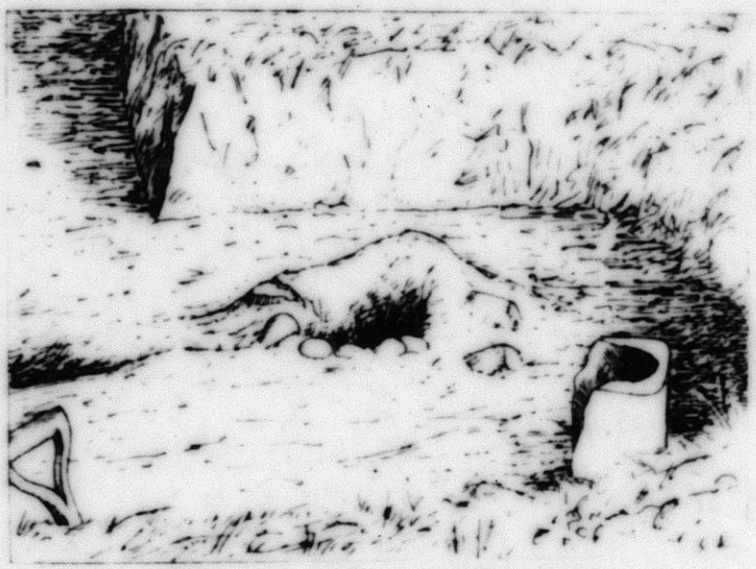


Fig. 46. Room 1 in Pit No. 7

wooden posts were found, with those marked b and c being at about the middle of the passageway leading from Room 1 to Room 2; deterioration was extreme. Posts g and h were in the passageway into Room 3; a, d, and f were lying on the pit floor. Although other wood remnants were found, most of them appeared to be boards for lining the walls; they included blue-painted ship lumber. The fire pit was located in Room No. 1; it was a closed circle, with that portion facing the passageway being made of earth and the other portion made of small natural stones. /p. 113/ Its major axis was about 70cm., its depth was about 20cm., and it was filled with charcoal. It was not determined whether it was a heating or a cooking stove, but near the fireplace there was a corroded iron /stove?/ with a hole for a stovepipe. Its height was approximately 50cm.

Artifacts were unearthed in each room, but were most plentiful near the fireplace in Room No. 1. Metal objects found at this spot were: one iron fireplace hook; two copper bells; one copper harpoon; one iron makiri* knife; one lead bullet; a fragment of a Western iron pan; and an iron axe. /Other items were/: one intact Western-style porcelain pot cover; one intact glass wine bottle; countless fragments of Western-style porcelain; one glass bead; fragments of rotted canvas; a small lump of sulphur; a small lump of coal; a small fragment of what appears to be the bottom of a naiji pot; one bone adze; two worn-out whetstones; and two fragments of stone implements /or vessels?/. In Room No. 2 were discovered one iron lock for a Western-style chest of drawers; two copper maru-otoshi /tama-

*According to the Heibonsha Daijiten, makiri is an Aomori Prefecture dialect term for "knife." T.N.

otoshi (?) apparently a circular object of some sort - T.N./; one copper nail; glass beads numbering in the dozens; a piece of black woolen cloth; a piece of cardboard; and fragments of porcelain. In Room 3 were found one copper chain; a bit of ship's gear (also copper); dozens of glass beads; fragments of porcelain; one fragment of a sheet of glass; a fragment of a glass mirror; and one side of the mandible of a sea mammal.

Bettobu Pit No. 2 (figs. 47 - 49)

There are two pits named "Bettobu Pit No. 2": the present one which was excavated in 1936 and given the temporary label at that time; and the second, which was excavated in 1937. This fact should be borne in mind. /p. 114/ Like the afore-mentioned Pit No. 7, this pit also is located on Alexander Hill. As shown in the plan, /Rooms/ 1, 2, and 4 present clear-cut square outlines in the present condition of the pit; Room No. 3, which has an entrance, presents somewhat of a triangle. The pit was built so that the various rooms were entered by means of passage-ways from Room No. 3. All of the rooms were overgrown with weeds. In Room No. 1, posts a, h, i, l, and m were found; while Room No. 4, post f was found.

In Room No. 1, the wall from 1 - 4 was 4.5m.; the 2 - 3 wall was 4.7m.; the 1 - 2 wall was 3.2m.; and the 3 - 4 wall was 2.85m. The distance between the center of the 1 - 4 wall, or A, to the center of the 2 - 3 wall, or B, was 3.5m., with a depth (before excavation) of 90cm.

On carrying out a trial excavation at the center of the pit, we struck boards at approximately 20cm. Upon carefully extending our excavation, we realized that the boards had been placed on the floor; therefore

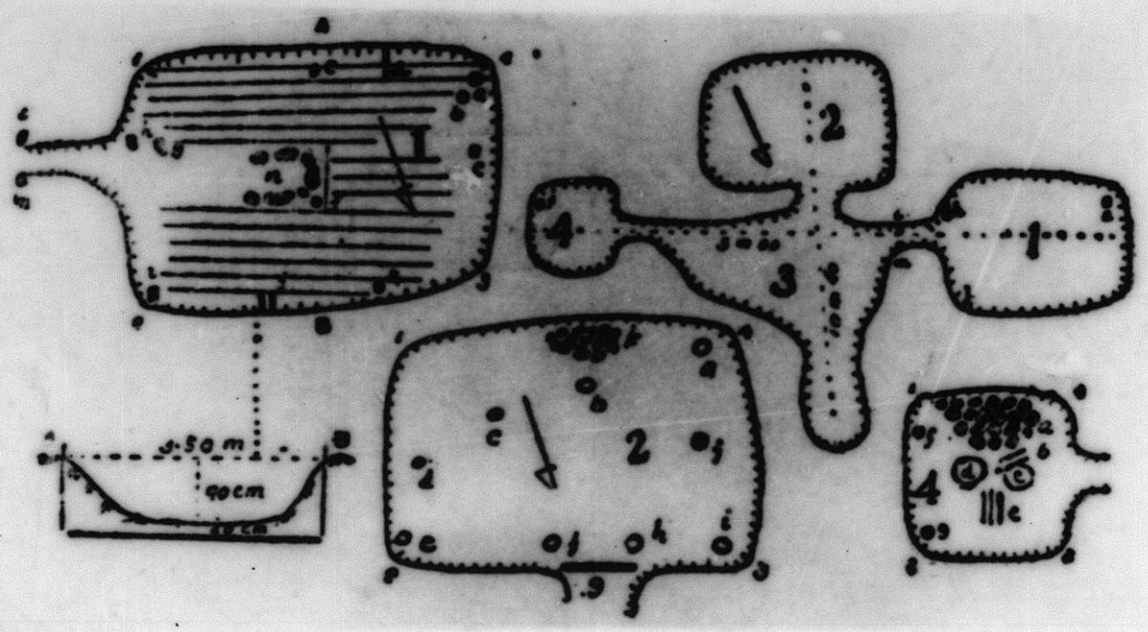


Fig. 47. Bettobu Pit No. 2

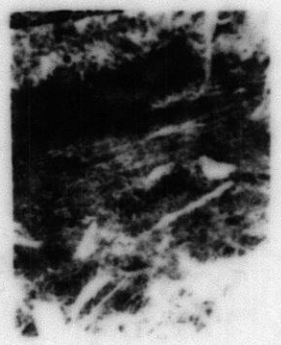


Fig. 48.

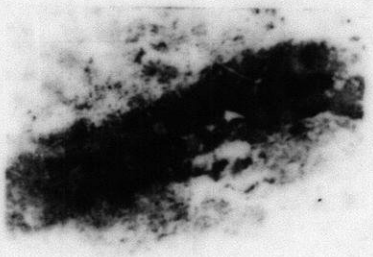


Fig. 49.

we decided to remove all of the covering earth from the board floor, which was very easy since the floor of the pit was clearly known; but we were careful not to damage the remains on the board floor, and proceeded slowly with the digging. When we had removed the covering earth from the board floor, we found that the space from the entrance to the fireplace was earthen floor, while the rest of the floor was covered with planks about 25cm. in width, running the full length from walls 1 - 2 to 3 - 4. These were not the usual rough-hewn lumber: they had probably used the deck boards from a shipwrecked foreign vessel. At various places cross-pieces were placed between the /̄ p. 115 ̄/ earthen floor and the wooden planks.

The posts exposed after the excavation were the eight labelled b, c, d, e, f, g, s, and k. (I omit the measurements.)

On the three sides of the fireplace, which was enclosed by the wooden floor, rather large stakes marked the edges. The fireplace opened in the direction of the entrance, and was made in a rather narrow shape using six natural stones and one foreign-made brick; its length was 95cm.; its width 60cm., and its depth 25cm.; a large amount of charcoal was found in it. Along wall 1 - 4 there remained the decayed wood fragments of an object which appears to be a bed, and there were remains of boards which appear to have been shelves. When we removed the floor boards, we discovered a layer of black soil mixed with charcoal; and after removing this, reached the yellow-earth floor of the pit about 10cm. below. Thus it appeared to us that these floor boards had not been laid down at the time of the construction of the pit, but probably had been added a good while later upon discovering the boards of a shipwrecked vessel. The

surface of the walls appears to have been covered with boards; this we determined through the discovery of decayed wallboards at various places.

The distance from the center of wall 1 - 2 to the passageway posts L and M (the spot where the door was probably attached) was approximately 1.55m. The original passageway must have been about 1m., with the width between L and M being 35cm.; it appears to have been a very narrow entrance. The finds unearthed were mostly scattered along the wall 1 - 4; in the area directly under surveying pole 1 were discovered, piled one on top of the other, six long strips of whalebone which were highly polished on one side; these were probably used as substitutes for the metal runners on sleds; these bone runners are objects which are also used by the Chukchees, and this type of bone object is frequently discovered in the shell mounds of Bettobu also. In the central area of this side there were what appeared to be the vestiges of shelves, and in the area below them were discovered a one-shō /1.588 quart/ sake decanter of porcelain, very likely made in Japan; a glass liquor bottle, probably for gin; and one bottle for pepper. /p. 116/ Among the other things discovered were a broken coffee cup, a stone pipe and a broken dish. It was of interest that a small hole had been made in the two sides of the broken dish and /the two parts/ joined together. On the bottom of this dish was the kiln name "Stephen Clive"; it is thought that this was probably of English manufacture.

Judging from the fact that there were Russian letters on the underside of the coffee cup, we knew that it was of Russian manufacture. In addition, we discovered a copper pot cover with a thick layer of sediment adhering;

it made one realize the filthiness of these people who never washed their tableware. In the area directly beneath surveying pole No. 2 there was a copper sheet one foot square, and under it we found a portion of straw matting apparently woven from muretchi /phonetic transliteration/; this was almost completely rotted, but we salvaged a piece of it. This type of matting, which we found in charred form in the burnt pit house at Oikawa, shows a high level of technique. In the method of weaving, there appear to be points of similarity between the two.

A fragment of naiji pottery was discovered near the bone runners. On the wooden floor near the fireplace was an iron axe and a bone implement of unknown use. On the boards which ran from the fireplace to the entrance were discovered the handle of a makiri knife and four wooden rods in a state of advanced deterioration; two of the latter appear to be harpoon shafts or bows, the other two have certainly been used as shafts for arrows. I brought home the best preserved of the rods. Also found were two wooden implements of indeterminate use tied together with copper wire, fragments of an iron pot, and numerous copper sheets. Over the fireplace lay an object about two feet long, made of a thin plate of iron, and forming an S-shape; this was probably the pot-hook.

The most noteworthy discoveries were three perfect skulls of foxes, with their jaws neatly clenched together, which were found on the wooden floor near the fireplace. Judging by the fact that no trace of the rest of the skeleton was found and that they had been placed in this position,

we concluded that they may have been used as an article of worship of some sort.

The passageway of Room No. 2, like the entrance to Room No. 3, opened in a northerly direction; it was about 1m. in width. The wall 1 - 4 was 4.3m.; 2 - 3 was 4.8m.; /p. 117/ 4 - 3 was 3.2m.; 1 - 2 was 2.8 m. and the present depth at the center was about 70cm. The yellow-earth floor of the pit was reached at about 30cm. deeper. Several naiji pots were found within the overburden of soil. After clearing away this soil we found ten posts (marked with a black dot) and post holes (marked with a circle) labelled a, b, c, d, e, f, g, h, i, and j. The plank labelled g was found lying at the entrance of the passageway. In this room we found no evidence whatever of boards having been laid down on the floor.

There was no fireplace in the center, but we found midway in a wall what was thought to be a firepit(?) approximately 1m. in width and 60cm. in height, made by piling up many natural stones, as shown in fig. 49. Since a large quantity of charcoal was found among the stones, and since traces of charring were found on the latter, we were convinced that our conclusion was correct. In the way of artifacts, we found only fragments of naiji pottery, fragments of an iron pot, and a copper sheet in the overlay of soil: the finds from Room No. 2 were extremely poor.

It should be noted that the naiji pottery unearthed in Room No. 1 was found on the floor, while that in Room No. 2 was found in the layer of overlying soil.

What was particularly interesting was that on the lip of these naiji pots was a line of indented designs in the shape of a "D". This certainly resembles the designs and the position of such designs on the Okhotsk pottery, and it is thought that possibly the Okhotsk pottery later evolved into the pottery of this type.

As for Room No. 3, we dug up about one fifth of it, in the vicinity of the two posts L and M, in a trial excavation, reaching the yellow-earth floor at approximately 25cm. We discovered only a fragment of a bone sled; there were no other remains.

/p. 118/ Room No. 4 was a small room in which all of the walls measured only about 2m. Along wall 2 - 3 there were places where portions of the mud wall of the roof survived, while in the walls at the side, planks were exposed as in Room No. 1. Along wall 1 - 4 was found a feature much larger in scale than that found in Room No. 2, consisting of large, head-size natural stones piled up; its entire area covered about one fourth of Room No. 4. A large quantity of charcoal was found between the rocks, and nearby were found two deteriorated wooden buckets. d and c indicate the metal loops of the buckets while b and e indicate the spots where the buckets were scattered. They appeared to be, and probably were, foreign-made wooden buckets.

The question arises whether this feature of piled-up stones occupying about one fourth of the entire area of the room could be considered a fireplace. Comparing it with the hearth in Room No. 2, /I would say that/ it was more likely something for a steam bath, and that this room was the bathroom. I learned that the Kurile Ainu had this type of bath from Mr. Sakichi BESSHO (a subordinate of the late Captain Gunji), who lived

on the island for forty years and who died recently; he told me that he had heard it from the Shikotan Ainu. He asked me whether I had not discovered this sort of thing in my excavations, and told me that according to the chieftain Yakofu /phonetic transliteration. T.N./ there were, until 1884, three places in Bettobu where there were such steam baths. Moreover, according to my friend, Mr. Tōkichi SAITO (a missionary of the old Greek Orthodox Church who lived with the Shikotan natives in their pit houses in 1907-1912 and whose wife, having become infected by tubercular natives, died after she returned to the homeland), one New Year's eve while he was on Shikotan Island, one of the natives having forgotten to pull the wooden stopper from the bathtub (it was the rule for the last person to use the tub to pull the wooden stopper and to clean the tub well), the water in the tub completely froze over the next day (New Year's day) and ruined the iron bathtub; this made it impossible for him to take a bath until the snow had thawed; so he was finally forced to use the natives' steam bath. This was constructed in a small abandoned pit house. On one side of this numerous stones were piled up, heated, and water poured over them. When this happened, white steam rose up like clouds and veiled the room, making it warm and causing the naked body to sweat. He said that in winter hot water was used to wash away the sweat and in summer cold water was used. It was a singular thing which he related to me.

The other remains in Room 4 consisted of only two or three /bits of/ ship's gear from a shipwrecked vessel.

/ p. 119 /

Bettobu Pit No. 3 (figs. 50 - 51b)

This pit is composed of two rooms which are connected and is in the shape of a dumbbell — a form also found on Alexander Hill in Bettobu. The length of the pit from A to B (A is at the center of wall 1 - 2, and B is at the center of wall 7 - 8) is approximately 7m.; the width of Room No. 1 was 4m.; of Room No. 2, 4.2m. Room No. 1 had an entrance-passageway facing north; the width of the latter (E - F) was 70cm. and the length 1.3m. The length of the passageway between Room No. 1 and Room No. 2 was approximately 1.5m. and the width 1.6m. /For data on/ the various walls and the locations of the features, please refer to fig. 50.

The situation within the pit after excavation was as follows: in Room No. 1, at point a near the entrance, there was an oval hole 46cm. long, 32cm. wide and 41cm. deep. There were no remains to indicate that it had been the fireplace, and what its use was could not be determined; but there were two planks laid across it. b indicates a post hole 5cm. in diameter and 41cm. deep. In the passageway toward Room No. 1 lay planks (labelled c and d); both measured approximately 90cm. At the entrance to room No. 2 lay a plank, labelled e; its length was 1.6m. h in Room No. 2 indicates the remains of a post* which protruded 15cm. above the floor of the pit. i is also a post, 10cm. high; j indicates a post hole 18cm. in diameter and 18cm. in depth; k, another post hole, 17cm. in diameter and 45cm. in depth; l another post, 18cm. high. n is a fireplace;

*Black dots indicate remains of posts; circles indicate post holes.

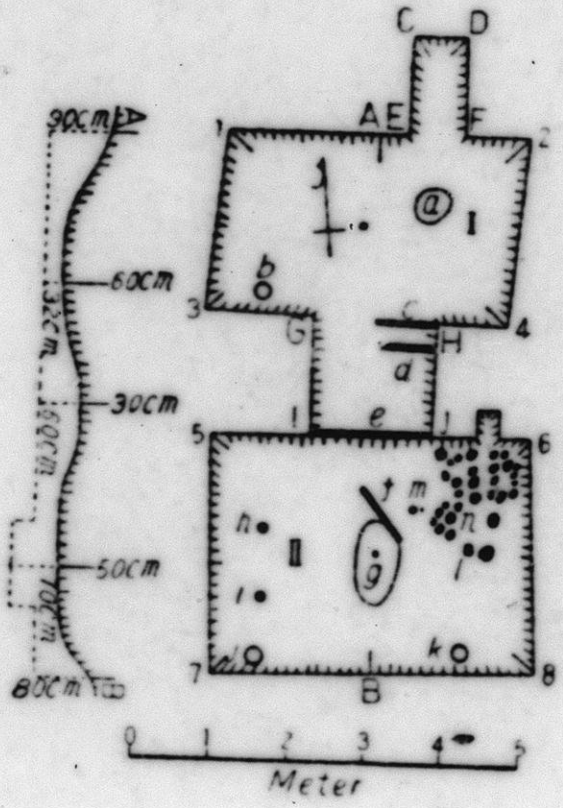
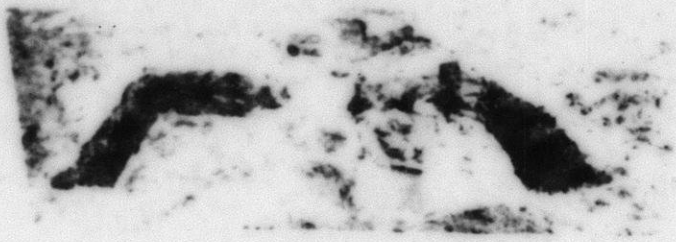
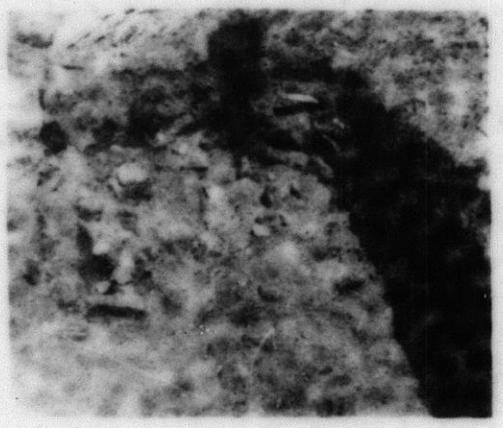


Fig. 50. Bettobu Pit No. 3





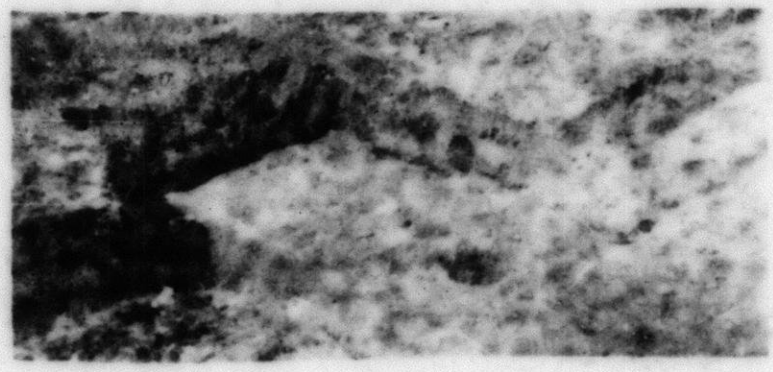


Fig. 51. Bettobu Pit No. 3. 1: inner room; 2: hearth in same; 3: entrance room.

the stones, the diameters of which were between 10 - ?0cm. [digit missing - Ed.] were arranged somewhat in two rows, and bricks were placed near the flue.

The length of the flue was 75cm., its width was 40cm., and it was dug 40cm. deep. Judging from the discovery of a corroded smoke-pipe of iron sheeting in the vicinity of this spot during the excavations, we were led to believe that it had been used for this purpose.

[p. 120] g is a circular hole approximately 1m. in length and 35cm. in depth. Since its interior had turned red from the heat and there were ashes, it is thought that this was the remains of the firepit to which the coals from the fireplace n were transferred. F is a plank which lay at an angle to the fireplace; its length was 90cm. The depth at the center of Room 1 before excavation was 60cm.; at approximately 32cm. the floor of the pit was reached. In Room 2 the depth was 50cm., reaching 70cm. at the bottom of the firepit. As to the depths of the pit along the walls, in Room 1, at A, between 1 - 2, the depth was 60cm.; in Room 2, at B, between 7 - 8, it was 80cm.

In view of the fact that the pit was a recent one, the finds were objects of recent date: Western porcelain, metalware, glass, coal, mica, rope, sulphur, and wooden implements. At a spot near the center of the 6 - 8 wall of Room 2, the skeleton of a dog with its skull facing south was found intact. It is being examined at present by Professor Inukai of Hokkaido University, and it is said to be a dog of Western origin.

Only a representative sample of the finds will be noted, owing to the quantity. We discovered a naiji pot near wall 1 - 3; it had two lugs and its diameter was 13cm., its height 8cm.; it was cylindrical in

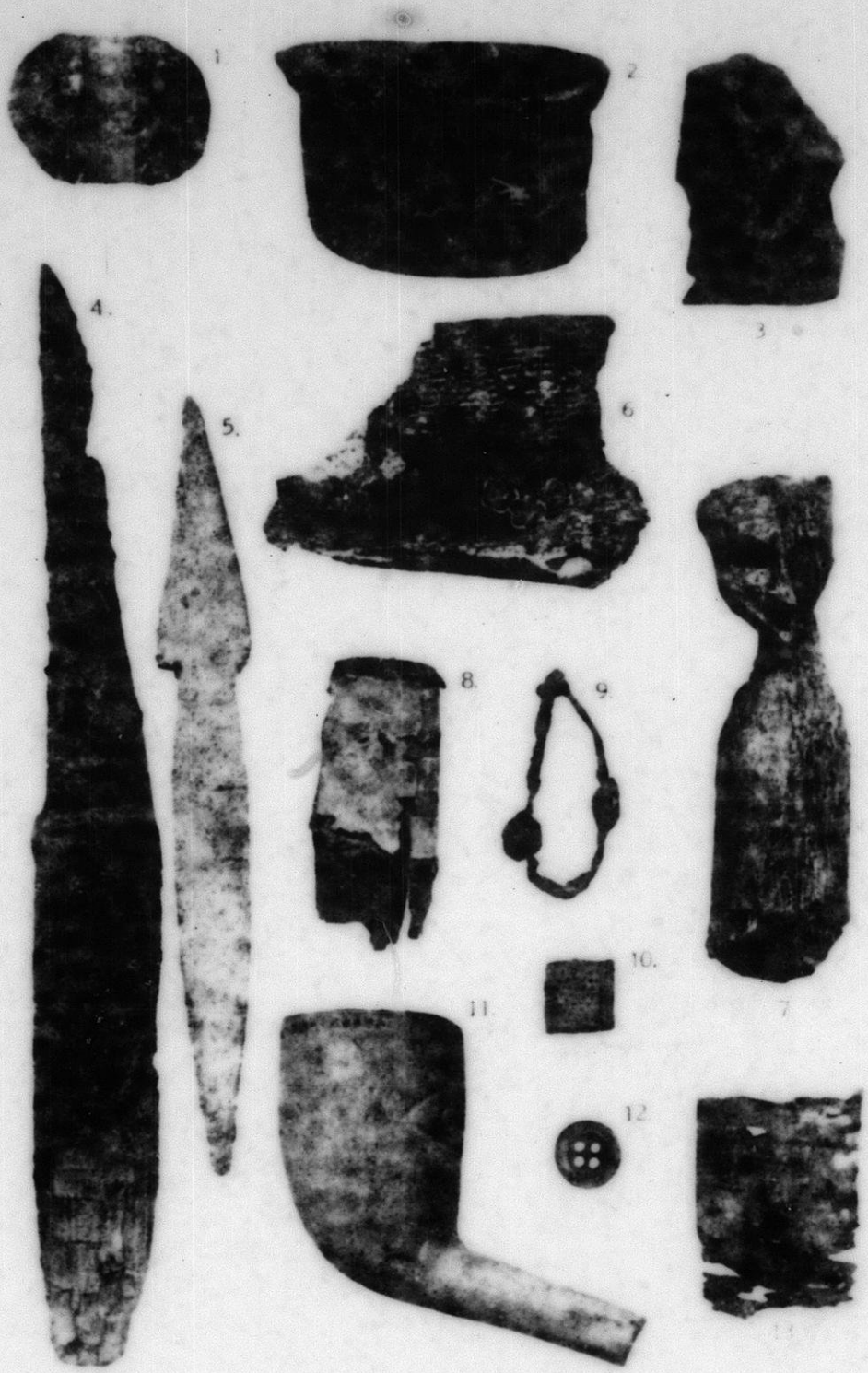


Fig. 51a. Objects from Bettobu Pit No. 3. (Nos. 1, 2, 7 and 11 are out of scale; scale for the rest: No. 5 is 19cm. long).

shape. Near the entrance-passageway was found a Russian-made axe measuring about 14cm. in length. Between the depression a and the passageway was found a leggings-button of bone. Near the point where the skeleton of the dog was found, in Room 2, were found the head and torso of a doll made of wood. Though it was decayed, it was possible to make out the whole form; it appears to be a female doll. This and the heel of a woman's shoe were found. Along the wall 7 - 8 there were found a half-broken blue glass bead (the type which is called Yezo-dama); a large, half-broken polished stone adze triangular in cross-section; a dipper-like object made of copper sheeting; and a copper cross. The writing on the surface of the cross (which was of the Greek Orthodox Church type) read, according to Sergei, Bishop of the Nicolai Cathedral, as follows: the three words at the top read "The Lord of the Earth," those at both sides at the center "Iesu Xristos" and, at the bottom "Where the skulls are"; and on the back /p. 121/ was written "God shall arise and His enemies shall scatter." From the floor near survey post 7 were excavated several fragments of lacquered cloth with blue plum flowers outlined in white drawn on them. According to Mr. Tomio YOSHINO of the Imperial Household Museum, who examined them, they were /parts of a/ cheap bag made in Japan after the Genroku Era (1688-1704).

In the corner near the survey post marked 5, along the wall 5 - 6, were found the following: a bone arrowhead; what appears to be the scabbard of a sword made by wrapping cloth around a wooden scabbard over which ornamental work made of copper sheet was placed; this, according to the appraisal of the expert on Ainu customs, Mr. Sueo SUGIYAMA, was probably

1: European porcelain cup; 3: sole of woman's shoe; remainder are metal objects.

the scabbard for an ikoro /phonetic transliteration/ (meaning an Ainu treasured sword). Also found were: a copper thimble used in sewing; and a European porcelain pipe with the word "Cork" on it. Around the fireplace were discovered several fragments of naiji pottery, a makiri knife, something with a wooden handle, a copper screw driver, an iron shovel about 25cm. long, and another iron shovel broken in half and with a wooden handle attached to it. Finds were discovered in greatest quantity in Room 2, from the point where the remains of the dog were located to wall 7 - 8. Among other things, fragments of vessels made from birch bark were discovered. The birch is not found in the northern Kuriles; I think these were brought from Kamtchatka or from the southern Kuriles. In the vicinity of the mouth of the flue at the fireplace marked n were discovered numerous pieces of European porcelain.

/p. 122/

Paramushiro:

Kabasato Pit No. 14 (figs. 52 - 54)

At Kabasato there were dozens of pits of this period arranged more or less in a straight line on the sand dunes in the rear of the Moriyama Fisheries. There were no single-room pits; most of them were composed of two connected rooms in the shape of a dumbbell. There were five or six with more than three rooms. On this occasion we excavated two pits, one with two connected rooms and this four-room pit. Fig. 53 is a panoramic photograph of the pit after excavation; the rooms were numbered in order of excavation.

Room 1, prior to excavation, was about 70cm. deep at the center; because of the fact that this was a recent pit the various rooms retained

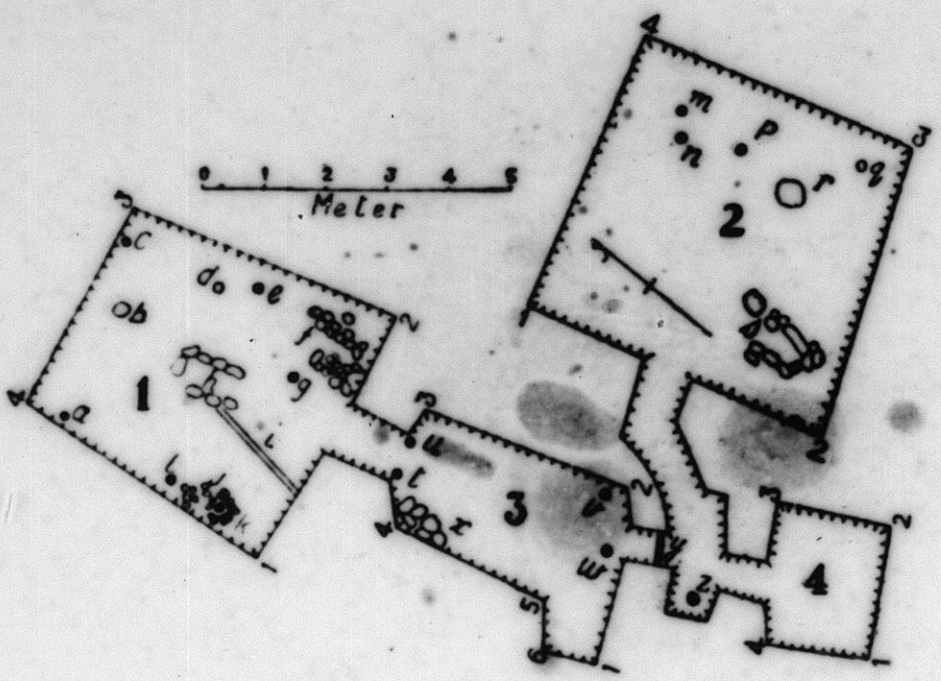


Fig. 52. Kabasato Pit No. 14

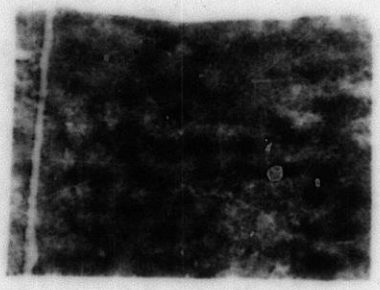


Fig. 53.

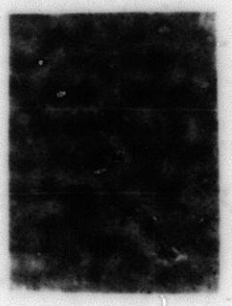


Fig. 54.

a wholly square shape and the earthen embankments along the edges of the walls were preserved intact. When the overburden of earth measuring from 20 - 30cm. was removed, the earthen floor of the pit was reached; since this /overburden/ was sandy soil, the excavation was relatively simple.

The room measured 4.6m. from 1 - 2; from 2 - 3, 4.7m.; from 3 - 4, 3.5m.; from 1 - 4, 4.55m. Generally speaking, the wall at the entrance was a little wider than the inner wall. There was a fireplace in the center built of eight natural stones forming a narrow enclosure with its opening toward the entrance. Its length along its outer edge was about 1.2m.; its width was 75cm. The length of the mouth of the fireplace in its inner edges was 40cm., its depth was 20cm. Charcoal about 5cm. thick and ashes were found at the bottom of the fireplace.

To the left, facing the entrance, was a fireplace (firebox) in the pechka /Russian stove?/ style; this spot was slightly raised, and the feature was made of numerous natural stones, both large and small, in the shape indicated by f in fig. 52, and also shown in the photograph in fig. 54. The length of the wall on the right side /of the pechka/ was approximately 1.2m.; its width about 30cm.; and between the two sides (that is, in the interior of the firebox) was a large quantity of charcoal. Its width was approximately 35cm.; its length approximately 80cm. Apparently a flue had been connected on the outside, /p. 123/ but we were not able to discover any trace of this.

To the right /facing the entrance/ was a spot where stones about 10cm. in diameter were piled up; this was approximately 60cm. in length. Separated from it by approximately 15cm. was a spot where several stones

were laid over an area 30cm. square; this is indicated by j. There were no signs that the stones had been subjected to heat, and we were not able to discover traces of charcoal.

/ p. 124 / A pole had fallen across from the entrance wall into the fireplace; this was probably a beam that had fallen down. It was approximately 2m. in length. We were able to discover the remnants of six house posts (marked a, c, e, g, k, and l) and one post hole, marked d. The first figure indicates the diameter of each post hole and the second indicates the depth: a: 10, 60; c: 15, 90; d: 15, 30; e: 10, 55; g: 7, 30; k: 8, 35; l: 7, 30.

Room No. 2 was slightly larger than Room No. 1. The distance 1 - 2 was 5.2m.; 2 - 3 was 4.6m.; 3 - 4 was 4.7m.; 1 - 4 was 4.6m. As the result of excavation we discovered on the left side, facing the entrance, a pechka-style firebox (marked s) like that found in Room No. 1. Its outside length was 1.4m.; its width was about 1m. Many square stones slightly larger than those found in the firebox of Room No. 1 were laid up, and among these we discovered a thick fragment of an Okhotsk pot forming a part of the side of the wall. The inside length was about 80cm., the mouth of the fireplace was approximately 35cm., its depth reached 30cm., and there was a large quantity of charcoal. This part also, in its entirety, gave the appearance of being a slightly raised embankment, and it was slightly higher than the floor. We found remains of three posts and one post hole; their respective diameters and widths were as follows: m: 5, 26; n: 8, 25; p: 10, 30; g: 16, 63.

Room No. 3 was connected with Rooms Nos. 1 and 2 by passageways, that to Room No. 2 being a long one. y indicates the rib of a whale

measuring 8cm. wide and 55cm. long which was imbedded in both walls at a height of 45cm. from the floor. This appears to have been placed for the purpose of blocking access and, since a cow was kept either in this room or in Room No. 4, it is thought that it may have been tied to this.

As for features in the interior, there was only one, marked x, where several natural stones were piled up over an area approximately 90cm. long 45cm. wide.

There were four posts, with those marked u and t being at the entrance to the passageway leading to Room No. 1; these appear to be the remains of the posts standing at both sides of the door. The diameter of post u was 10cm. and it stood ⌈p. 125⌉ 65cm. from the floor; the diameter of post t was 10cm. and it stood 55cm. from the floor; there were two others, posts v and w, with the diameter of v being 10cm. and height 50cm., of w being 10cm. and height 50cm.

Room No. 4 was the smallest of the lot, with wall 1 - 2 being 2.1m. and wall 2 - 3 being about 1.9m. There were no features in its interior and no posts were found.

It was not clear at what point entry was made into the pit house, but it was thought that it was between points 1 - 6 in Room 3. It was also thought that a secondary or separate entrance might have been at the spot where the post stood in the long passageway leading from Room No. 2. The area around these places which are thought to be the location of the entrances forms the starting point of the rise of the dune, and at various points below the incline were found extremely thin layers of shells.

Remains were found mostly in Room No. 1, followed by Room No. 2; there were no finds in either Rooms Nos. 3 or 4. Those found in Room 1 were: a lead bullet and one side of a stone object used as a bullet mold found in the vicinity of the fireplace at the center; a purple glass bead broken by the heat and a square stone implement in the ashes of the fireplace; a metal implement shaped like a plane, a lead ball, a square stone implement, an iron knife, an object shaped like the beak of the crane and made of the wood of the black alder, and several fragments of Western porcelain, along wall 3 - 4. From along wall 1 - 4 were discovered an iron marekku /phon./, one square stone implement, and fragments of Western porcelain. Above the firebox were discovered one perfect bone arrowhead made from deer antler, a chiroshi-like object made of wood, and one square stone implement. In addition, a great number of fragments of copper sheeting and iron implements were found.

In Room No. 2, copper sheets and one bone arrowhead were found along the wall near the passageway. Near the firebox s a cowhorn. Rooms Nos. 1 and 2 gave evidence of having been pits of the First Period because of the discovery, in Room No. 1, of a fragment of Okhotsk pottery which had been used to form part of the stove wall; also the discovery of four or five fragments on the floor of the pit, and of several such fragments and stone chips in Room No. 3 /misprint for 2?/.

/p. 126/

The Shell Mounds

The shell mounds of this period which we have inspected to date are: two at Bettobu on Shumushu, several at Kabasato on the southern tip of Paramushiro, and two at Musashi Bay and Bettobu on the same island.

Those at Bettobu on Shumushu I referred to as the Third and Seventh Shell Mounds in my "Archeological Investigations on Shumushu Island, Northern Kuriles," /Translation No. 2 below - Ed./, but here I will refer to the Third Shell Mound as the Shell Mound at Bettobu on a Dune to the Rear of the Native Burial Ground, and the Seventh Shell Mound as the Shell Mound on Alexander Hill, at Bettobu.

Shumushu Island

The Shell Mound at Bettobu
on a Dune to the Rear of the Native Burial Ground

In the area between the steep incline of the sand dune to the rear of the Ainu burial ground at Bettobu and the seashore, there are scattered middens.

Here are remains of the posts of the original dwellings; places where head-sized stones are piled up which seem to be the remains of steam baths; places which appear to be more the site of a shack on the ground rather than the site of a pit; and it is here that the shell layers are thickest — about 10cm. There was no overlay of soil; they were exposed over their entire surface.

The species of shell found in the greatest quantity was Volsella modiola; bone fragments of animals were also found, with those of sea mammals being in the largest number, while dogs' bones were also unearthed. /p. 127/ Among the artifacts found were several fragments of naiji pots. Stone implements comprised two stone arrowpoints and four square-shaped stone objects. But the majority of the finds were metal implements and fragments of European pottery. The metal objects uncovered were countless, and included fragments of iron pots, copper pots, iron

knives, iron hooks, iron rods, iron harpoons, iron marekku, iron needles, copper crosses, copper buttons, copper nails, Russian coins of 1842, and the Kan'ei /1624-1643/ coins (the Kan'ei Maruya-sen) of our country, etc. The bone objects included numerous bone arrowpoints, chiroshi-like bone objects, bird-bone tubes, bone harpoons, bone sled runners used as substitutes for metal ones, etc.

The Shell Mound on Alexander Hill at Bettobu

At the point where the road leading from Bettobu to Kataoka is about to enter Alexander Hill, the site of the former village of the Kurile Ainu, are the ruins of what even today is commonly called "The Natives' Huts." The truth is that these were built by the members of the Hōkōgi* in 1914; but in front of these is a shell mound of moderate size. I myself excavated this shell mound to some extent on my first and second expeditions: that is, in 1933 and 1935. There was almost no overlay; directly under the weeds was the shell layer, between 15 - 20cm. thick, composed almost entirely of Volsella modiola, with a very small amount of Acmaea cassis pelta. The shells had become powdery only to a very slight extent; even the shells at the bottom of the layer had a living color and were extremely fresh. Among the finds unearthed were a small piece of a stone object, a stone mold for making lead bullets, a small amount of iron fragments, a portion of ship's gear from a shipwreck, iron nails, two or three bone implements, and fragments of bricks. Fig. 55 shows a cross-section after excavation. (See p. 190.)

*An organization formed by Naval Reserve Captain Naritada GUNJI with the aim of developing the Kuriles for the purpose of guarding the northern ramparts - T.N.

Paramushiro:

The Shell Mounds at Bettobu, Musashi Bay

These are exposed in two places in the troughs in the sand dune on the seaward side of the Bettobu River which flows from Bettobu Lake, at the southern tip of Paramushiro Island, into Musashi Bay. /p. 128/ The types of shells here are generally the same as those on Shumushu Island. Although animal bones were relatively scarce, we found two or three dog skulls and the bones of sea mammals. In the way of artifacts, there were, as on Shumushu, fragments of naiji pots, European porcelain, glass beads, Nankin-dama /some sort of glass bead/, and a great number of metal objects, such as several fragments of iron pots made in Japan Proper, and one Kan'ei coin (a Gembun /1736-1740/ Takatsu coin; Gembun Fifth Year /1740/, Osaka; struck at /or by?/ Takatsu). Several pieces of bone implements were also found.

The Kabasato Shell Mound

Most of the pits of this period at Kabasato have their entrances along the seashore. Scattered along the walls are evidences of shell mounds. Although we do not know their exact number, the places where we excavated yielded five or six spots. Like the shell mounds on Alexander Hill, the shell layer was found immediately under a growth of weeds and was, at its thickest points, about 5cm.; whereas in other places the layer consisted merely of shells scattered here and there, making it only nominally a shell mound. Artifacts, however, were extremely plentiful: numerous fragments of European porcelain, beads, numerous square-shaped stone objects, and lamps. Metal objects included

an iron knife, the top of a flue made of copper, the sheath of a knife, copper sheets, and other objects. Bone objects were numerous, the main finds being a perfect bone sash clip (kukkurukeshi) and a tube made of bird bone.

In the foregoing, I have described several examples of my excavations of recent pits and shell mounds. It is characteristic of the pits of this period that there are few single-room dwellings and that most of them are made up of from two to four rooms which are all connected by passageways. Two connected rooms in the shape of a dumbbell is the typical shape of the pits of this period, and it is thought that the reason for the increase in the number of rooms is due to Russian influence.

Up to the present, there have been discovered, at Bettobu on Shumushu, no pits of this period with roofs intact: they have been found only to the extent of two or three pits with evidence that the roof had fallen in at the walls, and two or three others where the posts still remained in place in the ground. None of these, however, were found in the pits of this period at Kabasato and Bettobu on Musashi Bay, Paramushiro Island.

/p. 129/

Shumushu:

At the time that Captain Gunji first crossed over to the island during the twenties of the Meiji Era /1887-1896/, there were pit dwellings at Bettobu that were still intact; apparently some could be used for a night's lodging. The distribution of the post holes within the pits was similar to that of the previous Middle Period, the method of construction employing four main posts at the four corners and another between each

two corner posts. H. J. Snow (in 1878) and Yasukazu AMBA /YASUBA?/ (in 1884) are among those who knew the natives intimately while they were still living in such dwellings and who witnessed the construction of the latter and wrote about it. Snow, in his "Notes on the Kurile Islands" has written as follows: /Translation is from Japanese text - T.N./ "These native houses are ordinarily made by digging a shallow hole in the sand and by driving stakes around the edges. If they are not difficult to procure, wooden planks are nailed to the stakes on the inside, and the dwelling is built. The beams are laid across the top, and for this reason the roofs are flat. The secondary beams are laid across at an angle to the center from both ends, and for this reason the roofs are sharply inclined. The top of these roofs are covered with thatch or grass over which dirt is laid. At the entrance is a crude door made of wood. On entering through this, one passes through a low and narrow passageway and comes to a second door. Beyond this is the main room of the dwelling. Along the sides of this box-like living room there is in addition an alcove on which dried grass is laid, thus forming a bedroom. These dwellings are mainly made up of two or three rooms. Each room has a door at both ends and each is reached by a short, low, and narrow passageway. These large-scale houses are found especially on Shumushu, and the life of the natives on this island is more abundant as compared to the natives of the Central Kuriles. In one room of the house of the chieftain of Shumushu, I saw plates, tumblers, and dishes, and I was entertained with tea. These were of an elaborateness not to be found among the natives of Ushichi or Rasawa. Also, crudely made dining tables, chairs, shelves, etc., were found installed in good homes.

Moreover, each home has a sort of small altar over which were placed colored portraits of Christ and Mary, while in some homes there were portraits put there of the Russian Czar," etc., etc.

Yasukazu AMBA, in his "Diary of an Inspection Tour of Hokkaido in 1884," writes as follows: "The pit dwelling of the chief of the natives, at Alexander, may to some degree be called a human dwelling. A dog is put at the entrance passageway, beyond which, turning left, there is a room. There are an iron pot and a fireplace. There is another room, and still another which could be called an inner room. Two poles are placed horizontally at the center [p. 130]; a species of reed was scattered and there is a matting made of small bunches of grass woven together. To the left and the right there are beds; there are shelves on which various gear is placed. In the corner at the left is a fireplace; an iron pot is freely hung over it and young grass is boiled in it. On the south there was a window of glass about two feet in size. At the side of the entrance, on boards about seven by three inches, were carved Xs here and there. These resembled block calendars. It is said that nails are inserted to count the days." (Quoted from Kenji SEINO's "Travels in the Northern Sea in the Early Years of Meiji.")

In the "Chishima Expedition," written by Gisuke SASAMORI, who visited Shumushu in 1893 after the natives were transferred to Shikotan Island, we read: "When I had gone more than ten chō [one chō: approximately 119 yards] there was a large lake 20 chō more than a ri [3.927 kilometers]; it stretched out from ten to five or six chō wide; its lower reaches passed through Bettobu in the northeast and drained in the sea. It is the largest lake on the island and the largest river. In its upper reaches there were

found the remains of a native village. Abandoned pit dwellings numbering about twenty were scattered here and there. The entrance of each pit faced the north, this undoubtedly as the result of actual experiments in protection against snowstorms. The pits were first dug five or six feet deep from the surface; the circumference differed with the size of the pit. The four walls were lined with the boards from wrecked ships; in the four corners posts (all of them driftwood) were erected; the ridge-pole was thrown across and driftwood or boards were laid down, and earth was piled up over this; there is a fireplace and a flue, and a skylight. Steps were always built to the single entrance to make ingress and egress easy. At a strategic point in the ridgepole and the beams iron nails more than eight or nine inches long are driven in; from these the iron hooks that dangle over the firepit or the fireplace are hung. This did not differ from the interior of an extremely poor farmhouse in Japan. On the outside of each pit there were always rows of stakes arranged in squares seven ken /42 feet/ long and about six ken /36 feet/ wide; pushing aside the flourishing grass, and looking carefully, I found these to be the sites of cultivated ground. About 45 bu /one bu is six feet square/ seem to have been the cultivated plot for one house. It is said that the stakes driven around the edges were to keep dogs and cattle from blundering in."

The foregoing observations made by Mr. Snow and by Mr. Amba, which were made prior to the transfer to Shikotan; and the record of Mr. Sasamori, who made his observations soon after the transfer, are very valuable documents today.

As in the pits of the First, or Okhotsk Pottery, Period, the stone fireplaces usually are found in the pits; their shape is rectangular and is not as deep as the former fireplaces; there is always an opening at one end, which opens towards the passageway.

/p. 131/ The room in which the fireplace was found was, for the most part, the living room. Stoves were constructed in profusion, and were reported in the afore-mentioned record of Mr. Sasamori's. Compared to one example of the Middle Period as found in the Oikawa Pit No. 4, these are made sturdily with stone; and, whereas the smoke flue of the former was made so that it passed through the side of the wall and opened up on the outside, those of this period pass through the roof of the pit dwelling and a chimney seems to have been put on the outside. These stoves, too, seem to have been modeled after the Russian pechka.

In addition, there is a feature resembling a fireplace which may have been a stove or a steam bath, but use of which is unknown. This was made by piling up head-size rocks along the wall of the pit; although it is certain that it was used for some sort of fireplace, as attested by the facts that the stones are scorched and that a great amount of charcoal was found, it is possible that it may have been a small-scale steam bath. (The example of Room No. 2 of the Bettobu Pit No. 2, is found in fig. 49.)

The object in Room No. 4 of the same pit, made up of stones piled up so that they took up almost one third of the space of the room, was clearly used as a steam bath; other examples are the mound of stones used as a steam bath exposed at the site of a dwelling in the vicinity of the shell mound on the sand dunes back of the natives' burial place

at Bettobu, as mentioned before; and the statement made by Chieftain Yakofu /phon./ that in 1884 there were steam baths in three places at Bettobu. These were constructed in one part of the dwelling. As an example of isolated construction, we discovered one in the summer of 1937 on the hill in the rear of the Sawada Fishery at Nagasaki, on Shumushu. Here, at the spot where a little boring had been done in the center of the pit, a part of a mound of stones was exposed; this was clearly a pit used for steam baths, and it looked as though it were a public bath.

The foregoing was based on the results of excavations or on the records of actual observations at a time when the dwellings were actually in existence. The dwellings which were not pit houses have almost completely vanished, and it is not possible to know about these. Fortunately, however, records concerning them are contained in Professor Torii's great work, Etudes Archeologiques /p. 132/ et Ethnologiques. Les Ainou des Iles Kouriles.

According to the researches of Professor Torii, the Ainu of the Kuriles, like the Kamchadals, had, in summer, houses which were not pit dwellings and were called Mountchē. These were grass huts built directly over the ground. On Shumushu alone there were also the pou or so-called elevated storehouse like those of the Kamchadals, in which piles were driven into the ground in a square, and a structure like a storage room built upon it; it had a door at one side, and the storehouse was entered by a ladder made by cutting steps into logs. These were storage rooms and were used for the purpose of storing hides and dried fish. When Professor Torii visited the former settlement on

Alexander Hill at Bettobu, Shumushu, in 1899, he discovered notched logs cut to form the stepladders for the elevated storehouses of that period, and it is thought that these existed until the transfer to Shiokotan Island in 1884. Moreover, according to what the native, Gregory, told Professor Torii, there were at that time six elevated storehouses in Bettobu.

/ p. 133 / According to notes taken by Professor Torii from a person who had experienced life in the pits, the interior plan of a dumbbell-shaped pit with two connecting rooms, as shown in fig. 56, was as follows: "No. I was the inner room, and the main room (Tche); there was a fireplace - A - in the center, and at both sides were the Mokoratchi or bedrooms - B - with crude beds made of wood. Directly above the fireplace was a window open in the roof from which smoke could escape directly. II indicates the passageway (Moashinto) with a length of about 1.5m. and a width of 75cm.; III was the anteroom (Ashinto) in which various implements - traps, fishnets, and hunting equipment was put; there was a kitchen - C -, and a hut for the dog - D. E was the entrance (Abousouta). The inner room was rather wider than the anteroom, but it was only approximately four meters square.

"As for the depths of the floor, the inner room and the passageway were about 1.5m. from the surface of the ground, while that of the anteroom was only half of this.

"In neither of these two rooms did any light enter from the outside, and since there was no lighting they were dark even during the day. So they had to use lamps. The lumber used to construct the huts was usually driftwood; to build the huts took four or five days even with two men and

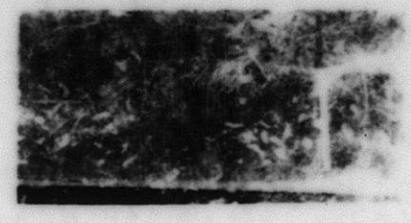


Fig. 55.

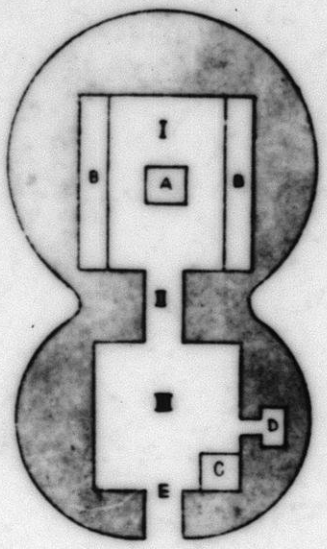


Fig. 56. Ground plan of a pit dwelling, after Torii.

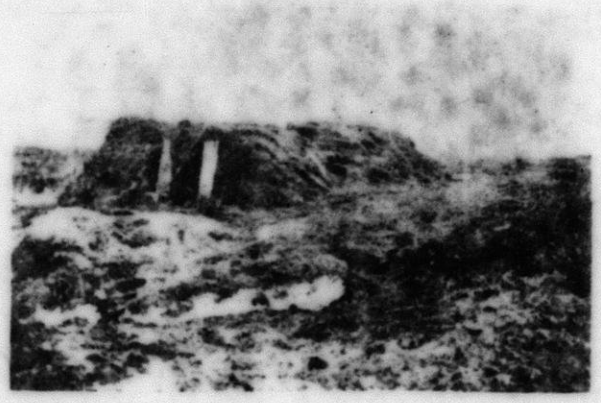


Fig. 57.

a woman working. The men mainly dug the pit and built the framework; the women got the grass together. The shape of the completed hut resembled a mound, and around it small ditches were dug to prevent rain which fell on the roof from running into the interior of the pit."

Among the sketches and photographs from the period when these pit dwellings were still extant are several of the Bettobu settlement on Shumushu published in Mr. Kenji SEINO's "Travels in the Northern Sea in the Early Years of Meiji," and I refer the reader to these; but the most perfectly preserved of the pits, and one which serves as a good example to illustrate the outward appearance of the dumbbell-shaped, two-room pit described by Professor Torii (and quoted above), is the one photographed at the Kurile Ainu settlement on Rasawa Island, in the Central Kuriles, by Mr. H. J. Snow in 1878. It is found in his In Forbidden Seas, and I use it as fig. 57. For purposes of reference, I have included it here.

/p. 134/ Recently, one of the Shishido Library books which came into my hands is a rare three-volume book by Chikayoshi KAWAKAMI /Shinzen?/ called Adrift in the Northernmost Limits, in the first volume of which (dealing with observations of the Kurile Ainu on the islands of Harumukotan and Onekotan in 1813) there is a record of the earthen houses.

This book is about Headboatman Kizaemon, Mondo, Sasuke, Kakuji, and twenty-two others of the ship Eiji Maru, of Funama Island, Kawauchi District, Takagi /or Takashiro/ County, Satsuma Province who, in the tenth month of 1812, met a storm at sea near Kumano, in Kii Province, and drifted about for eleven months, landing toward the end of the ninth month of 1813 on Harumukotan. Kizaemon, Sasuke, Kakuji and three others were saved by the

aborigines; they arrived at Kamchatka by way of Onekotan and Paramushiro Islands, and were later sent back to Etorofu Island. Fig. 58 shows a drawing of the earthen dwellings of the Kurile Ainu on Harumukotan Island, about which the following is stated: "The earthen pits are made by digging in an elevated spot in the terrain; posts are erected; beams are put across; miscanthus is used as thatch; and dirt is piled on it; there is an entrance at the side; a window is opened at the top; and when snow blows in, the door is closed and people enter and leave from the window in the roof. Logs are cut and notches are made; these logs are placed at an angle and used as a ladder. Moreoever, around the ceiling window is woven miscanthus ....../word missing/ is placed in the manner of a screen to prevent snow from coming in. Over this something like moss is placed; as for the fireplace, an enclosed fireplace is installed below the ceiling window." Being the oldest drawing of the pit dwellings of the Kurile Ainu, it is very interesting; what is more interesting is that we learn that when the snow falls heavily in the winter, they enter through the ceiling window by means of a stepladder of logs in which notches have been made, like the Kamchadals and the Aleuts.

The Artifacts

Bone Objects

These gradually diminish in number and variety, but are often quite elaborate because of the ease of procuring metal tools. The bone comb, which is one of the ornamental objects, has hitherto always been of the vertical type; but during this period the horizontal comb also appears, some with large teeth on one side and fine teeth on the other, as in No. 1

Fig. 58.

of fig. 59 which was unearthed from Room No. 1 of Pit No. 8, a pit of this period located on the plateau on the right bank of the Bettobu River excavated in the summer of 1937. The carved decoration probably represents the Russian double eagle.

The sash clip (kukkurukeshi), the characteristic ornament of the Kurile Ainu women, is found in large numbers in the graves of this period but occurs only rarely in other types of sites; [p. 137] fortunately, however, we were able to discover a perfect specimen in the shell mound in the vicinity of the entrance to the Kabasato Pit No. 1 on Paramushiro Island last summer. No. 3 of fig. 59 shows this; it is the finest specimen of sash clip which has so far been discovered in the northern Kuriles.

A large number of bird-bone tubes (containers for bone needles) of this period has been found which had designs on them. No. 7 of fig. 59 was found, along with the bone sash clip, in a shell mound of this period at Kabasato last summer. Both Nos. 12 and 13 were objects uncovered in Pit No. 8 along with the bone comb; their use is not clear. No. 14 was an object uncovered in Room No. 1 (excavated in 1938) of the Bettobu Pit No. 2; its use is also unknown. There is no great change in the shape of the bone arrowpoints from those of the previous Middle Period, except that the tip of the tang has changed from the shape of the previous period to the shape, or a shape identical with the bone arrowhead among the recent native implements of the Chishima Ainu. Occasionally there are examples with a small hole in the reverse side at the point of the blade, an arrangement in which to insert poison. No. 5 of fig. 59 was uncovered from Room No. 1 of the Kabasato Pit No. 14, and is an arrowpoint made of deer antler. Both Nos. 2 and 6 were discovered in

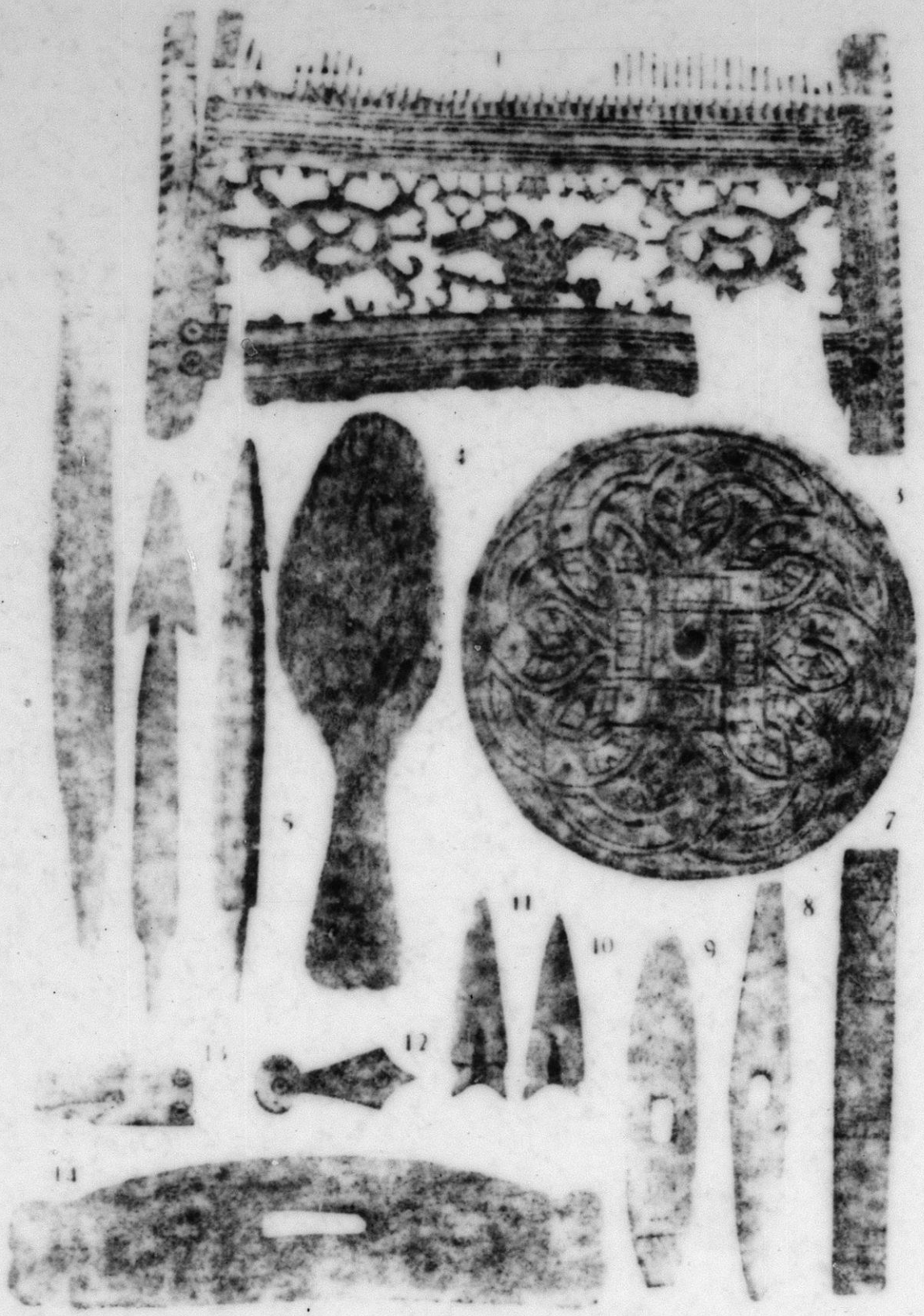


Fig. 59. Types of bone and antler artifacts from recent sites.

the shell mound in the dune to the rear of the native burial ground at Bettobu. Nos. 10 and 11 of fig. 59 show another type of bone arrowhead; it was put to use by joining the tang (chiroshi) and the point, and is identical with the bamboo arrowhead and the chiroshi which is found at present among the Ainu. Both were found in the shell mound in the rear of the native burial ground at Bettobu. Nos. 8 and 9 show a type of bone implement which is frequently discovered but whose use is not known; it is thought that they may be shuttles used in weaving nets. No. 4 is a bone spoon clearly made in imitation of an European spoon; this type is unearthed very frequently. The specimen was found in the shell mound at Bettobu on Musashi Bay on Paramushiro. In addition, bone harpoons have been discovered which are somewhat similar in form to those of the Middle Period, but most of the points of these harpoons are tipped with metal. Bone adzes have been discovered in the shell mound at Alexander Hill at Bettobu and in Pit No. 7; they are identical in form to those of the Middle Period, having from one to two or three small holes in the center on one side.

Among other bone objects frequently discovered in pits and in shell mounds are bone handles for metal-edged tools, doorknobs, and bone runners for sleds made as substitutes for metal ones; the latter are thin, long, narrow strips of whalebone through which /¯p. 138_/ small holes had been drilled at intervals, and one side of which was very smooth and well-polished. In addition, the buttons for leggings have frequently been found; these are, in all likelihood, imported items.

Porcelain and Glass Objects

Fragments of porcelain and glass are the items found in the greatest quantity in the shell mounds and pits of this period, but due to the nature of the material, perfect specimens are almost lacking. Relatively intact pieces have been found among grave goods in burials.

European porcelain, the so-called "Holland" porcelain, is found in the greatest quantity. Chinese and Japanese specimens are found only rarely and in extremely small quantity. Among the European-made porcelain, what appear to be goods of English manufacture occur in the greatest number. The name of the kiln whose mark is found most frequently is Copeland & Garrett, which was established about three hundred years ago and which is said to be a famous porcelain manufacturing company in England even today. Among the other marks is Stefin Clive, which is probably English. Next in number are pieces of Russian origin, as shown by the kiln marks which were in Russian script. The designs of the former were all printed; but the Russian ones were all hand-painted.

Pieces of Chinese manufacture were excavated from the Bettobu Pit No. 3; there were some from Kiangsi. Among those of Japanese origin was the fragment of an object like a flower vase excavated from a shell mound of this period at Kabasato; but mainly they were what is commonly known as bimbō tokkuri /"poor man's decanter"/ and No. 2 of fig. 60 shows one which was excavated in Room No. 1 of the Bettobu Pit No. 2.

Most of the European articles were coffee cups, soup plates, dishes, sugar bowls, teapots and the like; No. 3 of fig. 60 shows a Russian-made teacup which was unearthed in the Bettobu Pit No. 2. No. 4 shows the English-made cover for a teapot which bore the kiln mark of Copeland &

Fig. 60. Miscellaneous finds from recent sites.

Garrett [p. 140]. It was excavated from the shell mound on the sand dune to the rear of the burial ground at Bettobu. In addition, porcelain beads have frequently been found; a porcelain pipe was discovered in the Bettobu Pit No. 3, with the word "Cork" imprinted on it. It was probably English. A pipe of this type was also found at Kataoka. The glass objects found were mostly fragments of bottles, but whole specimens were found. No. 1 of the same shows either a gin or whisky bottle from the Bettobu Pit No. 2.

In addition, there was plate glass for windows, and a few examples of smoked glass. Moreover, glass beads - large, small, and "Nanking" beads - in various colors have been found, and almost all of them are European-made. What is most interesting is the fact that the porcelain unearthed from the sites of this period at Alexander Hill, on Bettobu, is almost all limited to the same identical type; since that found at Kabasato is also identical, we are led to believe that at a certain period the same type of objects were probably imported in great quantity. To determine when these objects were imported is a problem, and the tendency is to regard them as very recent - about the time of Snow's visit around 1877. It was probably only after 1830, when the Russian-American Company was established, that these were imported in large quantities.

Metal Objects

The metal objects of this period are mostly of European manufacture, and there is a preponderance of ship's gear salvaged from wrecked vessels. Even in this period, the natives did not themselves know how to work metals, and what objects they obtained were ready-made; but it appears

that they had some knowledge of forging, since fishhooks and marekku (gaffs for catching fish) made from the nails from ships, and adzes made from sheet iron, have been found.

No. 9 of fig. 60 shows a copper harpoon found in the Bettobu Pit No. 6; this was made from a portion of a piece of copper ship's gear found in this spot. No. 11 is a marekku /gaff/ made from a ship's iron nail, and was found in the shell mound in the sand dune at the back of the natives' burial ground at Bettobu. No. 5 of the same figure shows a fishhook of iron; a great number of such fishhooks made by bending nails from ships have been found. In addition, arrowheads, objects substituting for lamps, dippers, etc., made by working sheet copper have been found. No. 8 is a makiri knife, found in the Bettobu Pit No. 6; it looks like a Japanese-made object. No. 7 shows a knife with a bone handle; the blade appears to be European-made. No. 10 shows the front end of a pipe made of silver-plated copper; it was found in Pit No. 8 and appears to be of Manchurian or Chinese origin. The mouthpiece of the same type of object, thought to be probably of Manchurian origin, was found last summer in the Kabasato shell mound.

Iron pots have almost all been limited to fragments. Although it is difficult to say for certain because of the lack of intact specimens, these appear to be European-made, except for one perfectly preserved iron pot made in Japan which had been used as a burial object and was found in the graves at Bettobu on Shumushu. From the shell mounds at Bettobu at Musashi Bay on Paramushiro were found several fragments of Japanese-made pots. Whole pieces of copper pots have frequently been found; we uncovered one in the shell mound in the sand dune back of the burial

ground of the natives at Bettobu, and one from the Kabasato Pit No. 8; both of them were European-made. In addition, knives, scissors, forks, gold buttons, needles, sewing thimbles, axes, shovels, the barrels of guns, and iron bells (probably made in Japan) have frequently been found. No. 6 of fig. 60 shows a copper bell; it was probably hung on the neck of a cow, and it appears to be Russian-made; it is one of two found from the Bettobu Pit No. 2.

Along with these metal objects were found one Russian copper coin dated 1842 and one Hōei Maruya* coin of the Kanei currency, as shown in fig. 62; these were found in the shell mound in the sand dune back of the burial ground at Bettobu. (See p. 208.)

In addition, copper crosses have frequently been found, mainly those intended to be hung from the neck; these are Russian-made, and some of them have scriptures in Ainu or Aleut written on the back in Russian script.

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Wooden Objects

The sites being recent ones, wooden objects were frequently found. In Room 1 of the Bettobu Pit No. 2 were found what appeared to be a bow and a quiver, both in a state of decay. In the pits and the shell mounds of this period the so-called makiri handle for a knife is frequently found; in the Kabasato shell mound was found a makiri handle decorated with silver. From the Bettobu Pit No. 3 was found the perfectly preserved

* A coin named after a certain Maruya, who struck this coin. A Kanei copper coin struck at Kameido, in Edo, between Kanei 5 to Shōtoku 4 - T.N.

upper part and face of a wooden doll. Objects discovered in the graves included wooden implements apparently used as shuttles in weaving, wooden handles into which ships' nails were pounded to form a digging tool, and wooden sash clips (kukkurukeshi).

In a Kabasato pit was discovered a pick-like object made from black alder; in the Bettobu Pit No. 3 was found the wooden handle for a shovel; both were in an extreme stage of decay and were difficult to preserve.

A wooden handle which could be regarded as the handle for an ikoro (treasure sword), and on which were designs in copper, was discovered in the Bettobu Pit No. 3. However, since makiri handles made in this manner were found among the burial objects, it is felt that these probably were makiri handles.

Objects apparently made from birch bark were uncovered from these pits, but because of the fact that birch does not grow on the northern Kuriles, it is thought that these were brought over either from Kamchatka or the southern islands.

Earthenware

/ p. 143 / During this period the natives obtained iron and copper pots exclusively from Russia or America through the Russian-American Company, a fact confirmed by the frequent discovery of them in the pits and shell mounds of this period; and it appears that they also obtained iron pots made in Japan, as shown by the discovery of such a fragment in the shell mound at Bettobu, Musashi Bay, Paramushiro Island.

One would think that with these metal pots at hand the natives lacked nothing with which to cook, but the opposite is true, for due to their

inability to repair damaged pots, they manufactured the naiji pots of the previous period for use as substitutes until they were able to procure new metal ones, a fact which may be conjectured from the discovery of considerable numbers of naiji pots together with the metal pots in the pits and shell mounds of this period. Moreover, at the time that Professor Torii investigated the northern Kuriles in 1899, he became intimate with the Kurile Ainu on Shikotan, and ascertained the method of making this pottery from the old woman, Stephanie, who was more than seventy years old at that time and who had once engaged in making such pots. She informed Professor Torii that the extremely fine fibered plant called nokkanki was cut and mixed with clay and sand; this was kneaded with water, and when rings of the clay had been laid one on top of the other in a spiral-shaped form, water was put in it, and it was placed in an enclosed fireplace where a fire was built on four sides. The water in the pot gradually boiled, became steam, and in a little while the water diminished. After waiting till the water disappeared, the pot was then taken out into the open air and left there, being then considered completed. She said that generally it was the women who engaged in the making of pottery, and that while the Paramushiro women were skilled in making pots, the Rasawa women were not. This was due, she said, to the degree to which the nokkanki was used: the Rasawa women were unskilled because they cut it too small.

Among the pots with ears /$\overline{\text{lugs}}$/ there were two types: pots called toishu and dishes called toisara. Because of the way the pots were made,

she said that they frequently had a difficult time, since the pots broke when sea-otters or other large animals or fish were cooked in them.

Up to now the spot which has yielded the greatest number of fragments of naiji pottery has been the shell mound in the sand dune back of the native burial ground at Bettobu on Shumushu Island; and, in lesser quantity [p. 144], from the shell mound at Bettobu, Musashi Bay, Paramushiro Island.

As for those from pits, several fragments which appear to be the base of pots have been discovered near the fireplace in Pit No. 7, on the floor of Room No. 1 of the Bettobu Pit No. 2, and from the overlay of soil over Room No. 2; and a fairly well-preserved one was discovered in the inner room of the Bettobu Pit No. 3. Its shape is rather interesting, for, while the lip and the method of attaching the handles are identical with the methods used heretofore, the body and the base form a cylindrical shape, giving every evidence of probably having been modeled after the shape of the copper pots brought over from Europe.

Concerning these, I have written in more detail in my article "The Pottery of Chishima" in the special Pottery Issue. [Apparently never published - Ed.]

Other Relics

The sites being recent, various other objects are found, such as black woolen cloth, which, of course, is of European origin; also canvas and rope in a state of decay. I surmise that they were taken from wrecked ships. Since they had firearms, small lumps of sulphur which may have

been used for gunpowder were frequently found. In addition, there are small lumps of coal; it is thought that these were taken from foreign vessels. Silica is often found, as are European-style shoes; but whips are most frequent. Last summer, I discovered a cow's horns in the Kabasato Pit No. 14. Concerning the introduction of cows into the northern Kuriles, Mr. Sasamori, in his Expedition to Chishima, has this to say: "In the first year of Hōreki (1755) the raising of cattle on Shumushu was attempted, and a cow and a bull were brought over from Bolsheretsk (in Kamchatka). The 'Kurile people' did their best and engaged in their breeding; the cattle were finally transferred to Paramushiro Island also and the number reached forty head. The cattle did especially well on Paramushiro Island. The 'Kurile people' built sheds with floors for their cattle, and kept them even cleaner than their own dwellings. Since they only drank the milk or manufactured butter and did not kill the cattle for their meat, they gradually increased until their number reached seventy head; but when /foreigners?/ came from the 'Okhotsk Sea' to the second island to repair their ship, they bought up the cattle; so that in 1779 there were only three head remaining on Shumushu." At the time of the transfer to Shikotan Island in 1884, the natives had one cow.

From the Bettobu Pit No. 3 were discovered several fragments of a bag-like affair of lacquered cloth with a design of blue plum flowers outlined in white; this was a cheap Japanese bag made after the Genroku Era /1688-1703/.

Stone Objects

Along with the various afore-mentioned objects and the pottery, stone implements are frequently found in the sites of this period. These are of very recent manufacture, and why, from the practical or common sense point of view, they should have gone to all the trouble of making stone implements at a time when metals were rather plentiful, is difficult to understand. Therefore the judgment of whether these had been made and used, or whether they had been mixed in, or whether they had been kept as objects that had been handed down, is a problem that requires serious attention.

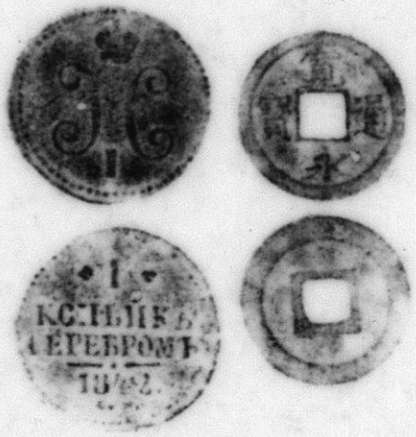
As examples of the stone implements uncovered from the sites of this period, there were discovered, in Pits Nos. 6 and 8, several objects that were bits of stone rather than stone implements; from Pit No. 7 were discovered a fragment of a flint stone sharpened on one side and a fragment of what I shall temporarily call a square [p. 146] stone implement and about which I will have more to say; and from the floor of the passageway of the dumbbell-shaped pit with two connecting rooms which we excavated in 1938 (Bettobu Pit No. 1) we discovered a polished stone adze and three stone arrowheads. The body of the polished stone adze bulged out and the rear end came to a point; its cross-section would reveal somewhat of a triangular shape, or the shape frequently found in the previous Second, or Middle, Period. The stone arrowheads all had tangs and were of comparatively large size; these also resembled types which were frequently found in the Middle Period.

From Pit No. 3 was discovered one polished stone adze of the same shape. Stone implements were discovered in the Alexander Hill shell

mound at Bettobu, and several tangless stone arrowheads and two square stone implements were discovered in the shell mound in the sand dune back of the native burial ground at Bettobu.

All of these stone implements were discovered during my four expeditions undertaken up to 1939. Regarding the peculiar square type of stone implement already referred to, I had been highly suspicious; but because I had picked them up on the surface of shell mounds, and because of the fact that the few perfectly preserved stone implements from the pits were of this type, I could not simply dismiss them as being objects which had been mixed in with the others or had been brought in from the outside. Since it was a serious problem about which I hesitated to say anything prematurely, unless I had incontrovertible evidence, I wrote as follows, in Mr. Masao OKA's and my 1938 article "Preliminary Report on the Archaeological Investigations on Shumushu Island in Kita-Chishima, and in the Taraika Area of Karafuto" in No. 3, Vol. 4, of Minzoku-gaku Kenkyū: "In the pits of this period also naiji pottery is frequently found, and round-bodied polished stone adzes and large stone arrowheads occur; but concerning the use of the square stone implement there is room for doubt." However, on undertaking my fifth investigation last summer (1939) in the vicinity of Kabasato, on the southern portion of Paramushiro Island, I discovered a large number of these square stone implements from recent sites of this type such as pits and shell mounds, and thus gained proof of the existence of this type of stone implement in the final sites of the Kurile Ainu in the northern islands. What I have provisionally termed the "square stone implement" is illustrated in fig. 61; their size is twice that of the

Fig. 61. Stone artifacts from



Rubbings from the Russian copper coin and the Kan'ei Era coin found in the shell mound on the sand dune behind the native burial ground at Bettobu.

photograph*, and if one could call the two faces of the implement the front and the rear, the front is chipped into a flat surface, while the rear, as can be seen in the photographs, is chipped into five planes. [p. 147] (The type of stone is being investigated at present.) Reading from right to left, Nos. 1 and 2 of the top row, were found in the shell mound in the sand dunes to the rear of the burial ground at Bettobu, while Nos. 3 and 4 came from the Kabasato shell mound on Paramushiro Island. Nos. 5, 6, and 7 of the bottom row, reading from right to left, were unearthed from the Kabasato Pit No. 14, while No. 8 was from the Kabasato Pit No. 1.

This special type of stone implement has never been found in sites of any other period in the northern Kuriles, and they give the impression of markedly resembling ancient stone implements. They have not been unearthed from sites in Hokkaido; but several have been found at Petropavlovsk in Kamchatka which, in form and type of stone, resemble these, and which were brought back by Professor Torii for keeping in the Anthropology Department of Tokyo University. So they can be seen to be distributed over South Kamchatka. At first glance these are in the shape of a plane, and although it cannot be determined to what use they had been put, I venture to guess that they might have been used for some purpose in the treating of hides.

The Modern Chishima Natives, and the Problem of the Manufacture and Use of Stone Implements

The impression that the natives of the Kuriles, that is to say the Ainu of the northern islands, may have made and used stone implements until recent times, was most strongly confirmed by the discovery of stone

*The photograph itself is 6.8 x 4cm. in the original text.

arrowheads attached to a number of arrows in a sheaf which had been left on a beam in one of the pit dwellings then still extant at the site of the Kurile Ainu's last village at Bettobu, Shumushu, by Navy Captain Naritada GUNJI during his expedition to Shumushu Island in 1893. When, on December 10, 1898, the latter gave a lecture on this to the Tokyo Geographical Society, the late Professor Tsuboi, who had himself been present that evening and had heard the lecture, evinced great interest in this problem and published, in No. 154 of the Jinrui-Gaku Zasshi (which came out in January of the following year), an article called "The Problem of the Shumushu Natives and the Stone Age," (about which I will have more to say later); /¯p. 148_¯/ and in May of that same year he sent his assistant, Professor Ryuzō TORII, to an island in the northern extreme of Japan which, at that time, was accessible only if one crossed over in a war vessel, to make an archaeological survey. What Professor Torii brought back as the result of his investigations, I will say later; but the problem of the northern Kurile Ainu and their stone implements was treated even earlier by Professor Koganei who, on October 13, 1889, at the 54th meeting of the Tokyo Geographical Society, gave a lecture entitled "Concerning the Neolithic Sites on Hokkaido." The following excerpt was taken from that lecture, published in No. 44 of the Tokyo Jinrui-Gaku Kai Zasshi. "When I questioned the chieftain Yakopu /¯phon.¯/ he said that there was no notable difference in the pits on Shumushu Island in which he lived, only that they were built four or five feet below the surface of the ground and that a ladder was fastened to the door for entrance and egress. The reason for the shallowness of the present-day pits is that, the

nature of the soil being damp, it was strictly forbidden to build houses rectangular and deep. The remains of such pit dwellings, when they fall into disuse and cave in, leave a hole shaped like an earthenware mortar. He said that there are a great number of such holes on Shumushu and on Paramushiro Islands, and that frequently earthen pots, earthen jars, and stone implements were found in such holes. He said that according to what he had heard from his elders, the stone implements were those used in ancient times by the ancestors of the 'Aino,' but that now that they possessed very convenient iron pots and iron adzes, very few of them had any of these. He could supply no details on the method of manufacture. As to the way the stone adze was used, he said that one end of a stick was split and the adze was inserted; the stick formed the handle, and the adze was tied to it by a cord made by strips of the skin of the sea-horse. Or it was strapped to a handle made from a crooked branch making use of the side notch /blade/. That was his statement on how these were used. He took out an iron nail and demonstrated. I asked him for this and brought it back with me. This made me think that the slanted blade of the stone adzes often found in Hokkaido is not a blade at all but a notch /the meaning of this passage is not clear - Ed./. He was very much interested in the problem of the stone implements of the Kurile natives.

Next, in Professor Tsuboi's article "The Problem of the Shumushu Natives and the Neolithic Age," he has written as follows: "On the night of December 10, last year, I met the head of the Hōkōgi-kai, Mr. Naritada GUNJI, at the meeting of the Tokyo Geographical Society and, having been able to learn from him about the Neolithic sites of Shumushu, I thought I

would make some notes on them. Stone arrowheads are discovered in various places on Shumushu, and at a place called Bettobu there is a spot which may be called the manufacturing center. This is a spot which is oval-shaped, 11m. long and 7.3m. wide, and which is enclosed by rocks. In the center there are burned animal bones, [p. 149] and the remains of rocks split by the heat. That is to say, there was a large quantity of stones chipped in small pieces and which gave the appearance of having snapped and flown away when the stones had become hot. A strange thing was that about the stones surrounding the spot were a number of fine stone arrowheads which had just been finished. It certainly looked as though the rough work was done at the center and that those that had been finished had been placed at the sides of the surrounding rocks. There are about sixty pits at Bettobu. There are large squares and smaller squares connected by a narrow passageway, and their shape, in a word, resembles a squarish gourd. The larger squares measure about 4.5m. on a side, while the smaller squares measure about 3.6m. square. In most of them the roof has caved in, and there are rare examples of those which have kept their original form. In examining these, he saw that within the pit several posts stood in a line, and it was these posts that supported the roof. In the center of the roof a smoke hole made by fitting together some wood was built; on other parts of the roof other than the window and entrance, grass pulled up by the roots was first laid on its side and this was covered by a thick layer of dirt. The pillars at the center measured 6 feet 5 inches and those at the side were 4 feet 5 inches; the dirt was piled on very thickly, and from the outside it looked exactly like an artificial hill. On Shumushu at present there are no natives of the

original population. They were all transferred to Shikotan Island in 1884. The pits which have been described were the homes in which they lived up to that time. In going through these huts and through the sites of those which have caved in, implements that had been used by the former inhabitants can be found frequently; among these have been found harpoons and cups made of brass and whalebone. In addition, fragments of porcelain with designs on them have been found; these are certainly made in Russia.

"The foregoing has no connection with Neolithic matters, but an interesting matter turns up at this point, and that is the discovery in the ceiling of a hut such as previously described, of a sheaf of twenty-three arrows in one bunch. These arrows were all in quivers made of black alder and were about one foot long. The arrowheads were made of brass or stone. The arrowheads made of stone do not differ one whit from the so-called Neolithic Period stone arrowheads which are discovered in the ground. These were attached to the point, and because the great portion of the arrowhead was inserted so that only the blade showed outside, there was no necessity to bind it to the arrowshaft with cords. At Bettobu, on Shumushu Island, where, until 1884 the former inhabitants of the islands lived, there was a manufacturing center for stone arrowheads, and there are traces to show that stone arrowheads were used alongside brass ones. [p. 150] This being so, people who made stone implements lived in that place until about fourteen or fifteen years ago, and these people are precisely the Shikotan natives (in reality the Shumushu natives) who now live on Shikotan Island. Moreover, what must be noticed is that even now the natives living on Shikotan make a

cleaver-like object made of stone which they tie with whale tendons to handles of animal bone or of wood and which some people are said to use in the process of tanning hides. This, too, may be useful information in the problem of the Neolithic Age.

"Mr. Hirosawa wrote as if the natives on Shumushu made porcelain, but did not cite any evidence; Mr. Koganei, in his research, merely said that there was a legend that the ancestors of the natives of Shumushu used stone implements and pottery; but no more. If we went on only these facts, we would never know about the relationship of the Shumushu natives with the Neolithic people on Hokkaido. For this reason, it is necessary to attempt to study the address which Mr. Gunji has just made. First, what about the matter of the center of the manufacture of stone arrowheads? I am inclined to believe that Mr. Gunji may be right on this point. However, I think it a bit premature to make the assertion, on the strength of that point, that it was a site left by the Shumushu natives. That there may have formerly been peoples other than those natives on Shumushu is a possibility. If there <u>were</u> some previous inhabitants, then they probably were the Neolithic people. If the Shumushu natives who are now on Shikotan Island were reported to manufacture stone arrowheads or to hand down their method of manufacture, the story would be different; but it is difficult to believe that the manufacturing center of stone arrowheads is theirs simply on the strength of the fact that it exists near their village on Shumushu.

"It is a matter of extreme interest that arrows tipped with stone arrowheads had been put away in the ceiling of a hut, but since it is said that there were brass arrowheads mixed in with them, I cannot think

this to be the act of a people who had established a center for the manufacture of stone arrowheads and had made them in large quantities. It is said that the Shumushu natives had lived in these huts until 1884, and if it were true that stone arrowheads had been manufactured until that time, and that they had been in general use, isn't it likely that the chieftain Yakofu would have mentioned these facts in reply to Mr. Koganei's queries? I put my faith in the observations of Mr. Gunji, /p. 151/ and I also put my faith in Mr. Koganei's investigations, and in putting my credence in both of them, I can come to no other conclusion than that the owner of that hut had picked up some stone arrowheads and had attached them to the head of the shaft. Such an act is more than likely since there are large quantities of stone arrowheads on Shumushu. In general, stone arrowheads made by chipping are narrow in width and thick in body; it is difficult to imagine how these could skillfully be inserted into the cleft of a wooden shaft. Mr. Gunji has not brought with him these unusual arrows, and he says that he has no idea whether someone has them in custody, so we are unable now to know the type of stone, the shape, and the method of insertion of these stone arrowheads. This is a matter for deep regret. The taciturnity of chieftain Yakofu concerning the stone implements presently used on Shikotan becomes increasingly strange. In any case, if we assume that there had been no misunderstandings in the interviews between Mr. Koganei and Yakofu, are the stone implements about which Mr. Gunji has spoken, actually made in recent times? It is a matter which will require a minute investigation. I do not know what facts will be discovered in the future, but for the present I must say that for us to assume that the Shumushu natives presently

residing on Shikotan are the descendants of the people who left Neolithic sites in various parts of Hokkaido would be greatly premature." In addition, Professor Torii, who undertook an investigation of Shumushu Island on the northernmost edge of Japan in May 1899 - an investigation which was given impetus by these arrow shafts to which stone arrowheads had been attached discovered by Captain Gunji - brought back with him a great many valuable findings after experiencing a good many hardships.

Concerning the problem under discussion, the following appears in Professor Torii's book, The Chishima Ainu.

"The natives of the Kuriles say that the remains found in the islands, such as pits, pottery, stone or bone implements, were all made by their ancestors. Concerning stone implements, they have this story to tell. Because there was no iron in the old days they used stone for making tools. They used a poinamukaru /poi is 'stone' and mukaru is 'adze'/. There were two types of poinamukaru. Poinamukaru is a stone adze. The other type was called anjiai. Anji corresponds to what we in Japan call obsidian; ai /p. 152/ refers to the shaft of the arrow. They said that the anjiai was the arrowhead of obisdian which they attached to the point of the arrow. The stone adzes were made with a stone called esshuen. However, it was a matter of regret that the method for making them has not been handed down. The following saying is still prevalent among the Ainu today: 'Poinamukaru niushupe ashinka shiri tinka.' They frequently say this. Its /literal/ meaning is that one has had great difficulty because one has scraped a tree by means of a stone adze, and it means that one's handiwork has finally been completed. Isn't this a very interesting term that has been kept among them? However, nothing other than the fact that

stone implements were made, has been handed down." Toward the end, Professor Torii says, "At any rate, let me first tell you that the Kurile Ainu, who are a kind of Ainu, were at one time a Neolithic people, and that they lived in pits and used pottery. And it is probable that they did so at a time which is chronologically not very distant. There are traces found at their sites which show that glass beads and frasco /Portuguese for flask. T.N./ were used to make arrowheads. Those /Ainu/ found on Hokkaido do not enter the picture here. It has been believed that their predecessors, the people known as Korobokkuru (who are probably imaginary), had moved northward /i.e. into the Kuriles, when displaced by the Ainu on Hokkaido/ but this is now disproved /by the nature of the finds in the islands/." In so concluding, he gave strong support to the then unpopular theory that the Kurile Ainu were the Neolithic population /of the islands/ who had once used stone implements; and this at a time when the Korobokkuru theory was widely held. With the discovery of arrowheads made by chipping fragments of flasks brought in by the Russians, he inferred that the Kurile Ainu still understood the technique of making stone implements and that the period in which such stone implements were used lasted until very recent times. Concerning dates, Professor Torii goes on to say, "These are fragments of empty glass flasks, and they attempted to make such arrowheads using these fragments. Taking this into consideration, the Neolithic sites surviving in the northern Kuriles may, as I will discuss next, be dated. That is to say, / p. 153 / in 1711 the Russians crossed over to Shumushu Island and conquered the natives. Gaining impetus, they crossed over to Paramushiro. This was the first time they

had arrived on Shumushu. When we consider this, we see that the glass beads and the glass flasks could not have been brought in at an earlier date. The question as to who these people were who had left such relics will be discussed later; but as for the date, it must certainly have been at the time of the encroachment of the Russians, that is to say, 190 years ago, after the Genroku Era. At any rate, it is possible to say that until about the Genroku Era there clearly lived in the northern Kuriles a people who used stone implements, pottery, and bone implements."

In addition, the part in the afore-mentioned Adrift in the Northernmost Limits by Chikayoshi KAWAKAMI dealing with the observations of the Chishima Ainu has this to say: "The fish caught are the cod, salmon, and the sardine. In the rivers there are small fish resembling the trout. Seals, cormorants, wild geese, etohiruka /?/ (this bird is found in great quantity in Ezo, it is said; its skin is easily taken off and is used in clothing) are netted, hooked, or shot with guns. The bullets used in the guns are said to have been acquired through barter and came from the Russian capital. There are many foxes. They are caught in traps. In making the trap a small bow is pulled tight and a mechanism is fitted in. Arrows are made of stripped branches of trees, and are fletched with bird feathers; the arrowhead is made of a flint-like stone /emphasis Baba's/; poison is applied when attaching the arrowheads. It is said that in mixing the poison, the natives test it by putting some on their own tongues." This clearly indicates that the arrowhead used in the amappo (Ainu for "trap") is an arrowhead made of stone. This was a record of events seen in the tenth year of Bunka (1813), or 126 years ago - 71 years before the Kurile Ainu left the northern islands in 1884.

In addition, from pits such as we have dug like the Bettobu Pit No. 5, numerous stone implements were unearthed, and along with them were found Russian beads and "Nanking" beads, clearly giving evidence that they were sites of a period after the coming of the Russians; and we were able to deduce that even then stone implements were made and used to a large extent.

[p. 154] At any rate, attention was called to this problem by the studies of Professor Torii; and by our own investigations, we have been able to discover material to further substantiate his theories. Furthermore, the square stone implements which we recently discovered are products of a very recent period. The sites in which these have been found are the last pits and shell mounds of the northern Kurile Ainu, from which have also been discovered vast amount of European porcelain and metal implements. On the left of fig. 62 is shown an excavated copper coin struck in Russia in 1842. The very latest date at which these square stone implements were made and used was thus 97 years ago, or 42 years before the Kurile Ainu left the northern islands in 1884. It is conjectured that they were probably used until recent times.

What is, however, very strange and unsatisfactory at this point, is the fact that while the Kurile Ainu are still acquainted with the way of making pottery, they have already forgotten the method of making these stone implements - even though the latter existed until recent times.

ARCHAEOLOGICAL INVESTIGATIONS ON SHUMUSHU ISLAND, NORTHERN KURILES

(Kita-Chishima Shumushu-tō ni okeru Kōkogaku-teki Chōsa Hōkoku)

by Osamu BABA

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The Sites

Pit Dwellings /p. 42/*

Pit dwellings are scattered in various places on the whole island, but those discovered near the mouths of the small rivers on the seashore plateaus are especially numerous. /They are/ found, needless to say, on the plateau near the Shiomikawa River; and near Yamamoto-gawa; Murakami Point; Toyoshiro River; Kokutan Point; Sakubetsu River; Nakagawa and the Nakagawa River; and the Kobayashi River of Kataoka. Even more densely clustered pit dwellings are to be found in two places: on the sand dunes along the coast of the so-called Bettobu Bay, near the Shiomikawa and the Bettobu Rivers; and Kataoka.

My investigations were mainly carried out at these two places. The total number of pit dwellings which I actually saw on the plateau of the Bettobu Bay coast exceeded two hundred, while at Kataoka there were more than forty.

As for the distribution of the pit dwellings on the Bettobu Bay coast plateau, there were more than ten on the plateau on the left bank of the Shiomikawa, while on the plateau at the brink of the seashore, on the highlands to the right, which runs from the Takeda Fishery to the Ainu

*Indicates page in original text.

graveyard on Bettobu, are to be found the most concentrated groups of pit dwellings, more than one hundred in all. The plateau on the right bank of the Bettobu River is also a concentrated area of pit dwellings, the number here totaling about fifty or more. On both sides of the small road leading to Kataoka, and located between Shell Mounds Nos. 4 and 7 in fig. 1, there were more than thirty; on Alexander Hill,* which is the location of Shell Mound No. 7, there are more than twenty visible, in some of which posts survive even today. It is probable that this neighborhood was the site of the old settlement at the time that /the natives/ were transferred to Shikotan, /southern Kuriles/ in 1884. The cluster of pit dwellings at Kataoka which Professor Torii called Moyoroppu is on Gunji Hill, which faces Kobayashi River; and there are at present forty or so /of these pits/. On Bessho Hill, on the opposite shore, there were numerous pit dwellings in former times; but since they were all filled in at the time that the ground was leveled for the drying place for the fishery, /p. 43/ no traces whatever are to be seen today. In sum: the largest of the old villages of the North Chishima Ainu on Shumushu were on the Bettobu Bay coast and at Kataoka; and it would seem that the pits which are scattered in various localities elsewhere are the remains either of extremely small settlements, or those which had been used as temporary shelters while traveling about the island, or as temporary dwellings during the hunting season.

*To the rear of Shell Mound No. 7 there is at present an earthen chamber; this is the fishery guard-shack built by the Hōkō Company in 1914, utilizing the remains of the old pit dwellings of the natives; since the multi-roomed pit dwelling in which the late chieftain, Alexander, lived is contiguous to this, I have called this plateau Alexander Hill.

As for the outward shape of the pit dwellings, we may say that the following may be listed as representative: (1) round or ovoid; (2) rectangular; square; (3) dumbbell shape; (4) what we will call the Kamchadal-style pit dwelling, with the entrance passageway present; (5) the type divided into several rooms connected by passageways.

From actual observation, the round and ovoid types constitute eighty per cent of the total. As to whether these were originally square or rectangular pits which, through the caving in of the earth, exist today as round or ovoid shapes, I cannot say for certain on the strength of my investigations on this occasion, with only a limited number of excavations; but the velocity of the wind is always strong on the island, and the cluster of pit dwellings near the Bettobu River is on the top of a sand dune. According to the statement by Mr. Sakichi BESSHO, who is engaged in fishing, and who is the sole remaining inhabitant from the time that the Hōkō Company was located at that place, the present small marsh near the fourth shell mound in fig. 1 has already been half filled in since his arrival on the island in 1896; a knoll has formed in the rear of the existing graveyard of the old Ainu, which has crosses; and the mounds /made/ at the time that the corpses were buried (still visible to some extent in 1896), have now become completely flat. So, based on these statements, we may surmise that since major changes in the shape of the surface of the ground have been caused by wind and sand, the square or rectangular pits became either round or oblong in shape. Fig. 2 shows the outward shape of the pit dwellings; the rather rectangular-shaped one (No. 2) is thought to be comparatively ancient; they are occasionally to be seen in clusters of pits of the round or ovoid shapes, but their

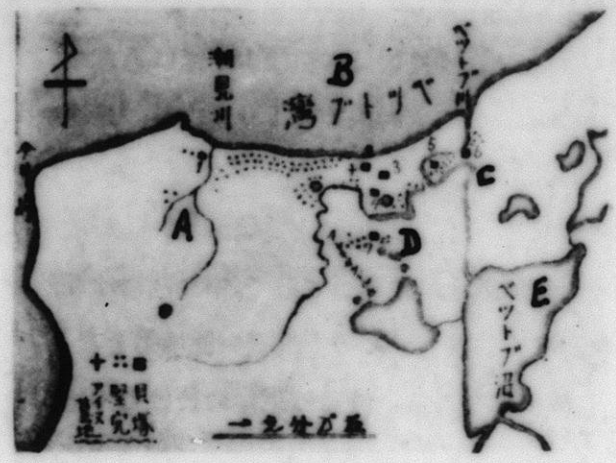


Fig. 1. Map showing distribution of the sites.
A. Shiomikawa River; B. Bettobu Bay; C. Bettobu River; D. Alexander Hill; E. Bettobu Marsh.
shell heaps; pit dwellings; Ainu graves.

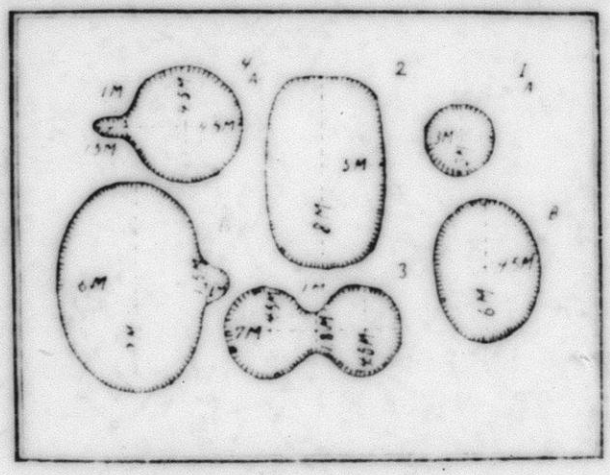


Fig. 2. Shapes of pit dwellings.

number is extremely small. However, almost all the new pits on Alexander Hill, in which posts survive, display in outward appearance the square or rectangular shape. Of the dumbbell shape, the completely preserved ones I saw were one at Kataoka and seven on the plateau on the beach of Bettobu Bay. As an example I have shown one in No. 3 of fig. 2, to which the reader is referred. Of the type in which the entrance passage survives and which resembles the Kamchadal type of pit dwelling, there are three in the pit dwelling cluster on the plateau to the right bank of the Bettobu River. [p. 44] I will limit the description by referring the reader to No. 4 A and B of fig. 2. The pits which are divided into several rooms by passageways are numerous among the pit clusters of the old village on Alexander Hill, and the former dwelling of the late chieftain, Alexander, is a good example.

As to the size of the pit dwellings, according to an actual survey I made of eighty-five pit dwellings in the cluster on the plateau on the coast of Bettobu Bay, they can be classified according to their major axis into large, medium, and small, as follows:

Large:	7 meters...to 10 meters:	10
Medium:	5 meters...to 7 meters:	31
Small:	3 meters...to 5 meters:	44

The results obtained were: the longest of the major axes was 10 meters, the shortest 3 meters; the longest of the minor axes was 8 meters, the shortest 2.1 meters. In general, those of Kataoka were smaller than those of the Bettobu Bay coast; there were even some which barely measured 2 meters in their major axis.

As for the depth of the pits at present, the shallower ones (at their deepest point at the center of the pit) measured 35 - 45cm.; but on the average, depths between 70 - 80cm. were in the majority, while in the deeper ones, there are some which reached 108cm.

In noting the depth of the walls of these pit dwellings at the entrance and in the interior, one side, parallel with the minor axis, was always deep, while the other side was shallow; the deep wall is the interior wall, while the shallow wall gave on to the entrance.

As for the direction of the entrance, it seems that in the majority of them there was no standard direction based upon a fixed tribal religious belief; they were oriented in a convenient direction, facing the road, or marsh, or river, or the seashore.

With regard to the relationship between the pit dwellings of the Kamchadals and the orientation of the entrance passage, Jochelson has this to say:

"For example, it is a well-known fact that a great many of the Siberian tribes, such as the Yakut and the Buryat, have their entrances in the direction of the east, from where the sun rises. It is thought that the sun is the god of bounty, and in order to bask in his favors, it is considered good to build the entrance facing the sun. The back of the dwellings face the west, which is where the evil demons are; and it is for the same reason that the entrances of the tents of such nomadic tribes as the Chukchee, Koryak, Tungus, and the Yukaghir, face east. On the other hand, the doors of the dwellings of peoples living on the seacoast are built on the side of the seashore in order that they will be able to catch the fish /and for this reason/ treat them

/the fish?/ as guests. It is for this reason that the entrances of the summer tents of Siberian fishermen face onto the river mouth. According to Professor Petri, the sites of the Stone Age pit dwellings which he discovered in the Baikal region had their entrances on the south, which has good exposure to the sun. Thus, it may be surmised that the ancient pit dwellings of Kamchatka had their entrances facing the sea, and some of them facing the river or lake, for the purpose of securing food, or supplying themselves with water." /Translated from the Japanese translation. T.N./* The Shumushu pits tally with these.

With regard to the conditions within the pits, it is a matter of extreme regret that our excavations were limited to only six or seven - a mere trifle /p. 45/ compared to the sites as a whole - and that we were unable to fully ascertain the details; but an example of the large-sized ones is provided by the excavation of a pit dwelling near the small marsh of Bettobu, which measured 10 meters in its major axis and 8 meters in its minor axis. The depth of the pit prior to excavation was about 80cm. The excavation began from the center and gradually moved in the direction of the rim. Approximately 70cm. down we reached the bottom of yellow sandy soil; at various places were a layer of ashes of about 1cm., while numerous stone chips were scattered about near the southwest side; from the inside were uncovered two stone arrowheads and one stone lance broken in half. The other relics unearthed were: one rotted piece of wood about 50cm. long; one side of the lower jaw of a sea mammal and several sea mammal bones. That was all; neither the fireplace nor posts were visible. In this major excavation, we were able to dig with

*T.N. signifies "Translator's Note."

the assistance of the crew of the Flagship XX of the -th Destroyer Flotilla, which was then on a mission of policing the northern seas and happened to come into Bettobu Bay. Fig. 3 shows a scene from the excavation at that time; the person standing in the center is the captain of XX, Commander Torazō KAWANISHI.

As another example, there is the excavation of a pit dwelling somewhat round in shape, measuring 7 meters in its major axis and 7 meters in its minor axis, which was associated with the shell mound on the high ground on the left bank of the Shiomikawa River; its entrance gave onto the riverbank; its rear wall faced the mountain. The deepest portion in the center prior to excavation was about 70cm. When we had dug down about 80cm., we reached the reddish-brown sandy soil of the floor. The layers down to the floor were roughly these:

(1) A layer of black sandy soil in which were to be seen grass roots and, scattered in it, animal bones and shells: 55 - 60cm.

(2) Shell layer: 5 - 10cm.

(3) Layer of ash: 1 - 2cm.

(4) Yellow sandy soil: 10cm.

And from here we reached the reddish-brown sandy soil of the floor. Below the shell layer in the center was found an irregular arrangement of natural stones which were covered over with a large amount of black ash; it is thought that this must have been the site of the fireplace. Moreover, near the rear wall on the west side was found a feature made of a flat stone placed over two stones, the interior of this being filled with charcoal; ⌊ p. 46 ⌋ this may have been the site of the firepit. The

relics unearthed consisted of only two bone implements, a great amount of animal bones (whalebone was particularly plentiful), and two stone lances from the layer of shells. We were unable to discover the location of the posts, nor were potsherds present.

As for the smallest of the pits excavated, there is the ovoid one whose major axis was 3.5 meters and minor axis 2.1 meters, located to the rear of the Takeda Factory on the highland to the right of the Shiomikawa River. In contrast to the other, the entrance side faced the mountain with the rear wall to the riverside; the depth at the center prior to excavation was 40cm.; after about 75cm. of excavation, the yellow sand floor was reached; the layers near the inner wall of the southwestern portion were generally as follows:

(1) A layer of grass roots and a layer of some black sand: 35cm.

(2) Layer of black soil: 3cm.

(3) Layer of black sand: 6cm.

(4) Layer of black soil: 3cm.

(5) Layer of black sand: 28cm.

(6) Layer of black charcoal: 2cm.

After this the floor was reached. Somewhat toward the rear wall from the center we were able to discover a rectangular fireplace, shown in fig. 4. Made of nine pieces of natural rock, it was aligned with its major axis parallel to that of the pit. The maximum external dimension of the fireplace was 81cm., and 52cm. on the inside; the minor axis measured 48cm. on the outside and 31cm. on the inside. The fireplace contained a large amount of charcoal. The relics uncovered came mostly from the layer (No. 5) of black sand: a stone arrowhead and a stone

Fig. 3. Excavation of a pit dwelling.

Fig. 4. Fireplace in a pit dwelling.

lance were found, and from the corners on the north and south sides sherds from the upper part of a plain black pot; near the floor was discovered a small piece of rotted wood; this was all.

The foregoing is a general outline of the investigations of the pit dwellings on this occasion; unfortunately I did not come across any pit in which there were posts. Even in Jochelson's excavations of the Kamchadal pit dwellings, he discovered only one, near Nalacheva Lake, in which there were two posts remaining. In the pit dwellings of the Ozernaia near Kuril Lake, there were no traces of posts to be discovered, and he says that this is proof of the extreme antiquity of the pits /p. 47/ for the posts have rotted away over the long years and have thus left no traces. However, at Shiomikawa, when the pit dwelling area toward the seashore (below the pits which I excavated) was dug up this spring for the purpose of leveling the ground for the drying area of the Takeda Factory, a great number of black, patterned sherds were recovered; and, according to the statements of the fishermen, there was a burnt post at each corner of the pits while the remains of two fireplaces without openings and made with great numbers of small natural stones came to light at or near the center, these being entirely covered over with black charcoal.

It is my intention to investigate in detail the relationship between the situation within the interior of the pits and the relics unearthed when I visit the island again.

Shell Mounds

In my investigations on this occasion, I was able to discover seven shell mounds. Compared to the shell mounds in the Kantō District /of

Japan; centered around Tokyo, in terms of extent and the thickness of the shell layers, they are of such small size as to be insignificant, and are moreover composed of thin layers.

Since this area has no local place names, it is not possible to name these shell mounds, so I have decided to label them with numbers and to refer to them by these. (See fig. 1.)

Shell Mound No. 1

This adjoins the entrance of the pit on the highland on the left bank of the mouth of the Shiomikawa River. It is exposed at a place about 6 meters below the entrance, and is associated with this pit.

(1) Overlay of earth: 15 - 20cm.
(Shells are visible scattered /on the surface?/ 10 meters /from the entrance?/ and below.)

(2) Layer of shell: 30 - 40cm.

The shell layer contains fragments of animal bones in great number, the majority being whalebone. Occasionally, a thin layer made up of the shells of the sea-urchin is to be found, and sometimes bone and stone implements are unearthed, but these are few in number. The length of the shell mound does not exceed about 15 meters.

Shell Mound No. 2

This is exposed in a ravine in the sand dune which is located to the rear of the old Ainu graveyard at Bettobu.

(1) Overlay of soil: about 1m.

(2) Shell layer: 5 - 10cm.

Its length extends to about 20 meters. The types of shells were identical

with those of the previous shell mound; animal bones were numerous, with the bones of sea mammals being particularly plentiful. In its wealth of bone implements it was outstanding in the entire island: seventy per cent of the total bone implements which I collected this season was unearthed at this location. /p. 48/ A small number of stone implements and a fairly large amount of naiji pottery sherds were also discovered.

Shell Mound No. 3

This was exposed in the ravine in the sand dune about 50 meters further on toward the Bettobu River than the preceding.

(1) The overlay of earth has disappeared

(2) The shell layer: about 5cm.

Although the types of shells were the same as the previous shell mound(s), the finds included no stone artifacts but consisted only of bone implements, metal implements, porcelain and glassware. Judging by the fact that the tops of two or three rotted posts were exposed in the shell mound we are led to assume that this was a shell mound within a pit house, the walls of which have disappeared due to wind and rain. As for the bone implements, they differ somewhat from those unearthed in pit dwellings and in other shell mounds; they resemble those seen among the recent native objects of the Ainu of the northern Kuriles. The handles of makiri /knife/ were unearthed, some with metal clasps attached to them; and something resembling one side of a bone runner was discovered. Among the metal objects were: fragments of bronze rings, bronze nails, and a fragment of a bronze pan; iron harpoons, iron knives, and iron hooks /gaffs?/. We also discovered porcelain beads and pieces of the European porcelain commonly called Dutch

ware, and the mouth of a glass bottle. Although we found two or three stone chips in the way of lithic artifacts, we found not a single pottery sherd.

Shell Mound No. 4 (fig. 5)

/Omitted: duplicates previous translation - Ed./

Shell Mound No. 5

This is located, along with Shell Mound No. 6, among the cluster of pit dwellings on the sand dune on the right bank of the Bettobu River. It is exposed at a point where, as shown in fig. 1, the Bettobu River is about to make a turn toward its mouth and where the surface soil from the top of the hill has fallen down to the side of the river.

(1) Overlay of soil: about 75cm.

(2) Shell layer: 5cm.

The length extends about 20 meters. Only two or three bone implements, polished stone adzes, and naiji pottery sherds were discovered.

Shell Mound No. 6

This is located on the side of the sand dune at the point where the river is about to make a curve into Bettobu Marsh /Lake?/.

(1) Overlay of soil: about 50cm.

(2) Shell layer: about 10cm.

It extended about 40 meters in length. Only a small amount of naiji pottery sherds was found.

View of shell mound No. 4.

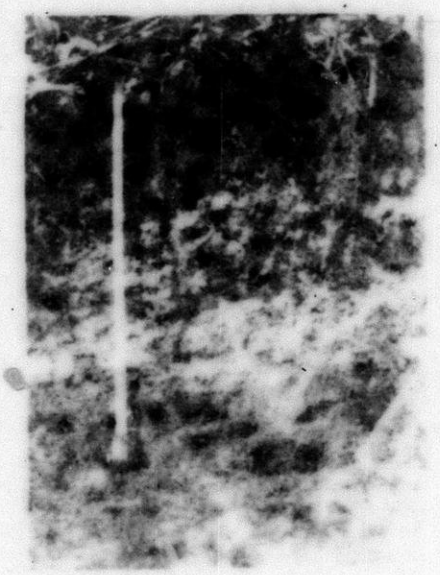


Fig. 6. Profile of shell mound No. 4.

Shell Mound No. 7

As shown in fig. 1, it is on Alexander Hill at a point on the slight rise facing the low ground which gives onto the Ainu cemetery hill to the front.

(1) Overlay of soil: the shell layer is located directly beneath the grass roots.

(2) Shell layer: 15 - 20cm. [p. 50]

Directly beneath this we reached the floor of the sand dune which was reddish-brown in color. As for the types of shell, it was almost all Volsella modiola, with an extremely small amount of Acmaea cassis pelta. The degree of powder-shedding was extremely light, with even the shells on the top layer having a living color; these were extremely recent. In the relics unearthed there were no pottery sherds; only one stone chip was found and two or three bone implements. Metal implements were unearthed in quantity, including square iron nails and bits of iron sheeting. Fragments of brick were also discovered.

Kataoka Shell Mound

This is located on Gunji-ga-oka, on the left bank of the Kobayashi River, at Kataoka.

(1) Overlay of soil (with scatterings of shell): 35cm.

(2) Shell layer: 10 - 15cm.

With this, the yellow earth of the floor was reached. There are places in this where animal bones are unearthed in large quantities. Bone implements are plentiful, and these are accompanied by stone artifacts and pottery. The types of shell are identical with the various Bettobu

shell mounds, Serripes laperous being particularly plentiful. The areal extent of the mound is not certain.

As I have stated above, the fact that the overlay of soil of the various Bettobu shell mounds varies, in some cases being extremely thick and in some thin, is the result of the wind; and we must take as the best example the overlay of soil on Shell Mound No. 1 at Shiomi-kawa, which is relatively free from the winds. At Kataoka, however, the shell mounds are almost never subjected to sand storms; so if these two /places?/ are taken as the standard, it is surmised that the normal overlay of soil of these shell mounds was 15 - 25cm.

/Duplicating section on shell and animal identifications omitted - Ed./

It is strange that although this is a world-famous crab-producing locality, crab shells were not noted in the shell mounds.

Artifacts

Stone Implements

The total number of stone implements unearthed was thirty specimens. According to an appraisal by Mr. Hisashi KUNO of the Geology Department of the School of Science of Tokyo University, the following ten kinds of stone are represented:

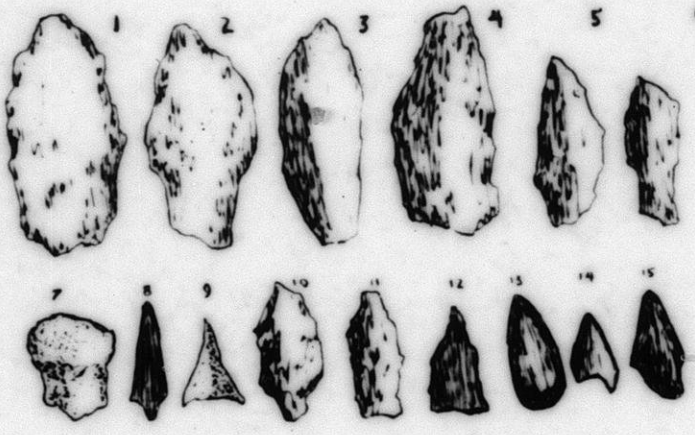
1. Olivine basalt feldspar
2. Non-phenocrystic Andesite, or basalt
3. Agate
4. Siliceous andesite
5. Pyroxene andesite feldspar
6. Andesitic tufa
7. Obsidian
8. Pumice of pyroxene-andesite
9. Glass-type andesite
10. Plagioclase andesite

Fig. 7. Polished stone adzes.

No. 1 was most numerous; 2, 3, and 4 came next; and obsidian, which is most numerous in the Kitami Region of Hokkaido, is extremely scarce. As for the types of stone implements, the chipped /type/ was most numerous, with stone arrowheads being the main item, followed by the stone lance; polished stone adzes are comparatively scarce. The technique, as compared to the objects made on the main island of Hokkaido and in the southern Kuriles, is poor in many cases. The polished stone adze shown as (1) in fig. 7 is of a blue-black /green-black?/ color and measures 13.5cm. in length; in shape it resembles the types found in Kamchatka and on the continent. No. 2 is of the same color and measures 15cm. in length; 3 is of a yellow-brown color and was a small one 5.5cm. long; 4 is also small, measuring 5cm. in length and of a green-black color. It is characteristic of all of these that only one side of the double-blade at the tip presents a markedly gouged-out shape. The types of stones are: (1) plagioclase andesite; (2) and (4) non-phenocrystic andesite or basalt; (3) andesitic tufa.

Nos. 1 - 4 of fig. 8 are stone lances of greenish-black olivine basalt feldspar of very inferior workmanship. (1) was discovered from the Shiomikawa Pit and measures 8cm. in length; (2), (3), and (4) were excavated at Bettobu; (7) is possibly a stone harpoon from Kataoka; the material is a silica-type stone with the color of tortoise shell. 8 - 15 are all stone arrowheads, 8 and 9 being from Kataoka, 14 from the Shiomikawa Pit, and the rest from Bettobu. In their shapes they resemble points from Hokkaido; with the exception of 8, which has a tang, the rest were all without tang. Although on Hokkaido tanged points are numerous, when one enters the Kurile Islands the tendency is for tangless ones to

Fig. 8. Types of stone artifacts.



become comparatively common. The stone phallus shown in No. 2 fig. 18* was unearthed at the time of the leveling of the pit dwellings when the Takeda Factory at Shiomikawa was enlarged in the spring of 1932; at present it is owned by Mr. Seizō TANAKA /Kiyozō?/, captain of the Otaru Maru, and is enshrined in the captain's cabin as a mascot for safe voyages; the type of stone is unknown, but the color is greenish-gray; it is 7.7cm. long, the head measuring 1.4cm., the groove measuring 0.5cm.; the circumference at the center is 3.9cm. This is an extremely rare specimen, and it is a matter requiring great attention as to whether the Ainu of the northern Kuriles had the custom of phallic worship. It is almost identical with the stone phallus unearthed at a Stone Age site on the Yenisei River which is pictured in Illustration No. 1, page 299, of the chapter called "The Phallic Worship of Our Prehistoric Ancestors" in Professor Torii's book The Primitive Worship of the Peoples Surrounding Japan. The stone ornament (labret?) shown as 12 in the fig. 18 is from Kataoka; it seems to be a silica-type stone with a rather reddish color; its length is 3.5cm. In addition, stone sinkers, chipped stone adzes and unidentified stone implements have been unearthed, but I have decided to omit a description of them.

Pottery

The pottery discovered during our investigations on this occasion was entirely of the so-called "northern pottery" type.

By "northern pottery" is meant here that ware which is unearthed along the coasts of Sakhalin, the Okhotsk Sea coast of Hokkaido, and in the Kurile Islands, and which dates from the end of the Stone Age Period,

*Page 261

at the time of simultaneous use of stone and metal. This name was given by Mr. Sueo SUGIYAMA, but Mr. Hiromichi KŌNO of Sapporo calls it the Okhotsk-type pottery. Dividing this roughly into types, they are: naiji /literally "inside ears"/ pottery, jomoku /rope/ pottery, mold-pattern pottery, incised-design pottery, and relief-design pottery. With regard to the pottery unearthed on Shumushu, I will, in discussing them, divide them into (a) the naiji-type pottery, and (b) the various other kinds of northern-type pottery, for the sake of convenience.

Naiji-Type Pottery

There are no whole specimens of this ware, only sherds. A total of twenty-nine pieces were found: three at Kataoka and twenty-six at Bettobu; broken down, these were: six sherds with interior "ears" or lugs; one lug; two basal sherds, and the rest parts of the rim and the body. At Bettobu these were all unearthed in shell mounds (Mounds Nos. 2, 5, and 6). At Kataoka, they were from pit dwellings.

Judging from the fragments, these resemble the whole specimen excavated by /Waldemar/ Jochelson from the pit dwelling on the banks of Lake Nalacheva in the southeastern portion of Kamchatka. /This is shown in Plate 17:1 of his "Archaeological Investigations in Kamchatka," Carnegie Institution of Washington, Publication No. 388, 1928./

The color of all the specimens unearthed is a grayish-black on the outside surface; occasional sherds show a reddish-brown color on the inner side. In size there are two types: large and small. Fig. 9 shows a large-sized one on the left and on the right the small-sized type. The large type is generally thick (1cm.), while the small type is thin (about 0.5cm.); in particular, the thick type has a large quantity of gravel

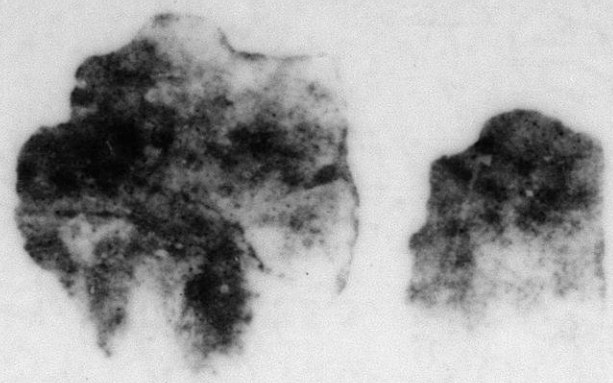


Fig. 9. Naiji potsherds.

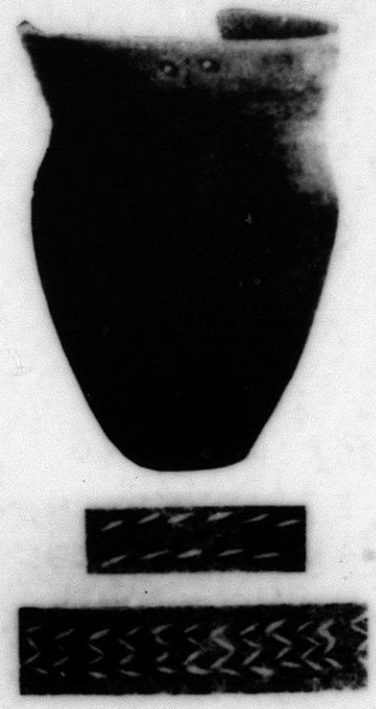


Fig. 10. Pot excavated at Kataoka, with rubbings of the decoration.

mixed in and, in some cases, fibers. In the thin type almost no fiber was to be seen and moreover gravel was comparatively rare. In these the firing was very poor and the ware extremely fragile. Soot adhered to both the inner and outer surfaces, being particularly marked on the outer surface; in some cases the layer of soot was between 0.2 - 0.3cm. thick. With regard to the "ears" (lugs), it would appear that there was a pair in the complete pots, one on each side; the lugs being attached to the inner surface near the upper rim. In the example on the left in fig. 9, it is placed about 6.5cm. from the upper rim; the length of the lug is about 6cm., and the diameter of the hole is about 2cm. In the small-sized one on the right, the lug is about 1.5cm. from the upper rim; the length of the lug is about 3.5cm., and the diameter of the hole is about 1cm. In both of these there is a sort of square mound-like projection on the rim at a place just above the lug, resembling the semispherical projections in modern iron pots where the handle is attached.

Among Jochelson's whole specimens of this type of pottery he discovered one which had three inside lugs, the perforations of which were parallel to the rim; but /in our excavations/ this type was not found. On the portion of the inner surface where the lugs are attached a groove has been made which runs parallel with the rim; in the large type /pottery/ where the ears are long the width of the groove is that much wider. The width of the groove in the specimen at the left is about 4cm., that on the one to the right is 2cm. Heretofore, pots of this type of pottery which have been found on Sakhalin, the south of Hokkaido, and in the central Kuriles were for the most part undecorated, /p. 54/ but on this

occasion, among those discovered were two with designs. In one, a thin rope decoration was placed 1.5cm. below the rim; the other, as shown in 5 of the rubbings in fig. 12, was one which had two lines of the pressed circle pattern of the same size.

Various Types of Northern Pottery

Of these, a perfectly preserved specimen was unearthed from the pit site at Kataoka and is owned by Mr. Chihaya Gunji (fig. 10); one fourth of another pot has been restored from sherds dug up from the pit site on the grounds adjacent to the Takeda Factory at Shiomikawa; the rest of the specimens are all sherds, numbering over fifty, including four bases. Fig. 10 shows the typical incised-pattern pot of this type of pottery; its height is 35.5cm., the circumference at the center of the body is 80cm., the lip diameter is 26cm., the base diameter is 12cm., and the thickness at the rim is 1cm. It is black in color and has two holes 1.5cm. in diameter in the rim which had been made by a metal implement; these are missing on the opposite side. The designs are shown at the bottom of the same plate in rubbings. About 4cm. below the rim are two rows of boat-shaped incisions, while on the body are two rows of similar incisions in a V-shaped pattern. A large amount of black soot adheres to the inner and outer surfaces. Fig. 11 shows the pot which has been restored from the rim to the middle of the body. It has two lines - one above and one below - of a three-line variation? of the boat-shaped incised pattern, while below this, somewhat to the side /or at an angle/ a pattern of long dotted lines has been incised. The color is blackish, and it has soot adhering to it; there are portions of the inner surface

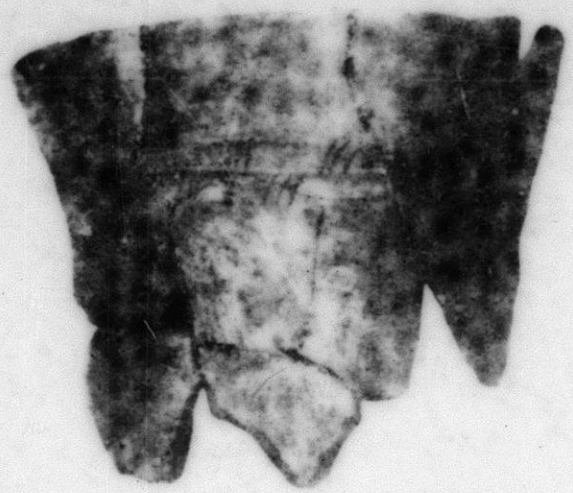


Fig. 11. Pot excavated at Shiomikawa.

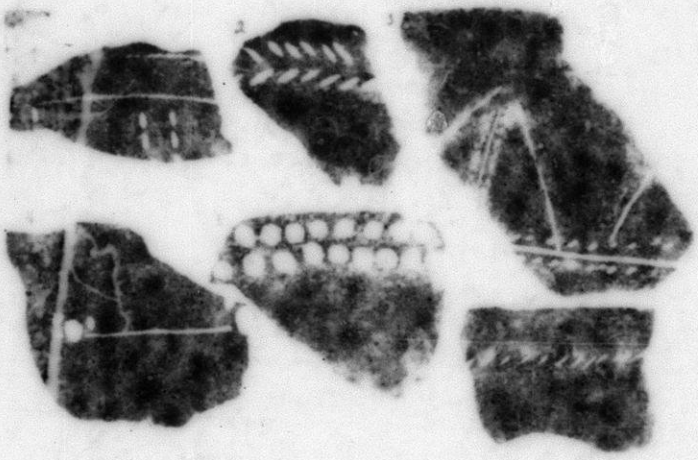


Fig. 12. Rubbings of designs on pottery.

to which ash has also adhered, so it would seem that this was a pot that may have been placed near the fire. The thickness at the rim is 1cm. As for the patterns of the other sherds, the rubbings of fig. 12 show (1) a rim pattern with two lines of a small twine-pattern and two lines of boat-shaped patterns below this. The color /¯p. 55_/¯ is black-brown, and its thickness is about 1cm. No. 3 of the same figure has incised triangular geometric designs with two rows of variations on the boat-shaped incised pattern. It is black-brown in color, 1cm. in thickness, and its original shape was similar in form to the pot in fig. 10. No. 4 is a portion of the body with one single line being incised near the curve of the body and with boat-shaped punctations being placed to the left and right above the seal-shaped incisions. No. 2 is a sherd of the part from the bottom of the lip to the upper part of the bulge; its color is black, and it has boat-shaped incisions arranged in a sort of herringbone pattern. No. 6 is also part of the rim; it has tiny boat-shaped incisions arranged in a single row, and is black-gray in color.

The other sherds are substantially the same as these, with the boat-naped incised pattern being the most common. This is adorned with the rope-pattern and incised geometric patterns, with various incised designs worked on them.

Pottery with boat-shaped incisions is the representative type among pottery with incised patterns, and is the type most often seen among the northern pottery. As for the distribution of this type of pottery, it has been unearthed in various places on southern Sakhalin (Sakaehama, Susuya, Honto), and also extends to the two islands of Rishiri and Rebun. Coming into Hokkaido, it is distributed mainly on the Okhotsk Sea coast,

with vast quantities being unearthed in Kitami and Nemuro; and while occurring only infrequently on the Japan Sea coast, it is found up to Esashi; on the Pacific coast it extends to the vicinity of Kushiro. It is found in large quantities in the southern Kuriles on the two islands of Kunashiri and Etorofu; it extends to the central Kuriles and reaches up to the northern islands.

Professor Goichi HIRAKŌ, of the School of Medicine of the Kyūshū Imperial University, has given this type of pottery the name of "itoppa pottery," and in his article called "The Existence of Ainu Carving (the Itoppa) as Designs on the Surface of Pottery" which was printed in Vol. 45, No. 2 of Jinruigaku Zasshi, he concludes that there is a connection between the boat-shaped cavities of the beard-spatula (the ikupashī) of the Ainu and boat-shaped-cavities pattern on the surface of pottery. The patterns on these pots are almost always applied only at the lip and on a portion of the body, and are not applied on the lower part. Among these pots, there are also those without patterns; and on each pot one or two holes have been opened up either at the rim or on the upper part of the body so as to hang the pots up by means of twine. In quality they are comparatively hard; the firing is good; and when compared to the naiji pots they show a great advance with respect to method of manufacture and quality.

/p. 56/ In regard to the relationship between this type of pottery and the pottery of the Kamchatka Peninsula, on the opposite shore, Jochelson has excavated a whole naiji pot from a pit on the banks of Nalacheva Lake, while sherds of this type have been discovered in large quantity at the same place and on the banks of Kuril Lake; so,

up to the present, this type of pottery is restricted to the southern end of this peninsula. Jochelson considers that the method of manufacture was learned from the Ainu of the northern Kuriles and he traces its prototype to Japan.

In the pottery unearthed from the sites at Kulki and Kavran in the north /of Kamchatka/, many sherds have been discovered with the rope impression, jomon /cord-pattern/, and the straight dotted line, all of these in sunken incisions. I have heard that Mr. Eiji NAKAYAMA excavated this year a thick cord-pattern pot from the northwestern section.

The pottery there /Kamchatka/ and here appears to have several points of similarity; so the study of the prehistory of Kamchatka is an important problem for which our scholastic world should bestir itself. From this standpoint, the two archaeological investigations made by Mr. Eiji NAKAYAMA of Kyoto University were extremely significant, for which I am extremely grateful.

Bone Implements

Of the various artifacts, bone implements were the most numerous found; I myself was able to discover over a hundred pieces on this occasion. Most of them were unearthed in shell mounds, but occasionally they are also discovered in pit dwellings.

As for the material, whalebone had been used for almost all of them, but bones of birds, the tusks of animals /ivory?/ and fishbones have also been found, though in small quantity.

No. 1 of fig. 18*is a bone belt clasp the Ainu name for which is kukkurukeshi, /and is of a type/ which had been in use until recently

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among the native Ainu of the northern Kuriles; it is the only one of the specimens unearthed which was perfectly preserved. It was collected at Bettobu by the late Tsunekichi KŌNO, and is now in the possession of the Museum attached to Hokkaido University. It has a rope-coil design and its diameter is 9cm.

No. 3 is a bone comb discovered in the Kataoka Shell Mound; its diameter is 9.5cm., and it has eight teeth; a similar specimen discovered in the central Kuriles is owned by Mr. Sueo SUGIYAMA. No. 4 is also a bone comb, 11cm. long; it was collected by Mr. KŌNO at Bettobu, and is kept in the Museum attached to Hokkaido University. /p. 57/ It is an extremely rare type among the bone combs unearthed, and has an interlaced pattern.

No. 5 is also some kind of ornament made of bone, 5.5cm. long; it has a hole in the center and twelve small holes around its edges and is probably some sort of belt or necklace clasp. No. 6 was discovered at Bettobu; it is thought to be a neck-ornament made of bone. It has the interlaced pattern, a hole at the top, and is 6cm. in length.

No. 7 is a pendant in the magatama /curved jewel/ style made of the tooth or tusk of some sea animal; its length is 3.7cm. This type of object is unearthed in large numbers in the southern and northern Kuriles; in the southern part, the teeth of foxes are used.

No. 10 is made from a thin piece of whalebone and is thought to be some sort of ornament. It has a whorl design worked on it, is 4cm. long, and was discovered at Bettobu. No. 11 is a sailor's pipe of bone unearthed from the pit dwelling site at Kataoka; it is owned by Mr. Chihaya GUNJI. Its length is 4.5cm.; the diameter of the mouthpiece is 2.6cm.; and there

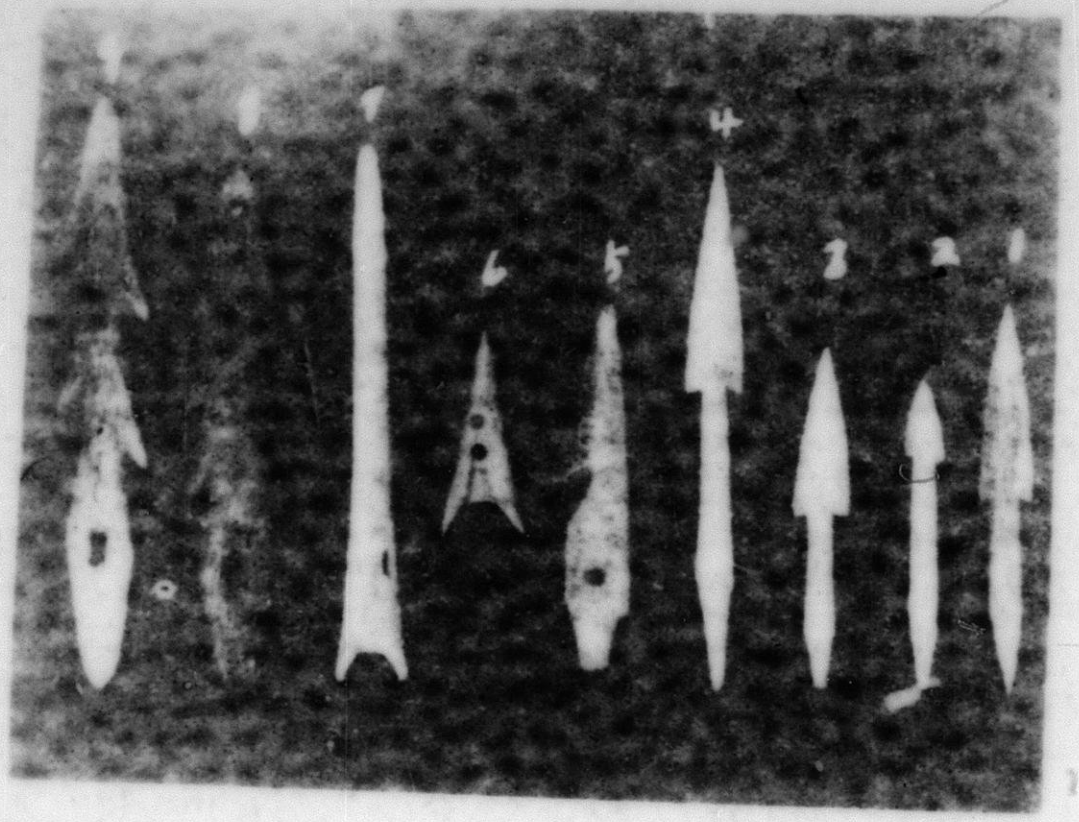
are still traces of nicotine on it. It is a local copy made after the infiltration of the Russians and corresponds well with the bone spoon discovered by Professor Torii.

No. 13 is a bone adze unearthed at Bettobu; its length is 14cm., and on the upper portion a man's face has been incised.

Nos. 1 - 4 of fig. 13 show bone harpoons unearthed at Bettobu. (1) is 10cm. long; (2) 8.5cm.; (3) 9cm.; (4) 14cm. Nos. 5, 8, and 9 are also bone harpoons which were inserted at the tip of a long pole, twine being tied through the hole at the bottom of the harpoon; this was then used for thrusting. No. 8 (14cm.) is from the Shiomikawa pit dwellings; No. 5 (10cm.) was unearthed at Bettobu; No. 9 (16cm.) also was unearthed at Bettobu. Nos. 6 and 7 are the heads of throwing harpoons; these, too, were attached to the ends of long poles and when thrust into the body of, for instance, sea mammals, these heads remain and the line which is attached through the hole in the harpoon is held in the hands and pulled in.

No. 6 measures 5.5cm. in length; No. 7 is 14.5cm. With further evolution these harpoons become the teki of the Ainu, which have metal blades at the tips; I discovered one of this type also at Bettobu. Nos. 1, 8, 9, and 10 of fig. 14 are bone foreshafts in the tip of which bone arrowheads were inserted; these are known as chekka in Ainu. All of these were unearthed at Bettobu. No. 1 is 11.5cm. in length; No. 8 is 9cm.; No. 9 is 10cm.; No. 10 is 11.5cm. [p. 58]

Nos. 2, 3, 4, 5, 6, and 7 were also all discovered at Bettobu, and appear to be bone arrowheads. No. 2 is 7.5cm. long; No. 3 is 9cm.; No. 4 is 9.5cm.; No. 5 is 9cm.; No. 6 is 8cm.; and No. 7 is 8.5cm.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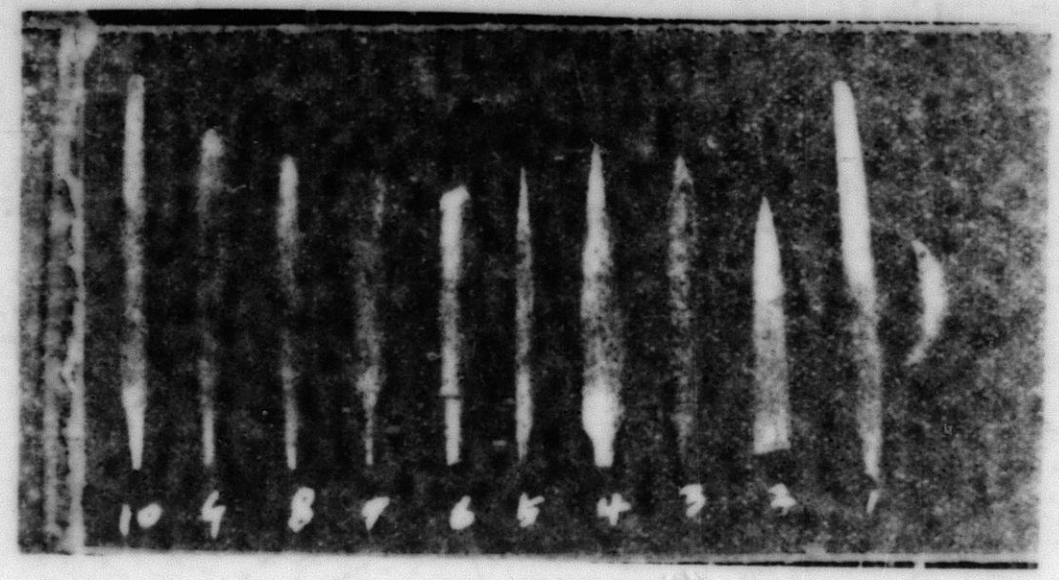
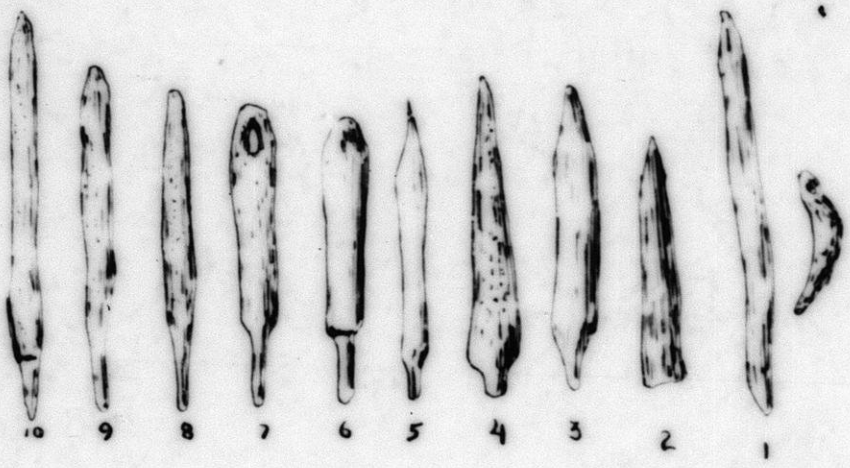


Fig. 14 Types of bone artifacts.



No. 1 of fig. 15 is a bone lance; its length is 17cm., and it was unearthed from the Kataoka Shell Mound. No. 2 also appears to be a flat bone lance; it was unearthed from the Shiomikawa Shell Mound, and its length is 14.5cm. No. 3, unearthed from the Bettobu No. 4 Shell Mound, is an object whose use is unknown; its length is 14cm. No. 4 was unearthed at Kataoka; it has a groove at the tip, and it was here that the stone arrowhead was inserted; its length is 14cm. No. 5 is also from the Kataoka Shell Mound; its use is unknown and its length is 13cm. No. 6 is an object unearthed at Bettobu whose function is unknown - possibly a bone adze; on both sides there are long, narrow grooves; its length is 8.5cm.

No. 7 was also unearthed at Bettobu; I think it is a kind of bone harpoon; its length is 6cm. No. 8 is probably a kind of bone arrowhead; it came from the Bettobu Shell Mound and is 5cm. long.

The above-mentioned bone implements are all made of whalebone; in addition, there were various types of bone adzes, bone implements like bone spatulas, possible parts of bone harpoons, and bone makiri with a metal clasp on the handle - all in large numbers. But regarding these I will write some other time.

Porcelain and Glassware

Objects of porcelain comprised two whole small beads, the rest being sherds; all were discovered in the Bettobu Shell Mound No. 3, except for one unearthed at Kataoka.

One of the porcelain beads is shown as No. 9 in fig. 18*; it is purple in color, and has a diameter of 1.8cm.; No. 8 of the same figure is also

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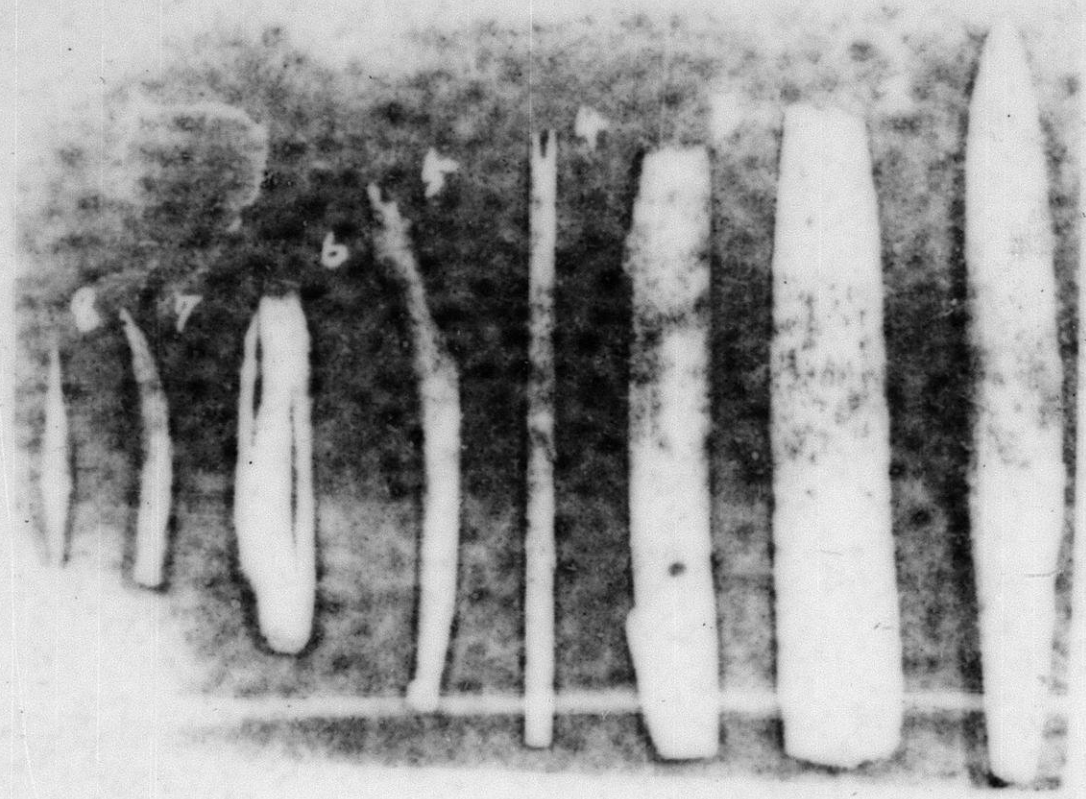


Fig. 15. Types of bone artifacts.

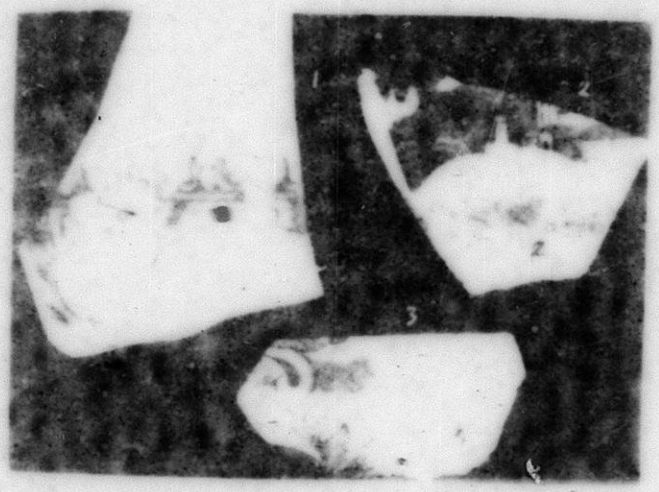


Fig. 16. Fragments of porcelain.

of a purple color with a floral design drawn around in white, the outlines of the flowers being shown in red lines. I own a similar object which I obtained in the Ainu settlement at Abuta, in Kimofuri; porcelain beads which resemble this are frequently to be seen among the shitoki /a kind of necklace with a large pendant ornament/ of the Ainu. The porcelain sherds numbered fourteen: seven being from the base, three handles, three pieces of the rim, and one cover. The glassware was also from the same shell mound: wine glasses, and one piece of what looks like the mouth of a large bottle. Among the porcelain sherds some have designs of flowers, landscape scenes, and drawings of buildings.

When I had these judged by an expert, through the good offices of Mr. Moriichi GOTŌ of the Imperial Household Museum, /it was found that/ there was not a single piece that had been made in Japan /p. 59/; they were all of European manufacture.

Among the basal sherds with no design was one made in Germany in the eighteenth century; among the sherds with landscape scenery on them are some which had been made in European Russia at the end of the eighteenth century. Those shown in fig. 16 are of the type commonly called Holland ware; this was made not only in Holland but also in such countries as England, France, Germany, and Russia. Nos. 1 and 2 are from the beginning of the nineteenth century; No. 3 is the most recent, being said to be from the second half of the nineteenth century. Only on No. 1 among these sherds was there faintly visible on the base the letters of the factory mark, which read GARRETT; so I was able to conclude that the ware was English-made.

The piece of the mouth of the glass bottle was black in color and iridescent. It is probably something made in the Caucasus of Russia in the eighteenth century; it may possibly be two or three centuries earlier. There are several theories as to the year in which the Russians first infiltrated into the northern Kuriles, and the matter is not finally determined. According to both H. J. Snow and L. S. Berg, Michael Nasedkin reached Cape Lopatka on the southern tip of Kamchatka in 1706 and when he discovered that there were islands opposite it, he reported the fact to the authorities in Yakutsk. The latter immediately ordered the exploration and mapping of the northern Kuriles, so in August of 1711, two men, Danila Antsiforov and Ivan Kozyrevskii reached Cape Lopatka from Bolshaia River, and, with one small boat and several dugouts, were the first to cross over to Shumushu Island. Later, in 1747, a missionary priest, Father Iwosafu /phon./, was sent to the islands for the purpose of missionary work; this was the time that the modern Shikotan Ainu became converts to the Greek Orthodox Church. Later in 1830, Russia /p. 60/ entrusted all of the Kuriles to the Russian-American Company. This company, whose main body was made up of Americans and Russians /sic/, engaged exclusively in taking the skins of the sea-otter and the fox. In short, in the light of the historical fact that there was contact first with Russia in the beginning of the eighteenth century, and then with the Americans in the middle of the nineteenth century; and also in the light of the year of manufacture of these porcelain wares and the country of manufacture, it is certain that these were obtained after the infiltration of the Russians. However, it is surmised that the period in which the islanders obtained these in the greatest quantity

may have been at about the time of the period of the Russian-American Company. As mentioned above, the Bettobu Shell Mound No. 3, the source of these porcelain beads and porcelain sherds, still contained two or three rotted pillars, yielded pieces of bricks and, among bone implements, the handle of a makiri to which was attached the metal clasps of a small knife blade, resembling the native article of the present time; also an object that could be regarded as the fragment of a bone /sled/ runner. In the light of these facts, we can conclude that it is an extremely recent shell mound.

When, in the summer of this year, Mr. Kiyozō TANAKA, the captain of the Otaru Maru, excavated a pit dwelling which still had its roof, at Arakawa on the west coast of Paramushiro Island, he discovered, a short distance below the pit, a shell mound from which he collected fragments of bricks, metal objects, and fragments of porcelain similar to that which I had found. Evidently these were objects from a recent dwelling, and we conclude that the Ainu of the entire Kurile Islands carried on a brisk barter with foreigners in exchange for the skins of the sea-otter and the fox.

Metal Objects

The metal objects were all found only in the Bettobu Shell Mounds Nos. 3 and 7. Among those which I discovered, there were only two types: iron implements and copper implements.

The iron implements were: one piece of an iron pot; one iron gaff; three objects resembling knives; two iron harpoons; two iron nails; and three other objects. Among the copper objects were: six copper nails;

one copper ring; and one piece of copper sheeting that had been fashioned into the form of the mouthpiece of a pipe.

Among these items, those shown in fig. 17 are: (1) an iron implement that looks like a small knife; its length is 14.5cm. and its width 0.2cm.; (2) a copper square ship's nail whose point had been sharpened; its length is 5.5cm., its width 0.5cm.; (3) this is also a square copper nail, but is the head; (4) a harpoon made of iron whose length is 9cm.; (5) a similar object, whose length is approximately 7cm.; (6) a small iron blade resembling a jackknife; its length is 8.5cm.; (7) apparently a half-moon-shaped small knife; its length is 18cm., its width 2.5cm.; (8) a piece of an iron pot [p. 61] which seems to be Russian; its length is 6.5cm.; (9) an iron hook made of square-shaped iron wire measuring 5.5cm. in length. Most of these items are ready-made objects, but on certain of them there are traces showing that the people made them by working pieces of iron and copper. In particular, all of the square nails were worked on and the points have been sharpened.

[The passages from the second paragraph of page 61 to the end of the second paragraph on page 62 are omitted; they deal with the forging and introduction of metal implements and weapons in the northern regions, and are a series of quotations. T.N.]

Conclusions

In the foregoing, I have discussed generally the sites and artifacts of Shumushu. When these are compared with those of the islands of both the central and southern Kuriles; with those along the coast of Nemuro and Kitami, which are on the Okhotsk Sea coast of Hokkaido; and with those

Fig. 17. Metal objects.

of the end of the Stone Age Period found along the shores of southern Sakhalin, they may correctly be considered as remains of the Ainu, who were of the same culture.

It would be a serious error today to consider the Stone Age Period in the northern Kuriles to be something separate. /This initial opinion was markedly revised in the light of Baba's subsequent work. Cf. Translation No. 1 - Ed./

In the light of the investigations that have been carried on hitherto, the ancestors of the Ainu probably entered the southern Kuriles from Hokkaido at the time of the Later Period Hokkaido-Style Thin Jomon Pottery (a thin jomon pottery which is also called Ebetsu-type pottery, being unearthed in the old graves at Ebetsu, and which is discovered in large quantity in sites along the Okhotsk coast of Hokkaido and also in the southern Kuriles; or at about the time of the period of the northern pottery; and moved into the northern islands via the central Kuriles. Mr. Shōzo NISHIDA, an instructor at the Higher Commercial School at Otaru, has propounded the theory that the Ainu of the northern Kuriles came from the continent and, proceeding via Sakhalin, moved south along the Okhotsk Sea coast of Hokkaido, crossed over to the southern Kuriles, and then entered the central and northern islands. However, I think that this major problem must await future study.

There are other problems, but I will limit this article to an investigatory report. I lay down my brush with the aim of writing further on the basis of future investigations.

/The last paragraph on page 62 consists of acknowledgements./

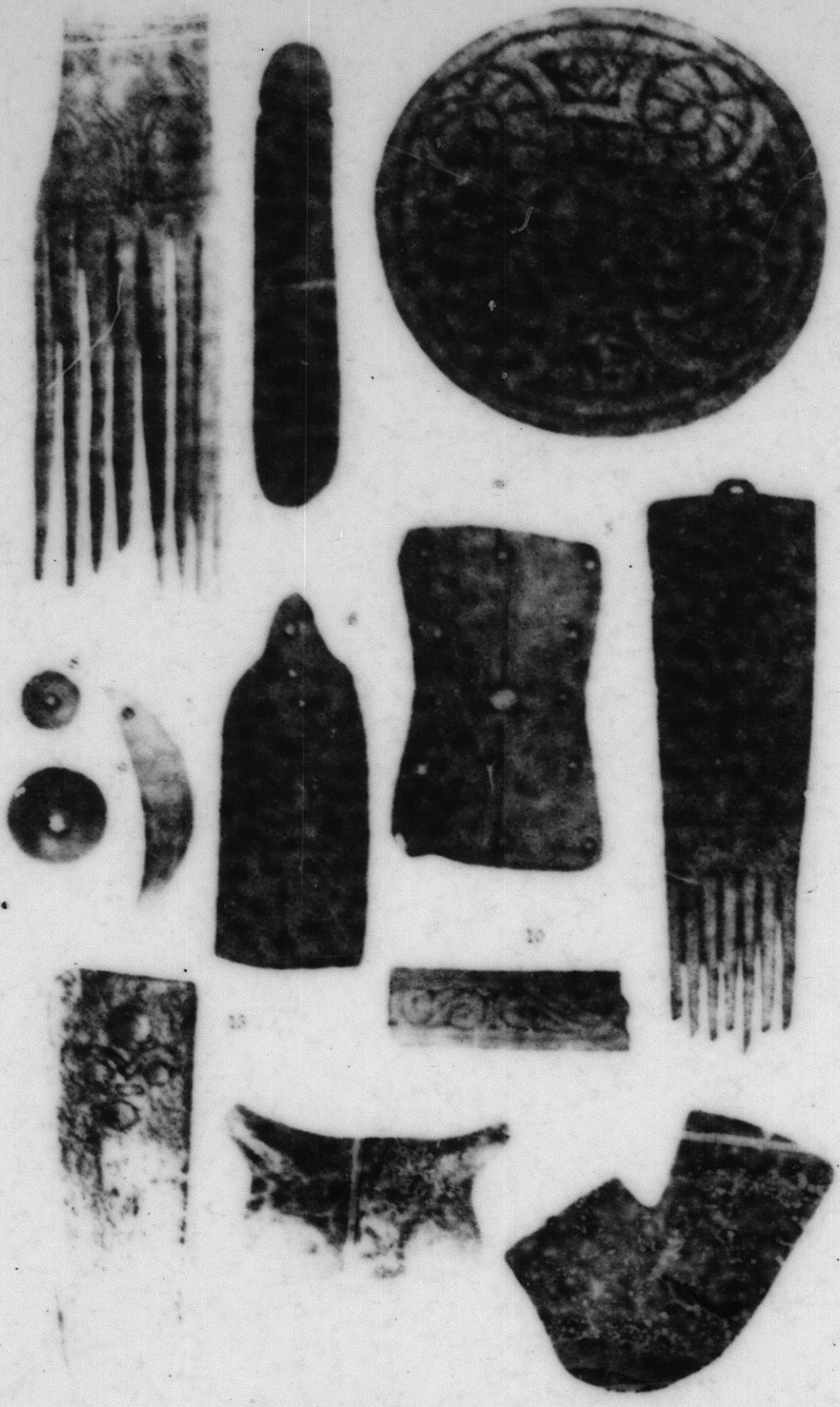


Fig. 18. Bone and stone artifacts from Shumushu Island.

HUNTING AND FISHING IMPLEMENTS FROM EXCAVATIONS IN THE KURILE ISLANDS

(Chishima Gunto Shutsudo no Shuryogu oyobi Gyogu)

by Osamu BABA

(MINZOKUGAKU KENKYU, Vol. 3, No. 2, pp. 295-337. 1937)

The abundance of material from the northern Kuriles /has prompted me to make this/ the basis of the present article. Coverage of the southern Kuriles is based on my materials and those collected by Messrs. Tani, Sasamori, Iwasaki, and Taniuchida; while I have written on the central Kuriles by borrowing Mr. Sugiyama's materials. However, it is regrettable that data regarding the central and southern islands are so scanty at present. It is my intention in the future to investigate and excavate the sites in these areas, collect a great number of artifacts and complete /the picture/. I will be very glad if this article is considered as a first /attempt along these lines/, and it is with this intention that the author has written it. At the same time he believes that there are many points which will be revised later with the /acquisition of/ new materials.

Introduction

The Kurile Archipelago is made up of twenty-four large and small islands which are scattered like steppingstones between Hokkaido and the Kamchatka Peninsula.

At present, it is administratively divided into three parts, Minami-Chishima /southern/, Chūbu-Chishima /central/, and Kita-Chishima /northern/. Minami-Chishima is under the jurisdiction of the Hokkaido Government, while

Chūbu-Chishima is under the jurisdiction of the Agriculture Ministry. Minami-Chishima is made up of the three islands of Shikotan, Kunajiri, and Etorofu; while Chūbu-Chishima extends from Urup Island to Onekotan Island, and includes North- and South- Chirihoi Islands, Puroton Island, Shimushiru Island, Ketoi Island, North- and South- Ushishiru Islands, Rashawa Island, Matsuwa Island, Raikoke Island, Shasukotan Island, Ekaruma Island, Chirinkotan Island, Harumukotan Island, /p. 91/ and Makanru Island.

Kita-Chishima comprises the four islands of Shirinki, Paramushiro, Araido, and Shumushu.

From Kemurai Point on the southern tip of Kunajiri Island (which is located at the point north latitude 43° 40' and east longitude 145° 33'), to Cape Kokutan /Kunihashi/ on the northern tip of Shumushu Island (which is at north latitude 50° 52' and east longitude 156° 29'), is a distance of some 1180 kilometers. With respect to Hokkaido's mainland, the southern tip of Kunajiri faces Point Notsuke of Nemuro eight and a half sea miles away; while the distance between Cape Kokutan /Kunihashi/, on the northern tip of Shumushu Island, and Cape Lopatka of Kamchatka is a mere six sea miles.

In various parts of the archipelago Neolithic sites are found. In the southern Kuriles are found the sites of people who used the Hokkaido-style cylindrical pottery, the Hokkaido-style usude (thin) jōmon pottery of a later period (also called the Ebetsu-style pottery), and the Okhotsk-style pottery. It would seem that up to now only the Okhotsk-style pottery has been found from Urup to Shumushu, but the naiji-style pottery is scattered throughout the Kuriles and up to the southern portion of the Kamchatka Peninsula.

It is an established fact that Ainu once lived on all of the islands, and that on the three islands of Shumushu, Shinshiru and Urup there were Aleuts, who had been forced to migrate from the Aleutians after the coming of the Russians, living until the ninth year of Meiji (1876). While it is not clear when the Aleuts were transferred to Shumushu Island, there is a record which says that they were transferred to Shinshiru and Urup in 1772.

Since this was the scene of the activities of the Okhotsk pottery people, the Ainu, and the Aleuts who were transferred by the Russians, these people will here be referred to under the general term of the Kurile natives.

It is my task to discuss the hunting implements and the fishing implements which have been discovered at the sites of these natives. Since Chūbu- Chishima /central islands/ is an area into which entry is almost completely forbidden, I have depended for my material on that gained by Messr. Sueo SUCIYAMA and Toshiyuki ISHINO; while for the southern Kuriles I have added the materials of Messrs. Keiichi TANI, Teishu SASAMORI, Yoshitaka IWASAKI, and Jirō TANIUCHIDA to that which I collected when I investigated the islands of Etorofu and Shikotan in August, 1930. The materials gained from three trips to the northern islands (in August, 1934; August, 1935; and August, 1936) /p. 92/ amount to about a thousand items, so I would like to use these as the basic materials.

It is an interesting project to attempt to write about the hunting and fishing implements left by the former inhabitants of the archipelago - an area which has been famous from ancient days as one of the leading fishing grounds in the world for salmon, salmon-trout, and cod, as well as being a world-famous breeding ground for sea mammals. Moreover, at

the present time the problem of arctic culture has been receiving the attention of a number of scholars; and if any portion of my article can serve in some fashion to elucidate the problem of the relationship between these native implements and arctic culture, and what relationship there may have been between the latter and the Neolithic culture of Japan, I will consider myself fortunate. In addition, I would like to receive the comments /of my colleagues/.

Hunting Implements

Harpoons

The harpoon of the former inhabitants of the Kurile Archipelago was used in fishing and in the hunting of sea mammals; but in the northern islands it seems to have been used mostly in sea hunting.

The hunting of sea mammals on the ocean using guns has made it possible to kill the animal directly by means of shells; but in the case of the harpoon, it has the defect of not achieving the coup de grace except when it skillfully pierces deep into a vital point. Therefore, the essential function of the harpoon is to remain securely in the body of the prey after it has been harpooned and is then brought alongside the ship and stabbed or beaten to death.

In shape, the harpoons excavated in the archipelago are of various types; but from the standpoint of the mechanical principle which enables them to discharge this function there were only two sorts. This appears to be the same case with the uncivilized peoples of the present day, and with the peoples adjacent to the Ainu, the Kamchadals, the Aleuts, the Chukchis, and the Eskimos.

One of the principles is that of hooking and pulling in by means of barbs on the harpoon. [p. 93]

The second is the principle by which the harpoon revolves [i.e. toggles] in the body of the prey and forms a right angle with the dragline; that is, harpoon and line form a T-shape as the prey is dragged in. The various types of harpoons are all made so that they would discharge one or the other of these functions.

For purposes of convenience, I will call harpoons embodying the first principle "barbed", and those embodying the second "toggle."

Great pains must have been expended in the manufacture of these harpoons in order to cause them to function effectively.

In order that the harpoons should operate successfully, it was necessary to take into consideration not only the harpoon itself, but the component parts, like the head, the foreshaft, the shaft, and the line; it is only by the combined functioning of these parts that the harpoon fulfills its role.

Barbed Harpoons

Any harpoon is so constructed that it will penetrate readily into the body of the prey. Needless to say, in order to do this the tip must be particularly sharp. Therefore, in cases where the harpoon is made from one piece of bone the point is sharpened; others have a groove at the tip into which a stone or metal blade is inserted to form the point, making possible an even better penetration.

This type of harpoon with a stone point at the tip has not been discovered at all up to the present among the objects excavated from the

sites of the Okhotsk pottery people in the northern Kuriles; but it has been discovered in large numbers in the south.

Now, even if the harpoon enters the body because of its keen point and barbs, there is the danger that, as the very result of being sharp, it will bring about the opposite of the desired result by being enabled to withdraw out of the body; therefore, in the barbs of this type of harpoon, the upper part is sharpened, but the bottom edges are made either blunt or almost flat. This is an important element of construction which makes possible the effective functioning of this type of harpoon.

Up to a certain point, the longest possible barbs and those with well-formed, pronounced curves [p. 94] are the most effective; but when they are made from bone, this ideal cannot be realized because of the material involved, the difficulty of working, and the fact that they are easily broken when in use.

This type represents the harpoon in its primitive stage; it is a simple form, operating with only three parts: the head (in some cases there is also a tip), the shaft, and the line, the latter being attached either through a hole at the end of the harpoon or to the knob.

Specimens Unearthed in the Northern Kuriles

(The illustrations on which the name of the excavator or the owner is not noted show materials which I own. No numbers are given in the figures, so I wish to call attention to the fact that number 1 is on the right, with numbers running from right to left.) No. 1 of fig. 2*

*This specimen is 20.5cm. long.

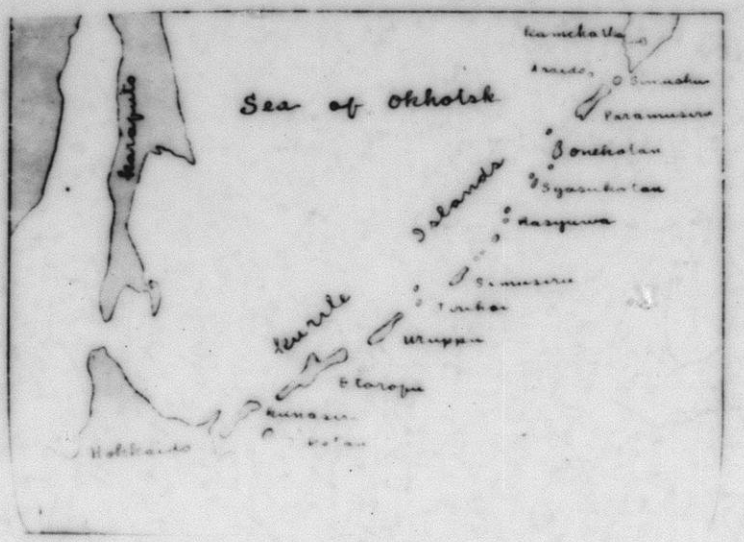


Fig. 1.

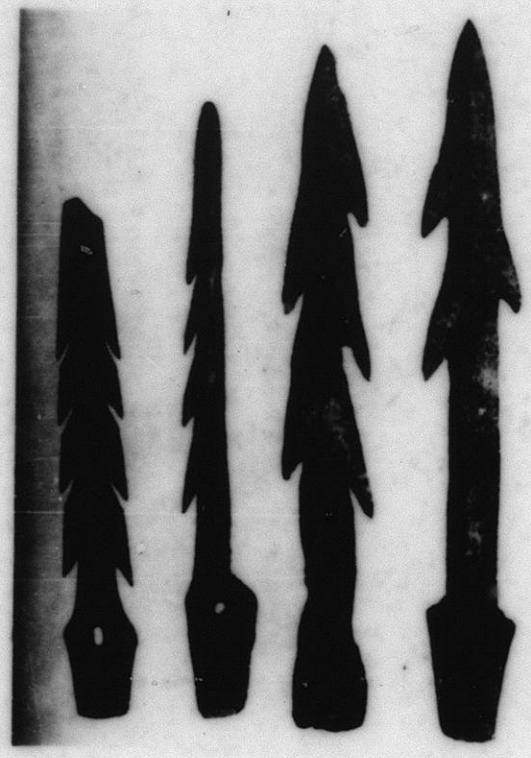


Fig. 2.

is a specimen unearthed from the shell mound to the rear of the Takeda Fisheries at Shiomikawa on Shumushu Island; it has three barbs, with the towline tied to the knob at the bottom edge. No. 2 is also from the same shell mound, and appears to have been used /to hunt/ large sea mammals like the sea lion. Nos. 3 and 4 were both with eight barbs /p. 96/ and were unearthed in the same place.

All the specimens in fig. 3 were also uncovered in the same shell mound. No. 5 seems to have been used as a harpoon arrow. (Length: 7.4cm.)

Nos. 1 and 2 of fig. 4 were found on a sand dune at Bettobu, and may have been used in fishing; No. 3 was unearthed from the Shiomikawa Shell Mound; and No. 4 was discovered on the sand dune at Bettobu. (17cm.)

From these illustrations you can see the shape of this type of harpoon in the northern islands. Generally speaking, they are large as compared to those from the south. This may have something to do with the type of prey.

Examples of Specimens Found in the Southern Kuriles

In the south there is a tendency toward the frequent occurrence of the type of harpoon with a groove at the tip in which a stone point is affixed. No. 1 of fig. 5 is a specimen with a groove at the tip; it was discovered in the Shana Shell Mound on Etorofu Island; No. 2 was also discovered in the same shell mound, and is thought to have been used in fishing. (Length: 6.1cm.)

Nos. 1 and 2 of fig. 6 are examples of harpoons with a groove for a stone point at the tip; No. 3* is a type of harpoon which lacks this; both were excavated from the U'inbetsu Shell Mound on Etorofu Island by Mr. Keiichi TANI, a fisherman living in Hakodate.

*Length: 13.2cm.

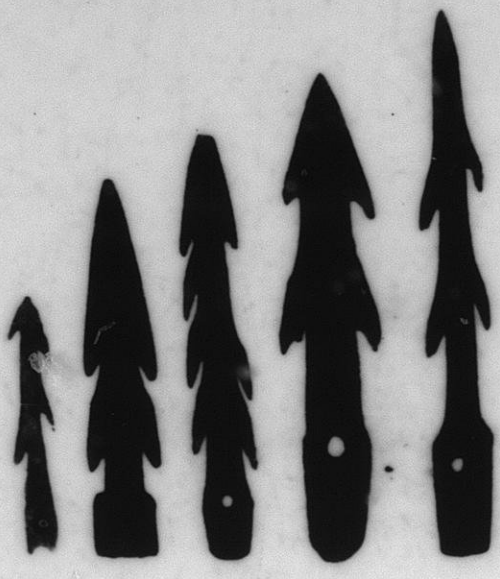


Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

The examples which I have cited above, both northern and southern, were all unearthed from shell mounds in which Okhotsk-type pottery was found.

/p. 97/ Fig. 7 shows a harpoon made of copper which was unearthed in August, 1935, from a recent pit (No. 7) at Bettobu on Shumushu Island; it was made by using a piece of ship's gear from a foreign vessel that had been shipwrecked, and resembles the recent barbed harpoon of the Sakhalin Ainu. This type of harpoon is occasionally found in the southern Kuriles, but in either case this brings us down to recent times. (Length: 13.2cm.)

Toggle Harpoons

This type of harpoon is like the kite (meaning "harpoon") which was used until recent times by the Ainu in fishing for chirikappu (the swordfish?) and the mambō /the sunfish/; it was made in such a way that when the kite pierces the body of the prey it turns /toggles/ inside, the line and the head of the harpoon forming a T-shape as the result of tension.

Thus the harpoon is prevented from slipping out, and the prey is towed in. Most of the harpoons from the Kuriles belong to this type. Though their shape and operation may differ, they all follow this principle.

In order to explain how this type of harpoon thus turns in the body of the prey and forms a T-shape, I would like to base my remarks on the example of an actual discovery.

The small swallow-tail-shaped harpoon has been known for a long time from various sites in the northern Kuriles, but the foreshaft to which it was attached was hitherto unknown. This has fortunately come to light with the discovery, during the investigation last summer, of a large number of foreshafts along with the harpoons in the shell mounds and pits at Oikawa.

Fig. 8 shows an example of this. No. 1 shows an imaginary drawing of a small swallow-tail-shaped harpoon with a stone point inserted at the tip, attached to a foreshaft as it first pierces the body of the prey. The line would not be curved away from the foreshaft as shown in the drawing; [p. 98] this was done in order to illustrate the point that the harpoon head and the foreshaft are tied together with twine. Actually, the line should be parallel with and close to the foreshaft.

The stone point affixed to the tip of the harpoon is not tied on with twine in this illustration; but judging by the fact that there are narrow grooves on both sides at the tip, it was fastened by means of twine. Evidently the fit was made tight by inserting fish glue into the slot.

The hole (the line hole) of the harpoon through which the line is passed is drilled somewhat to the center; a socket like this is carved out, its center and the center of the line hole at the middle being somewhat perpendicular. The tip of the foreshaft is shaped like this , and is made so that this point fits into the socket. The harpoon head and the foreshaft [p. 99] are firmly tied on the side of the swallow-tail edge to the hole (line hole) and the hole or the groove of the foreshaft, and the latter is attached to the end of the harpoon shaft. It is thought that the parts are so designed that the foreshaft and the harpoon shaft can be separated after having entered the prey. Otherwise, there is great danger that the harpoon and the foreshaft and the harpoon shaft may, after they have pierced the prey, slip out because of the pressure exerted by the prey as it thrashes about.

Fig. 8.

When it is seen that the harpoon has hit its mark, the line is pulled and the harpoon head begins to turn, as shown in No. 2; this is because it works dynamically, with the foreshaft as the supporting base.

In No. 3, the harpoon head has turned, is completely separated from the foreshaft and is at right angles to the line, thus preventing completely any slipping out, while by means of the line the prey is pulled alongside.

Taking one example of a harpoon head and the attached foreshaft, I have described the process by which the toggle is formed; but any harpoon head will have its auxiliary foreshaft; thus, they are cleverly designed so as to form this shape.

Explanations of the functioning of each individual harpoon are presently undergoing study and I will leave the other examples until a later date.

Specimens Unearthed in the Northern Kuriles

(1) The swallow-tail-shaped harpoon used by the Okhotsk pottery people.

Type A In its outer form, this is almost identical with Type B, which will be discussed later, but as shown in fig. 9, what distinguishes it from Type B is that the socket made at the bottom surface of the swallow-tail (into which the tip of the foreshaft is to be inserted) is in a different place; also the formation of the socket is a little different. For these reasons, and because I myself have not discovered the foreshaft to which this was attached, it is totally unclear to me what sort of foreshaft must have been used in order to form the toggle. Moreover, the position of the socket is not, as in Type B, in the center

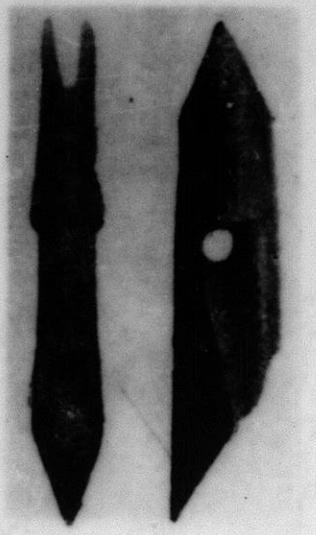


Fig. 9.

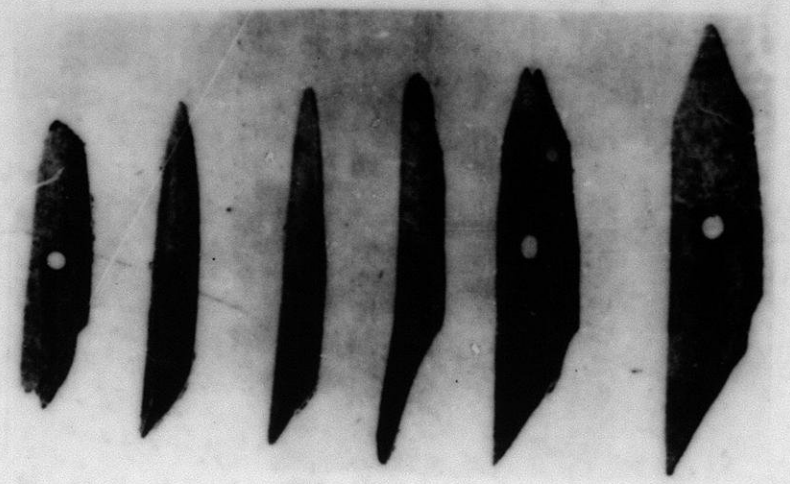
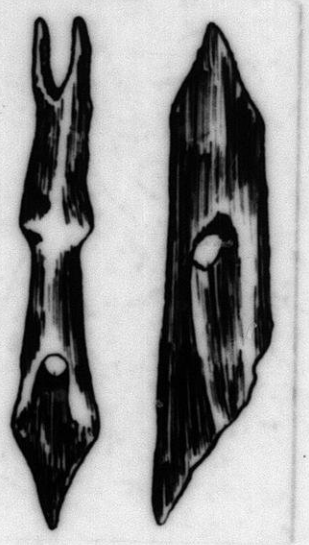
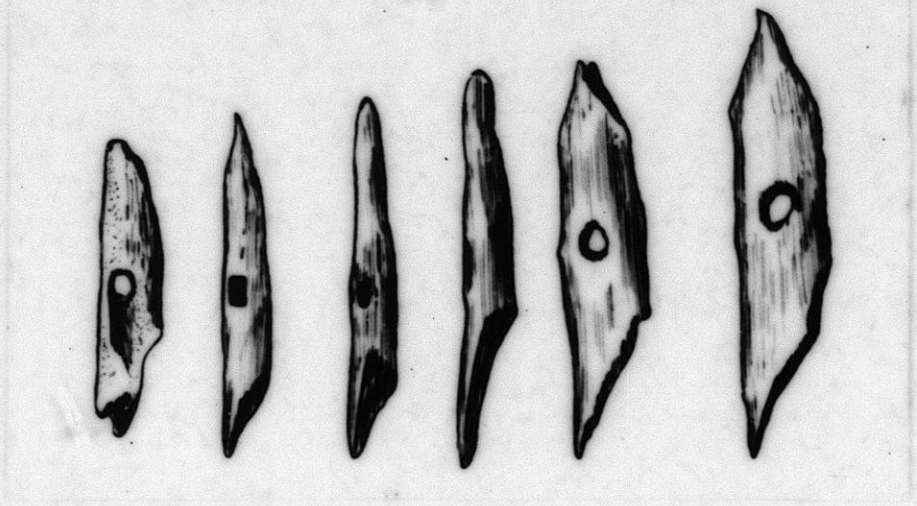


Fig. 10.





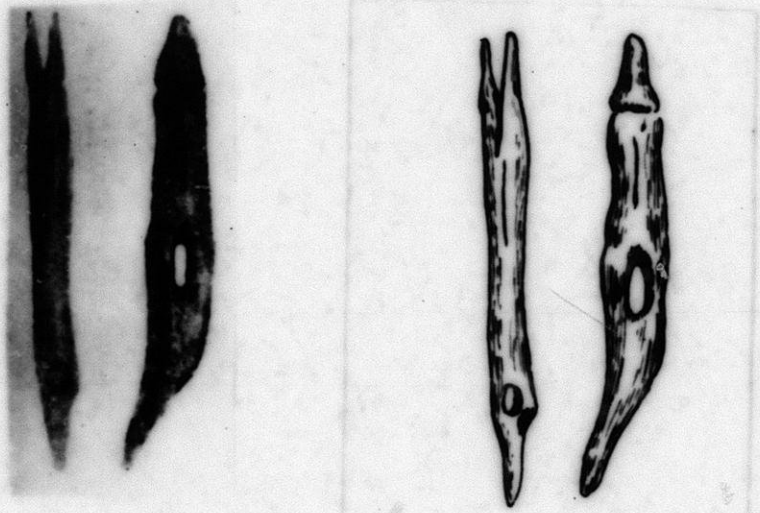


Fig. 11.

of the harpoon but has been placed on the central axis on the side of the line hole, and on the outer side of the socket on the underside /p. 100/ a cut has been made. Judging by all this, I have conjectured the existence of a foreshaft which is different from that of Type B and whose toggling is effected by another means. Here, I have simply noted the distinctions.

The line hole of this harpoon is drilled approximately in the center, and I imagine that the cut in the socket shown in 2 and discussed previously forms an important element in the toggling action. (Length: 8.6cm.)

The specimens shown in fig. 10 were all excavated from the Shiomikawa Shell Mound; Nos. 1 and 2 were of large size and were probably used for a large sea mammal like the todo /the largest species of sea lion/; the rest are all thought to have been used for the sea-otter; Nos. 4 and 5 had no slot at the tip into which a stone point could be inserted, but the tip of the harpoon was sharpened. (No. 1 is 10cm. long.)

If one examines the line hole of the swallow-tail-shaped harpoons, in every case the side to which the rope would face, in other words, the side of the hole on which pressure would be put, is made thicker than the side of the hole on the opposite side, in order to prevent splitting.

Type B This is the harpoon referred to at the time I explained the operation of the toggle harpoon. No. 1 of fig. 11 shows the side view, No. 2 shows the underside. The socket at the bottom of the swallow-tail, into which the foreshaft would be inserted, is made as previously explained, but is somewhat heart-shaped. The reader is requested to study the illustrations carefully. (Length: 8.5cm.)

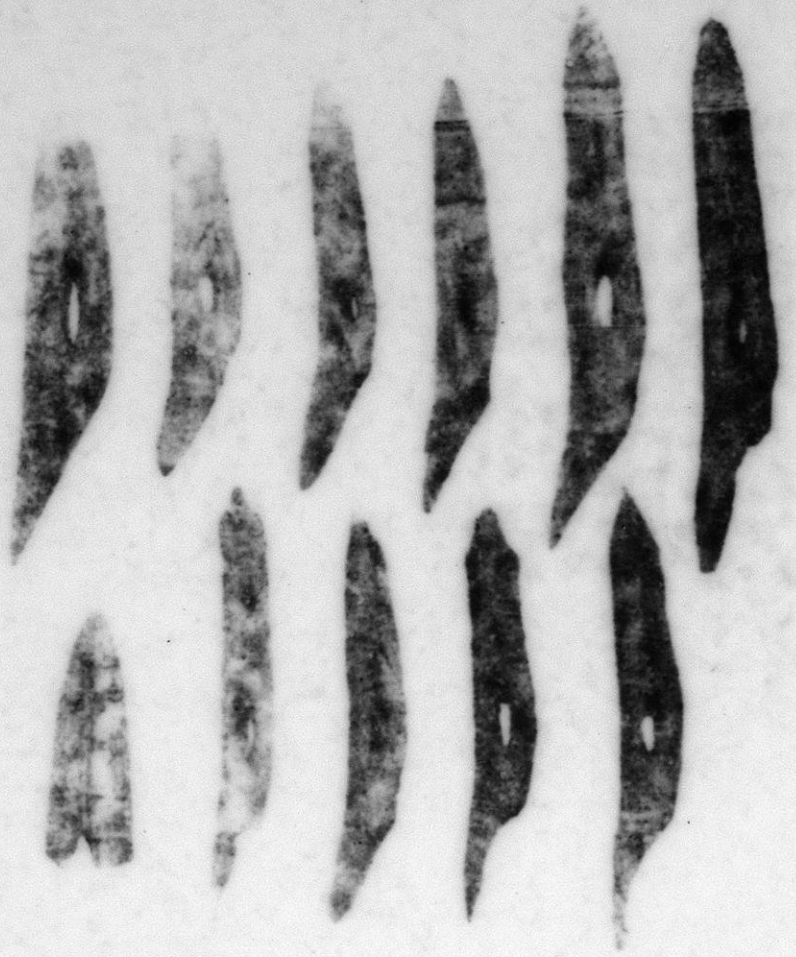
Fig. 12 shows harpoons of this type. [p. 101] No. 1 of the top row* was excavated from the Shiomikawa Pit No. 2 (excavated August, 1935); Nos. 2 - 6 were found in the Oikawa Shell Mound. Nos. 1 - 4 of the lower row were unearthed at the Oikawa Pit No. 10 (dug in August, 1936); No. 5 is from the Oikawa Shell Mound. Of these harpoons, only No. 6 of the upper row and No. 5 of the lower row (which are in fragments) had no slot for a stone point; the tips of the harpoons themselves were sharpened. Most of these have some decorative designs. These harpoons seem to have been used to hunt the sea-otter.

The foreshafts for this type of harpoon are shown in figs. 13 and 14; discovered in large numbers for the first time during last summer's excavations, and as a result the method of effecting the toggle action became apparent.

No. 1 of fig. 13 was discovered in the Oikawa Pit No. 10; at the bottom edge on the side there is a lateral hole running through it which serves for lashing. No. 2 was excavated at the Kokutan [Kunihashi?] Cape Shell Mound, and this, too, has a lateral hole. Nos. 3 and 4 were also excavated at the Oikawa Pit No. 10; these have either a vertical groove at the bottom or a pair of small cuts on either side, these serving to secure the lashing rope. No. 5 was excavated at the Oikawa Shell Mound and, as in No. 2, narrow grooves have been incised on both sides at the tip; it is probable that these may have served as places of attachment to make more secure at this point the rope which had been passed through the pulling hole and the groove or the hole in the foreshaft. (Length: 9.1cm.)

Nos. 1, 2, and 3 of fig. 14 were unearthed in the Oikawa Pit No. 10; No. 4 was unearthed from the Oikawa Shell Mound; all of them have a groove and a vertical hole at the bottom. (No. 10 is 10cm. long.)

*Length: 8.8cm.



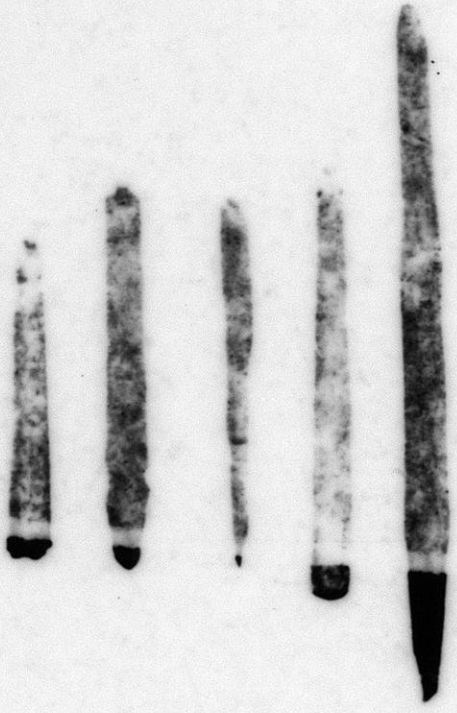


Fig. 13.

Fig. 14.

[p. 103] Attention is directed to the fact that the tips of all of these harpoon foreshafts are heart-shaped in order that they will fit the heart-shaped sockets of the end of the swallow-tail.

Type C Those shown in fig. 15 have a groove cut through both sides at about the center of the bottom of the swallow-tail; this is a type of swallow-tail-shaped harpoon that is extremely rare.

Just what sort of foreshaft was attached to this, and just how the toggling could have been effected, is difficult to explain.

Only No. 1 was perfectly preserved, and judging by this, the prong or back of the socket into which the foreshaft would be inserted was rather long and made rather thick; the prong on the opposite side of the socket seems to have been broken off in Nos. 2, 3, and 4, or was broken in half, probably in the process of toggling. If the reader should have specimens similar to these harpoons, I would appreciate information.

Nos. 1 and 2 were excavated at the Shiomikawa Shell Mound; Nos. 3 and 4 were from the Oikawa Pit No. 9. (No. 4 is 9cm. long.)

The foreshaft shown in fig. 16 was excavated from the site of the grave located on the border between Shiomikawa and Bettobu. It is not clear as to what sort of harpoon it could have been attached to, but there is some reason to believe that this type of foreshaft could have been used with harpoons of Type C. [p. 104] A small hole was drilled at the upper edge of this foreshaft; this must have been for securing the harpoon. (Length: 21.4cm.)

The Harpoons Discovered in the Bettobu Sand Dunes

In contrast to the line holes of varying types in the swallow-tail shapes previously discussed, which were drilled at right angles through

Fig. 17.

both sides, in these harpoons they were made at right angles from back to underside, and gradually come to resemble the arrangement of the teki of the Ainu. Not a single one of this type of harpoon has been discovered in sites in which the Okhotsk-type pottery occurs in the northern Kuriles. Those shown in fig. 17 were discovered in the sand dunes at Bettobu; portions of the legs from this type were discovered in the Bettobu Pit No. 8 (excavated in 1935), but since this pit was a recent site in which foreign pottery and metalware were discovered, these harpoons must be recent ones as compared to the harpoons previously discussed. No. 1 was discovered in the Bettobu sand dunes; the line hole is not in the center but is almost at the bottom. No. 2 is also of this type; No. 3 had only one line hole; both are drilled below the center. No. 4 has a slot at the tip into which a point was inserted; in contrast to the parallel holes of the previous ones, these are vertically arranged. No. 5 is a smaller type similar to this one. (Length: 6cm.)

Fig. 18 shows foreshafts which must have been attached to these harpoons; all of them were discovered, among a number of others, in the Bettobu sand dunes. [p. 105] The tips of these are not sharp like the chirosu shown in fig. 42 and are made so that they will fit into the socket. On the lower portion of No. 1 there is a groove for use in fastening together the foreshaft, the harpoon head and the tip of the shaft. A narrow groove has been incised at the bottom of No. 3. In the foreshaft of the Eskimo harpoon there is no groove at the bottom but a small hole; otherwise they are of the same type. (No. 3 is 11.7cm. long.)

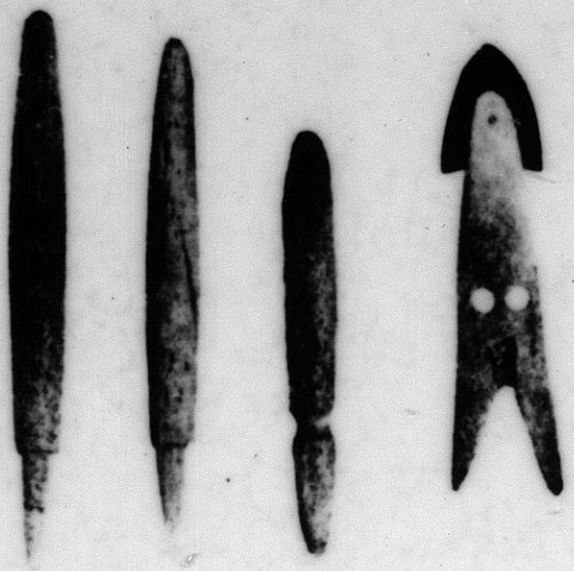


Fig. 18.

Fig. 19.

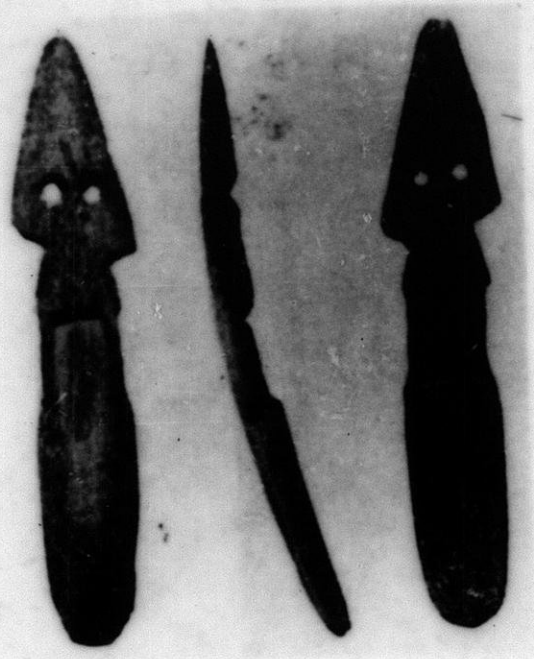


Fig. 20.

Fig. 21.

(3) Harpoons Tipped with Metal Points

These are similar in construction to those described earlier, the only difference being that the blade at the tip is not a stone point but a metal one. These are frequently found. All of them are apparently of recent date. No. 1 of fig. 19 is from the Bettobu sand dunes on Shumushu Island; Nos. 2 and 3 were discovered in the sand dunes of Shibetoro on Etorofu Island; all of these harpoons are of a similar type.

No. 4 is a model made of bone /reconstruction?/ which indicates the original form of this type of harpoon; it has copper sheeting attached to the tip. (Length: 9.3cm.)

This type of harpoon is frequently discovered throughout the Kuriles. In view of the age of the sites in which these have been found, the improvement in manufacture (resembling the kite), and the prevalence of metal implements /in association/ /p. 106/, it is thought that these came later than the swallow-tail harpoon described above.

(4) /Other/ Harpoons of Varied Shapes

In this classification are placed harpoons which externally strongly resemble the barbed-type harpoon, but actually are not of this type.

No. 1 of fig. 20 shows the dorsal part of this type of harpoon. At first glance it looks like a barbed harpoon, but the line hole has been drilled near the upper end, and a wide, shallow groove has been made in the center part of the back. The bottom edge differs from the barbed-type harpoon in that there is no feature which would fit into the harpoon shaft. In looking at No. 2, which shows a side view, /it can be seen that/ the lower side of the body is extremely curved. No. 3 shows the underside;

here, directly opposite the groove in the center of the back, a socket has been carved into which the foreshaft is inserted. This is also one form of the kite-style, and is a type which has hitherto rarely been discovered in the northern Kuriles. They are abundant in the south, and the type is frequently uncovered in Hokkaido on the Okhotsk Sea coast and also in Okhotsk-type pottery sites in southern Sakhalin. (Length: 9cm.)

Fig. 21 shows another form of this type; is exactly like the one just discussed in construction, and is from the Shana Shell Mound on Etorofu Island. (Length: 7.6cm.)

Fig. 22 /shows harpoons/ discovered in the Uenbetsu Shell Mound on Etorofu Island by Mr. Keiichi TANI; they are similar in construction to that in fig. 20. Some have slots in which stone points were inserted. On examining the lower edge of these harpoons, /we found/ some with designs. Despite careful scrutiny, / p. 107 / they did not seem to be constructed so that they could be attached to the tip of the harpoon shaft. All harpoons of this type, therefore, are attached to the shaft by means of a foreshaft just as in the various types of harpoons described earlier.

At present, we have not discovered how the harpoon head and the foreshaft were able to toggle; this requires further investigation.

It would appear that the line was attached to the groove in the center of the back. In those specimens with a line hole in the upper part, it may be that the line was also passed through this; but on certain points perhaps this /line hole/ may have served in some fashion to effect the toggling action. On these questions, I would like to await the results of future study. (No. 2 of fig. 22 is 14.6cm. long.)

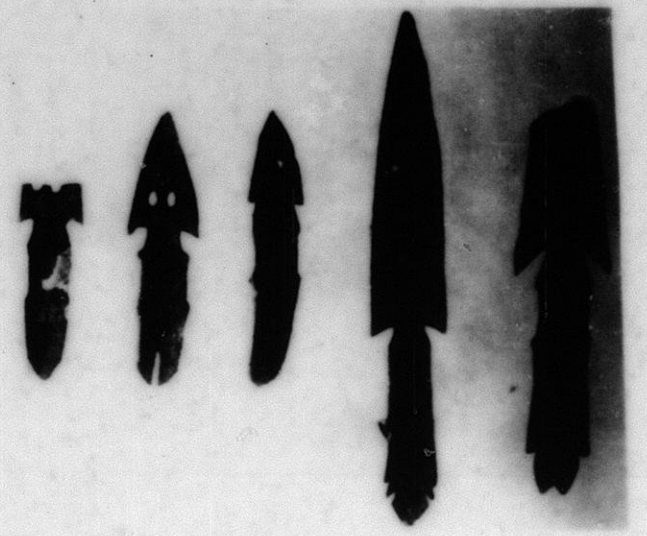


Fig. 22.

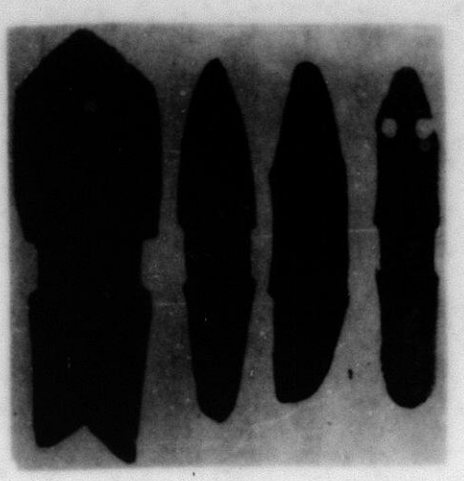


Fig. 23

Fig. 24.

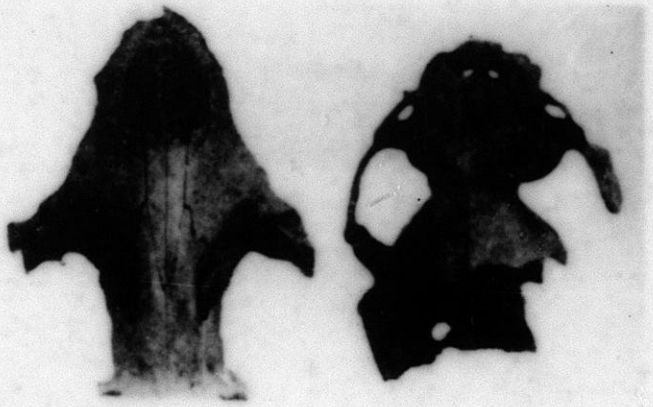


Fig. 25.

Those shown in fig. 23 illustrate various shapes of this type of harpoon. Nos. 1, 2 and 3 were discovered in the Shana Shell Mound on Etorofu Island. No. 4* is a model of one uncovered on Kunajiri Island; /p. 108/ it has a slot at the tip into which a stone point was inserted.

(5) Harpoon Shafts

For these, wooden poles were almost always used, and it appears that there were differences in length depending upon the type of harpoon. In the northern Kuriles, however, there are no trees over three feet high except in the valleys on Paramushiro Island — only twisted han trees; so it would appear that they must have made them with driftwood.

A bone object which was thought to have been attached to the tip of the harpoon shaft for the insertion of the foreshaft was unearthed in the afore-mentioned grave site. This is shown in fig. 24. The interior of this object has been hollowed out; the prongs on both sides at the bottom seem to have been inserted into the tip of the harpoon shaft; this was then tied and formed the top of the shaft. The foreshaft seems to have been inserted into this. (Length: 16.2cm.)

(6) The Harpoon Line

This was not rope made of fibers, but was probably made from the hide of sea mammals. In view of the fact that a bone comb was uncovered in the northern Kuriles with a hole at the top through which a leather thong was passed, and that a copper bell was also discovered with this type of thong passed through the hole at the top, we are led to believe that when strong twine was needed, hide thong was always used. It seems that the method of obtaining this thong was like that employed by the Sakhalin Ainu who made

*Length: 9.2cm.

long thongs by cutting the hide of the todo /largest species of sea lion/ in thin spirals from tail to head.

(7) Animal Bones in the Shell Mounds

The fragments of animal bones in the shell mounds of both the southern and northern groups of islands are the same, the only difference being that in the north the Arctic fox and the reindeer are found. Most frequent are bones of the fox and sea mammals, making us realize to what extent these animals had been the people's main game in their hunting. /p. 109/ The reindeer was not native to the northern Kuriles; it is thought that the animals were hunted by crossing over to Kamchatka.

Jochelson has reported that in his excavations of the shell mounds in the Aleutians he almost never discovered the skulls of sea mammals. Vast numbers of these skulls have been discovered in the various shell mounds of the northern Kuriles, a great number of them showing evidence of fractures sustained when the animals were clubbed to death at the time of capture. Among the Aleuts there has been since ancient times a kind of animal worship; the skulls of the animals were always removed at sea and thrown into the water. This was due to their belief that the skulls which they had thrown into the sea would come back to life. For this reason no skulls are found in the shell mounds. It would seem that the Chishima natives did not have such a worship in ancient times. Fig. 25 shows examples of the skulls of sea mammals which have been excavated in great numbers from the shell mounds.

(8) Animal-Shaped Amulets (?) /Query Baba's - Ed./

Bone objects of this type which have been unearthed in the shell mounds of the Kuriles include, from the northern islands, a bone artifact in the

shape of a fish discovered in the Shiomikawa Shell Mound; and one in the shape of a seal discovered in the Oikawa Shell Mound. No. 1 at the top of fig. 26 shows what appears to be a fish-shaped amulet; it was made from the penis bone of a sea mammal; a small hole has been drilled in the head as if for hanging from the belt. No. 2 was from the Oikawa Shell Mound; it is difficult to say whether it is a sea-otter or a seal, but is is probably the latter. This also had a small hole at the tail for the purpose of suspension. /¯p. 110_/ No. 3 shows the dorsal view.*

Fig. 27 also shows bone objects in the form of sea animals; these were discovered by Mr. Keiichi TANI in the Uenbetsu Shell Mound on Etorofu Island. In addition, there were some made in the shape of a bear. All of these were made for suspension, and all are thought to be possibly hunting amulets. (Upper specimen is 10.4cm. long.)

(9) A Long Bone Cylinder with a Drawing of a Sea Hunt

In fig. 28 is shown a view of a sea hunt incised on the side of a long bone cylinder (a case for bone needles); this was unearthed from the Benten-jimi Shell Mound at Nemuro, which adjoins the southern Kuriles. It was discovered by Mr. Yasuo KITAKAMAE /¯?_/ of the same town. At the prow of a seven-man ship stands the man who will cast the harpoon. Judging by the fact that two lines are attached to the prey, two harpoons have just hit the mark. A harpoon shaft is placed at the edge of the boat; four men have oars in hand. /¯p. 111_/ The prey being taken has been identified as a whale; but according to Mr. Matakichi HANEHARA, an instructor at the Fisheries' School, it may be a chirikappu /¯swordfish?_/. At any rate, it is excellent material with which to gain an insight into one aspect of the sea hunting of the people of that time. (The cylinder is 15.6cm. long.)

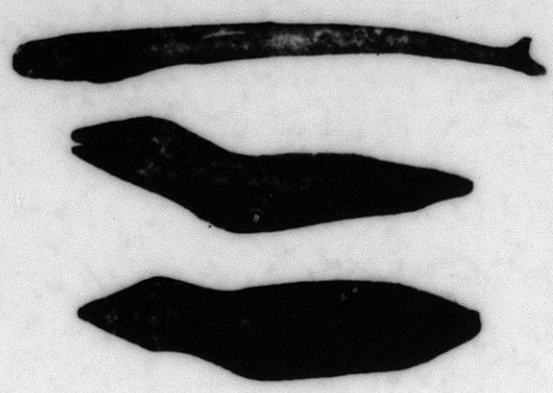


Fig. 26.

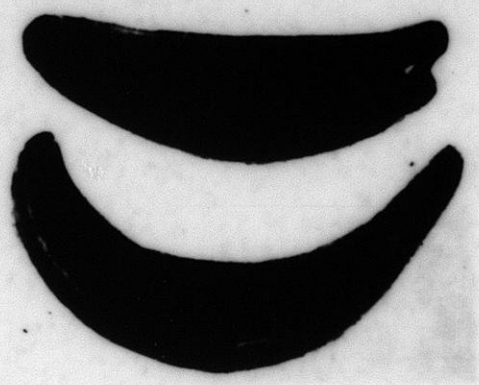


Fig. 27.

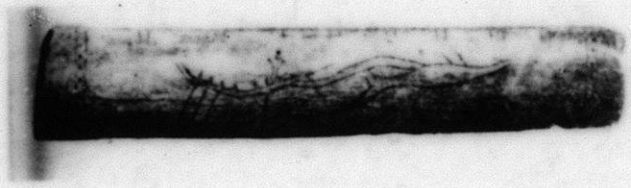
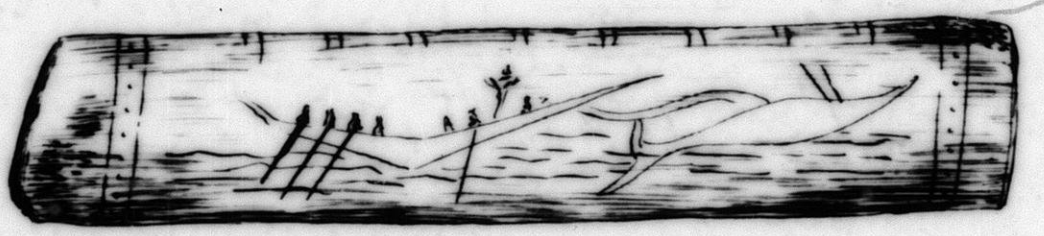


Fig. 28.



Arrowheads

Bone and Antler Arrowheads

Just as there were two varieties of harpoons with different functional principles, there are arrowheads with two functions. One type is used to strike at a vital spot or to cause death through bleeding; with the other, poison is placed on the arrowhead and you wait for the prey to die from the effects. The essential point is simply the ability to penetrate the prey, so there is a variety of shapes; and since it is essential to consider them according to period, I have decided to present them accordingly.

(1) Bone Arrowheads Used by the Okhotsk-Style Pottery People

These are unearthed in shell mounds in the northern Kuriles in which the Okhotsk-style pottery is found. They occur in greater number than the harpoons. Classifying those which have been discovered up to the present, they are generally of the four following kinds: (a) long and slender like a bone needle with sharpened tips; (b) exactly like type (a) but barbed; (c) a type with barbs and with a groove at the tip in which to insert a stone point; and (d) those with a tang.

(a). Type (a) is shown in fig. 29. The point is sharpened, the body is made like a rounded, slender bone needle, and the base has been notched to facilitate fitting into the arrow shaft. All of these were uncovered in the Shiomikawa Shell Mound. (No. 1 is 12.5cm. long.)

/ p. 112 / (b). As shown in fig. 30, these are exactly like type (a) in shape but have barbs, ranging in number from one to three or four. Specimens with barbs running all the way down to the base are often encountered.

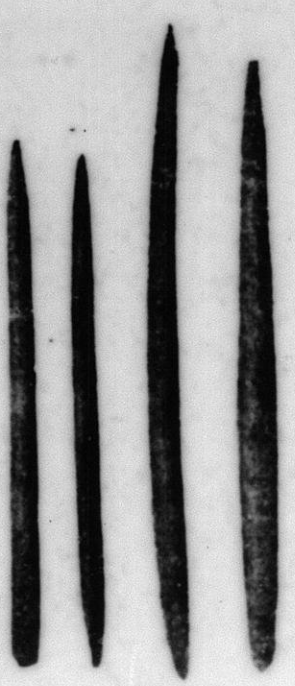


Fig. 29.

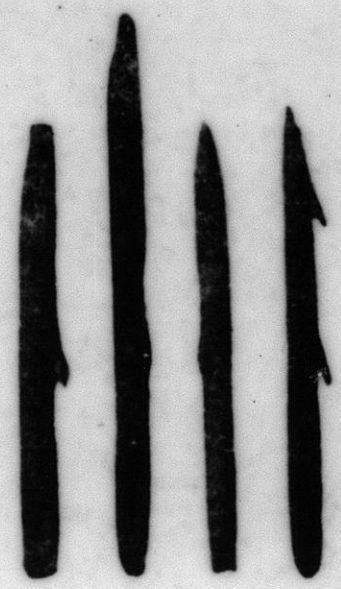


Fig. 30.

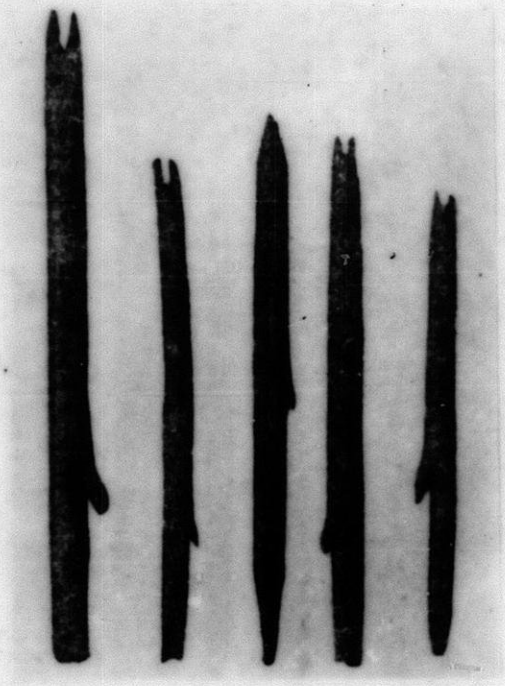


Fig. 31.

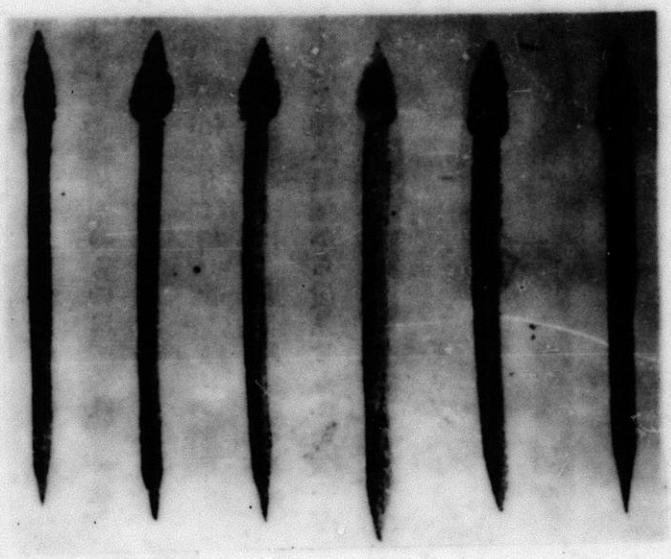


Fig. 32.

It is thought that these bone arrowheads could cause quite a deep penetration. All were unearthed in the Shiomikawa Shell Mound. (No. 1: 9cm.)

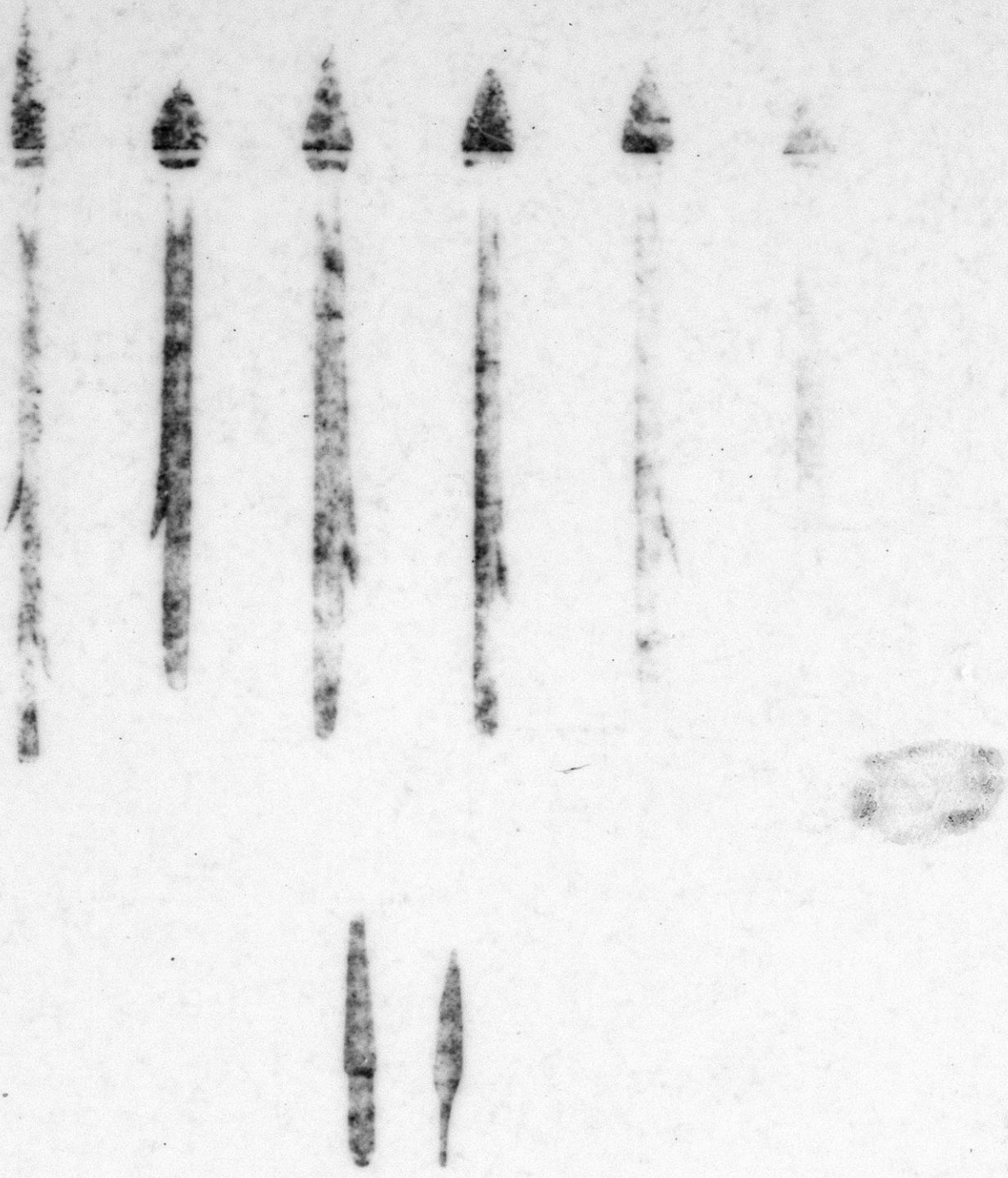
(c). This type* is exactly like the preceding one in shape but has a slot at the tip for the insertion of a stone point, thus ensuring greater penetration than the above types. The forms found with the greatest frequency are this type and type (a). Examples of this type with the stone point still attached are extremely rare; Professor Torii came into possession of one at Bettobu on Shumushu Island, but this was one which did not have the barbs.

Fortunately, last summer, upon excavating the Oikawa Pit No. 10, I discovered twenty-nine of this type of bone arrowhead, all with their stone points still attached; fig. 32 shows one portion of these. Fig. 33 shows a portion of the stone points which have been separated from the bone arrowhead. The stone points which were attached to this type of bone arrowhead were restricted to the tangless type. Whether the stone point was tied with thongs is not clear, but it is probable that they were not. (No. 1 of fig. 32 is 10.6cm. in length.)

/ p. 114 / These three types of bone arrowheads are peculiar to the shell mounds and pits in the northern Kuriles in which the Okhotsk-type pottery has been discovered; no examples have as yet been uncovered in the south, but similar types are found in the shell mounds and sites in the Aleutian Islands.

(d). Bone Arrowheads with Tangs. No. 1 of fig. 34 shows the only bone arrowhead with tang that was discovered in the northern Kuriles; it is from the shell mound at Shiomikawa on Shumushu Island in which Okhotsk-

*Fig. 31. No. 1 is 8.8cm. long.



type pottery was found. No. 2 is one type of bone arrowhead with tang which was discovered in the Shana Shell Mound on Etorofu Island. (6cm.)

(2) Bone Arrowheads Discovered in Burials

These are shown in figs. 35 and 36. Since I did not myself excavate the graves, I do not know whether they are those of the Okhotsk-type pottery people or those of later pecples; but since this type of bone arrowhead has never before been found in shell mounds or pits associated with the Okhotsk-type pottery in the north, it is thought that these probably are of a later period. In the summer of 1934 an employee of the Takeda Fishery at Shiomikawa discovered several human skeletons buried in extended position on the upper edge of a fairly steep slope of the plateau descending toward the beach at the boundary between Shiomikawa and Bettobu. From beneath the thighbone of one of the skeletons was discovered an associated burial object consisting of over twenty of these arrowheads in one bunch. The two illustrations / p. 115 / show one portion of these. (Figs. 35-38 are in the same scale. No. 1 of fig. 35 is 15.2cm. long.)

In those of fig. 35 the barbs are at sharp angles; Nos. 1 and 2 of fig. 36 have protrusions toward the bottom which appear to have fitted into the tip of the arrow shaft. This type is exactly like that shown in fig. 37, which was discovered by Mr. Keiichi TANI in the Uenbetsu Shell Mound on Etorofu Island. No. 3 of fig. 36 has barbs that are at right angles; Nos. 4 and 5 have blades of willow-leaf shape. A bone arrowhead exactly like this one is labeled as having been discovered in a pit at Kinatoushi on Kunajiri Island by Mr. Jiro TANIUCHIDA of Nemuro; according to Mr. Taniuchida, the pit was a deep square one and no pottery or stone implements were found in it.

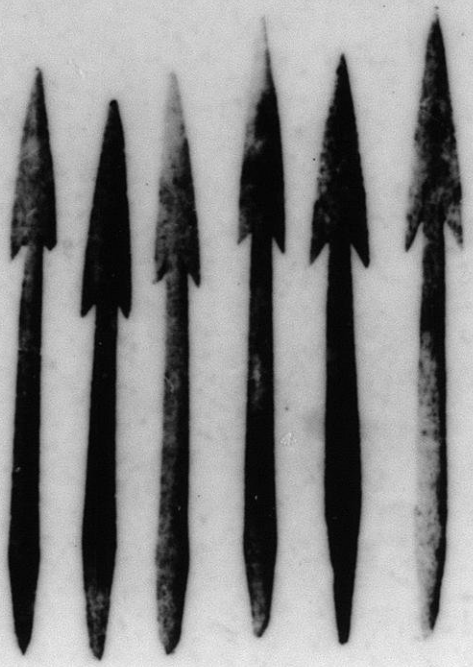


Fig. 35.

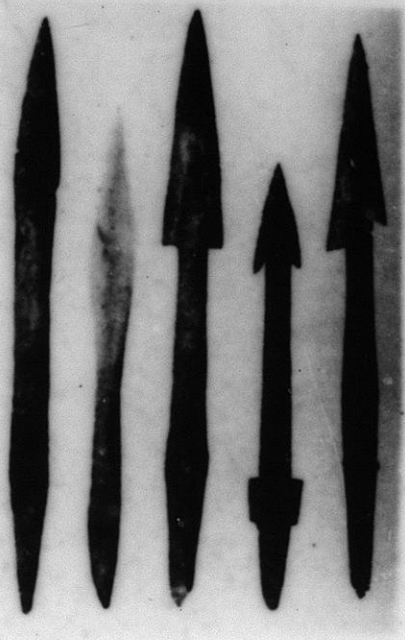


Fig. 36.

Fig. 37.

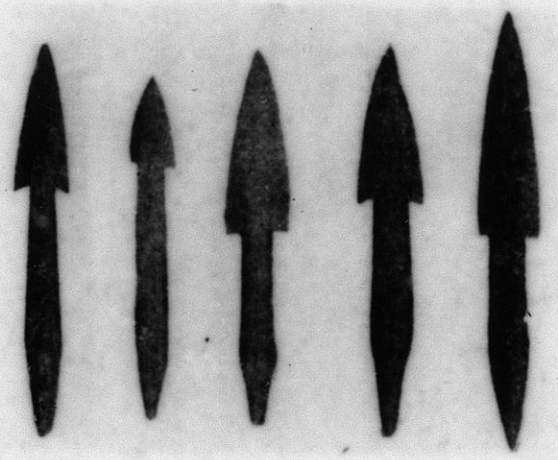


Fig. 38.

(3) Bone Arrowheads Discovered in the Bettobu Sand Dunes

Those shown in fig. 38 were discovered on the surface of the sand dunes at Bettobu on Shumushu Island, /p. 116/ and it is impossible to know the nature of the sites to which they belonged; but in view of the fact that in general they are identical in shape with the previous types, it is thought that they may be of the same type. The only thing is that the angle of the barbs is not so sharp, and the tang is comparatively short. There was a triangular mark on No. 5.

(4) Recent Bone Arrowheads

Fig. 39 shows the type which is uncovered in sites of dwellings or in shell mounds at Bettobu which yield Western porcelain and metal objects. The basal portion resembles an awl inserted into a wooden handle; the barbs also are not at such a sharp angle. (No. 1: 20.7cm.)

Fig. 40 shows a bone arrowhead which had been in the possession of the natives, and which /was of the type/ used up to the turn of the century by the former North Kurile Ainu who are now on Shikotan Island. It was given to my friend, Mr. Tōkichi SAITO, who was a missionary on Shikotan Island for the Orthodox Church, by Hiyokutesuto /phon./, the son of the native chief, Auerian /phon./, who in turn gave it to me. When it is compared to the previous type there is a strong resemblance. (18cm.)

Fig. 41* shows the points of bone arrowheads which were discovered in sites of recent date. All of these are intended to be attached to the tip of the bone artifact called the chirosu, shown in fig. 42, and they formed arrows when they were attached to wooden shafts. When we come to this type, they are almost identical with the points of the bamboo arrowheads which were in use among the Ainu of Hokkaido until recently, and

*No. 1 is 6.2cm. long.

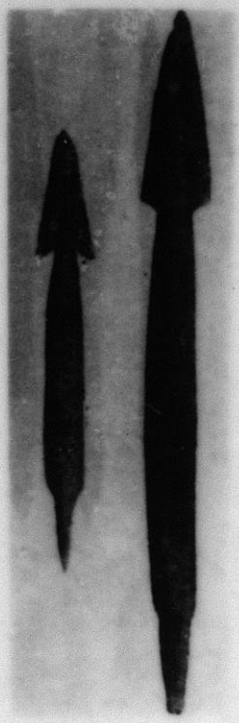


Fig. 39

Fig. 40.

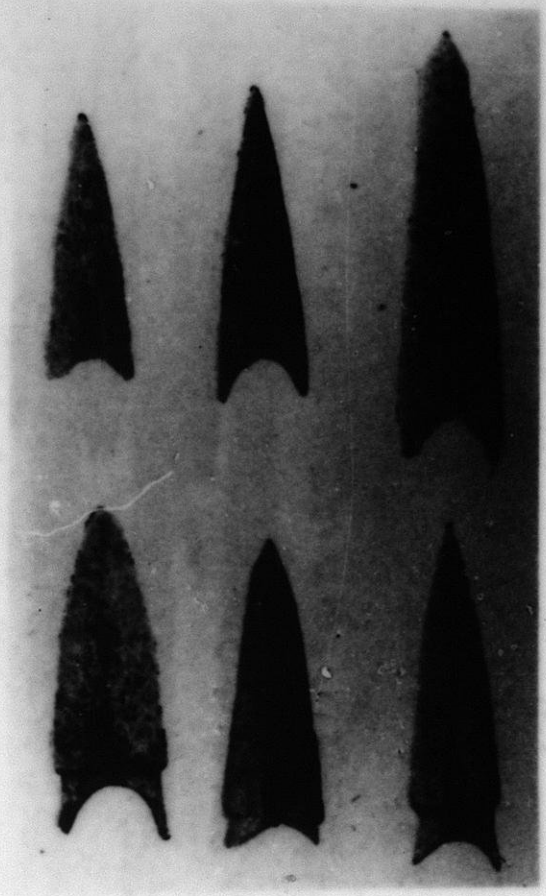


Fig. 41.

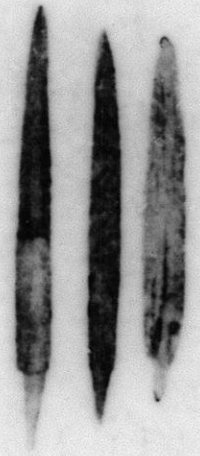


Fig. 42.

Fig. 43.

Fig. 44.

which were also attached to the point of chirosu made of bone. Those of fig. 42 were discovered in the Shana Shell Mound on Etorofu Island. The objects previously shown in fig. 18 were harpoon foreshafts; those in fig. 42 are chirosu; /‾p. 117_/ the only difference between them is whether the point is sharpened like a needle or not. (No. 1: 9.2cm.)

Those on the bottom row of fig. 41 all have small shallow grooves incised on both sides at the bottom for securing the thong that fastens it on the tip of the chirosu. This is identical with the point of the bamboo arrowhead of the Ainu.

(5) Copper Arrowheads

Arrowheads made of copper are frequently discovered in pits and shell mounds in the northern Kuriles which yield metal objects; these are made by cutting isoceles triangles from copper sheeting. The upper specimen of fig. 43 was discovered in the Bettobu Pit No. 1 (excavated August, 1936); that on the bottom, with the copper arrowhead attached to a bone foreshaft, was discovered in the Shana Shell Mound on Etorofu Island by Mr. Yoshitaka IWASAKI, an employee of the Shana Post Office. (This is a model.) /‾Reconstruction?‾/ (9.8cm.)

(6) Poisoned Arrowheads

Occasional examples of bone arrowheads appear to have been used as poisoned arrowheads. Fig. 44 shows one in which the bone point* and the bone tang are made separate and then joined to form the arrowhead. /‾p. 118_/ Poison was inserted in a cavity in the tip of the bone point; it was so designed that when the arrow was shot only the tip of the bone arrowhead would remain within the body of the prey. This is one of the

*6cm. in length.

more than twenty bone arrowheads interred as grave goods in the burial site at Shiomikawa on Shumushu Island.

No. 1 of fig. 45 was collected at the Shana Shell Mound on Etorofu Island by Mr. Teishū SASAMORI of Shana Village. At the lower edge of the arrowhead is a cavity like a trap door in which poison was poured. (A model.) /Reconstruction?/ (6.7cm.)

Nos. 2 - 7 are all arrowheads made from the bones of birds. Poison was placed in the hollow of the interior prior to discharging the arrow. All of these were uncovered in the Shana Shell Mound on Etorofu Island. Specimens resembling these have been found on Kunajiri and in the vicinity of Kitami at Nemuro. The poison used was made from aconitum japonicum (torikabuto) and kawamushi /"river insects"/ and was called bushi.

(7) Marks on Bone Arrowheads

(a) Marks Used by the Okhotsk-Type Pottery People

Fig. 46 shows the marks and their location on this type of bone arrowhead; they were incised variously at the top edge, in the center, or at the bottom edge. Certain ones had from two to three marks in different places; these are thought to have been incised as they changed hands, from person A to B to C, just as there are several different marks on the back of the Ainu ikupashiē (moustache lifters). (No. 1 is 9.8cm. long.)

The illustrations in fig. 47 show these marks as drawn from rubbings of the actual incisions. No. 1 is á type frequently found; the twenty-nine bone arrowheads found in the Oikawa Pit No. 10 (excavated in August, 1936), all had this mark on them. No. 2 was unearthed in the Shiomikawa Shell Mound; Nos. 3 - 4 - 5 from the Oikawa Shell Mound; Nos. 6 - 7 were

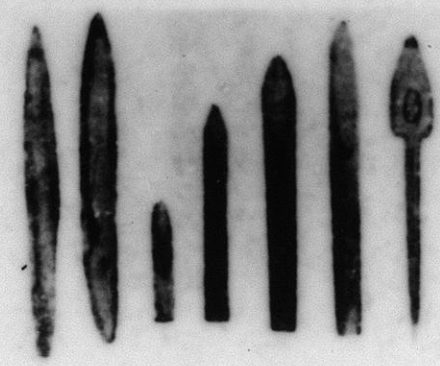


Fig. 45.

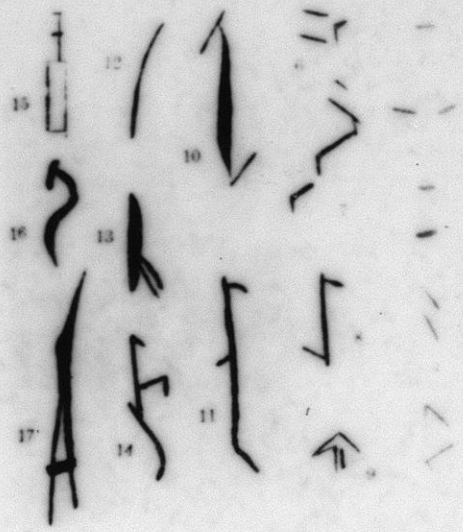


Fig. 47.

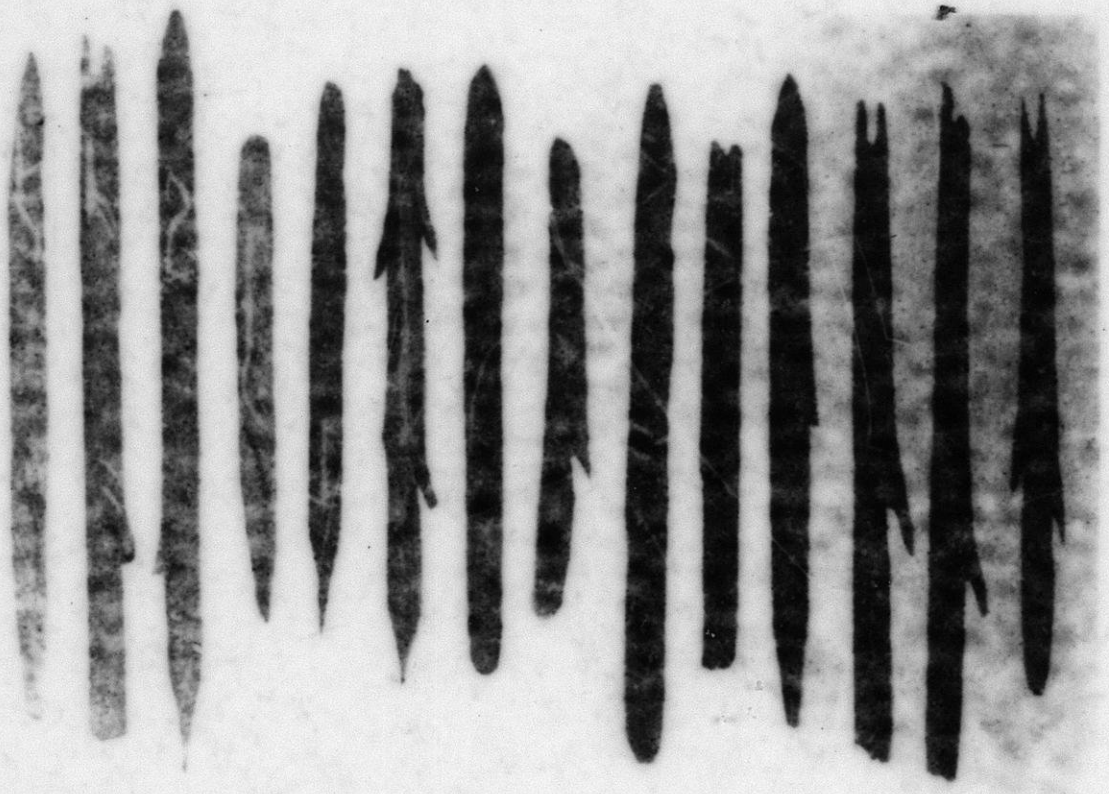


Fig. 46.

from the Shiomikawa Shell Mound; 8 - 16 from the Oikawa Shell Mound; No. 17 was from the Shiomikawa Shell Mound.

/ p. 120 /

(b) Other Symbols on Bone Arrowheads

Fig. 48 shows the places where the symbols were made; fig. 49 shows the different types of marks. Nos. 1 - 7 were from Shiomikawa and Bettobu on Shumushu Island; No. 8 was incised on arrowheads of the type under discussion, discovered by Mr. Jirō TANIUCHIDA in a pit at Kinatoushi on Kunajiri Island.

Comparing the previous group of marks with those of this latter group, the latter shows a considerable resemblance to the marks of the Ainu, while those of the former show somewhat less of a connection /with the Ainu/ and on some points appear to resemble certain marks among the Eskimo and the Indians (what is the reader's opinion?). It is interesting that designs have been incised on certain of the bone harpoons, but nothing that appears to be a mark has been found on any uncovered to date. This is accounted for by the fact that, in the case of the harpoon, the prey is dragged to the side of the boat and then clubbed or speared to death; hence the ownership of the prey is not in doubt. In the case of the arrowhead, while there would be no argument if the prey died instantly on the spot, in most cases they die at a distance and at times are discovered several days after death by someone else. In such cases the bone arrowhead embedded in the body of the prey would be removed and the ownership determined by the mark thereon; / p. 121 / it is thought that this is the reason that so many of the bone arrowheads had marks made on them. However, in their society, as in the societies of uncivilized peoples of the present, the

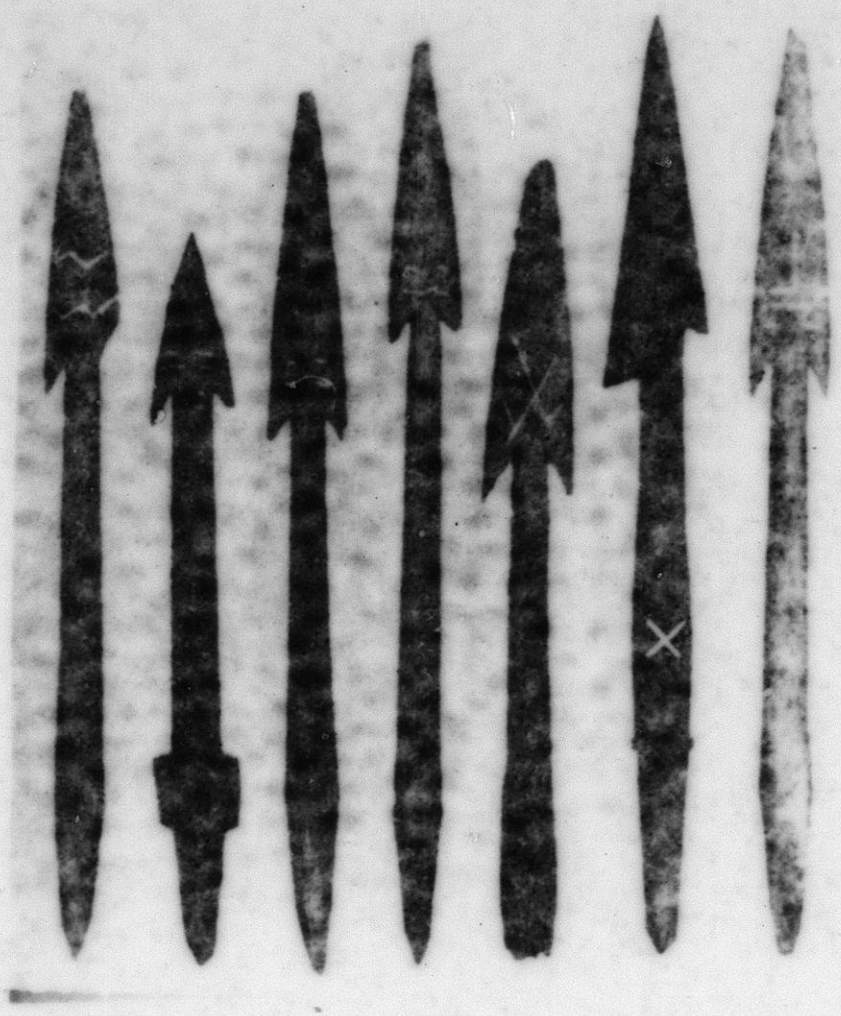


Fig. 48.

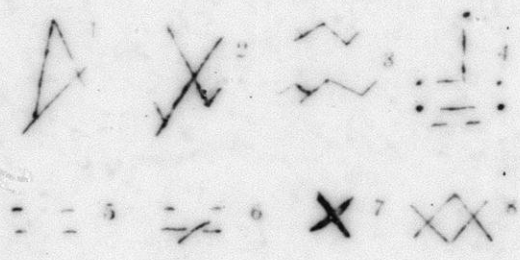


Fig. 49.

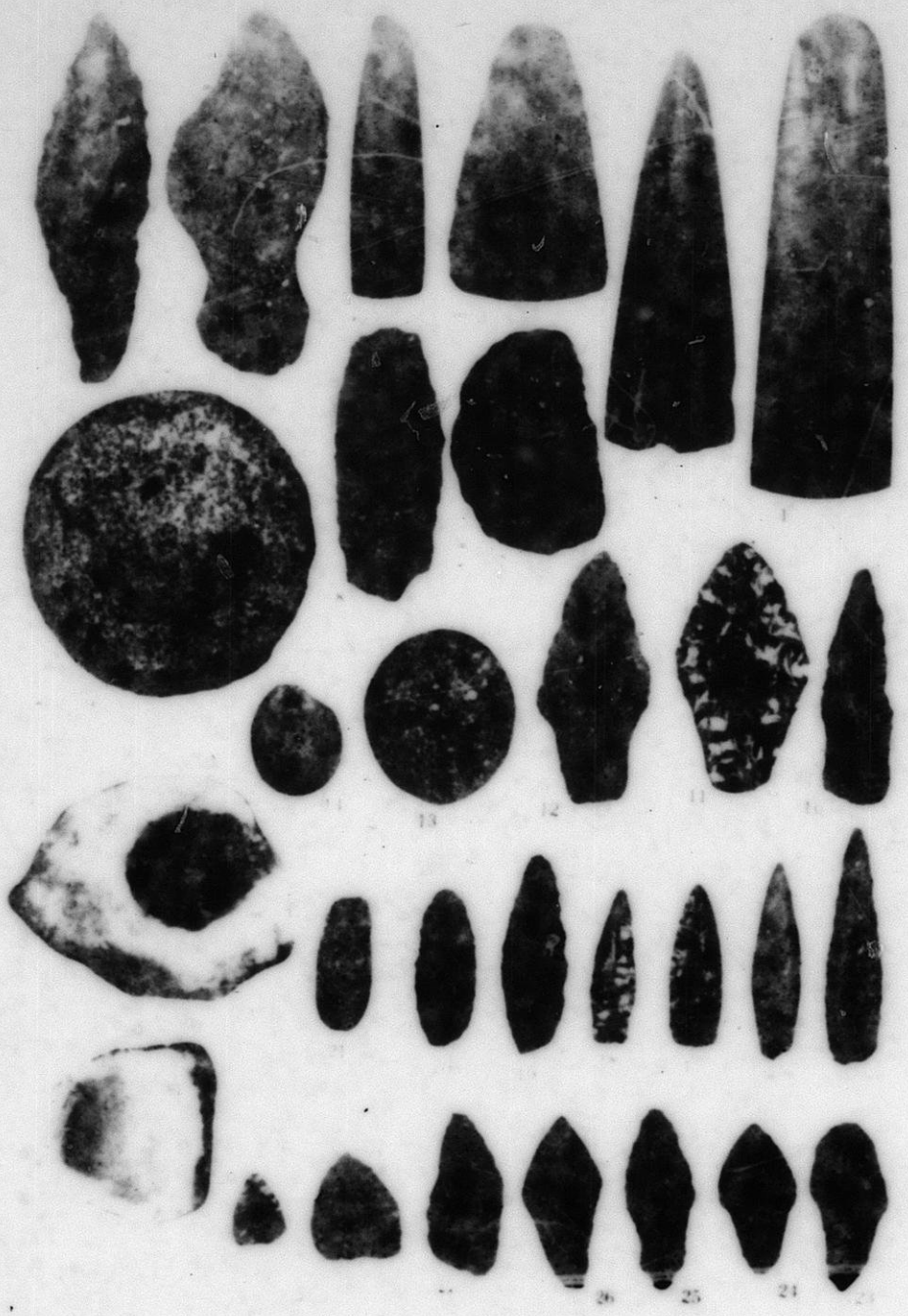


Fig. 49a.

meat of the prey was communal food, and it seems that only the hide of the prey came into the possession of the man who had brought the animal down.

Stone Arrowpoints

In the arrowheads tipped with stone, the points are of two types: with and without a tang.

With respect to the stone arrowpoints uncovered in the northern Kuriles, the reader is referred to those on the top row of fig. 33; to fig. 8 of my article "Archaeological Investigations on Shumushu Island, Northern Kuriles" [Translation No. 2], and to Plate 3 of my article "Report on the Second Archaeological Investigation on Shumushu Island, Northern Kuriles" in Jinruigaku Zasshi, Vol. 51, No. 3. [Reproduced here as fig. 49a - Ed.]

Fig. 50 shows stone arrowpoints uncovered in the central Kuriles on Chirihoi and Kita-jima; they are in the possession of Mr. Sueo SUGIYAMA. Fig. 51 shows stone arrowpoints uncovered at Shana and near Rubetsu on Etorofu Island. (The scale shown is five Japanese inches.)*

In this article I have merely illustrated the stone arrowheads of the north, central and southern areas; and since a discussion of their resemblances and differences would lead us into an archaeological problem, I will omit it.

Guns

In 1711, after the coming of the Russians, the Ainu of the northern islands [p. 122] obtained guns and used them to hunt sea mammals and foxes, a fact which is recorded in documents. Fig. 52 is a genre picture

*See p. 306. One Japanese inch equals 1.19 inches.

Fig. 30

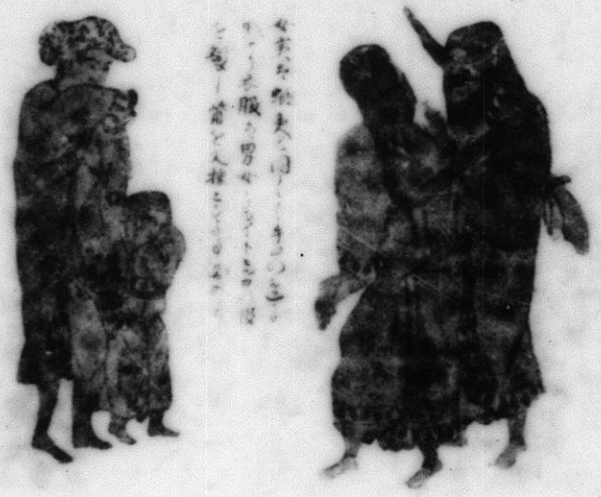
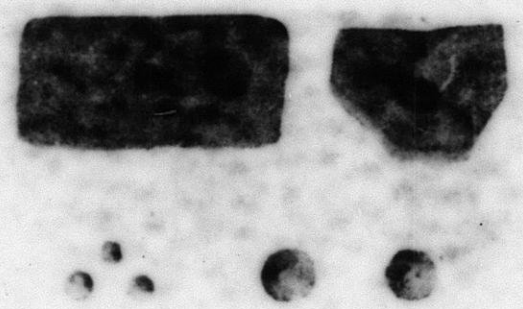
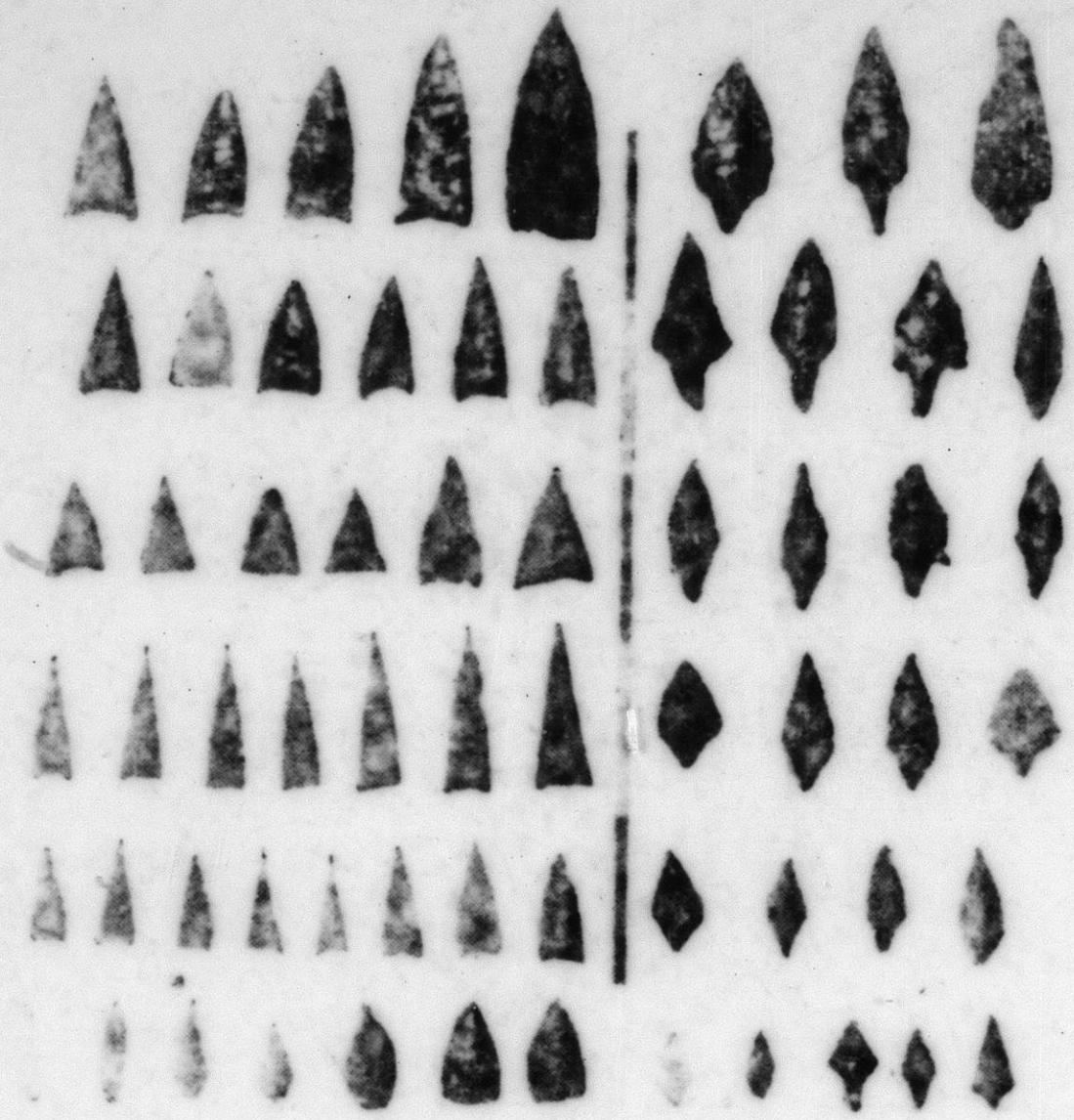


Fig. 31





of the occasion when the Ainu of Rasawa Island, in the central Kuriles, came to Etorofu Island in 1805, and is found in Ezo-to Kikan /"Strange Sights on the Island of Ezo"/; I have taken it from Professor Torii's monograph "Les Ainou des Iles Kouriles." Each of the men has a gun slung over the shoulder. In the travel journal of the Englishman, H. G. Snow, the captain of the Sea Otter, famed as the first navigator of the route to the Kurile Archipelago, which was written in 1878 when he visited the Ainu on Shumushu Island, the following appears: "The guns possessed by the natives are of an extremely ancient type." These were of an old type as compared to the guns of the Early Meiji Period, so it is thought that they were probably of the fuse type.

I myself once discovered the barrel of a gun in the shell mound at Bettobu. In the later pits and shell mounds molds for bullets and lead balls, such as those shown in fig. 53, are frequently discovered. Nos. 1 and 2 of the upper row show stone molds for making bullets discovered in the Bettobu Shell Mound; in the lower row are shown lead balls of varying sizes, all of which were discovered in the same place.

Fishing Equipment

Fishhooks

The fish most used for food by the Kurile natives were the salmon and the salmon-trout, apparently followed by the cod.

Even today the salmon and the salmon-trout form the most important marine products of the archipelago. In recent times the Kunashiri coast of Etorofu has gone into a great economic decline owing to the shifts in the ocean current, and does not present the same picture of activity as

in the Meiji Era; but the fishing industry in the northern Kuriles has made an epoch-making upsurge in the last two or three years and has become a major asset of our country.

Nowadays the method of catching fish is by the use of nets, to the exclusion of all other methods. But the natives themselves were not dependent upon the net: the salmon and the salmon-trout, which went upstream in summer at spawning time, could be caught with a fish spear or could easily be clubbed to death in the shallows; these were the fish which were caught in the greatest numbers. The cod, however, is a fish that usually lives in water over thirty fathoms deep, and even today they are still caught by means of hooks because it is difficult to secure them with a net.

/ p. 124 / The fishhooks of the natives seem to have been only for the cod. This conclusion is reached by the fact that a vast quantity of codfish bones have been discovered in the various shell mounds.

Types of Bone Fishhooks

Fishhooks made in one piece, such as those found in the shell mounds in Japan Proper — particularly from the shell mounds in which Kamegaoka-type pottery is found — have so far almost never been found in the Kuriles. Instead, they are made by joining together two bone pieces, the stem and the barb. These hooks are almost always found in the shell mounds in which the Okhotsk-type pottery is found; in the Kuriles this type is the oldest form of fishhook. Judging by those found so far, they can be divided into the following three types.

Type A In this type, which is shown in fig. 54,* the small hole at the bottom of the slightly curving stem is not drilled perpendicular to

*Length: 13cm.

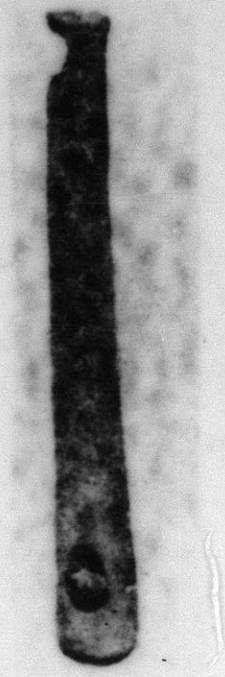


Fig. 54.

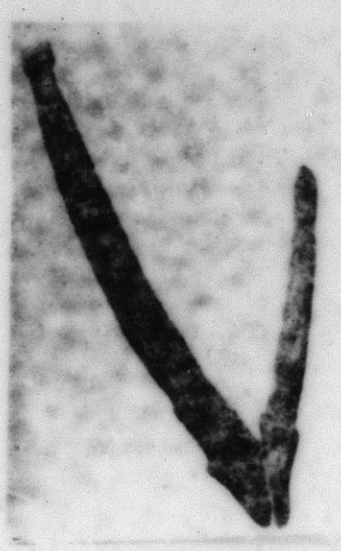


Fig. 55.

Fig. 56

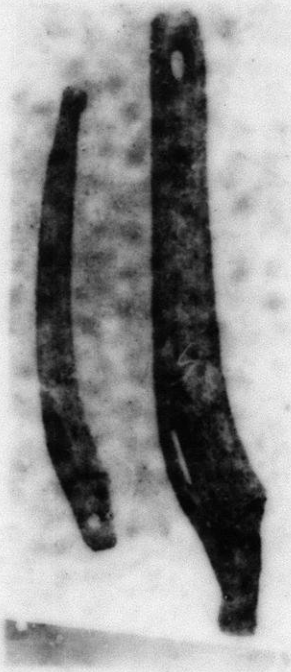


Fig. 57.

the axis of the stem but at an angle inclining upward on the inner side. Into this hole a curved, pointed barb is inserted tightly, forming the hook. Examples of this type of fishhook occur among the Eskimo. The one illustrated is a rare specimen discovered by Mr. Shintaro MAFUJI, president of the Paramushiro Fisheries Company when he and I were excavating the Kataoka Shell Mound on Shumushu Island, which he presented to me. I take this opportunity to express my profound thanks to him.

Type B The lower ends of the stem and the barb fit together, and a hook is formed by lashing them with a thong. The bone fishhooks of the Aleuts are almost always /¯p. 125_/ of this type. The same method is widely used also among the South Seas natives.

Fig. 55 shows this type; we were able to authenticate it because /¯both parts_/ were discovered in one spot in the Kokutan /¯Kunihashi_/ Cape Shell Mound on Shumushu Island. (Length of stem 12cm.)

Type C In this type either a small hole is made in the base of the slightly curving stem, or a shallow groove is carved on one side of the lower end. Then the basal portion of the barb was fitted alongside at this point and the two lashed together with a thong, thus forming a fishhook. It appears that this type was the most frequently used, to judge from the quantity unearthed.

No. 1* of fig. 57 shows the stem of the bone fishhook unearthed from the shell mound at Kokutan /¯Kunihashi_/ Cape; No. 2 is from the Kataoka Shell Mound. In both a small hole had been made at the lower end of the stem. Nos. 1 - 3 in fig. 56 are stems on which shallow grooves had been carved at the lower end; Nos. 4 - 5 show two of the numerous types of bone barbs. All of these were from the Shiomikawa and the Oikawa Shell Mounds.

*Length: 17cm.

Metal Fishhooks

These are found, not in ancient sites, but in recent sites associated with Western porcelain and metal objects. They are recovered mostly from the dwelling sites at Bettobu on Shumushu Island and from the shell mound there.

Fig. 58 shows this type. Almost all of these were made by fashioning scraps of steel, although No. 1 seems to be a finished product which probably came from America or Russia. The others are handmade. Nos. 2 and 3 have a narrow groove at the top of the stem for attaching the line. A great number of ships' nails have been discovered which had been bent at the tip and used for fishhooks. No. 4 et seq. show this type, of which only No. 6 was a copper nail. These appear to have been used exclusively to catch cod. (No. 1 is 9.6cm. long.)

Marekku /p̄hon./

The marekku is used by the Ainu of today to catch salmon and salmon-trout. To make this implement, an iron object in the shape of a fishhook is attached upside down to the tip of a wooden handle about two meters long. The method of attachment is this: the hook is tied on with a short line; a groove large enough so that the stem of the iron marekku can be inserted vertically into it is carved into the end of the handle; and the iron hook is inserted into this. The device is so made that when the prey is speared it can be wedged between the tip of the hook and the tip of the handle.

This implement is discovered in the recent sites previously mentioned along with the iron fishhooks. No. 1 of fig. 59 is a small marekku.* No. 2

*4.8cm.

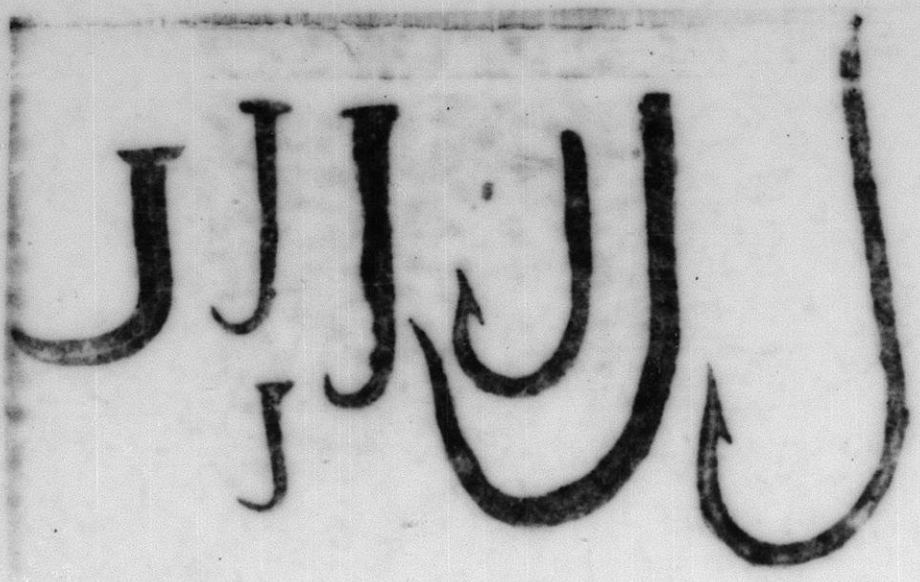


Fig. 58

Fig. 59

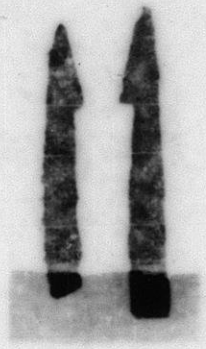


Fig. 60.

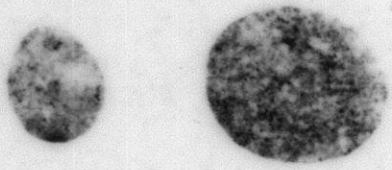


Fig. 61.

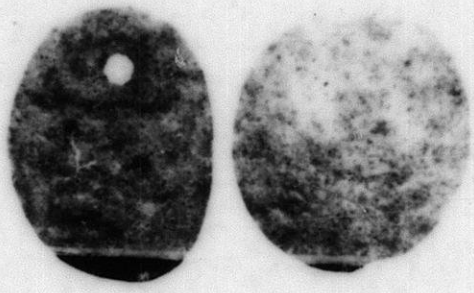


Fig. 62.

is a large one with a number of shallow grooves cut into the stem horizontally [p. 127] to facilitate secure lashing. Both are made of iron and were unearthed from the Bettobu Shell Mound on Shumushu Island.

Rasuma (Scissors-Harpoon)

This type is fashioned as if one slightly spread apart a pair of cotton-cutting scissors and fixed it rigidly at the tip of a wooden pole about two meters long. When the fish is pierced through from the back, it is held fast because of the barbs and is unable to escape. This is the principle [evidently similar to the leister - Ed.]. This type is not used today among the Ainu as much as the marekku. Two of the metal parts used in the rasuma were uncovered from the afore-mentioned sites; fig. 60 shows them. These probably are not cotton-cutting scissors but were doubtless fashioned from suitable metal ships' gear. They were uncovered from the Bettobu Shell Mound. (No. 1 is 8.4cm. long.)

Stone Sinkers

No. 1 of fig. 61 shows [a type] unearthed in the Shiomikawa Pit No. 2 or in Pit No. 3 (Okhotsk-type pottery sites); all are sinkers for bone fishhooks.

In addition, there are those of the type in which both sides of a round, flat stone have been chipped off. Fig. 62 shows stones the size of an infant's head along the central axis of which a shallow groove has been made or in which a hole has been drilled at the upper edge through which the line could be passed. These are occasionally unearthed in shell mounds connected with the Okhotsk-type pottery, and appear to have

been used as sinkers [p. 128] or as substitutes for anchors. Both were uncovered from the pits at Oikawa on Shumushu Island.

Nets

It is not difficult to imagine that nets were used from the Okhotsk-type pottery period until recently. However, just what type of nets were used is not yet clear at present. There has only been the discovery of bone implements which seem to be shuttles used in making nets and the needle for making nets.

No. 1 of fig. 63 is of the Okhotsk-type pottery period, and was uncovered at the Oikawa Shell Mound; it is thought to have been a shuttle for netmaking. Nos. 2 - 6 were uncovered from the late shell mounds on Bettobu. On the basis of comparisons with the possessions of the Eskimo, they are thought to be netmaking needles. (No. 1 is 11.8cm. long.)

Conclusions

In the foregoing, I have discussed the hunting and fishing implements which the ancient natives of the Kuriles have left behind them. [p. 129] This discussion was based upon material at hand to which those of Messrs. Sugiyama, Tani, Sasamori, Iwasaki, and Taniuchida have been added. As for relics probably left behind by the Aleuts, no articles other than the stone labrets (lip ornaments) and the stone lamps have been found. Of the objects that once belonged to the Aleuts who lived at Kataoka on Shumushu Island, those obtained by Messrs. Shinren [?] HASEBE and Tamemoto [?] TOKITO in 1876 at the time of their cruise through the Kuriles are at present kept in the Ethnological Museum attached to the Hakodate Library. Among these objects there are several types of harpoons,

Fig. 63.

Fig. 64.

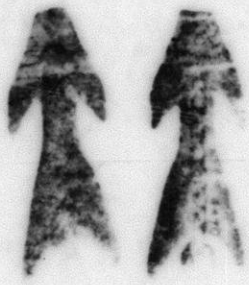


Fig. 65.

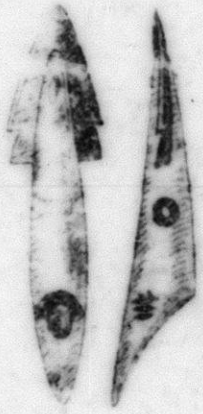


Fig. 66.

all of which are almost identical with those which have been unearthed from the Aleutian Island shell mounds. They have such /distinctive/ characteristics that they can be recognized at a glance as being of the Aleutian type. Therefore, it will be no great mistake if what I have discussed in this article is all taken to refer to those objects left behind by the Okhotsk pottery people and the Kurile Ainu.

In studying the barbed forms of the bone harpoons of the Okhotsk-type pottery people and of the metal harpoons of the Ainu of the northern Kuriles, we see that in both types, with the exception of No. 3 of fig. 2, the line hole at the base of the harpoon has been drilled in all cases at a right angle to the sharp edges of the tip or barbs. When harpoons made in this fashion penetrate into the prey, the degree of friction of the harpoon line which runs through the line hole on the point of penetration is heightened. No. 1 of fig. 64 is a barbed harpoon used up to the present by the Ainu of Sakhalin; but in contrast to the previously discussed type, the line hole is made in the same plane as that of the sharp edge. Thus, when the harpoon enters the prey, this reduces to a great degree the friction between the harpoon line and the wound. /p. 130/ As shown in No. 2 of the same figure, it is identical with those discovered in the Kuriles; but a great portion of the metal harpoons of the Ainu of Sakhalin are of the type in No. 1. This is thought to be a development of the second stage.

When stone points are to be affixed to barbed harpoons of the type unearthed in the Kuriles, the only method is to make a slot in the tip and then insert them. In those of the Aleuts, however, a shallow socket is carved into one side of the tip and the stone point is inserted and

tied with a thong. Harpoons of this type which were discovered on Rebun Island off Hokkaido and which are in the possession of the Anthropology Department, have the Aleut-type hole into which the stone point was inserted. The tip of No. 2 of fig. 65 shows this. It is said that in Sakhalin also this type of stone point attachment occurs.

Next: in all of the swallow-tail-shaped harpoons of the barbed type the line hole is made at a right angle to the point. This is a common characteristic of the swallow-tail-shaped harpoons of the northern races like the Aleut, Chukchee, Eskimo, Kamchadal, etc. It has a serious fault in the friction between the line and the wound when the animal is harpooned with this type of weapon. In order to compensate for this drawback, the Okhotsk-type pottery people of the northern Kuriles, as can be seen in Nos. 1 and 2 of fig. 9, made the upper portion of the harpoon, at the point of the line hole, the widest part; and they made a vertical groove from the line hole to the base. It can be seen that by placing the line in this groove the degree of friction was lessened. When this type toggled within the body of the prey, the cutting edge of the point revolves in the direction of the hide of the animal at the point of entry. No problem is involved if the harpoon penetrates deeply into the body, but the underside forms such an extremely sharp angle that when the penetration is shallow the blade edge and the hide of the animal come in contact and there is danger that the harpoon will tear loose. In the case of metal blades, they would be even sharper and this would constitute a defect. However, No. 1 of fig. 66 shows a <u>kite</u> owned by Mr. Sueo SUGIYAMA which in shape is almost identical with the Type A and B swallow-tail harpoons of the Okhotsk-type pottery people of the northern Kuriles.

/p. 131/ The point at which the method of manufacture differs, however, is that the line hole and the blade are in the same plane /so that pressure is exerted on the flat surface when toggling/. Compared with the type discussed previously, this is a further development. The swallow-tail-shaped harpoons of the Eskimo, in which metal blades are attached at the tip, take this form.

According to Professor Hasebe: The swallow-tail-shaped harpoons unearthed from the shell mounds at Numazu, in Rikuzen /Northern Japan/, have their line holes in the same plane as the point and he states that these were made after the swallow-tail-shaped harpoons of the Okhotsk-type pottery and after the swallow-tail-shaped harpoons unearthed from the shell mound of Motowanishi at Muroran (where Kamegaoka-type pottery has been found), which are identical. But judging from the fact that Mr. Kiyoo YAMAUCHI has discovered harpoons at the Nakai Shell Mound in Mutsu /Northern Japan/ (in which cylindrical pottery has been found) and at the Motowanishi Shell Mound in Muroran (in which Kamegaoka-style pottery has been found) on which a shallow groove in the back replaces the line hole and a shallow groove in the center of the belly replaces the socket — harpoons of this type were in use during the Neolithic Age in the north-eastern district of Japan Proper and in southern Hokkaido, at the time of the cylindrical and Kamegaoka-type pottery, which are older by far than the Okhotsk-type pottery.

Not many harpoons have been uncovered so far in the central Kuriles, but judging by the stone and bone implements (which are almost all of the northern type), it would be better to say that /the central islands are/ an extension of the north rather than of the southern Kuriles.

When we study the harpoons of the south, rather than being of the north Kurile type, they have a far more intimate relationship with those of Sakhalin and the Okhotsk Sea coast of Hokkaido.

This article has become too long, so I will lay my brush down.

In conclusion, I wish to express my deep appreciation to Mr. Gima TAKEDA, a fisheries industrialist of Hakodate City, and to the late Kakubei NISHIHARA, of the same city, who went to great lengths to assist me in collecting material: the former for the north Kuriles region and the latter for the southern islands.

NOTES ON PREHISTORIC POTTERY FROM BENTEN-JIMA AND THE KURILE ISLANDS

(Chishima oyobi Bentenjima Shutsudo Doki Hahen ni Tsuite)

by Goichi HIRAKO

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Pottery Unearthed and Its Location

My journey to the island of Shikotan in August of 1928 was described in the article entitled "The Present Situation of the So-Called Kurile Ainu, etc." which appeared in the previous number of this journal. In this article I would like to say more about the potsherds unearthed on the island of Shikotan. The reason for my doing this is that upon looking at the newest edition of the Gazeteer of Stone Age Sites of Japan, I saw how very scanty was /the material/ relating to the Kuriles; also because I was stimulated by the following passage in an article by Professor Torii:

"The pottery of the period of the Stone Age in the northern Kuriles is all made up of this type (the naiji pottery). I think that it is probably unnecessary any longer to go to the northern Kuriles to investigate the Stone Age Period of the Hokkaido type. The reason I think it is probably unnecessary is because there are /specimens/ of this type there which are peculiar and which were left by the Chishima Ainu." /p. 132/

This is a pretty arbitrary statement. But a great deal of sympathy can be felt for the assertion of a scholar who was then youthful and energetic.

After a report such as this one made by Professor Torii, it seems to me that articles relating to the antiquities unearthed in the Kuriles have been extremely few. This, of course, is due to the superficial knowledge of the present writer; but, whipping this superficial knowledge with courage, I would like to make a brief report. To be sure, my material is not related to the northern islands, and furthermore, on this trip I obtained over twenty types of potsherds and stone implements from the Benten-jima Shell

Mound. Benten-jima is located within the Bay of Nemuro /northeastern Hokkaido/. Shikotan Island is more than sixty sea miles distant, but it is extremely interesting to make comparisons.

The shell mound at Benten-jima, which measures over 66 square meters, /was located/ along the outside of the northwestern corner of the low, grass-covered earthen embankment which surrounds the Benten Shrine. At that time, in August, this was occupied by a vegetable plot; from the fact that here and there were scattered fragments of white shells (hotate and small fragments of what seemed to be oysters), I knew at a glance that this was a shell mound. On the east side of this field, that is, on the earthen embankment of the Benten Shrine, everything that had interfered with the cultivation of the land had been pushed up against it. In this were mixed many varieties of stone implements and pottery fragments. However, since these were all small fragments, I think it is correct to say that they appeared to be the sort of thing that even collectors of archaeological materials would throw away and not give them a second thought. However, I discovered here something of interest. What was particularly interesting among the stone implements was a pestle. I will make a report on another occasion concerning this. We scratched away in the plot as much as we could, and in one or two places we searched by digging down to a depth of about two feet. In this way we obtained some unusual pottery fragments. We discovered no bone or horn implements, however.

On Shikotan Island, I excavated several tomblike features in the spare time I had while idly waiting for the boat. On the slope in front of the post office, a stone monument leaned sadly to one side. This is a

memorial monument to Kusenohon Chieruniku /phon./ who unexpectedly died on Urup Island. This locality was formerly the graveyard from the time that the natives were transferred onto this island until they shifted over to the new graveyard. In Professor Torii's book there is a photograph of what appears to be this place. Early in the morning, before the inhabitants of the island had waked up, I climbed up, brushing away the dew on the dwarf bamboo, and /p. 133/ on discovering an earth mound rectangular in shape and measuring two by three feet, I made a trial excavation. In the vicinity of the monument there are many such mounds. On these mounds of this isolated island irises were blooming. I dug as far as I could with a hand hoe, but there were no clues. I dug to a point where, if this were an Ainu grave, I usually would have struck something; but there were no results. Then I climbed further up and carefully excavated — rather deeply — in a spot not visible to the inhabitants of the village; but even here, there were no results. On seeing these earthen mounds here and there, it appeared that there was somebody who had the same idea as I, for there were some that had already been tested. Finally I gave up and came down near the foot of this mountain overgrown with dwarf bamboo. Not coming completely down into the valley, I walked into the interior gradually, with the valley visible to the left. When I did this, I discovered that there still were similar earthen mounds. After I had seen a good many of them, I ignored them, deciding that they must probably be anthills. I traversed something over a kilometer. Halfway up the hill to the right stretched what seemed to be a man-made inclined slope with a declivity, and below this, at a spot where were small mounds of earth (probably made when the slope was

constructed) I had workers dig after breakfast until noon. Kawasaki also helped dig. However, there were no results. What I thought to be artificial constructions may have been natural formations. I gave up, and while walking home and giving my attention to the newly built road, I saw a potsherd exposed in a cut about eight inches from the surface of black humus. Further on there was another. Near the spot where the spring gushes forth at the foot of the hill three additional potsherds were exposed. Old Mr. Igarashi of the post office /p. 134/ helped me find other sherds at this point. I was told that at the time the road was built, it was at this point also that similar pottery was most abundantly found. When I returned to my hotel it rained. In the course of conversation I learned that during the construction of the road a shell mound (fig. 1) was discovered at Notoro, and that pottery fragments were also unearthed from it. When I asked Mr. Goubler about this shell mound after my return to Sapporo, he told me that it was a very shallow layer of two to three inches. Mr. Goubler collected several potsherds and pieces of animal bone there. The foregoing will serve as background for the collecting activities which I am about to describe.

Potsherds Unearthed at Benten-jima /Omitted/

Potsherds Unearthed on Shikotan Island

My purpose in writing about the sherds unearthed on Shikotan Island here is not with the intention of arguing about the relics of the present-day Kurile Ainu. I have taken up my pen with the thought that /this may be of some/ use when, in the future, archaeological /investigations/ in the Kurile Archipelago increase. It is clear from the position and

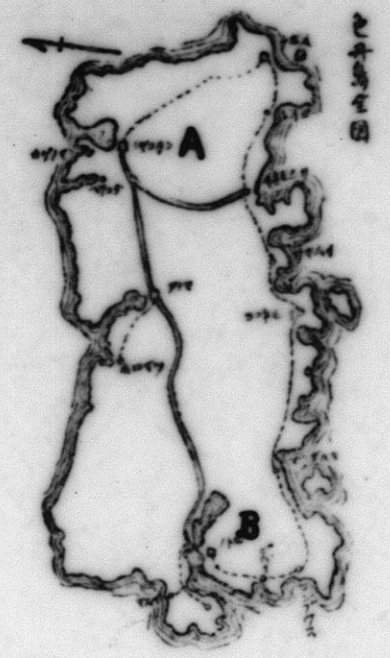


Fig. 1. Shikotan Island.
A: Shakotan; B: Notoro.

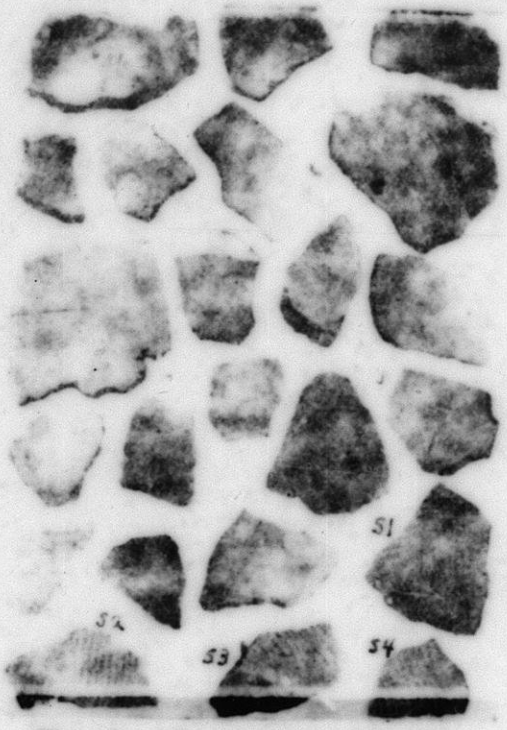


Fig. 2. Four sherds (S1-S4) from Shikotan Island. The remainder are from Bentenjima.

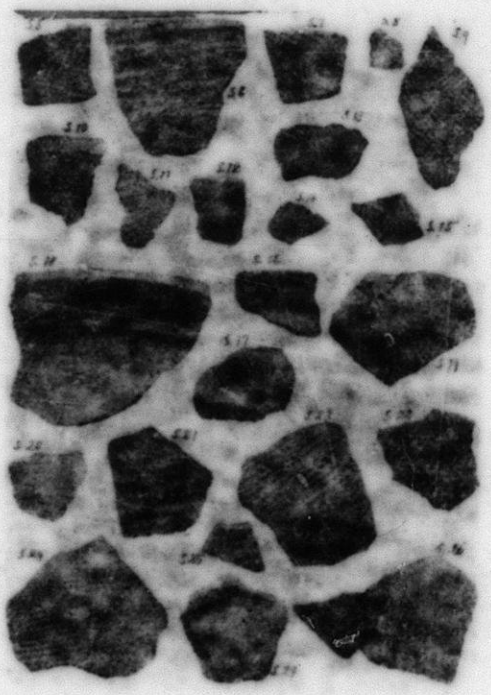


Fig. 3. Sherds from Shikotan Island.

stratum from which they were unearthed that my sherds were not those that had been used by the present-day natives of the islands, and they are too old also to be connected with the hundred or more natives who are said to have lived there during the Tokugawa Period. That is to say, I will write as though I had discovered Ainu-type pottery of a period similar to that of the relics which have heretofore been uncovered from Stone Age sites in various localities in Japan.

As I have stated in the Introduction, the place of discovery was in the foothills several hundred meters up Naka-no-hashi at Shakotan. Those I personally collected numbered only fifteen. That is, S.1 - S.15 of figs. 2 and 3.

In all of them, there was a pattern which seems /to have been made/ by impressions of grass matting. That is, this is the grass-matting pattern. The colors were yellow-red, yellow-brown, or gray; the firing was poor, and the quality weak, being easily broken. Not only this, but there were some in which the grass-matting pattern had been rubbed off. Everything about them leads me to believe that they are the so-called Ainu pottery of the standard type. All of them were small fragments, and it is difficult to imagine their shape as a whole, but their thickness is between 4mm. and 8mm. There were numerous types of matting, the usual one being what appears to be straw matting; but there are some which appear to have been woven from rushes. One of the fragments (S.6) was rather large, being from a vessel the inner diameter of which at the mouth was 26.7cm. /p. 193/ and the height of which is thought to have been about 10cm. There was nothing unusual about it as pottery, but it

is a little different from the other pottery in that the matting shows a method of weaving which leads me to believe it may have been a kind of rush mat made by weaving seaside grasses.

(S.6). The thickness at the lip was about 9mm.; near where it merged into the base it was 13mm.; the surfaces, both interior and exterior, were yellow-red in color; but the inner part, in cross-section, was gray. The upper half of the outer surface was stained gray-black, but no other part, whether inner or outer, had sediment sticking to it.

The foregoing are those which I myself collected. In addition, I would like to append, along with mine, those which were collected by Mr. A. Goubler, an instructor employed by our school. He went over to Shikotan Island from the middle of July to August of this year, that is, before I went across to the island. It was through his kindness that he lent them to me; so I would like to take them and supplement my materials. /fig. 3/

(S.16). A fragment of the rim, measuring 4cm.; it was excavated by Mr. Goubler himself from the Notoro Shell Mound. The Notoro Shell Mound was discovered in the summer of 1928 when the new road was built, and is said to be near Notoro Bay. I did not get a chance to go to that place, but Mr. Goubler fortunately did go there. The color of this fragment was a black-gray with black predominating; in the inner surface the gray somewhat predominated; black sediment adhered. The rim of the mouth was 1.5cm. high; below this it dipped in sharply and formed a horizontal groove. The pattern on the surface was unusual: three 15mm. wave-shaped raised lines run undulating along the rim. The bottommost line remained almost intact; only one portion of the topmost one remained; of the center

line, only several millimeters of it remained in the center; this line was 2mm. thick. [p. 194] In this relief design, shallow grooves were first made in the surface, and then thin clay strips were inlaid and fitted in, forming a raised surface; where the applique has fallen off this groove is revealed; [this was] extremely clever work.

The diameter at the interior of the mouth was 18.8cm.; the thickness at the rim was 7mm.; below the groove at the neck it was between 4 - 5mm. This type of pattern has also been discovered on Benten-jima, and is to be found among the specimens owned by Mr. Kōno. It is also discovered at Kunajiri. Recently, Mr. Kōno has brought back splendid examples of this type of pottery from Kunajiri. (See section 4.)

(S.17). As with S.16, it was discovered by Mr. Goubler in the Notoro Shell Mound; the quality of the pottery and the black color were almost similar with that of S.16; there was nothing adhering to it. The outer surface was rough; and especially the interior was extremely crude. The outer surface gave some appearance of having been polished.

The fragment was part of a base, and while it could be considered to be one part of the pot of S.16, this was not certain. The inner diameter was 6 - 7cm.; its thickness was 4mm.; the thickness at the base was 7mm. Those specimens unearthed by Mr. Goubler himself were only the above-mentioned two.

(S.18). This was given to Mr. Goubler by Mr. Kobayashi, of Shakotan, who said it had been unearthed from the Notoro Shell Mound. In color, shape, quality, and its design of boat shapes, the pottery resembled in every way the piece I unearthed on Benten-jima. That is to say, the color, was somewhat reddish, the original clay being of the same color, with a

secondary gray-black color being painted on the outer surface. There was no noticeable sediment /temper?/. The inner surface was especially clean. Moreover, the whole surface of the pottery was smooth. The height of the rim was 2.4cm.; 1.8cm. below the edge of the rim the boat-shaped pits were arranged. The length of these was 9mm., with a distance of 13cm. /1.3cm.?/ between each. The diameter within the mouth was 24.6cm.; the thickness at the rim was 8mm.; at the belly it was 5mm.

(S.19). This was given to Mr. Goubler by Mr. Kobayashi. It was said to have been unearthed near the Shakotan Settlement. It was peculiar in having raised flower-shaped patterns on the surface. The color was gray, with the outer surface being somewhat gray-red in color; the size of the flower pattern was 2cm.; the distance between the center of one pattern and the center of the next pattern was 5cm.

It was a small pot, the outer diameter of the place where the designs were being 13.2cm.; its thickness was 4mm. to 7mm. The pattern was simply an elevation, formed by the center being pushed up by means of a spatula, and the circumference /of the flower/ having traces of having been pushed into radiating lines by the same spatula.

(S.20). /This was/ given to Mr. Goubler by Mr. Kobayashi. Unearthed in the neighborhood of Shakotan. Reddish in color; the quality was fine. The inner surface was black, the redness of the outer surface /p. 195/ being thought to have been due to the firing. With regard to this fragment, the grass-mat or rope pattern was applied artificially; and particular attention must be paid to the fact that the ordinary pattern is applied while the clay is still soft, but in this case, it seems to have been

applied to a clay surface that had already hardened somewhat, by means of something not sharpened but rather with a rough point.

(S.21). /This was/ given to Mr. Goubler by Mr. Kobayashi. Unearthed in the neighborhood of Shakotan. This was a splendid grass-matting-pattern ware, there being deep parallel patterns made by strongly pressing a rather large twine made by double braiding smaller twine. The color: gray-black; black sediment was stuck to the inner surface. The inner diameter was approximately 30.8cm.; its thickness between 5 - 6mm.

(S.22). /This was/ given to Mr. Goubler by Mr. Kobayashi. Unearthed in the vicinity of Shakotan. Color: gray-black; the inner surface was somewhat lighter in color, a gray tinged with brown. Its original color was black-gray. There were clear traces of some hard material, like wheat-straw plaited together, having been applied to it. The inner diameter was 40.5cm.

(S.23). /This was/ one given to Mr. Goubler by Mr. Kobayashi. Unearthed in the neighborhood of Shakotan. The outer surface was yellow-red in color; the inner surface was black-brown in color, with what seems to be some black organic material adhering to it; this had not completely turned to ash. It had a minute grass-mat pattern. The diameter was 13.3cm. Its thickness was 6mm.

(S.24). /This was/ one given to Mr. Goubler by Mr. Kobayashi. Unearthed at Shakotan. It had a minute grass-matting pattern.

(S.25). /This was/ one given to Mr. Goubler by Mr. Kobayashi. Unearthed at Shakotan. It is a small, flat fragment and had no curving surface. The exterior was gray tinged with red. The inner surface was tinged with black. On the outer surface was a straight deep groove; over

this there is a horizontal line forming a cross-hatch shape. It is not possible to imagine its whole shape /from this fragment/.

Where it is thick it is 8mm.; where it is thin it is between 4 - 5mm.

(S.26). Although it is peculiar in that it has the grass-mat pattern and has long fibers mixed up in it, there is nothing else that was unusual about it. / p. 196 /

(S.27). /This was/ given to Mr. Goubler by Mr. Kobayashi; it was unearthed at Shakotan. It is one part of the base of a pot. Both the outside and inside were tinged with red; the grass-mat pattern had been applied on the outer surface down to the bottom edge of the base; the thickness at the base was 7mm.

The other three were all splendid ones which belonged to the so-called rope-pattern pots, but I will omit them because I could not photograph them and because they are similar specimens.

Concerning the Pottery Unearthed on Kunajiri Island

The fifth edition of the Gazeteer of Stone Age Sites in Japan came into my hands recently, and, along with my great appreciation of the labors of the various people of the Anthropology Department of the Tokyo Imperial University, I felt a great regret in my heart, seeing how extremely meagre was the material concerning the Hokkaido area. I still thought it their duty to report on what has been found. Especially when it came to the Kuriles, there was even less. Even today, the picture is still /as though/ Professor Torii were dominating the stage. For this reason, I intend to make a report on the pottery unearthed on Kunajiri Island as excellent comparative material for the pottery unearthed on Shikotan Island

and Benten-jima. However, these were collected by Mr. Tsunekichi KŌNO from various people last fall when he went over /on business/ to Kunajiri, so the data on their provenience are regrettably obscure.

No. K1 (fig. 4). Unearthed at Ponkinashiri. In its shape, it was rather well preserved; its height was 14.5cm.; diameter of the mouth 14cm.; the diameter of the base 6cm.; the color was gray-red and the outer surface was rough; the inner surface was tinged a gray-black color. The walls were thick. It was an extremely simple piece of work, and at the rim was an artful rope pattern in relief. The line of twisted rope is a single line, and at a glance seems to be a wave pattern. On the upper half of the outer surface there is a relief running /around the vessel/ in band formation. /This was made by/ sticking thin strips of clay /onto the vessel/; at various places they have fallen away and the pieces have been found. In shape, these were composed of one rather straight /line/ and one with a wave shape; and these are repeated twice.

No. K2 (fig. 4). Unearthed at Ponkinashiri; it was given by Mr. Ōmi. Its height was 10.2cm.; diameter at the mouth 8cm. It was stained a black color and something like tar still clung to it. In manufacture it was thick and coarse; the outer surface was not smooth. The pattern is a relief /but it was made by/ applying strips of clay; between two straight bands was inserted one wave-shaped line. These are found at the rim and at the belly. In addition, there are, above and below /the lines at the/ belly, a small wave-shaped line /p. 197/. It has the shape of unraveled rope.

No. K3 (fig. 5, right). Unearthed at Ponkinashiri. Its height: 17.5cm.; the diameter at the mouth: 16.8cm.; the base is small and is

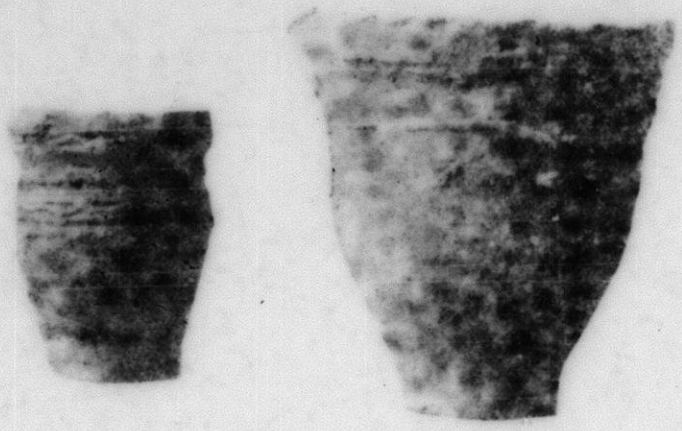


Fig. 4. Pots Nos. K1 (right) and K2 (left) from Kunashir Island.

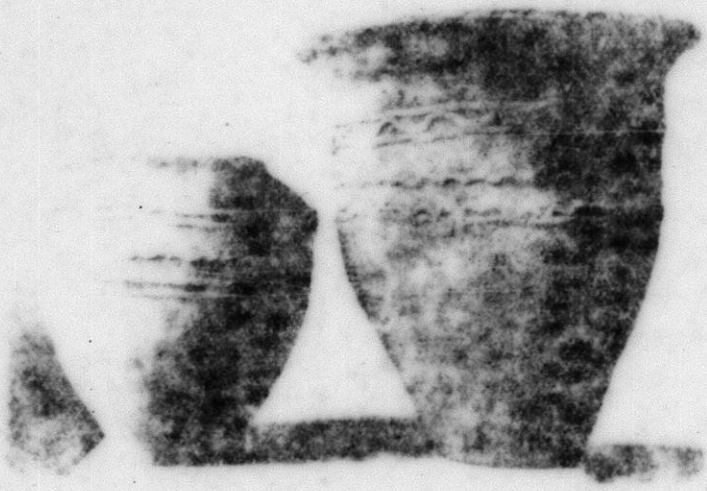


Fig. 5. Pots Nos. K3 (right) and K4 (left) from Kunashir Island.

6cm. In general, it was gray-black in color, with the inner side being still blacker. The outer surface was rough, and though not smooth, it was well-proportioned. As for patterns, there were two poorly contrived lines of small waves at the rim; at the belly there were two straight lines enclosing a wave-pattern line. Below this, there are, in addition, two bands in the shape of unraveled rope and one straight line. All of these were made by sticking on strips of clay later.

No. K4 (fig. 5, left). Unearthed at Ponkinashiri; presented by Mr. Ōmi. One portion of the rim was broken; the height of this vessel is 12.5cm.; the diameter at the base is 4cm.; the color is gray-red, with the inner surface being gray-black. As for its patterns, there are two horizontal bands on the upper part of the belly. This was originally one line which moved off in another direction halfway /across/ and looks like two lines. This band is found again in the center of the belly. Between these two bands is a band in the shape of unraveled twine. Above and below this rope pattern, impressed patterns running from right top to bottom left were lined up in a row. In the top row the declivity was gentle, while that of the bottom was abrupt. As in the previous /pots/, in all of these, strips of clay were stuck on later.

No. K5 (fig. 6). Unearthed at Ponkinashiri; presented by Mr. Matsui. Its height was 31cm.; the diameter at the mouth 28cm.; the rim flared out 3.5cm.; the base was extremely small, being 7cm. in diameter; the walls were thin with a thickness of about 5mm. plus. The color was gray-black, with black sediment attached at various places. The inside was rather clean. As for patterns, there were two lines of the unraveled-rope pattern at the rim. At the belly there are two levels of the band pattern with

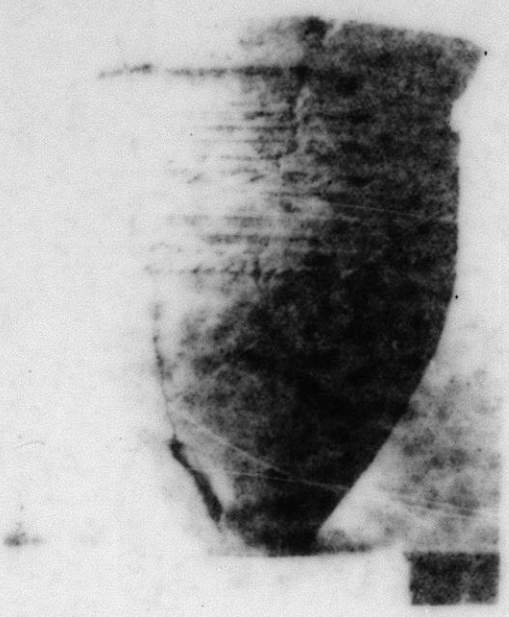


Fig. 6. Pot No. K5 from Kunashir Island.

Fig. 7. Pots Nos. K6 (right) and K8 (left) from Kunashir Island.

three lines each; and in between these are two bands in between which a wave-pattern is wedged. At the very bottom there is a single line /¯p. 197_¯/ of a splendid unraveled twine /¯pattern_¯/. All of these line patterns are in relief, and the width of the lines is 2mm. Strips of clay were stuck on, and the surface was made flat. It was large in shape and was splendidly formed in the shape of a modern jar.

No. K6 (fig. 7, right). Unearthed from the Ponkinashiri pit dwelling. Its height: 26cm.; diameter at the mouth: 21cm.; the base was again small, being 8cm.; the color was gray-black, with black sediment attached to the outside; and although the inside was stained black it was cleaner than the outer surface. Decorative patterns, one at the mouth and two on the belly, consisted of two lines enclosing a wavy line. All of these were made by applying strips of clay and flattening the surface.

No. K7 (fig. 8). Unearthed at Ponkinashiri; presented by Mr. Ōmi. This is a splendid pot which resembles the present-day water jar. Its height: 19cm.; diameter at the mouth: 9.6cm.; the distance from the tip of the spout /¯p. 199_¯/ to the handle was 16.5cm. In color, it was somewhat tinged with red and was grayish-red. It was stained black in great part, and also had black sediment adhering to it.

What is most peculiar about this pot is that the spout is in the form of the head of a sea animal /¯sea lion?_¯/, a fact which has surprised even zoologists. The handle was also well-done, with the design of a young sea animal crawling up it being carved on it. It is regrettable that the head of the young sea animal has been damaged and lost, but judging from the fin-shaped form of the feet, it cannot be doubted that it was such a creature. From the fact that this was the young of a sea

Fig. 8. Pottery from Kunashir Island.

animal, it may be assumed almost with certainty that the head at the spout is also that of the same species. This latter is depicted in the act of roaring, with mouth and eyes wide open. As for the decoration, it consists mainly of five bands of two lines having a wavy line in between them. The uppermost band is at the rim, extending from the pouring lip in front to the upper portion of the handle at the rear. Below this there is a single wave-shaped line. Below the second band there are two parallel, horizontal lines which give the appearance of being connected in sections; and in between the third, fourth, and fifth bands there are two thin, wave-shaped lines. The walls of this water jar were thick; it was heavy and poorly made but, withal, it was well-proportioned.

No. K8 (fig. 7, left). Unearthed at Ponkinashiri. It was presented by Mr. Ōmi. Its height was 5.9cm.; the diameter of the mouth between 9 - 10cm.; the thickness of the walls from 6 - 7mm.; its shape was that of a mortar and was poorly done. Its surface was not smooth. In color it was black, with something even blacker, like tar, sticking to it. The clay was gray-red in color and was stained black. Near the rim there was a poorly-done, wave-shaped line in relief and several knobs.

No. K9 (fig. 8). Unearthed at Furukamappu; its height was 11cm.; the clay was thick with the mouth somewhat oval in shape; its major diameter was 9.5cm., its minor diameter 7.5 /p. 200/ mm. In color it was tinged with red and had something black attached to it. For decoration, rope patterns and the grass-mat pattern had been incised upon the slightly hardened surface of the pot. The rope pattern runs sideways around the neck along the rim; the grass-mat pattern is poorly made and is incised at the belly. Along the rim and just below it, there are four knots /joints?/ along its circumference.

No. K10 (fig. 8). Unearthed at Ponkinashiri; its height: 12cm.; its diameter at the mouth: 10cm.; the diameter at the base: 6cm. In color it was gray tinged with red, with the inner surface being black. Near the rim there is an embankment-shaped rise with the rope pattern incised on it. At the belly, there was a wide band which seems to have been stuck onto it. In between, there are, in addition, irregular pricked patterns.

No. K11 (fig. 8). Unearthed at Ponkinashiri; the rim has been damaged; the height of this fragment is 15cm.; the diameter of the base is 5.5cm.; the diameter of the trunk is approximately 13cm.; the color was a gray-black, with the black being especially predominant on the inner surface.

At the point where the body was largest, there is a small, wave-shaped line running horizontally. It is applied. Above this is a design of mountain shapes done freely in a negative relief. Three lines are made one over the other. In the area above this, there are what seem to be /joints aligned?/.

No. K12 (fig. 8). Unearthed at Ponkinashiri; this is a small fragment and the main portion of the decoration is taken up by tiny rope patterns.

No. K13 (fig. 8). Unearthed at Ponkinashiri; the appearance of the patterns are exactly like those seen on the pottery unearthed on Benten-jima.

From Professor Kiyono's Diary of his Travels in Sakhalin /Omitted/

The Differences Between the Rope Pattern and the Grass-Mat Pattern /Omitted/

Locality of Manufacture with Particular Reference to the Spouted Vessel with the Sea Animal Decoration /Omitted/

Conclusions

In order to discuss the pottery unearthed in the Kuriles, I made a special trip to Hakodate to investigate the pottery owned by the Library. The pottery collected here was excavated from the relic-containing layers in the compounds of the Trappists; around Shirisawa, in Hakodate; from within the Hakodate Park area; from Sumiyoshi-cho. /Among/ the other /items were/ a deformed stone flute made in Hikada; naiji pottery made in Karafuto; while the pots, over two feet high, with a diameter of over one foot, with rope and grass-mat patterns, which were unearthed at Kamegaoka in Aomori /Prefecture/, are rare items that are enough to startle the eye. Collected among these /items/ were numerous sherds unearthed around Shirisawa. /p. 388/

In the Sapporo Museum, /there are specimens/ from Kikonai, Chitose, Isari-mura, Sōya, Kabuka in Rebun Province, Muroran, Uryū, Otaru, with one group of pottery unearthed at Temiya-mura, in Takashima Province drawing the most attention. Among these is a splendid pot resembling the pot unearthed at Kamegaoka, in Aomori.

That Mr. Tsunekichi Kōno has in his possession a great number of sherds bespeaks hard work on his part over the years. I was cordially shown /his collection/.

In my Department, at Hokkaido University, there also are some sherds sent in from various localities. There are also those recently unearthed from within the compounds of the school while the Science Department was being constructed.

I think that the Kokuanji /Temple/ at Atsukishi may also have specimens in its possession, but I have not seen these.

In addition, I think that there are many pottery collectors among interested individuals, but I could never get around to inspecting these. It is not difficult to imagine that many archaeology specialists have collected still more. But according to the Gazeteer of Stone Age Sites of Japan, those /specimens/ which have been reported are few in number. I have difficulty in understanding this.

My knowledge with regard to pottery is as meager as this. But when attention is paid /to the points/ mentioned above, one cannot help but find interest stimulated when one observes the pottery unearthed in Chishima.

I will desist from making surmises as to whether the pottery about which I have written above is the pottery of the Ainu, or whether it is Yayoi pottery; I will wait for the judgment of the experts. And the reason is that there were no human skeletons found along with this pottery. However, it is absolutely certain that they have either the rope or grass-mat pattern. Moreover, I think that with the explanations written above, the following facts have been made clear a little: the differences between the rope pattern and the grass-mat pattern; that there are two types in the rope pattern, the one which was made simply by impressing the real object /the rope/, and the other made artificially in imitation; and also that the patterns become parallel patterns, and that they evolve into wave-shaped patterns or even into straight lines.

In essence, can it not be said, after observing the sherds unearthed at Shikotan Isla[illegible], that the relics of the Stone Age cannot be indiscrimi-

nately called recent, as one proceeds north? /p. 389/ I look forward very much to the exploration, from the standpoint of local customs and of archaeology, of the areas further north than this.

Since there have been few articles dealing only with pottery, the scope /of my article/ has been as I saw fit, so it may have been overly long; but I earnestly ask /the reader/ for his understanding and beg /him/ for enlightenment.

(Department of Pathology,
School of Medicine, Hokkaido
University.)

POTTERY AND STONE IMPLEMENTS EXCAVATED ON ETOROFU ISLAND IN THE KURILES

(Chishima Etorofu-to Shutsudo no Doki oyobi Sekki)

by Tadashi SAITO

(KOKOGAKU ZASSHI, Vol. 23, No. 6, pp. 333-344. 1933)

Preface

In July, 1933, a group consisting of Akamaro TANAKA, Denzaburo MIYACHI, Naosuke HAZAMA, Ichinosuke OKUGAWA, Shin'ichi ASAYAMA, and Ryuichi HOSHINO traveled in the Kuriles region with the aim of studying lakes and marshes and collecting animals; and it is cause for rejoicing on our part that this expedition not only merely carried out research in their special fields but also paid attention to archaeological sites and collected a large number of artifacts. The latter, fortunately, were presented to the Archaeology Department of Kyoto University by Messrs. Hazama, Okugawa, and Asayama of this group; therefore, I wish to repay their kindness by reporting on this material immediately to the scholarly world.

Summary of the Sites

These artifacts were obtained mainly through the excavation of pit dwellings. The Bettobu area in Shana district yielded an especially large number of pots and stone implements.

Since this area is under the jurisdiction of the Department of Army at present, I cannot give a full geographic description of it, but will briefly describe it merely in summary form, based on the statements made by the Messrs. Hazama and Asayama. The locality of the site is at a distance of about 1100 meters from the shores of Bettobu Bay on the banks of Onsen-gawa /Betsusama-gawa/. It is said that even now innumerable pit dwellings are to be seen scattered about. The pit dwellings are depressions from two to six feet deep at present, and they are of various sizes with those 1.8 meters in diameter being the smallest. In general, the finds were obtained after digging some two feet further. Stones were laid out on the floor, and there was a marked admixture of charcoal.[1]* It was reported that while the pottery and the stone adzes, which I will discuss later, were both unearthed from pits of this type, the stone arrowpoints were discovered in one locality together with bird bones and other items. Moreover, the sword and the human remains were obtained by digging down over two feet in a depression in an area 200 - 300 meters northwest from this sand dune belt. The skeletons were lying face upward with the head to the east, and a sword reportedly lay in the vicinity of the right hip of one of the skeletons.

In addition, another group of potsherds was excavated on a sand dune in Rubetsu overlooking Rubetsu Bay, while in Toshimoe (which overlooks Hitokappu Bay) there is a shell mound from which three stone arrowheads were collected.[2]

*For notes, see p. 358 et seq.

The Artifacts Unearthed at Bettobu

Pottery. The pottery belonged to the so-called Jomon type. In general, the sherds are thick and coarse; they are made of clay in which fine gravel has been mixed in, and are either a light brown color tinged with black or a black-brown. Of course, some that are relatively hard and of fine workmanship are to be seen among them; and there are those whose interior surface is somewhat flat and smooth and on which the traces of brush or spatula are to be seen. Of especial interest is the fact that there are sherds with traces of a mixture of some fibrous material.[3]

The majority of these pots are fragments, but upon attempting restoration, it is thought that all of these belong to seven forms of vessel shape; and when we make a basic division from the standpoint of shape, they could be classified into two types. That is, the first group is composed of those of a bowl shape of the simple type in which the main section of the body flares outwards; the other is the type that could be called the fish-basket shape, being of the type in which the rim section is everted and the body is slightly distended. The decorations are comparatively simple, there being a great many pots which have the raised pattern. In forming the latter, parallel lines are made by applying slender string-shaped bands of clay, and between these bands either single wavy lines or several parallel wavy lines are applied; there is also to be seen the pattern in which two wavy lines interlock (Nos. 1 and 8 of fig. 2; No. 7 of fig. 1; Nos. 1 and 5 of fig. 3). There are also patterns of impressed lines, but these are extremely simple; the type in which oblique stabs are arranged in a line is particularly common (Nos. 2, 4, 5 of fig. 1; Nos. 2, 3, 4 of fig. 2; and Nos. 2, 3, 4

Fig. 1. Sherds unearthed at Bettobu.

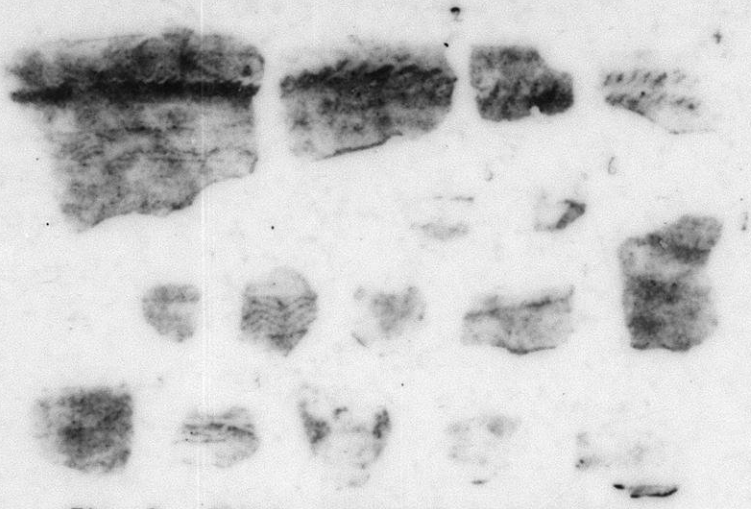


Fig. 2. Sherds unearthed at Bettobu.

Fig. 3. Rubbings and rim sections of the same.

of fig. 3). An exception is one with a somewhat complex pattern made up of almost straight lines all over the section below the belly.

In the foregoing, I have discussed the pottery in general in a rough summary. In the following, I would like to discuss two or three pots individually which are virtually intact or which can be restored to their original shapes.

Pot A (See fig. 3a). Height: 15.8cm.; rim diameter about 12.7cm.; base diameter 5.8cm. Its outer surface is rather rough and is of a dark brown color. The rim has been designed with a series of eleven mountain-shaped projections; it presents a complete and pleasing fish-basket shape with its rim curving outward slightly and with the neck slightly constricted. The decoration is composed of raised string-shaped lines which have been applied mainly around the rim. That is to say, four parallel bands are wound about forming three sections with wavy lines being applied between each. Below the belly, there are two holes about 3cm. apart.[4]

Sherd B (No. 1 of figs. 2 and 3). This is one section of a large vessel the mouth of which is estimated to have measured 39.4cm. The rim is everted.

A band encircles the area near the lip, with a rather thin wavy-line band at the edge of the neck constriction; and between these two bands is an impressed line in the form of large waves. On the upper portion of the body contiguous to the neck, parallel lines measuring 21.2cm. [illegible] in width encircle the pot and these enclose four parallel, gentle wave-lines; below this there has further been added another band on which diagonal stabs have been made, giving an appearance exactly like that of rope.

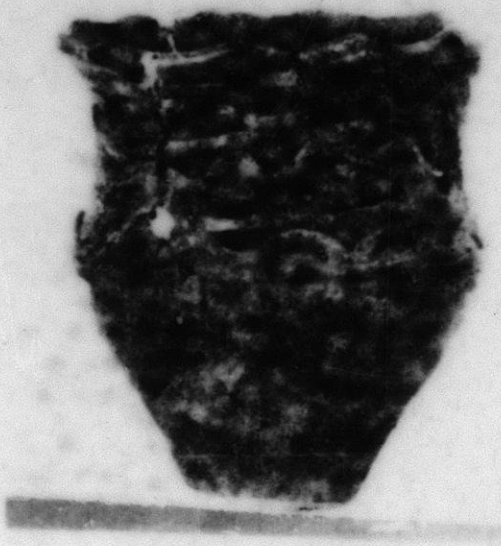


Fig. 3a. Pottery vessel from Etorofu.

Fig. 4. Stone adzes from Bettobu
(The scale is 4.77 inches long.)

Sherd C (3 of fig. 1). Similarly, this belongs to the undecorated pot-shaped type with everted lip. Its height is 11.5cm., its estimated base diameter is 3.6cm. It presents a comparatively flat and smooth outer surface and its firing is rather hard and fine. Its lip opens in a straight diagonal line; it is a pot whose outer curves are gentle, with its everted rim merging with the belly to form a gentle constriction. There are holes at the rim section.

Sherd D. This is bowl-shaped; its base diameter is 11.5cm.; its height is conjectured to have been 60.6cm.; the estimated mouth diameter is 27cm.; the thickness at the lip is 5mm. and at the base 15cm.; it is large, thick, and crude. Thin, raised boundary lines encircle the rim, and contiguous to them below, three stabs of a bamboo tube have been applied, made so that each of them would form the apex of a triangle. In view of the fact that there is a fixed distance between these groups and that they are to be found in the same position in other pots, it is thought that they have a decorative significance.

The Stone Implements

Stone Adzes /ā̲xes?/. There are three specimens which have the characteristics of the stone adze /ā̲xe?/. In all, the stone is andesite. One is 13.3cm. in length; its maximum thickness is 3cm. and the length of the blade is 9cm. Its outer appearance is such as to seem, at first glance, to be a crude natural stone lightly polished; small flaking is noticeable on its entire surface. In cross-section, the body is slightly rounded; when we come to the blade, it opens up sharply into a plectrum-shape; the blade has been polished on both surfaces, and is in the shape of the so-called clam-blade (No. 1 in fig. 5a and fig. 4).

Fig. 5. Stone artifacts from Bettobu.
(The scale is 1.19 inches long.)

Fig. 5a. Stone artifacts found on Etorofu.

The blades of the other two are not as pronounced as the first; one of these is 13.3cm. in length, 3.6cm. in thickness, and the length of the blade at present is 6cm. (No. 2 of fig. 4). The other is rather flat in cross-section; its thickness is 3.6cm., its width 6cm.; its present length is 13.6cm., and its blade is missing (No. 3 of fig. 5a; No. 3 of fig. 4).

Stone Arrowpoints. In one, the stone is chert, and it is of a dark brown color. It is shaped like a stemless triangle and the chipping along the edges is rather fine; its length is 3cm. (No. 1 of fig. 5). The other is made of basalt; the shape is uneven but it is in a diamond shape with tang; its present length is 2.7cm. (No. 4 of fig. 5).

In addition, there are those which are close to being stone lances; these are made of basalt and some are rather thick, and are 3.9cm. in length (No. 6 of fig. 5).

Stone Lance. This is likewise of basalt, close to the so-called willow-leaf shape, and of crude workmanship. Its length is 7.3cm.; its greatest width is 2.4cm. (No. 7 of fig. 5).

Stone Spoon. This is of the shape which resembles a stone spoon; the blade has been formed by chipping on three sides. Made of basalt; its length is 7.3cm. (No. 8 of fig. 5).

In addition, there are some which have a long oval shape and which are thought to be natural stones. Traces of chipping have been noted on those which are somewhat rounder (Nos. 5, 6, 7 of fig. 5a). In addition, a large quantity of small fragments of chips made while fashioning stone implements were seen.

Artifacts Which Accompanied the Human Remains

The foregoing stone implements and pottery were specimens unearthed from the pit dwelling zone, but, as noted earlier, a sword and human skeletons were discovered at a spot two or three hundred meters distant from this area. Since the Messrs. Miyake and Nakayama of the Pathology Department of Kyoto University are going to make a detailed report on the skeletons, I will here discuss only the sword (figs. 6 and 7).[5]

In its present length, the sword is 50cm.; of this length, the length of the blade is 38.2cm. Although both ends have been damaged and lost, to judge by the shape of the sword guard, the blade length must have been somewhere around 71cm. In general, the oxidization has been severe. The blade of the sword is flat, and the spine, while it is roundish, does not have planes or angles; it would appear that it had had an outward curve of around a centimeter with respect to its total length. The scabbard which sheathed it has now completely rotted away with only its wooden nature being evident, but it was made in an extremely flat manner, and it is thought that its outer appearance differed considerably from the scabbard of the Japanese swords which were made in the Edo Period. Moreoever, particular note must be made of the survival in one portion of it of the section wound with the bark of Prunus Itosakura, var. subsessilis Koidz., measuring about 6mm. in width; this has been wound about at equal intervals in the form of the flute-binding style. As additional peculiarities in this sword, we can list the sword guard of copper without the latchhole and having the oak design worked into the front and rear of the four sides, which are in the shape of a papaw; and we must not overlook either the facts that this sword from the beginning did not utilize pins [i.e. metal

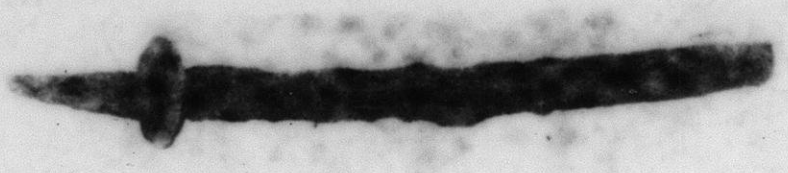
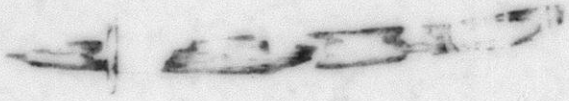


Fig. 6. Photograph of sword from burial at Bettobu.



Drawing of the same sword. (The scale is 3.58 inches long.)

fasteners to keep the parts in place/; that a snippet of leather /?/ had been inserted; and that a piece of cloth was stuck between the snippet and the sword guard. Moreover, braces of the eyes in the hilt are barely visible; it is thought that pins made of bamboo or whittled wood were used.

This sword resembles those which have been discovered in recent times from Ainu graves. As for its probable age, in contrast to the indication of considerable age in the method and style of the sheath, the style of the sword guard does not go beyond the Muromachi Period; moreover, it is not impossible to consider that the flat style of the sword blade indicates a rather old technique, but this was more the result of crudity in execution, and it is thought that there is not a great gap in time between this and the conjectured age of the sword guard; so, considering it as a whole, it is probably reasonable to place it about the time of the Muromachi Era /1392-1569/.

In addition, there was found what was thought to be the fragment of another sword. This was a fragment of a section centered on the kan /barrier? border?/; in the portion of the hilt, there are seen traces which would lead one to believe that something made of bone or horn had adorned that place; moreover, the fact that cloth fragments which wrapped the sheath still remained on the side of the blade was worthy of attention.

Artifacts Unearthed at Rubetsu

The relics collected in this area were limited to pottery. Compared to the simplicity in patterns of the pots collected at Bettobu, these were somewhat more varied and complex. As for the material, there was no great difference from the previous specimens, but it is thought that

the workmanship shows a harder and finer technique. They are of a brownish or dark-brown color. Since only small fragments remain, it is difficult to restore the shapes, but only in the case of one larger sherd was it thought, on the basis of its rim, to have been a jar-shaped pot with a diameter of around 23cm. As for the designs in general, impressed lines were in the majority, in the form of the jomon pattern, the pierced pattern, the straight-line pattern, and combinations of these. In addition to these, protruding patterns were seen in a very few examples. In the following, I will discuss these patterns.

Cord Impression /The nawame pattern/. This is the pattern in which the cord impressions run horizontally in somewhat disordered fashion along the whole of the body of the vessel; the lines are comparatively fine. In the large fragment of the pot on which this type of cord impression is to be seen, the estimated mouth-diameter was 24cm.; on the outwardly flaring lip, there are two mountain-shaped projections side by side with their ridges extending downward along the rim. We may consider that since one peak of a similar kind is to be seen at a distance of about 18cm. from these peaks, there must have been, to judge by this, identical peaks arranged in a position each opposite the other, and that, thus, a total of four peaks must have been located on the lip (No. 1 of fig. 8; No. 2 of fig. 9). In addition, the fragment of another pot which has this same pattern has had a band of cord impressions applied along the lip with other cord-impressed lines being applied irregularly at right angles to it or obliquely. Moreover, there are small, gentle peaks on the lip; they

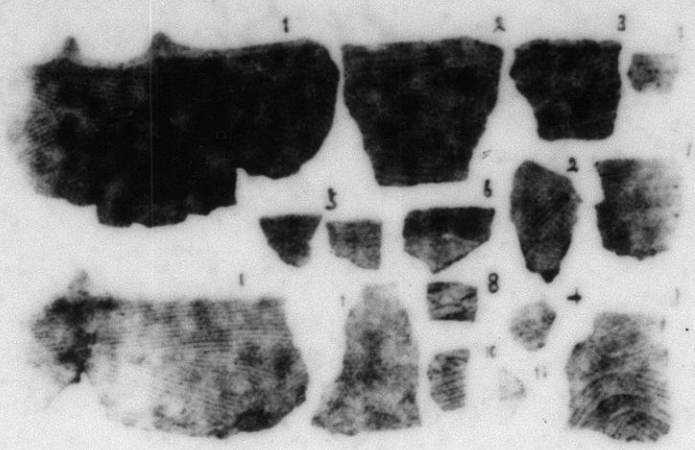


Fig. 8. Sherds from Rubetsu.

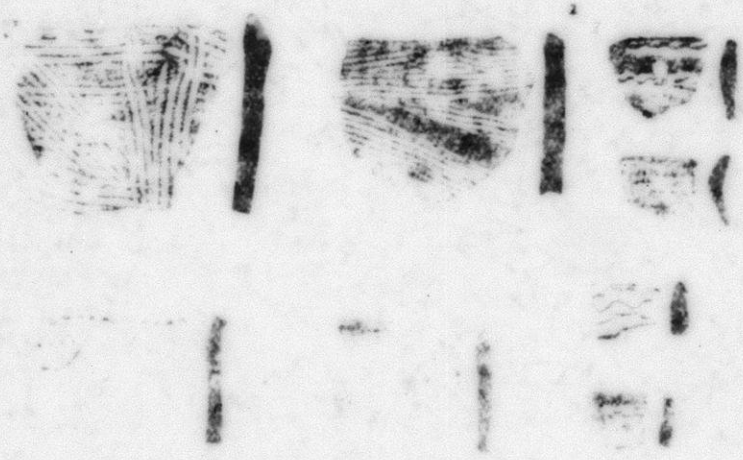


Fig. 9. Rubbings and rim sections of Rubetsu potsherds.

extend along the outer surface and rise slightly. In both these examples, this could be taken to be a degenerate form of a handle, and they draw our interest (No. 2 of fig. 8; No. 1 of fig. 9).

The Pierced Pattern. In this, small punctations have been aligned in orderly fashion in four lines; below this, there is the type (5 of fig. 8; 6 of fig. 9) in which circles made with a small bamboo tube have been arranged; and there is also the type (4 of fig. 8; 8 of fig. 9) in which two diagonal punctations have been aligned.

The Straight-Line Pattern. We found no more than one example of this in which the straight lines were interlocked in a lattice shape (11 of fig. 8).

In addition to the above, there were rather complex combinations of patterns, such as those which combined the jomon, the pierced pattern, and the thin, raised lines, and which have groups of small projections along the rim in the form of small, continuous waves /serrations?/ (3 of fig. 8; 3 of fig. 9). Moreover, there are sherds with small, raised, curved lines forming circles and oblongs with the cord lines distributed among them; to judge by this style, it is possible that it may have formed the lower section of the sherd discussed earlier (9 of fig. 8). In addition, there is the pattern in which bands of several parallel straight lines are supplemented by dotted lines (7 of fig. 8; 4 of fig. 9).

Among the projecting patterns, there is that (6 of fig. 8) in which a single projecting belt is wound about near the lip after which pressure-traces have been added; and there is that in which raised parallel bands encircle the pot with two interlocking, wavy lines being applied between these bands (8 of fig. 8; 7 of fig. 9).

Finds Unearthed at Toshimoe

I will describe the three stone arrowpoints which were collected at this locality. One was small, lozenge-shaped, made of obsidian; its length was 1.9cm.; at a glance, one can see that it has a delicate appearance (2 of fig. 5). The second was a little more slender than this and was of a brownish color; in general, it was a fine, small, stone arrowpoint with delicate chipping. Its length was 2.1cm.; the stone material was chert (3 of fig. 5). The third was the type with a tang; the stone material was hornstone, the length was 27.9mm. (5 of fig. 5).

Although not an item that was directly dug out of the ground, the weight which had been used at the Toshimoe post station for weighing down pickles is the stone object shown as 8 in fig. 5a. Of oblong shape, its length is 18.5cm.; its lateral width is 11.2cm.; its thickness is 8.5cm. Made of andesite, its outer surface is rough. Toward one side, a hole has been pierced. On both surfaces there are to be seen mountain-shaped grooved lines with three depressions scattered among them. Objects of this type were recently discovered at Kuril Lake in Kamchatka, and are thought to have been sinkers used in catching fish.[6]

Conclusions

In the foregoing, I have discussed the pottery and the stone implements[7] unearthed on Etorofu. I will consider it my good fortune if this article about the little-known antiquities of this district will serve to contribute something to the study of the Stone Age Period in Japan.

Now, going further one step beyond the discussion of the finds, I think that the question of what sort of connection these had with the Hokkaido

district or the Kamchatka district is an interesting and a natural one; but I think that I will discuss this on another occasion. Therefore, in this article, I have presumed to leave out such a study and have decided to confine it to a descriptive report.

One thing I would like to say at the end is in relation to the aforementioned human skeletons. It goes without saying that since these human remains were discovered alone and apart from the pit-dwelling area from which were unearthed the pottery and the stone implements, we cannot assume that they were of the people who had used this pottery. That is to say, we are unable, with only the specimens we now have, to gain any insight into the relationship of the human remains and the above-mentioned relics. But, in view of the fact that the sword was found at the side of the skeletons, the relationship between these two alone can be clearly seen. Moreover, this sword, on the basis of the aforé-mentioned surmise, is thought to be of the Ashikaga Period (1392-1569), while the skeletons, upon examination, were judged to be no more than a few decades old. Therefore, on the basis of these two authoritative facts, a suggestion has been granted to us; moreover, it is impossible not to be led to an unending surmise in connection with this.[8]

Before closing, I would like to express my deep appreciation to the three gentlemen mentioned previously: Hazama, Okuyama, and Asayama, who gave me the opportunity to write this article; to Mr. Masao SUENAGA who assisted me in the notes on the sword; to Mr. Eizo AKABORI who undertook the task of judging stone types; and, along with these, I express my thanks to both Professors Hamada and Umehara who were kind enough to revise my efforts.

Notes

1. Mr. Keiichi TANI has recently published a summary of the sites in this area /see translation No. 7/. Furthermore, Mr. Teiji ISHIKAWA wrote long ago in some detail with regard to the pit dwellings in an article titled "Chishima junken zakki" (Miscellaneous notes on an inspection tour of Chishima) in Chigaku zasshi, Collection 7, Vol. 77 (1895). By quoting a section from this, I will make up for the lack of description in this article: "In Bettobu there are remains of eighteen or nineteen pit dwellings in which the interiors and earth covering still retain their old forms; in addition, there are also a large number of open pits, such as are frequently seen in various localities in Hokkaido. It seems to me that there is no doubt that both of these must have been originally of the same type, the latter being the ruins of the former, retaining only faint traces of their previous form with the passing of time. On sand dunes nearby there are gravemarkers that resemble crosses. For the pit dwellings, the earth is dug out and driftwood is used to line the interior and to build the superstructure (the roof), the whole being covered with soil. Some of the interiors are extremely simple in plan, while others are very spacious and divided into several rooms. Their location was one end of a gently sloping elevation facing north toward the sea; a river wound about the foot of the hill and poured into Lake Kashiwabara to the east. The outer sides of this river were composed of sand dunes which extended from 40-50 to 80 feet. The pit dwellings are scattered in the inner area of the sand dune and on one edge of the high ground, with the river flowing in between. It is said that down to 1884 there

were over forty dwellings. Near the pit dwellings is an abundance of Irakusa (Uritica dioica) and Chishima azami (Cnicus Kamtschaticus), while the murikusa (Elymus mollis) grows on the sand dunes."

2. With regard to the place names of these sites, Mr. Teiji ISHIKAWA has already reported in the article entitled "Chishima no kuni Etorofu-jimi tateana kokibutsu hakken-chi" (The places of discovery of pit dwellings and old implements on Etorofu Island in Chishima Province) in the Tokyo jinruigaku-kai zasshi, No. 59 (1891).

3. According to Professor Torii's Chishima Ainu, the method of manufacturing pottery in the northern Kuriles area is to knead a mixture of clay, sand, and water with an admixture of nokkanki, a fine fibered plant which has been cut in pieces. It is possible that this method of manufacture may have to be taken into consideration in this area. Moreover, these pots may prove interesting from the standpoint of comparison with the so-called fiber-pottery which has attracted much attention recently.

4. The boring of so-called crack-preventing holes in pots is a widespread custom, but I think that in this region it is especially prominent. It would appear that the same situation holds for the pots of the Kamchatka region, regarding which Waldemar Jochelson has the following note: "Holes were seen in a great number of sherds. These were made differently for various purposes. That is: the holes near the rim were made by an awl while the clay was still wet, and were intended as holes through which to pass slender rope or twine in order to hang the pots over the fireplace. Other holes were made with a drill with the

aim of repairing broken pieces; the areas affected were tied together by strong thread and clay was applied over the crack." /Translation from the Japanese/ (Archaeological Investigations in Kamchatka, p. 76.)

5. I am indebted to Mr. Masao SUENAGA for my description of this sword.

6. Waldemar Jochelson, Archaeological Investigations in Kamchatka, p. 61.

7. In addition, the bone and ivory implements discovered on this island have been described elsewhere by Mr. Keiichi TANI in his "Bone Artifacts from the Eastern Coast of Etorofu Island" /Translation No. 7/.

8. That is, at the time of the discovery of an auxiliary burial article from a grave, the possibility must always be borne in mind that, even if the absolute year of the object may be clear, we cannot therefore consider immediately that this grave is of the same period; and this could be considered a conspicuous example of this. And all sorts of conjectures considering the relationship in time between these two are brought to mind. In the Ashikaga Period, a sword bound with the Prunus itosakura and made in Japan Proper later crossed the seas and went into the land of the Ezo; passing into the hands of the Ainu in exchange for something, it was valued: such must have been the case. And we do not know how many years have passed during which it was handed down. And thus, it came to be buried with the last man into whose possession it came. This probably is one permissible conjecture. Moreover, if it is correct that this possessor of the sword had been the descendant of mixed blood through some voyager from Japan Proper, then we may be permitted to imagine the romance of his ancestor which took place against the background of a wild island in the northern seas.

THE EARTHENWARES OF ETOROFU ISLAND, SOUTHERN KURILES

(Etorofu-to no Doki)

by Hiroshi TAKIGUCHI

(KODAI, No. 11, pp. 17-20. 1953)

I received from Mr. Kingo HAYASHI his recent publication, A Russian's Journey to Japan /Roshiya-jin Nihon Enkoki/ and read it with interest. In its appendix there is a long article entitled "The Ancient Culture and People of Northern Japan /Nihon Hokuchi no Kobunka to Shuzoku/," in which the pottery tradition of the northern area is summarized. In relation to this, I would like to present some materials on the pottery of Etorofu Island.

Etorofu is located north of Kunashiri Island and is the largest of the Kurile Islands, extending 220 kilometers in length (equal to the straight-line distance from Tokyo to Nihonmatsu, Fukushima Prefecture). The whole island is covered with coniferous trees. The number of volcanoes on the island is more than ten. It is said that the number of bears is greater than that of human inhabitants.

The island narrows from both sides just about at the middle portion, forming an isthmus. The southern bay is known as Hitokappu and the northern, Ryubetsu (or Rubetsu); the shortest distance /across the island/ between the two bays is only nine kilometers. Since both bays have wide mouths, neither makes a good harbor. But for Etorofu, which on the whole lacks indented, curved coast lines, they are important harbors. On the south are the towns of Toshimoe and, across the bay, Tennei; and on the north is the town of Ryubetsu.

The coast of Hitokappu Bay, including the Hamanaka Beach, is all sandy beach, except for the small section somewhat west of the center where the small volcanic island of Rakko (sea-otter) projects out into the ocean. A wrecked ship which is more than half buried in the sand presents a sorrowful sight. It is said that Rakko Island used to be inhabited by sea-otters in the past, but at present it is a barren, rocky island sticking out of the ocean. On the east coast of this bay, south of Toshimoe, are the two swamps of Yanke and Rebun, between which runs the Obeboso River.

This river is a small stream of only seven kilometers in length. The last two kilometers from the river mouth run through a marshy area. Artifacts are present in the left bank of the river near the river mouth. Below the surface soil, pottery occurs in a brownish stratum which lacks stratigraphic markers. Figure 2, No. 1 shows a complete jar-shaped, small vessel. The diameter across the opening is 95mm., height 117mm. All over the surface is a lightly-applied cord design, running in one direction in a slanted fashion; it can be seen on the rim also. Below the rim at one place, a hole is drilled as shown in the diagram. Since the section adjacent to the hole is missing, it is not clear if there were two holes lined up side by side.

Figure 3, No. 3 is made in the same manner. It is a sherd of a jar-shaped vessel. The diameter across the opening is about 15cm. It is relatively well fired. The color is black, with reddish-brown portions due to oxidization. There is an oily substance adhering to the inside of the sherd. The difference from the previous ware is that this one has a series of small circular holes on the rim and the side of the rim.

Fig. 1. Portion of Etorofu Island. 1: area yielding artifacts on lower course of Obeboso River; 2: cluster of pits at Toshimoe; 3: area yielding artifacts at Toshimoe; 4: area of surface finds at Rausu Beach; A: Rubetsu Bay; B: Ryubetsu Town; C: road to Shana; D: Hamamaka Beach; E: Hitokappu Bay.

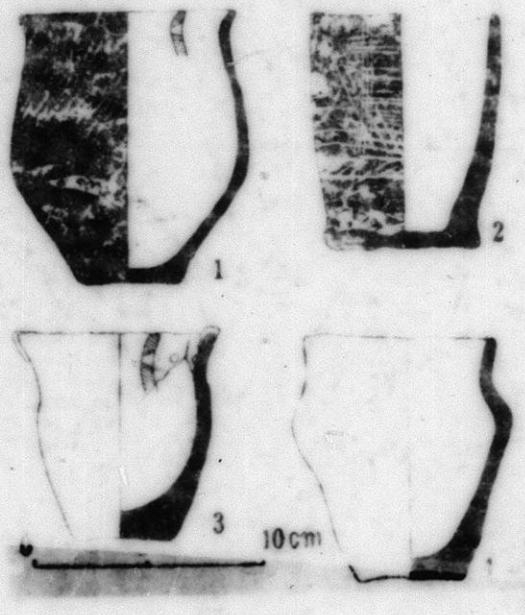


Fig. 2.

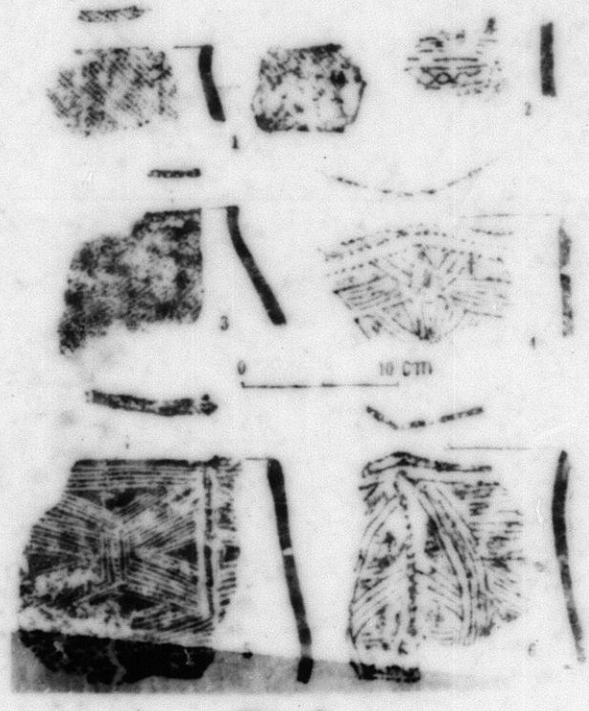


Fig. 3.

There are about thirty dwelling pits on the sandy beach north of the town of Toshimoe. Receiving strong westerly wind, the edges of the pits have an accumulation of sand and the pits look like volcanoes on the moon. Two trenches were dug; but due to the sandy nature of the beach, the floor of the pits could not be identified. We were able to get only several large stones from one of the pits. We do not know their use. A considerable number of stone tools has been found at this site. The writer has examined about four hundred, most of which are arrowheads; but there are also some which can be classified as spearheads and drills. Potsherds were few. The color is light brown. There is no design except slender clay bands pinched on. No oily substance was found on these.

Several hundred meters northwest from this cluster of pits, I accidentally found a deposit containing pottery on a plateau 6 - 7 meters high. This deposit consists of dark brown soil underlying a thin, sandy layer. Below the dark brown soil was reddish-brown soil. Pottery consists of somewhat large sherds, probably of deep pots. No. 1 in Figure 3 shows a thick sherd of a deep pot, 15cm. across the opening. Cord marking is seen about 2cm. wide from the rim along the interior. Along the rim are circular perforations, 5mm. in diameter and 12mm. apart on the average.

There is a road good enough for automobile travel between Toshimoe and Ryubetsu. It runs through a coniferous forest, along Toshimoe Lake and Ryubetsu Swamp. Both the lake and the swamp freeze in the winter and travel on them by automobile is possible. This road was constructed in a virgin forest. It is almost all flat and is the main road connecting the northern and southern coasts.

The dwelling pits and other sites near Ryubetsu were investigated and reported long ago. I came across an area where artifacts were scattered on the sandy beach at Rausu, about one kilometer east of the Ryubetsu River mouth. The surface-collected pottery is shown in the figures. No. 2 in figure 2 is a crudely made cuplike vessel; the diameter across the opening is 82mm., the height 103mm. The thickness is uneven and the shape is not perfectly symmetrical. The design is made by incising several straight lines horizontally and vertically with a spatula.

Figure 3, No. 4 is a sherd of a deep pot with a wavy rim. The clay contains some amount of sand. The color is reddish-brown. The interior is thickly covered with oily substance. The rim is thinly made and has continuous punctations made by a spatula. The surface is thinly covered with clay. The design is effected by combining cord impression, incision with a round stick and punctation with the tip of a spatula, giving the effect of slight bas-relief. There is a hole near the rim, but no trace of its having been used for suspension purposes can be recognized.

Figure 3, No. 5 is a sherd of a deep pot. The sherd consists of the top two-thirds of the vessel. The clay contains sand and the color is dark brown. There are small protrusions on the rim, from which a line, raised in a ridgelike fashion, extends straight down on the surface. The line is punctated. The rim is also minutely punctated. There are five incised lines paralleling the rim and several parallel incisions which cross each other in an X-like fashion. These are the principal designs. These incisions are accompanied by cord impressions, and, in order to make the design more forceful, series of dots are also applied. The bottom one-third is probably not decorated. This piece also has a hole.

Figure 3, No. 6 is also in the shape of a deep pot, contains sand in the clay, is greyish-brown in color and has oily substance adhering to the interior. The rim is wavy, and from the highest points of the waves, ridgelike raised lines extend straight down. The lines have indentions. The rim has a continuous series of dots. On the surface, cord impressions and incised lines create thin, raised lines.

In sum, these sites have pottery of Notoro style or of Ebetsu style, which is considered to be a derivative of the Notoro. They show differences in character from the sites on the Pacific coast previously discussed.

Twenty kilometers in a straight line northwest from Ryubetsu the largest town of the island, Shana, is located. A friend of mine found on a hill near the town two pots which are shown in figure 2, Nos. 3 and 4. Both are made by coiling and the firing is poorly executed. There is no decoration on the surface. They are dark with soot. The interior is covered with oily substance. In No. 3, the diameter across the opening is 87mm., height is 90mm. There are traces of small protrusion /opposite from/ the rim. The two holes near the rim were drilled for the purpose of repair after a crack occurred. No. 4 is 83mm. across the opening, 106mm. high and has a slightly pointed shoulder. It is a small, jar-shaped ware.

That there are dwelling pits on the sand dunes near Shana, which produce pottery and stone tools, was reported by Teiji ISHIKAWA long ago in the Journal of Anthropology (Jinruigakukai Zasshi). But I was not able to investigate this.

Note: The Rausu Beach was investigated in May, 1945 and others in 1944.

BONE ARTIFACTS FROM THE EASTERN COAST OF ETOROFU ISLAND

(Etorofu-jima Higashi-kaigan Hakken no Kotsuga-ki)

by Keiichi TANI

(SHIZENGAKU ZASSHI, Vol. 3, No. 4, pp. 173-183. 1931)

For the purpose of operating a fishing industry /I/ sailed for the first time to Etorofu Island in April of last year, and debarked at a place called Hodokoshi in Rubetsu Village. Although it was the end of April, two feet of snow remained in the valleys, and the cold was far from springlike. Immediately upon landing, I set off to investigate the extent of snow damage within the fishery precincts, and when I passed the spot where, the year previous, the ground had been leveled for the construction of fishery buildings, /I found/ arrowheads fallen on the ground, and when, thinking this strange, I explored the vicinity, I discovered exposed pit dwellings and shell mounds. Moreover, near these were scattered sherds, stone chips, and several flat stones that were thought to have been used as paving stones. Because of these, it became clear that this was the location of a Stone Age site.

The three sides of Hodokoshi are enclosed by such mountains as Otamoe /Otamoi?/ and Mt. Hodokoshi, with the vast Pacific Ocean to the front; the coast is very steep, with only a small bit of flat land on both sides of the Hodokoshi River. For this reason communication with nearby villages is cut off by geographic barriers, with no other method of contact except by ship. Since it is so inconvenient even at the present time, it seems impossible to imagine that in the days when it was uncivilized and wild, dwellings were built and life went on here. Nevertheless, on the strength

of the afore-mentioned facts, it is evident that a primitive people lived here. Judging by this, it is thought that, no matter how isolated this island was, /the primitive people/ had nevertheless built their dwellings everywhere, had sought their sustenance in the mountains and the sea and had managed to exist. From the beginning, this island was rich in food, with the salmon and the salmon-trout going upstream in masses, with the cod and other fish and seaweed proliferating in the sea, and especially with the sea mammals (without which they could not get along) swimming everywhere along the coast; while the bear, fox, and other wild animals live in droves in the mountains and the meadows. Thus, because the bases for existence were easily obtained, the population naturally increased; and it follows that large settlements were formed, a fact made clear by the remains of countless pit dwellings that remain today in various places.

In the line of business, I several times made the round trip of over fifty miles between Hodokoshi and Urumobetsu. Each time, I discovered sites near the path, or explored them, or, taking an hour or two, made trial excavations in accessible sites. However, I had insufficient time; the weeds grew to the height of a man; the kumasasa /a low, striped bamboo/ grew wild and covered the sites; and on top of all this, bears frequently appeared. For these reasons the investigations were hampered, and I could not carry out a systematic study. However, since I will cross over to the island every year henceforth at the fishing season, I intend to carry on a continual investigation of one small section /p. 174/ and complete it some day. In view of all this, the collection of relics has been difficult, but I will select the perfect pieces from among the hundred

and several tens of bone and ivory implements which I have collected in five years, and describe them. If, in so doing, /this article/ becomes source material for the study of the relics of the Stone Age, to however modest an extent, I shall be very happy.

General Outline of the Sites

The Kitchen Midden at Hodokoshi, in Rubetsu Village. On top of a hill about thirty feet from the seashore there are pits in seven places. The area in which sites were destroyed for the purpose of leveling the ground was about 230 square meters, and it is conjectured on the basis of various details that there had been pit dwellings here, too. The pits are round in shape and the kitchen middens are /found/ inside of the pits or on their eastern side. The shells are almost all makigai, with the bones of the whale, bear, and birds mixed in, and this forms a layer of about a foot and a half. Pottery and stone implements appear in a stratum about one foot thick between the surface layer of soil and the black soil beneath the shell layer. Articles made of bone consisted of only two or three objects made by sharpening bird bones. Of course, since this was the result of the excavation of about 3.3 square meters, the overall frequency of relics is not clear. As for the appearance of the interior of the pits, the fireplace consisted of a large pot with the base broken out, while in addition to this, another fireplace about two feet away had been built by piling up round stones. With these two fireplaces as the center, large and small, flat stones had been laid in the form of rays. The pottery was of the thick type.

The Onebetsu Kitchen Midden, O-aza Furubetsu Village, Rubetsu Village. On top of a high hill on the left side of the mouth of the Onebetsu River, and about fifty feet away from the seashore, are some thirty large and small pits. About one foot from the surface of the earth, inside and outside of the pits, are the kitchen middens. A great many bones of the whale and other animals and birds are mixed in, forming a layer from one to three feet thick. The bone implements are fewer than those of the Uebetsu Kitchen Midden, but the same types have appeared. It was from this place that an object made from the vertebra of a whale in the shape of a brazier was discovered. Pottery and stone implements have been recovered from the surface layer of soil and from the black stratum of soil beneath the shell layer.

The Uebetsu Kitchen Midden, Rubetsu Village. This is located on a flat hill on the left side of the Teinei River. Approximately sixty feet away from the seashore there are about twenty large and small pits scattered about. The pottery and stone implements form a layer at a depth of five to seventeen inches from the surface of the earth. The kitchen midden, inside and outside of the pits, contains the bones of whale, fish, and birds beneath the layer of black soil, the depth being from three to four feet; even the shallow examples are over a foot thick. Bone implements have been found in enormous quantities. What is especially notable is that it was from here that an ivory implement in the shape of a spoon was found with elaborate carvings on it. It is thought that the kitchen midden covered a considerable area. Human remains were discovered beneath the shell layer of one of the pits. Around the skeleton were placed several jar-shaped pots three to five inches in diameter and five inches to one

foot in height which had no decoration or had straight line patterns — evidently grave goods — and these were covered by ashes. Could this not have been a special type of burial? This is problematical since I have not heard of other examples where the pots had been covered with a thick layer of ash.

The Sunayama Kitchen Midden, Rubetsu Village. This is located about two and one half miles to the south of the Uebetsu Kitchen Midden, and faces the open sea. The pits are on the gently inclined slope of a sand dune. It is said that until several years ago this was covered with black soil and formed a vast, grassy plain, but I have been told that it has now become a sandy beach and, since it is being eaten away year by year by the waves, the number of pits has decreased. /p. 175/ The kitchen midden is located about five inches beneath the sand stratum, but there are places where it has been exposed by the wind, or where, the sand having been removed by the wind, only the cultural deposit remains. Bone implements and pottery have appeared in the shell layer or beneath it. There is a layer of ashes thought to have been the site of the fire pit. Stone implements are discovered in the entire area.

The Tomakarausu Kitchen Midden, Furebetsu Village. About 240 feet away from the seashore, there is an elevation about fifteen feet in height. At this spot there are about ten pits. Once, when the area around the pits was dug up, pottery was discovered in vast quantities, and it is said that stone arrowheads, whetstones, and stone knives were also discovered. The kitchen midden forms a two-foot layer around the pits. Pottery and stone implements have been discovered.

The Kankekarausu Kitchen Midden, Furebetsu Village. If one climbs up a steep slope about three hundred feet away from the seashore, the slope becomes a flat hill in the middle of which flows a mountain stream of about twenty-four feet in width. On the left side of the river are large and small pits. The largest of them has a diameter of about eighteen feet. The kitchen midden forms a layer of about three feet on the outer rim of the pits. Pottery and bone implements have been discovered. It is here that the decorative object in the shape of a fur-seal was discovered which could be called the curved jewel made of ivory.

The Artifacts

Objects Made of Ivory

The Scoop-Shaped Object Made of Ivory (No. 4 in fig. 5).* Unearthed from the Uebetsu Kitchen Midden. It was made of a sperm whale's tooth. Since I have not heard of the excavation of specimens similar to this object, its use is not clear; from its shape, it could not have been a decorative object, but must have been used as a spatula to scoop up something. On the whole, it gives the feeling of being a kind of well balanced ornament. Its length is 15.7cm.; the width is 4.7cm. At three places on each side of the head are round protuberances; circular holes have been pierced through their centers, and from them engraved lines extend inward. A longitudinal groove runs from the apex of the V-shaped relief line, and both ends of this terminate in round pits. At the inner end of this groove there are six small holes on each side, running left to right at an angle, adjoining /the figures of/ a man and a bear carved in relief. The figure of the man is seated on the ground, with his folded arms resting on his knees; he is

*See p. 388.

looking up, and the pose is expressive of pride. The bear near him is on his back and rigid. On his flank is a small hole depicting the wound of a lance or an arrow, while the belly, from the breast to the reproductive organ, has been split open. In essence, this design probably portrays the spectacle /of a man who has/ killed a bear and who is nearby in a state of arrogance. On the inner side of the figure there is shown a form like an arrowhead in relief; it is thought that this shows the shape of the arrowhead or the lancehead used at the time of hunting bear. On the entire surface of this artifact there remain, here and there, traces of what appears to have been varnish painted over it; but judging by the fact that the same substance seems to have been painted not only on this object but on other ornamental objects that will be discussed later, it is thought that this /type of/ paint was in general use at that period. No. 2 of fig. 1 is 9.8cm. long. It has been damaged, but since it is a similar specimen, I have used it as an illustration for purposes of comparison. This object also is made of the same material as the preceding, and the form in general is similar /p. 176/ but the decorations have been applied only on the head. The balance and beauty of the design and the delicacy of the sculpture are matters of astonishment, and we are able to judge how advanced in artistic technique /the people/ were.

The Fur-Seal Made of a /Sperm Whale/ Tooth (No. 2 of fig. 5). This was unearthed from the Kankerausu Kitchen Midden. It was fashioned by utilizing the naturally curving upper tooth of the sperm whale. The length of the body is 5.6cm. and the width is 2cm. It shows a fur-seal just about to leap into the water; the head is small, and a horizontal line has been engraved to indicate the mouth; on each side beneath the eyes there are

nine pricks to indicate the whiskers; on the belly there is carved in relief a simple pair of front flippers; on the dorsal surface, at the tip of the tail, the rear flippers and the tail have been engraved. At the center of the rear flippers there is a hole of about 0.5cm. which has been drilled from both sides; on the torso there are pricks to indicate the hair. It is thought that this, like the curved jewel made of a tooth, was used as a neck pendant.

In addition to the above, there are other objects, round and polished, made by cutting discs from whale teeth; or rings were made with holes at the top and bottom, which were thought to have been used as necklaces; or the teeth were cut vertically, utilizing the dental cavities, making something which is thought to have been used as a spoon. But since in all these cases perfect pieces have not been found, I will discuss these at a later date when similar /perfect/ specimens have been discovered.

Objects Made of Bone

The Bear Figure (No. 1, fig. 5). This object was unearthed from the Uebetsu Kitchen Midden. The figure of a bear is well depicted, and one can recognize it at a glance. It appears that the bear had an extremely close relationship with the people of that time, and this is made clear by the profusion of bear bones unearthed from kitchen middens. Ordinarily, when they are found in the mountains and meadows, they are truly lovable creatures; even today the Ainu raise baby bears, while in their ornaments, there are numerous objects on which the /bear-/ form is to be found. /p. 177/ It goes without saying that not only the Ainu, but the Kamchatka natives copied the figure of the bear on toys and ornaments. The length of the body is about 3.5cm.; it is made of whalebone of good quality. The

leg on the left side, the part made of soft material, has been rubbed away and is short, but the eyes, mouth, nose, and ears are depicted to perfection. At the waist, there is a hole about 0.6cm. It is thought that a thong was passed through this hole, and that it was used with other ornaments in something like a necklace. A varnishlike substance of a yellow-brown color has been painted from the waist to the hind legs; and from the fact that traces of it are to be found here and there, this would mean that it was painted over the entire surface.

The Harpoon (No. 5, fig. 1). Unearthed from the Onnebetsu kitchen midden. Made of whalebone, its length is 14cm.; it has a pair of barbs; the blade tip is thin and sharp, making it well designed for penetrating into flesh. The end of the shaft has been whittled on four sides and made small so that it could be inserted into the head of the shaft. Just a little above this is the hole through which the line is passed. During usage, we may imagine that the slender portion of the shaft end was slightly inserted — sufficiently to prevent its falling out — into the head of the shaft, and the line was tied to the line hole. When it had pierced the flesh of the prey, the handle fell off by itself and only the head remained, with the barbs serving to prevent its slipping out. Then the line is wound up by hand, the prey is drawn in and captured. Although there are small differences in arrangement and usage engendered by differences in the design of fishing gear and in the materials used to make it, the spear fishing which is carried on today in various localities may be said to be identical in principle with this.

Harpoon Head. That harpoons are of various types from the standpoint of shape and mechanism, depending upon the type of prey and the methods

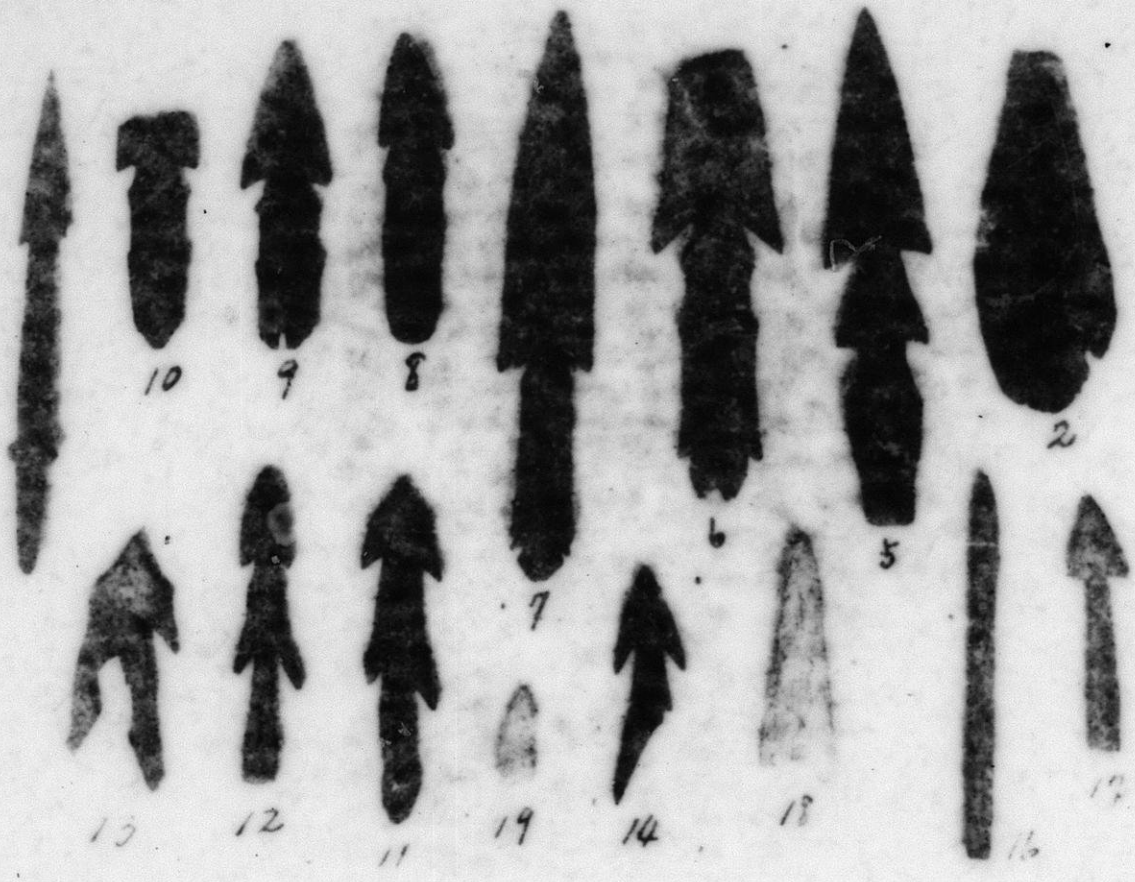


Fig 1

of use, is a fact that holds true in all ages. When the game was large and strong, then large, strong harpoons that are not easily broken were used; while for prey that was weak and easily caught, it was sufficient to have one which did not easily slip away. The specimens of harpoon heads collected on this island are few in number. The mechanisms were complicated and it is thought that, compared to the harpoon heads of the other Stone Age sites, these are advanced. The large-type harpoon heads do not have line holes; the small-type ones have two holes where the line was tied, in a horizontal row near the base of the blade. However, it is thought that both types were identical in manner of use. There are three harpoon heads which were designed for use with stone points. Of these, one has been damaged from the middle, but in general, it is thought that it was identical with the other two in design. Since there are nine specimens of the types discussed above, I will divide them into four types and discuss them.

Type A. Divided into a and b sub-types

Sub-type a (No. 6 in fig. 1). Unearthed from the Kankekarausu Kitchen Midden. The tip of the harpoon has been damaged and its exact length is not clear; but if we assume that the damaged portion was 2.5cm., its length is 14.5cm. The underside of the point is flat while the back surface forms a mountain-shape /is convex?/. The blade is thin and sharp and the barbs are cut in deeply. In cross-section, the stem is semi-spherical, and as one gets closer to the basal tip, the underside has been whittled away and made pointed. The notches are deep and circular grooves are cut into the back to prevent the line tied to the head of the handle from slipping away. /p. 178/ The tip of the tail has a pair of small barbs. At the neck are signs of rubbing where the line had been tied.

Sub-type b (No. 7 of fig. 1). This was found in the kitchen midden where a was found. Its length is 15.8cm.; the point is slender and long and flat. The length of the point is 9.5cm. The stem, as compared to the point is short; it has shallow grooves and lacks the circular groove; at the tip of the tail there are small barbs. On the neck there are traces of the line having been tied. This harpoon head, in its mechanism, is closer to a lance than to a harpoon.

The two varieties of harpoons discussed above, sub-types a and b, differ greatly in mechanism and in usage when compared to the other small-type harpoons. That is to say, in certain cases they were firmly lashed to a shaft and used as lances, while even when they are used as harpoons, thick lines were tied onto them since they have no line holes; this prevented the weakening of their strength, and they were suited for the hunting and capture of strong animals such as the common seal and reindeer. Those in which the point is larger compared to the body are thought to have been used for the "strike" such as the hurling lance used in whaling boats.

Type B (Nos. 8, 9, 10 of fig. 1). Nos. 8 and 9 of fig. 1 are from the Uebetsu Kitchen Midden; No. 10 of the same figure was unearthed from the Onnebetsu Kitchen Midden. The former two are 8.3cm. in length; the latter is also approximately of the same size. No. 8 in the illustration presents a somewhat rounded form; a pair of line holes have been drilled at an angle from the center. The area between the line holes has been scraped away to form a hollow so as to prevent the protrusion of the rope, and the barbs have been cut in deeply. The body is a semi-spherical tube shape and has the circular groove. On the belly a groove has been made

suitable for receiving the shaft. A shallow groove has been made from the line hole to the groove /for the shaft/, making it convenient for the rope to fit in. This groove is not to be seen in the other two. The tail end has been faintly sharpened. No. 10 of the illustration is, in general, of the same design, but the tail-hook is sharper than that of No. 8 of fig. 1, and it has no curve. In No. 9, the point is flat and the blade is sharp. The tail-hook has been split /p. 179/ and divided in two, and designs have been engraved. Thus, there are some differences, but the original shape is the same, and it is thought that the method of use was also the same.

Almost all of the harpoon heads which have been excavated and described up to now usually have the line hole in the middle of the body, and examples such as the above in which the point has rope holes have been rare. It is a problem which should be given a great amount of study as to why rope holes have been made in this fashion. It is clear that, because these harpoons are flat and narrow in shape, when they enter the body of the prey, they penetrate deeply, and because the line is close to the point, they turn sideways rapidly, are held fast at both ends, and thus are ideally suited to prevent their slipping out.

Type C. This is the type designed for use by inserting a stone point. Nos. 11 and 12 of fig. 1 were unearthed from the Uebetsu Kitchen Midden; No. 13 of the same figure was unearthed from the Kankekarausu Kitchen Midden.

Whalebone has been cut flat, and at the tip, a slot to separate the back and front has been made. Clearly, it was to be used with the insertion of a stone point. Nos. 11 and 12 have two pairs of barbs, and

near the end of the stock a slender line hole has been drilled. They may have been used with the end inserted into a shaft. Their lengths are 8.1cm. (No. 11), and 7.5cm. (No. 12). Since No. 13 has been damaged in body, its construction is not clear, but the way the barbs are made differs from the other two. That is to say, the position of each of the barbs on the left and right differs: in the first /pair of/ barbs, a barb is to be found only on the right side, while on the left side it is only vestigial. In the second /pair of/ barbs, the position of the left and right /barbs/ differ, the barb on the left side having been carved out from a point further toward the right from the center.

Type D. The Harpoon Head of the Hurling-Lance Type, with Two Pairs of Barbs (No. 14 of fig. 1).

One side of the second /pair of/ barbs remains, and the body has been damaged; but I saw two which were similar in shape to this one. I intend to reconstruct /this/ from the latter. A flat fragment of bone has been scraped, forming two pairs of barbs. There is a plane in the center, both on the back and on the front. As the base of the second /pair of/ barbs, a pair of slender holes, thought to be line holes, has been drilled. Judging from similar specimens, the stock was long and slender, and is thought to have been used by being fixed onto the shaft.

Bone Adze (No. 20 of fig. 2). Although its length is not clear — the head having been damaged — the remaining portion is 16.7cm. long. It was made of whalebone; the blade has been sharpened on both sides and is keen. As compared to the cutting edge, the head is somewhat wide. The surfaces at the sides have been left as they had been whittled and are extremely crude, having bumps and hollows. It was unearthed from the Uebetsu Kitchen Midden.

Bone Arrowheads. These are divided into two types.

Type A. The type with tang (Nos. 15, 16, and 17 of fig. 1). In shape these strongly resemble metal arrowheads, having a long tang with the tip sharpened. No. 15 was unearthed from the Tomakarausu Kitchen Midden; its overall length is 13.5cm.; the length of the blade is 5cm. The cutting edge is keen and is like the metal arrowhead; the tang, in cross-section, is round, and at a point 2.8cm. from the end, there are protuberances to fix it firmly into the arrow shaft. In No. 16, a bone fragment has been shaped so that it is round in cross-section; its point has been sharpened, the right side has been rounded somewhat to form the border between the arrowhead and the shaft. /p. 180/ The end of the tang has been whittled away on the back to facilitate the insertion into the arrow shaft. Its length is 9.4cm. It was unearthed from the Uebetsu Kitchen Midden. No. 17 is lacking the end of the tang, and its length is unknown; but in its extant part only, it is 6.5cm. The arrowhead is triangular; the whole body is flat and the cutting edge is not sharp. It was unearthed from the Uebetsu Kitchen Midden.

Type B. The tangless type (No. 18 and 19 of fig. 1). It is in the shape of an arrowhead, and was used inserted into an arrow shaft. No. 18 was collected at Toshimoe and is 5.6cm. in length. In the crotch, the length at right and left differ. No. 19 was unearthed at Rubetsu and its length is 2.3cm.

/Objects/ Used as Fish-Spears (Nos. 21 - 33 of figs. 2 and 3). Since I think that to many people who do not engage in fishing the term /yasu/ is unknown, I would like to explain a little bit what yasu are and how they are used. The yasu is an implement made of a metal spear with pointed

tip to which is attached a handle made of wood or bamboo; this handle is grasped and fish and shellfish in the water are speared and captured. The metal spear may be single-pronged or it may be double-pronged or it may have several prongs; moreover, in those which have more than three prongs, the prongs may be in a row or they may form tripods. Some are used from a ship, some are used to spear fish anywhere under water, and some are used by diving under the water. Many methods are used, depending upon the place and the prey to be captured. Those from No. 21 and 31 are thought to have been used as yasu. As I have explained above /sic/, they may be made of metal or bone, and they may have been bound to a one-prong or multi-pronged handle and used. Roughly classifying the thirteen specimens in the illustration according to type, we divide them into six types. Nos. 21 - 25 of fig. 2 are of the same type; they are pointed at both ends, and at the center and to the right there is a triangular, knob-shaped protuberance, and the surface on back and front is fairly flat. The lengths are: 17.4cm. (No. 21), 16.3cm. (No. 22), 13.6cm. (No. 23), 12.6cm. (No. 24) /p. 181/, 7.9cm. (No. 25). No. 21 was unearthed from the Onnebetsu Kitchen Midden; Nos. 22, 24, and 25 were unearthed from the Uebetsu Kitchen Midden; No. 23 was unearthed from the Kankekarausu Kitchen Midden.

In Nos. 26 and 27, the tips are somewhat flat and come to keen points, and they have inconspicuous hooks. In all other aspects of form, they are the same as those described above. The lengths are 13.5cm. (No. 26), 7.2cm. (No. 27). No. 26 was unearthed from the Uebetsu Kitchen Midden; No. 27 was unearthed from the Sunayama Kitchen Midden.

Nos. 28 and 29 of fig. 3 have projections alternately on both the left and right sides, are slender as compared to the others, and the tip is sharp. No. 28 was unearthed from the Sunayama Kitchen Midden and is 17cm. long. No. 29 was unearthed from the Uebetsu Kitchen Midden and is 15cm. long.

No. 30 of fig. 2 was unearthed from the Uebetsu Kitchen Midden, and though both edges have been damaged, its length is 25cm. The body curves and the alternating projections are attached to the body at an angle of ninety degrees. No. 31 of fig. 3 lacks both edges, but the left side has been whittled away to the extent of 3cm. forming a groove to facilitate fastening. It was unearthed from the Uebetsu Kitchen Midden.

No. 32 was unearthed from the Kankekarausu Kitchen Midden and is 12cm. in length; a protuberance has been made on the right side; the end has been scraped so that it would fit into the handle.

No. 33 was unearthed from Kankekarausu and is in the shape of an arrowhead; a hole about 0.4cm. in diameter has been opened up at the end. The method of fashioning is crude, and it may have been used as an arrowhead, but since there are similar types among the fish-spears used today, I have put it into the category of fish-spears.

Beak-Shaped Bone Implements (Nos. 34 and 35 of fig. 3). The rib-bones of bears have been cut, the outside has been whittled away, and the point sharpened. Although their use is not clear, it is possible that they may have been used as fish-spears. Their lengths are 17cm. (No. 34), and 13.5cm. (No. 35). They were unearthed from the Uebetsu Kitchen Midden.

Curved Bone Implements (Nos. 36, 37, 38 of fig. 3). They were made by whittling rib-bones and whalebones; their use is not clear. A groove

has been made in one end for tieing or for attaching a rope; the other end has a hollow. Nos. 36 and 37 were unearthed from the Uebetsu Kitchen Midden and their lengths are 14.8cm. (No. 36) and 15.5cm. (No. 37). No. 38 is 13.8cm. in length; the point is thin; compared to the others, it is roundish. It was unearthed from the Onnebetsu Kitchen Midden.

Beach-Chisel-Shaped Bone Implements (Nos. 39 and 40 of fig. 3). Because these resemble the beach-chisels used for prying off shellfish adhering to rocks, I have given them this name. No. 39 is 14.2cm. in length; a flat piece of bone has been made into the form of a spatula and the tip has been rubbed thin. No. 40 is 11.7cm. in length. A triangular piece of bone has had its tip rubbed and made into a blade; traces of its having been used are clearly visible. Unearthed from the Uebetsu Kitchen Midden.

Tubular Bone Implements (Nos. 41 and 42 of fig. 4). Made in the shape of a tube by cutting off both ends of the tibia of birds. Large quantities were unearthed from each of the kitchen middens. Unearthed from the Uebetsu Kitchen Midden.

Bone Implements Thought to Have Been Used to Hang Objects (No. 43 of fig. 4). The body is curved with circular grooves on both ends. The top and bottom have been cut away especially deeply. It is oval-shaped in cross-section; it is thought that a cord was tied to the groove and objects were hung or suspended. Its length is 9.3cm. and it was unearthed from the Uebetsu Kitchen Midden.

Bone Implements Whose Use is Unknown (Nos. 44 and 45 of fig. 4). No. 44 is a rectangular-shaped, flat sheet of bone with a thin ridge made horizontally on both ends; the corners on one side have been rounded and

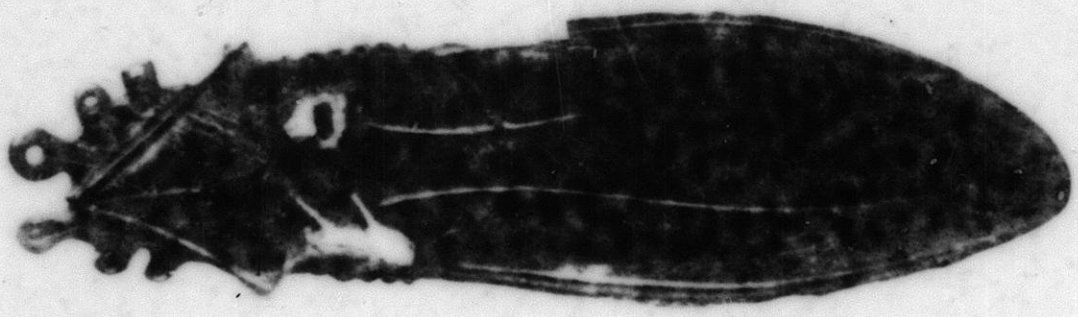
Fig. 4

curve inward. Its length is 9.6cm. and its width is 3cm. No. 45 is an uneven pentagon in cross-section; its length is 9.5cm. It is somewhat depressed along its major axis on both sides. Unearthed from the Uebetsu Kitchen Midden.

U-Shaped Bone Implements (Nos. 46, 47, and 48 of fig. 4). May have been used for suspending things. Whole pieces are lacking, so I have illustrated with those whose shapes are comparatively clear. Although one side is missing in No. 46, it is clear from No. 48 that it had another side similar in shape to the other one. The two sides of No. 47 form slanting shapes while the two sides of No. 48 are parallel. Thus, the three differ somewhat in shape, but the method of use was the same. Nos. 46 and 47 were unearthed from the Uebetsu Kitchen Midden while No. 48 was unearthed from the Onnebetsu Kitchen Midden.

Bone Needles (Nos. 49 and 50 of fig. 4). Shaped in the form of needles, the points are extremely sharp. In No. 49, the part in which the eye was located is missing, but it is thought to be a large-shaped needle. Made by splitting the tibia of birds and sharpening the point. It is almost identical in shape with those used by Indians owned by the Hakodate Library Museum. Its length is 11.6cm. It was unearthed from the Uebetsu Kitchen Midden. In No. 50, one point of the wing-bone of a bird has been sharpened and the other end has an eye near the edge. Its length is 16.6cm. Unearthed from the Kankekarausu Kitchen Midden.

Bone Implements Presumed to Have Been Used in Eating Shellfish (Nos. 51 and 54 of fig. 4). A great number of bone implements thought to have been used to pick out the flesh of spiral shells have been unearthed. Those of the illustration are one example of these; these are made of



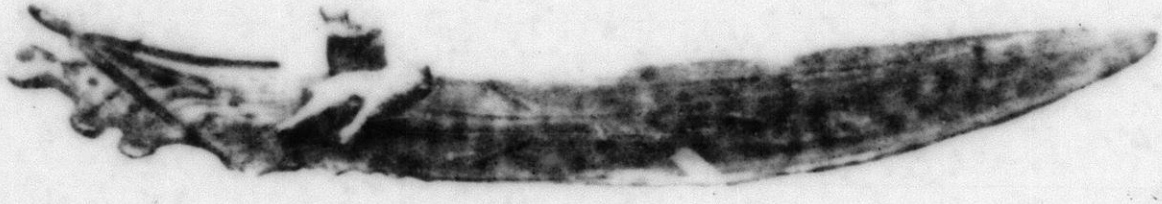


Fig. 5.

bird-bones with one end sharpened. Although there are differences in length, they are generally from 6 to 8cm. long.

Conclusion: This ends my description of the important bone implements discovered on the eastern coast of Etorofu; but it is a matter of extreme regret that I have been unable to make clear the changes /developments/ in their construction and their methods of use. Particularly with respect to the relationship with the bone implements unearthed from the various kitchen middens of Hokkaido and of Japan Proper, materials for making a comparative study are scanty; and since I know of these only through books and magazines, I have felt a terrible inconvenience in making a comparison of the relics. If, fortunately, there are persons who are familiar with this type of bone implements, I will request their guidance.

STONE IMPLEMENTS AND POTTERY FROM ETOROFU IN THE KURILES

(Chishima Etorofu no Sekki oyobi Doki)

by Sanpei UEDA

(KOKOGAKU ZASSHI, Vol. 24, pp. 777-778. 1934)

Yonematsu YOSHIDA, a friend from my own province who had returned from Tokyo on September 10, visited me at the Education Ministry carrying the relics had had collected from the pit dwellings in the sand dunes at the beach at Rubetsu on Etorofu Island. The site was a sand mound about forty feet above sea level. What appears like round black lumps in the white sand were layers of volcanic ash of a black-brown color; the pit dwellings had been built in this layer of volcanic ash, and sand has

collected in their interiors. The pottery was of the jomon type of middle size; the thickness at the belly was 1cm.; the cord impressions, criss-crossing somewhat vertically and obliquely, have many points of difference with those of Japan Proper. The portion of the rim is comparatively thin with a slight flare. As for the stone implements, there was one "knife"-shaped object made by chipping; its length was 10cm.; its width 3cm.; at its thickest point it was approximately 1.2cm.; it utilized, on one surface, the natural cleavage of the stone, and the double blades were made by chipping. In stone arrowtips, there are those made of obsidian and there are those made of opal, and their shapes, while generally small and thin, are comparatively well-made. When we compare the ratio of those which have a tang and those which lack one, a comparison which is being specially made in the various areas, we see that, of the total of forty-one arrowtips brought in by Mr. Yoshida, ten had tangs and thirty-one had none, showing definitely an overwhelming number among those without tang.

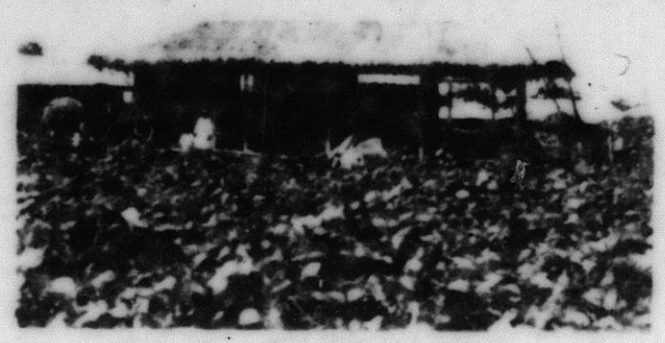


Fig. 1. Standing figures. indicate location of site.

Fig. 2. Stone implements and potsherds from Etorofu Island.