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# THE T 1 SITE AT NATIVE POINT, SOUTHAMPTON ISLAND, N.W.T.

HENRY B. COLLINS

The discovery of flint bearing sites of considerable antiquity in Alaska, Canada and Greenland during the past decade has opened a new chapter in Arctic archaeology. Though not as old as Paleo-Indian sites to the south, the early Arctic flint complexes have close affinities with Mesolithic cultures of Eurasia. Organic material from one of the Alaskan sites, the Trail Creek cave on Seward Peninsula, has been dated at 6,000 years B.P., and on the basis of typology the site would appear to be somewhat later than the Denbigh Flint Complex. As the oldest radiocarbon dates for Eskimo sites are only 3,000 years for Chaluka on Umnak Island in the Aleutians and 2,258 years for Okvik on St. Lawrence Island, it is apparent that the flint sites are pre-Eskimo in the sense that they were occupied probably several thousand years before the establishment of the pattern of culture which we call Eskimo. They cannot, however, be entirely dissociated from Eskimo. Indeed, one of the most important conclusions to emerge from the new discoveries is that of a cultural continuity, indicated by specific trait linkages, between the Arctic flint sites and early Eskimo patterns, particularly the Dorset. The early or proto-Dorset site described here, for which a radiocarbon date of  $2,000 \pm 230$  years has been obtained, affords additional evidence of such connections.

The site is located at Native Point, on the southeast coast of Southampton Island, 40 miles south of Coral Harbour. It takes its name from Tunermiut, the Aivilik Eskimo name for Native Point, which was the principal settlement of the Sadlermiut Eskimos who became extinct in 1903. In addition to T 1, there are three other archaeological sites at Native Point: the old Sadlermiut village, consisting of over 75 stone and sod house ruins; T 2, a small Dorset site, later than T 1, adjacent to the Sadlermiut site; and T 3, a small site similar in cultural content to T 1, but apparently somewhat later. This paper is concerned only with the T 1 site.

Excavations were carried out at these four sites, as well as others in the vicinity, during the summers of 1954 and 1955.<sup>1</sup>

<sup>1</sup> The T 1 site was discovered by G. D. Bell, a member of Dr. J. B. Bird's geographical expedition of 1950, and it was on the basis of his description of this and the Sadlermiut site (Bird, 1953) that Native Point was chosen for excavation. The 1954 expedition was sponsored by the Smithsonian Institution, National Museum of Canada and National Geographic Society; the party consisted of the writer, Dr. J. N. Emerson, William E. Taylor, James V. Wright and myself. In 1955 the sponsoring institutions were the Smithsonian, National Museum of Canada and American Philosophical Society, and the party consisted of Emerson, Taylor, James V. Wright and myself. We are grateful to the U. S. Quartermaster Corps for providing military rations and the loan of tents and Arctic clothing, to the R.C.A.F. for air transportation from Montreal to Coral Harbour and return, and to Mr. A. T. Swaffield, Hudson's Bay post manager at Coral Harbour, for arranging for our local transportation by Eskimo dog team and Peterhead boat.



The T 1 site is situated on the top of a 70-foot high headland or plateau 1 mile east of the Sadlermiut site and half a mile from the present beach. The plateau is formed of glacial till consisting of limestone gravel and sand (Bird, 1953). On its flat gently sloping surface are a number of low ridges—old beach lines—the pattern of which is clearly visible only from the air. Between the base of the plateau and the sea are six younger, more prominent beach lines. The T 3 site is on the oldest of these ridges, adjacent to T 1, and 45 feet above sea level.

The T 1 site consists entirely of shallow middens, concentrated for the most part on the northern and western parts of the plateau, and covering an area, though not continuous, of over 30 acres. The midden areas are covered by a low sparse growth of vegetation, mostly saxifrages, Dryas, grasses and lichens, which does not differ in any respect from that growing on other parts of the site. The entire top of the plateau has the appearance of a flat, level pasture, and the middens are recognizable only because of bleached animal bones, flint flakes, or artifacts that project here and there from the turf or are exposed on the surface where wind erosion has removed the vegetation. There are no house ruins, pits or irregularities of any kind on the surface. Several hearths and irregular arrangements of flat stones suggestive of flooring were uncovered but we found nothing else to indicate substantial house construction in the areas excavated. No graves, cairns or other surface structures were found nearby that could be positively identified with the T 1 occupation. All such structures in the vicinity of T 1 that could be identified as to origin were found to be Sadlermiut.

Selected midden areas at different parts of the site were staked off in 5-foot squares. Twenty-five squares were excavated in 1954 and thirteen in 1955. The average depth of the middens was 12 inches and the maximum depth (in Midden 4) was 20 inches. Grass roots have penetrated even the deepest layers. The midden deposits are not frozen and permafrost is encountered only in the underlying gravel, usually below a depth of 2 feet. Despite the absence of protective permafrost the bone and ivory in the midden is for the most part solid and well preserved, though to a certain extent weathered and patinated. The color is that of a creamy tan or light grayish brown, not the dark chocolate brown usually seen on such material at other Dorset sites. This difference in patination results probably from differences in moisture and chemical composition of the soil in which the organic materials lie; the T 1 site rests on dry, well-drained sand and gravel of limestone origin, while most other Dorset sites that have been excavated are in areas of granitic and other crystalline rocks where the soil is dense, black and moist. Though 2,000 years of seasonal freezing and thawing have had relatively little effect on the bone and ivory (assuming the correctness of the C 14 dating), wood and all other organic materials have completely disappeared; not a scrap of wood was found in the excavations, though it must have been used for harpoon shafts and many other purposes.

There were indications of differences in seasonal occupation and

possibly in age between the eastern and western parts of the site. The heaviest concentration of refuse was on the western side of the plateau in the areas designated as Middens 1 to 5. Here, in nineteen 5-foot squares, where the cultural bearing stratum was no more than 12 inches thick, over 25,000 mammal bones were excavated in 1954, along with immense quantities of flint chips and several thousand artifacts of stone, bone and ivory. The underlying material was a fine-grained yellowish sand with relatively little gravel. In contrast, the eastern part of the site was preponderately gravel. Here the culture layer reached a maximum depth of 20 inches at one spot but contained fewer artifacts, especially those of bone and ivory. Some of the types of stone artifacts, such as those shown on Plates III and V, were especially characteristic of this part of the site. Mammal bones were much less numerous, totaling only 340 in six squares, but bird bones were more abundant. The preponderance of bird bones suggests that the eastern part of the site was occupied mainly in summer when large numbers of migratory birds were present.

All bird bones were brought back for identification. The mammal bones were counted and as many as possible identified in the field. Those identified were skulls, mandibles, limb bones, scapulae, pelvic bones, and some ribs. Vertebrae, phalanges, and most of the ribs, being too difficult for positive identification in the field, were counted but are not included in the tabulation of identified bones in Table 1. The table shows only the mammal bones excavated in 1954; those excavated in 1955 are not yet tabulated. Significant differences in the food economy of the proto-Dorset and Sadlermiut people are revealed by the bone analysis. The seal was the principal food animal of both peoples. Foxes were considerably more important to the early T 1 people than to the Sadlermiut; dog bones were completely absent at T 1. Caribou, which were the second most important source of food for the Sadlermiut, were hunted very little by the earlier people. This was undoubtedly a matter of necessity rather than choice. The T 1 people had no dogs and therefore no effective means of winter transportation. Lacking the mobility of the later Sadlermiut, who possessed the dog sled, they would have been unable to make long hunting trips to the highlands

Table 1. DISTRIBUTION OF IDENTIFIABLE MAMMAL BONES EXCAVATED AT T 1 AND SADLERMIUT SITES

	T 1		SADLERMIUT	
	Number	Percent	Number	Percent
Seal	2035	66.5	1840	65.2
Walrus	379	12.4	149	5.3
Bearded Seal	299	9.7	204	7.2
Fox	315	10.3	75	2.7
Caribou	25	.8	332	11.8
Polar Bear	4	.1	38	1.3
Dog	0	.0	180	6.4
Whale	0	.0	6	.2
Total	3057	99.8	2824	100.1

in the eastern part of the island where the caribou mostly lived. With their hunting activities thus restricted, they would be forced to depend almost entirely on local food resources, mainly sea mammals and birds.

Typical T 1 artifacts of ivory and bone are illustrated on Plate I. An antler lance head with the tip broken is shown on Pl. I, Fig. 1; it has an open shaft socket and a wide shallow lashing groove on the opposite side, a small line hole through the spur and a slot for a side blade 30 mm long and 6 mm deep in thick right edge; the left edge is sharpened. Wissler (1918, p. 125) illustrates a lance head of this type from Rensselaer Harbor, Smith Sound, and another incomplete specimen from Pearyland is described by Knuth (1952, Fig. 11, 1). The most common type of harpoon head at T 1 is that shown on Pl. I, Fig. 3. It is a short rather heavy type and is made of ivory, like all of the T 1 harpoon heads. It has the usual Dorset rectangular closed socket, a large central line hole and a blade slit at the end parallel with the socket. On one side—the side shown—there is a steep bevelling from above the line hole to the ends of the two basal spurs, and a narrow tapering slot is cut through the bevelled area to connect with the socket. The type seems to have been restricted to Southampton and neighboring islands. The second most important type (Fig. 4) is larger, with the same form of socket, spur and blade slit. Like Fig. 2, it also had a slot cut through to connect with the socket. The upper surface (shown) is arched or thickened in order that the line hole could be cut through it parallel with the socket and blade slit; thus both line hole openings are on the same side. The opposite side is flat and has a large slot at the center which opens into the line hole. Fig. 2, a small slender form without end blade, has the same kind of socket, spurs, and line hole as Fig. 3. A fourth type not illustrated resembles Fig. 2 except that it has an open socket. Fig. 5 is an unusual type with wide shallow open socket and opposite lashing groove, a small line hole and a second narrow slot through the edge; the upper end has been reworked and is broken. This may be the lower portion of a barbed head such as illustrated in Figs. 16 and 17. Fig. 6 is the upper part of a large heavy foreshaft of ivory which fits perfectly into the socket of such heads as Fig. 4. As these were the largest of the harpoon heads they were no doubt used for walrus, the largest animal hunted. Fig. 7 is a long slender ivory foreshaft which had a central hole at the point where it is broken; it fits the sockets of the smaller harpoon heads, which were probably used in sealing. Two barbed ivory harpoon heads are illustrated in Figs. 16 and 17. Both have shallow open sockets with lashing grooves, straight bases and small line holes. Fig. 16 has two barbs and a slot through the upper end; Fig. 17 originally had three barbs and an end blade. The tips of two slender barbed points of ivory are shown in Figs. 8 and 9. Figs. 18 and 19 are two slender ivory objects of uncertain function, possibly fish stringers. Two examples of a common T 1 implement, a small composite ivory handle or socket, are shown in Figs. 10 and 11. The straight inner side has a narrow shallow socket designed for holding a slender stone cutting tool, possibly a spall like the smaller examples

shown on Pl. VII. A groove across the back suggests that two of them were lashed together so as to enclose the spall, only the tip of which projected. Fig. 12 is an ivory flaking hammer, with both ends battered. The most common type of flaking tool, probably a light hammer, is illustrated in Figs. 13 and 14. They are always made from the dense, heavy bone of a walrus maxillary or mandible, usually the bone surrounding the tusk; the lower end is rounded or bluntly pointed. The tapering, wedge shape suggests that they were set into a wooden socket. Fig. 15 is a flint flaker made of walrus rib. A bone object of unknown use, resembling a harpoon rest for lashing to the deck of a kayak, is shown in Fig. 21. It is made from piece of a seal scapula, with two holes for lashing it in place. Highly characteristic of the T 1 site is a spatulate knife-like implement of ivory with pointed or rounded end, rather sharp edges and a suspension hole at the base (Figs. 27 and 29); a similar form of implement (Fig. 28) is rounded or pointed at both ends and lacks the basal perforation. Bone needles (Figs. 30-32) were the most numerous of all bone or ivory artifacts. The eyes are tiny oval slots, never round, and are countersunk on both sides. The upper ends are always pointed, never rounded or flat, and the tips are almost as sharp as those on steel needles. They were all made of bird bone, usually a large humerus (Fig. 33). The ivory object shown in Fig. 20 is possibly a needle case. It is made from the proximal hollow end of a young walrus tusk. Two low protuberances were carved on the sides to represent an animal's ears. A broken ladle made of antler and an unidentified ivory object decorated with a row of short oblique lines are illustrated in Figs. 25 and 26. The small polar bear (Fig. 24), the pendant carved in the shape of a caribou hoof (Fig. 34), and a realistic caribou with straight line decoration, not illustrated, are the only examples of animal carvings found at T 1. All are of ivory. Other rather simple ornaments illustrated are a slotted tube of bird bone (Fig. 22), two thin bone disks (Figs. 23 and 36), a triangular section of purple clam shell (Fig. 35), and a small ivory object with two "legs," a central perforation and surface decoration consisting of short incised lines (Fig. 37). Perforations on all specimens were cut or gouged out, in typical Dorset fashion, never drilled.

One of the most striking features of the site was the abundance of flint and flint artifacts. Along the edges of the plateau where there was not plant cover the surface of the ground was littered with innumerable flakes of various sizes, tiny chips, and broken or complete artifacts, and in digging the middens we had to proceed very slowly because of the great quantities of such material encountered at all levels. The material most commonly used was a very fine-grained chert which breaks with a conchoidal fracture; it is smooth and glossy in texture and ranges in color from a light gray to almost black. A second variety of gray chert, of a more granular or gritty texture, was used exclusively for making spall implements (Pl. VII) and those with rubbed edges and surfaces Pl. X, Figs. 1-4). Chalcedony was conspicuously absent and there were only one or two implements of

quartz. The only other varieties of stone present were rock crystal, soapstone, slate and nephrite. Implements of transparent rock crystal—delicately made micro-blades, tiny tanged knife blades, and end scrapers—constituted an important minority of the lithic complex. Rubbed slate and nephrite were far less common, totaling less than a dozen blade fragments each, with no rejectage or raw material, and soapstone pot fragments were almost as rare. Slate, nephrite, and soapstone are not native to Southampton Island. The gray chert, which constitutes at least 99 percent of the lithic material at the site, occurs as sporadic nodules or masses in the limestone formations characteristic of the southeastern part of the island. A fist-sized block of gray chert was seen in a limestone slab used to cover one of the Sadlermiut burials, but in no other instance was it observed, either as loose nodules or *in situ* in the few outcrops of limestone bedrock in the vicinity of Native Point. As suggested by Bird (1953, p. 62), the source of the flint may have been Lake Brook, about 35 miles to the southeast, where nodules are known to occur in some abundance. The absence of a readily accessible source of supply may explain why there were so few large pieces of chert at T 1; the raw materials would have to be brought in from a distance and therefore would have been carefully preserved and as much of it as possible utilized for making tools. In contrast, at the Sadlermiut site where flint implements and rejectage were far less abundant than at T 1, we found more larger pieces of the material. This would suggest that it was easy for the Sadlermiut to reach the source of supply, either by dog team or by boat, whereas the T 1 people had no dog teams and we cannot even prove that they had boats.

Typical end blades for projectiles and knives are illustrated on Pl. II. These and all other stone implements illustrated are of chert unless otherwise indicated. The majority of the end blades at T 1 were made from flakes, with the bulbar surface unmodified or only partly worked. Examples are those shown on Pl. II, Figs. 1, 6, 7, 10, 13, 15, 16, 18, 19. Most of the others now appear as bifaces because the original bulbar surface has been obscured by chipping. Figs. 6 and 15 are unique in that the outer surface (shown) is unmodified while the edges of the bulbar surface are worked. A median ridge on the outer face is a common feature of the T 1 blades, e.g. Pl. II, Figs. 3, 4, 6, 7, 12, and also on the end scraper, Pl. IX, Fig. 2. None of the end blades are stemmed and only a few, such as Figs. 4 and 6, are side notched at the base. The bases are usually straight or slightly concave, only a few, like Fig. 10, being convex. None of the blades had the deeply concave base characteristic of the Dorset culture. The wider forms illustrated on the second row of Pl. II are most likely end blades for harpoons; the most common type of harpoon head (Pl. I, Fig. 3) had a slit that would accommodate blades of this shape and thickness. The smaller, more slender blades shown on the upper row could also have been used on harpoon heads though they would ordinarily be classed as arrow points. If they were arrow points they were attached directly to the end of a wooden shaft, Indian fashion,

for no bone arrowheads of Eskimo type, either with or without slits for end blades, were found at T 1, nor have they turned up at other Dorset sites. The use of bow and arrow is therefore conjectural. Pl. II, Figs. 16-19 were probably end blades for knives, or possibly lances, despite the fact that no end-socketed knife handles or lance heads of bone or ivory were found; in all probability they were knife blades, set in wooden handles which have not been preserved. The type of blade shown in Figs. 20-22, with slanting base and rounded corner, is unique at T 1. They were probably side blades for heavy lances. A large lance head was found with side socket suitable for holding a blade of this length and thickness.

A different type of side blade, designed for knives or lances, is illustrated on Pl. III, Figs. 1-7. These are long straight-sided flakes with the outer surface carefully worked and the bulbar surface unmodified. Both edges are sharpened except Fig. 5 which has the right edge dulled by chipping. Fig. 2 is unique in being thicker than the others and in having the bulbar surface (shown) also worked along the edges. These narrow rectangular blades were especially characteristic of the eastern part of the site; they are closely similar to side blades from Mesolithic and Early Neolithic sites in Siberia and Mongolia but have not been described from other sites in the American Arctic. Figs. 8 and 9 are tentatively identified as side blades because of their size and shape, though in technique they belong with the curious type of blade, unique at T 1, illustrated on Pl. VIII. In Fig. 8 the lower half of the right edge is dulled by chipping. On the opposite edge a long spall has been struck off vertically from the tip (shown at bottom), as in a burin, and a smaller spall removed from the other end. It might, indeed, have been a burin. It would no doubt be so classified if it were found alone, but in view of its structural affinities with the implements shown on Pl. VIII its identification is uncertain. Fig. 9 is similar in shape with the right edge dulled by chipping and the left edge sharp from the original flake. Various forms of shorter, wider side blades are shown in Figs. 10-17.

The most numerous of all implements at T 1 were micro-blades (Pl. IV).<sup>2</sup> They are illustrated here with the bulbar end down except Fig. 22, a tanged form. They range in length from 5.7 cm (Fig. 2) to 1.9 cm (Fig. 14), and are about equally divided between the thicker forms, triangular in section with two longitudinal flake scars, and the thinner forms with three such facets. On some of the blades the outer surface is strongly curved or arched (Figs. 2, 5, 7, 10, 11, 13, 14, 17), while others are relatively flat. The sides are usually parallel and the ends rounded or straight, but in some of the more slender examples the edges converge to a point (Figs. 7, 9, 12-17). Occasionally, as in Fig. 6, the outer surface of the bulbar end is retouched as in a

<sup>2</sup>Following Movius and Giddings I am using this term for the narrow parallel-sided blades which I and others have previously called lamellar flakes. As Solecki (1955) has shown, there are valid objections to the term "lamellar flake," but I am not sure that "micro-blade" is a perfect choice either, as many of these blades are much larger than such a name would imply.

scraper. In most cases both edges show minute flake scars from use as cutting or scraping tools, and occasionally there is retouching on the edges (Figs. 1, 2, 4, 8); one has a prominent side notch (Fig. 6). Many of these blades have the bulbar end carefully notched or worked to form a tang (Figs. 19-21, 23-25); in the case of Fig. 22 the tang is at the distal end, opposite the bulb of percussion. Fig. 19 differs from the others in having the entire left side and tip retouched. Tanged blades of this kind seem rare at other Arctic sites but a few have been described from Pointed Mountain (MacNeish, 1954, Fig. 66, 14) and Mongolia (Maringer, 1950, Fig. 38, p. 141). Though from their shape and regularity it is certain that these micro-blades were struck from carefully prepared cores, very few of the latter were found. One of these, with three narrow flake scars at one of the sloping ends and two at the other, is shown on Pl. X, Fig. 12. Most of the cores were evidently used and reused until exhausted.

On Pl. V are shown a number of implements that fall in the general category of backed blades in that one edge is sharp for cutting while the opposite edge is thick or steep. Some of them are ordinary micro-blades with one edge thickened by steep flaking (Figs. 2, 5, 6, 8, 12). Others are thicker, heavier flakes, triangular in section, with the thick edge either steeply flaked (Figs. 13, 16, 17, 21, 22, 23, 25, 26) or left plain (Figs. 11, 15, 18, 19, 20). In some of the blades the thickening of one edge was accomplished by removal of one or more longitudinal flakes (Figs. 1, 3, 4, 9, 10, 14). In Figs. 7 and 24 the thicker edge, shown at left, was formed originally by removal of a long flake and then lightly retouched; both of these blades also have basal notches or tangs. Fig. 14 has a small notch on each side. In all cases the thinner cutting edge shows tiny notches resulting from use.

The implement shown on Pl. VI, Fig. 1, is the best example of a burin found at T 1. The burin facet at the right upper edge, produced by removal of a spall 1 cm long and .3 cm wide, shows a distinct negative bulb of percussion. On the sloping edge below it are several notches or jags which were left when earlier spalls were removed. Four additional smaller flakes have been struck off from the opposite side and face of the upper end to shape it for cutting or gouging. Other implements shown on the same plate (Figs. 2-8, 11, 12) lack a clearly discernable negative bulb of percussion. Nevertheless the upper or working ends have been shaped by removal of vertical flakes struck or pressed off from above, so that they were produced in the manner of burins and in all probability were used as such. In the case of Fig. 2 the point was produced by removal of three rather wide flakes. Fig. 3 has a trimmed left edge, intersected at the tip by a single broad oblique flake scar 2.2 cm long and .6 cm wide. Figs. 4, 5, and 8 have gouge-like tips, all showing wear marks. The rounded tip of Fig. 4 bears four exceedingly small but distinct flake scars, while in Fig. 5 there are five larger such scars. Fig. 6, a micro-blade, had a single short spall removed from the upper left corner. Fig. 7 is an implement of the kind illustrated on Pl. VIII. Its outer face is carefully worked and the greater part of the right edge is blunted by steep chipping. The wide notch at the upper left corner seems purposeful and the



tip shows several secondary flake scars. Figs. 11 and 12 are thin delicate flakes which despite their small size were carefully shaped for a burin function by removal of minute spalls from the tip; three flake scars are clearly visible on Fig. 11 and two on Fig. 12. The small flake implement shown in Fig. 9 somewhat resembles a Folsom graver, though only the right side of the projecting tip is reworked; the opposite side of the tip and the sharp edge below it to the left show marks of use. In Figs. 13-16 are shown four examples of nephrite "burin-like" implements such as are frequently found at Dorset sites. Each implement is different in shape though all are ground on both faces and edges. Fig. 16, which is the tip only, resembles the Old Bering Sea and Ipiutak examples, as well as Dorset. Fig. 15 has a rounded base and two deep side notches; Fig. 14 has shallower notches and a deep vertical groove on both faces. Two small thin rim sherds of soapstone vessels are shown in Figs 17 and 19. They are 4 and 5 mm thick and have a black encrustation of burned blubber on the outer surface (shown). Two round repair holes, cut not drilled, are visible on Fig. 17. Fig. 21 is the upper end of a large rubbed slate blade with three facets on the outer surface. Figs. 18 and 20 are sections of thicker, narrower blades of banded red slate. These and the other fragments of slate blades, though few in number, are significant as indicating the occasional use of rubbed slate implements by the early or proto-Dorset people.

On Pl. VII are shown a number of flint spalls, which are characteristic of the site. Those on the upper row have the form of rather thick rods, mostly triangular in section and with one or more of the sides steeply flaked. Fig. 7 differs in having a fine retouch along the left edge. The upper ends of Figs. 1-4 are also worked to produce a tip suitable for gouging. Some of the smaller, more slender spalls such as Figs. 14-16, 21, 27-33 might be described as burin spalls; their size and shape are such as might be expected of spalls struck from burins. It is doubtful, however, whether the majority of these spalls are in any way connected with burin manufacture. They were struck from a variety of blades or flakes, some apparently from unmodified flakes, others, such as Figs. 8-12, 19, and 34 from the retouched margins of finished blades. In the case of Fig. 34 and several others not illustrated even the tip of the finished parent blade adheres to the lower end of the spall. Most of the spalls illustrated here were, I believe, produced intentionally; they were tools in their own right rather than casual by-products of burin manufacture, even the few which may actually have been struck from burins. Giddings (1956) has come to the same conclusion regarding the burin spalls from Cape Denbigh and Knife River. Like his spalls, a number of those from T 1 (Figs. 19-34) have the upper end carefully retouched for use as a minute cutting or grooving tool. Such spall implements would themselves have had the function of burins, designed for the fine grooving and slotting so characteristic of the bone and ivory artifacts at T 1. The tiny slotted eyes on the bone needles, for example, presuppose the existence of extremely small cutting tools, and it would seem quite likely that some of the smallest of the spalls, e.g. Figs. 9, 10, 31-33, and 44, were

fitted into the narrow ivory handles or sockets such as Pl. I, Figs. 10 and 11, to provide the cutting end of a composite tool designed for fine grooving and slotting.

The slender spalls shown on Pl. VII, Figs. 35-44 are a specialized type of implement that has not been described previously. Most of them are quadrangular in section with one to three of the sides rubbed and showing the same white patina as the "burin-like" implements shown on Pl. X, Figs. 2-4. In fact, most of them, perhaps all, were struck from the edges of such implements usually from the left, squared-off edge; several of these implements were found with the left edge flaked off to produce such a spall. The upper working end of the spall either retains the sharpened bevel of the parent implement or has been rubbed down secondarily to produce such a point. It is of interest to note that not only all of the spalls of this particular type but also most of the others shown on Pl. VII are made of the coarse-grained, gritty chert that was always used for making the "burin-like" tools; only those shown in Figs. 4, 10, 18, 19, 27, and 33 are of the smooth shiny variety of chert from which the great majority of the T 1 implements were made.

Next to micro-blades, the most important and characteristic implements at T 1 were the slender triangular blades of unknown use illustrated on Pl. VIII. The type is a highly specialized one that has not been reported as yet from other Arctic sites or for that matter from anywhere in America though some of the examples are in certain respects suggestive of Mesolithic types from Eurasia. They are made from thin, delicate flakes, with the bulb of percussion at the upper narrow end. The inner, bulbar face is unworked while the outer face, which is illustrated here, is usually covered wholly or in part by shallow surface flaking; a few examples (Figs. 17, 18, 33, 35) have no surface flaking. They are triangular in shape with a straight or slanting base, and they range in length from 3.6 mm (Fig. 1) to 1.2 cm (Fig. 28). The most characteristic feature structurally is the treatment of the edges, which in most cases had a long flake removed from the upper end, as in a burin, with the opposite edge dulled by steep, usually vertical flaking. They may be divided into six general categories:

- A. One edge dulled, opposite edge with flake removed (Pl. VIII, Figs. 1-28)
- B. One edge dulled, opposite edge sharpened by chipping (Figs. 29-31)
- C. One edge dulled, opposite edge sharp from original flake (Figs. 32, 33)
- D. One edge with flake removed, opposite edge with smaller flake removed (Figs. 34-37)
- E. One edge with flake removed, opposite edge sharpened by chipping (Figs. 38-42)
- F. One edge with flake removed, opposite edge sharp from original flake (Figs. 43, 44).

Some of these microliths with sharply sloping bases (Figs. 19, 38) have the appearance of side blades and may have been used as such.

On these and some others such as Figs. 1, 4-6, 8, 9, 35, 39, the lateral flake was removed at a slant, not straight across the edge of the blade, thus leaving an edge sharp enough for cutting, and on three of them (Figs. 1, 4, 39) there are tiny flake scars indicating such a use. The only others that show use marks along the edge are Figs. 18, 29, 30, 33, 38, 40, 43, and 44. In some cases the basal end was reworked (Figs. 3, 7, 9, 10, 12, 15, 19, 24). In the majority of cases the lateral flake was struck off at right angles to the blade, as on a burin, leaving a blunt edge that would have been as unsuitable for cutting as was the opposite edge which had been deliberately blunted by steep flaking. We may therefore recognize the possibility that some of these implements were designed and used as burins but it is difficult in that case to explain the consistent dulling of opposite edge.

End scrapers (Pl. IX, Figs. 1-9) occur in a variety of forms which, however, do not include those most common in the Dorset culture such as the very small triangular types and those with expanding or flaring lower ends. In shape the T 1 scrapers range from triangular (Figs. 1-3) to ovoid (Fig. 9) to quadrangular (Fig. 7). They are all made from heavy flakes, with the under surface unmodified or only slightly worked. The triangular scrapers are straight-sided with straight or slightly convex lower ends; Figs. 2 and 3 are keel-shaped with a prominent median ridge on the outer face. Others are more rounded in contour (Figs. 4, 5). Fig. 6 is the lower end of a scraper which may have been either quadrangular or roughly triangular in total contour. Fig. 7 is quadrangular, almost square, with an abruptly thickened lower end. Fig. 8 is a unique type, roughly triangular, with the lower thickened end slanting instead of straight. Fig. 12 is irregular in shape and might be described as a core scraper in that the thickened scraping end, at the left, has a vertical face 1.3 cm high which was produced by removal of a series of narrow flakes struck off from the lower edge. Fig. 10 is somewhat similar in outline, with the lower and left edges strongly arched and the maximum thickness (1 cm.) at the center. Fig. 11 has the upper end broken off obliquely and may originally have been of about the same shape as Fig. 4. Figs. 13 and 14 are two knife-like scrapers with rounded ends and basal tangs for hafting; both surfaces are carefully worked so that they have the appearance of bifaced tools though they may have been formed originally from thick flakes. The wider scraper with upper end broken off (Fig. 15) was made from a flake, the under surface of which was only slightly worked. Fig. 16 is the haft end of an implement, probably a scraper similar in shape to Fig. 15 but with three notches on each side of the tang.

Two scrapers of a different form are illustrated on Pl. X, Figs. 5 and 11. The first is a large thick curved flake 6.5 cm long and 1.9 cm wide, the convex outer face of which retains the cortex of the nodule from which it was derived. The bulb of percussion is at the upper, narrow end. It is worked only at the lower end which is steeply flaked to produce a scraping edge. The smaller scraper (Fig. 11) is of the same general shape but is steeply flaked over the entire outer

surface with a prominent ridge extending down the center; the under surface is retouched along the left edge.

Implements with ground flat surfaces and edges, one of the most characteristic types of the Dorset culture, were equally important at T 1 (Pl. X, Figs. 2-4). These are the implements that have been sometimes referred to as "boot creasers" but which I have called "burin-like" tools because, as De Laguna first pointed out, they were provided with a strong sharp corner designed for gouging or grooving, and thus probably functioned as burins. The T 1 examples are remarkably uniform in appearance. Figs. 2 and 4 represent the most common form—rather narrow, quadrangular, and notched at the base for hafting; Fig. 3 is wider and somewhat thinner. In all cases the left edge is perfectly straight, usually from 4 to 6 mm wide at the lower end and tapering upward to a point; the face of the smoothed widened edge is at right angles to the adjacent and similarly smoothed flat surfaces of the blade. The upper end is bevelled to a cutting edge by rubbing. The right edge is only slightly rubbed, usually at a bevel like the upper end, but the rubbing was not strong enough to efface the original chipping. The flat surfaces, as shown by the fine striations, were always rubbed transversely, while the left edge was rubbed in the opposite direction, longitudinally. The implements were always made of the tough, gritty textured chert, not the smooth glossy variety used for other tools. The smoothed areas, and only those, invariably exhibit a whitish patina, an alteration of the surface produced evidently by the heat or friction of rubbing. An adz-like scraper is shown on Pl. X, Fig. 1. The lower end is rubbed to produce a flat straight edge 7 mm wide. The lower part of the upper surface is similarly rubbed and meets the adjacent straight edge at almost a right angle. This is a characteristic implement of the Dorset, Old Bering Sea and Ipiutak cultures. Four long thick flakes, possibly unfinished tools, are shown in Figs. 6-9. All are triangular in section. Only Fig. 7 has been worked to any extent—on the lower end of the bulbar surface, opposite the bulb. Its edges and those of the others show light chipping resulting from use. Fig. 10 resembles the other four except that it is curved and shows no signs of use. Fig. 12 is the double ended fluted core previously referred to in connection with the micro-blades. Fine chipping on the lower right edge is evidence that it was also used as a scraper. Fig. 13 is a large heavy flake with a burin-like upper tip formed by intersecting flake scars. It is retouched at intervals along the edges, and the lower end has been fashioned into an oval-pointed projecting tip.

In analyzing the T 1 material we may first ask how it compares with that from other Dorset sites. The following specific Dorset types are present at T 1: Barbed dart points, needles, micro-blades, cores, burins, small triangular projectile points, burin-like implements and adz-like scrapers with rubbed edges and sides, flat bone runner for hand sled, and soapstone vessels; moreover the general Dorset character of the culture is shown by such features and tendencies as rectangular

closed sockets on harpoon heads, multiple notches on blade tangs, cut or gouged holes in implements, use of nephrite and rock crystal, presence of a simple straight line incised ornamentation, and the small and delicate nature of the bone and ivory implements.

On the other hand the following characteristic Dorset features were missing at T 1: Closed socket harpoon heads with two line holes, open socket heads with single spur and line hole at edge, harpoon foreshafts with lateral line hole, small knife handles with deep side sockets, ivory runners for hand sleds with ends fitted together, ivory spatulas, projectile points with deeply concave bases, end scrapers with expanded edges, concave side scrapers, asymmetric knife blades, grotesque human and animal carvings, and stylized chevron and other incised designs. The absence of these typical Dorset features at T 1 can hardly have been accidental, for the amount of material excavated here was considerably greater than from any other Dorset site.

Many of the T 1 implements are types that are new not only to the Dorset but to any other culture. In evaluating these we should remember that every Dorset site thus far excavated has differed in some degree from all others; despite a number of recurrent features the Dorset culture on the whole is rather variable. In a collection as large as that from T 1 it is to be expected that some new forms of local specializations will appear. Consequently, some of the ornaments and objects of unknown use shown on Pl. I would occasion no surprise; anyone familiar with Dorset material would at once recognize their general Dorset character even though they had not been previously reported from the Dorset culture. Nevertheless, the fact remains that almost all of the dominant types at T 1, those that occur in the largest numbers and give the culture its distinctive stamp, are new. This applies to the small composite handles or sockets (Pl. I, Figs. 10, 11), the flaking hammers (Figs. 12-15), spatulate knife-like implements (Figs. 27-29), large blades with slanting base (Pl. II, Figs. 20-22), large parallel-sided side blades (Pl. III, Fig. 1-7), micro-blades with tangs (Pl. IV, Figs. 19-25), backed blades (Pl. V, Figs. 1-26), micro-blades and other very small implements of rock crystal (not illustrated), microlithic triangular flake-blades (Pl. VIII, Figs. 1-44), and several kinds of scrapers (Pl. IX, Figs. 8, 10, 12, and Pl. X, Figs. 5, 11).

In view of the pronounced differences it is obvious that the T 1 site cannot be equated with the Dorset culture as we have known it. Neither can it be separated completely from Dorset. It formed a part of the general Dorset continuum, two later stages of which were found at Native Point. As it is so different from other Canadian Dorset sites, and older, it would seem appropriate to call it formative or proto-Dorset. An age of  $2,000 \pm 230$  years was obtained by the University of Pennsylvania Carbon 14 Laboratory from samples of charred mammal and bird bones from the eastern section of the site. This bone, like all material of human origin at the site, had been penetrated by grass roots so that it might have been contaminated, in which case the radiocarbon date would be a minimum one. On the other hand, if current geological

opinion is correct we would not expect an archaeological site on Southampton Island with an elevation of only 70 feet above sea level to be much more than 2,000 years old when other parts of the island are known to have been uplifted more than 600 feet since the postglacial marine submergence.

Based on cultural comparisons the proto-Dorset site T 1 should be older than known Dorset sites in Canada, probably contemporary with Knuth's early Dorset phase in Pearyland but later than his earliest culture there and later also than Sarqaq in Disko Bay and Knife River west of Hudson Bay, all of which might be called pre-Dorset in the sense they represent earlier stages from which the recognizable Dorset pattern eventually emerged. On this basis T 1 should also be considerably later than the early flint sites further west such as Cape Denbigh, Anaktuvuk Pass, Trail Creek, the Campus site, Pointed Mountain, etc.

It may be of interest to examine the typological resemblances and differences between T 1 and the earlier flint sites.

*Burins.* These are few in number and highly variable in form. There are no examples at T 1 of the well defined Denbigh, Anaktuvuk or Sarqaq types. On the other hand, one of the most important T 1 implements, the triangular microliths shown on Pl. VIII, were made by removal of spall from one or both edges, a burin technique.

*Spalls.* Giddings (1951, 1956) has been the first to recognize the importance of these small and inconspicuous implements, which probably occur more frequently at Arctic sites than the published reports would indicate. The Denbigh and Knife River spalls were actually struck from burins while most of those from T 1 were not. Nevertheless the edges of some of the T 1 spalls were retouched (Pl. VII, Figs. 19-34) as at Denbigh, Knife River and Sarqaq, so that functionally the spall implements from these sites are comparable.

*Micro-blades.* These are too widely distributed to be of diagnostic value except in a very broad sense. Their widespread occurrence in the American Arctic, their persistence there from the time of the Denbigh Flint Complex to probably less than a thousand years ago, as contrasted to their spotty and limited distribution south of the Arctic, is one of the strongest indications of a direct relationship between the early Eskimo and pre-Eskimo cultures of Arctic America and the Mesolithic cultures of Eurasia. Micro-blades occur in greater abundance at T 1 than probably any other Arctic site, and in about the same proportion as at Cape Denbigh and Pointed Mountain. It is of interest to note that Denbigh resembles T 1 and differs from Sarqaq and Knife River in its strong emphasis on micro-blades, just as it resembles the latter two and differs from T 1 with respect to burins.

*Side blades.* The T 1 rounded side blades and those with one straight edge (Pl. III, Figs. 10-17) are much closer to Ipiutak forms than to those at the older Arctic sites. The large parallel-sided blades with retouch over the outer surface (Pl. III, Figs. 1-7) have not been described from other Arctic sites but occur in Mesolithic and early Neolithic sites in Mongolia and Siberia (Maringer, 1950, Pl. XXX, Figs. 1, 4, 5; Okladnikov, 1950, Fig. 62).

*End Blades.* The small triangular end blades at T 1 (Pl. II, Figs. 1-13) fall within the general Dorset range even though the most characteristic Dorset type, with deeply concave base, is missing. In outline the rather wide, straight-based forms (Figs. 8-12) bear a certain resemblance to those from Cape Denbigh and Ipiutak. However the Denbigh blades are more delicately flaked, and like those from Ipiutak are more standardized in appearance than the T 1 examples. Some of the Mongolian end blades (Maringer, 1950, Pl. XV, Figs. 5, 8, 9, 12; Pl. XXIX, Fig. 18) are closely similar to those from T 1, but this may be of no particular significance in view of the wide distribution of this simple type of blade.

*Backed blades.* Micro-blades and heavy triangular-sectioned flakes with one edge sharp for cutting and the opposite edge thickened or blunted by steep flaking or the removal of longitudinal spalls (Pl. V), have not been reported from other Arctic sites. Most of the T 1 examples may, however, be compared in a general way with some of the backed blades of the Old World Paleolithic and Mesolithic.

*Triangular microliths.* These curious little blades of uncertain function (Pl. VIII) formed an important part of the lithic complex at T 1 but have not been described from any other site. In general shape and in the blunting of one of the long edges they are suggestive of some of the Mesolithic microliths from Eurasia. They differ from these however in the shallow flaking of the outer surface and in the burin-like flake scar along one edge. In fact, some of these T 1 implements may represent a new and delicate type of burin.

It is indicative of the growing cohesiveness of the archaeological picture in the far North that the proto-Dorset site T 1 must be considered in relation to both the classic Dorset Eskimo culture of the eastern Arctic and the much earlier pre-Eskimo flint complexes of Alaska and Canada. It strengthens the linkage between Dorset and the early flint horizons in the west, and indicates more clearly than ever that the latter were the source from which the original eastern pattern of Eskimo culture was derived. Also, though it is probably some thousands of years later than the oldest Alaskan sites, T 1 contributes several new components to the impressive list of traits shared in common by the early Eskimo and pre-Eskimo Arctic cultures and the Mesolithic cultures of Eurasia.

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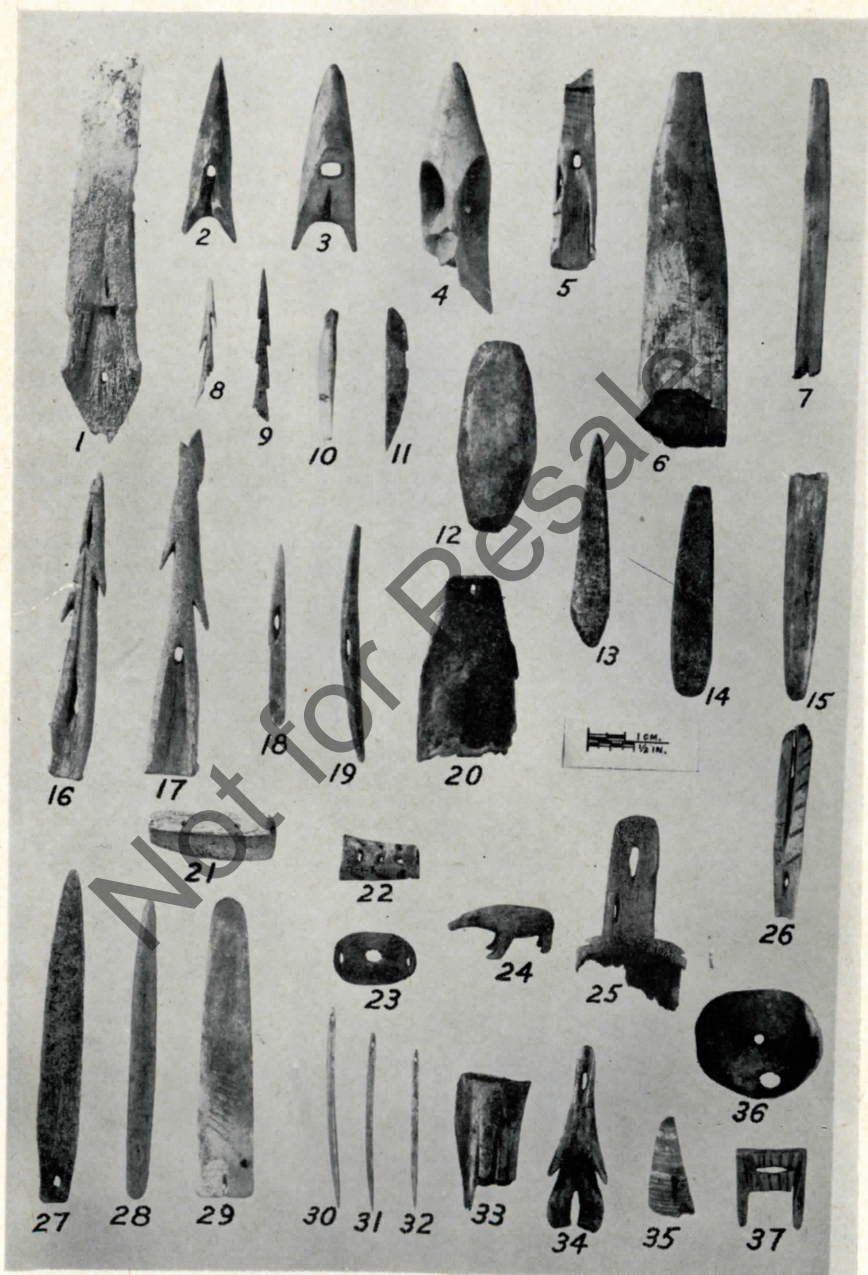


Plate 1. Ivory, bone, and antler artifacts from T 1. One half natural size.



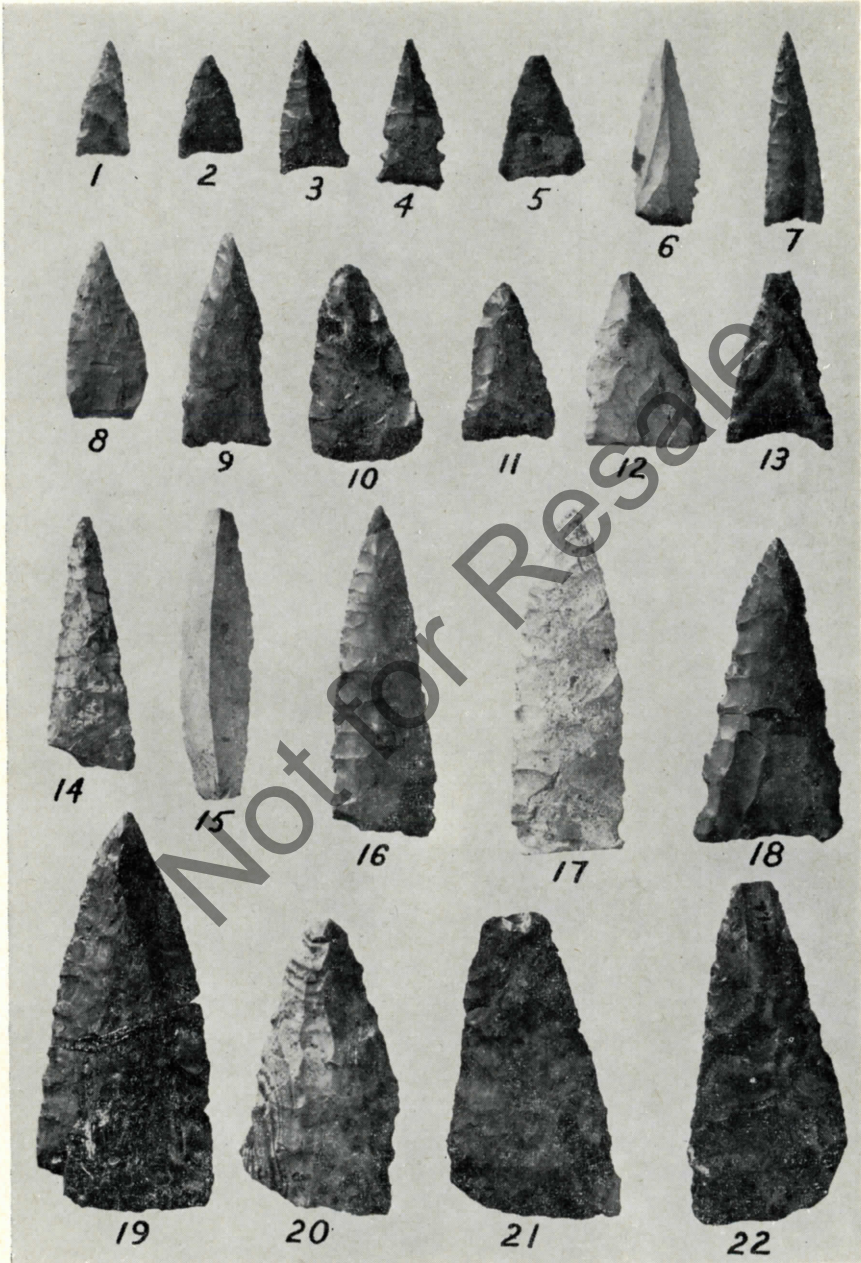


Plate II. End and side blades from T 1. Chert. Natural size.



Plate III. Side blades from T 1. Chert. Natural size.



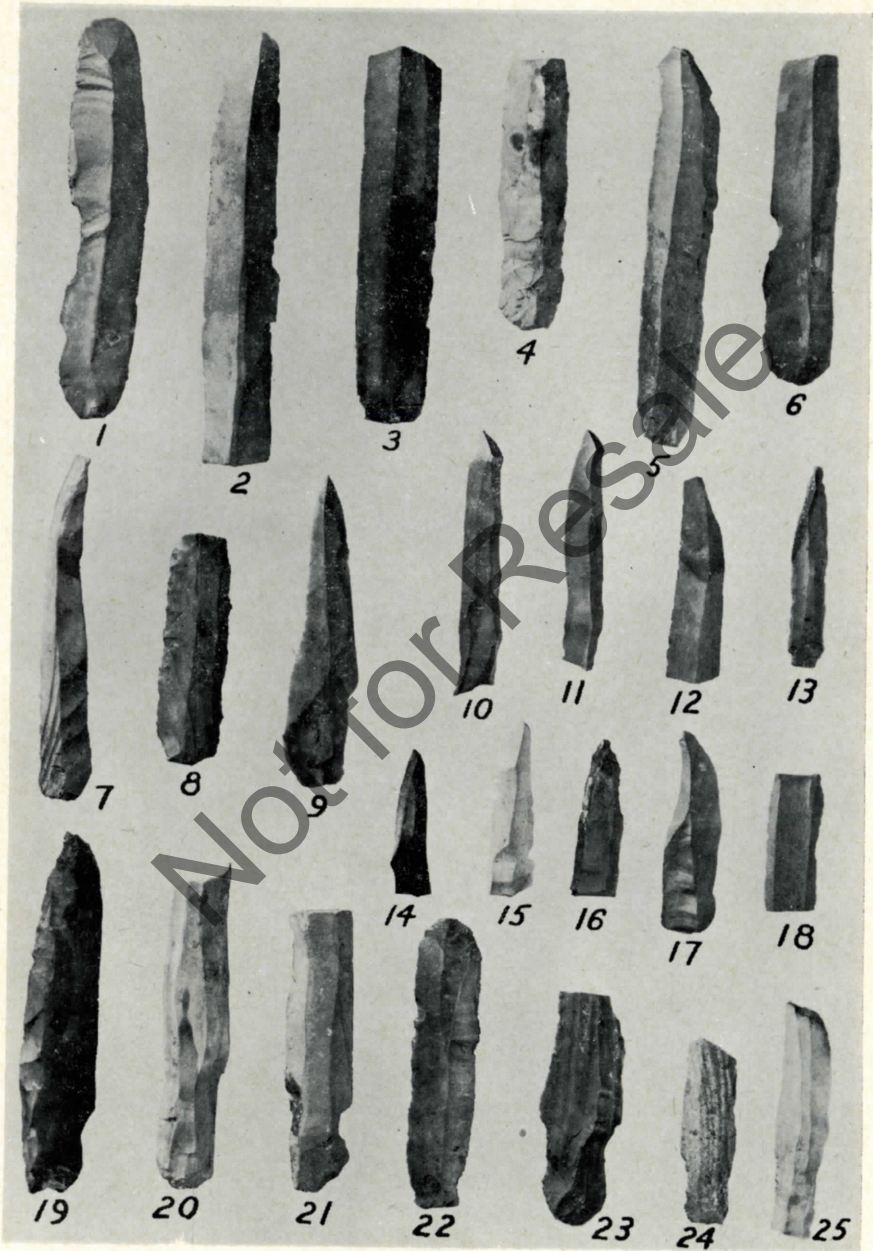


Plate IV. Micro-blades from T 1. Chert. Natural size.

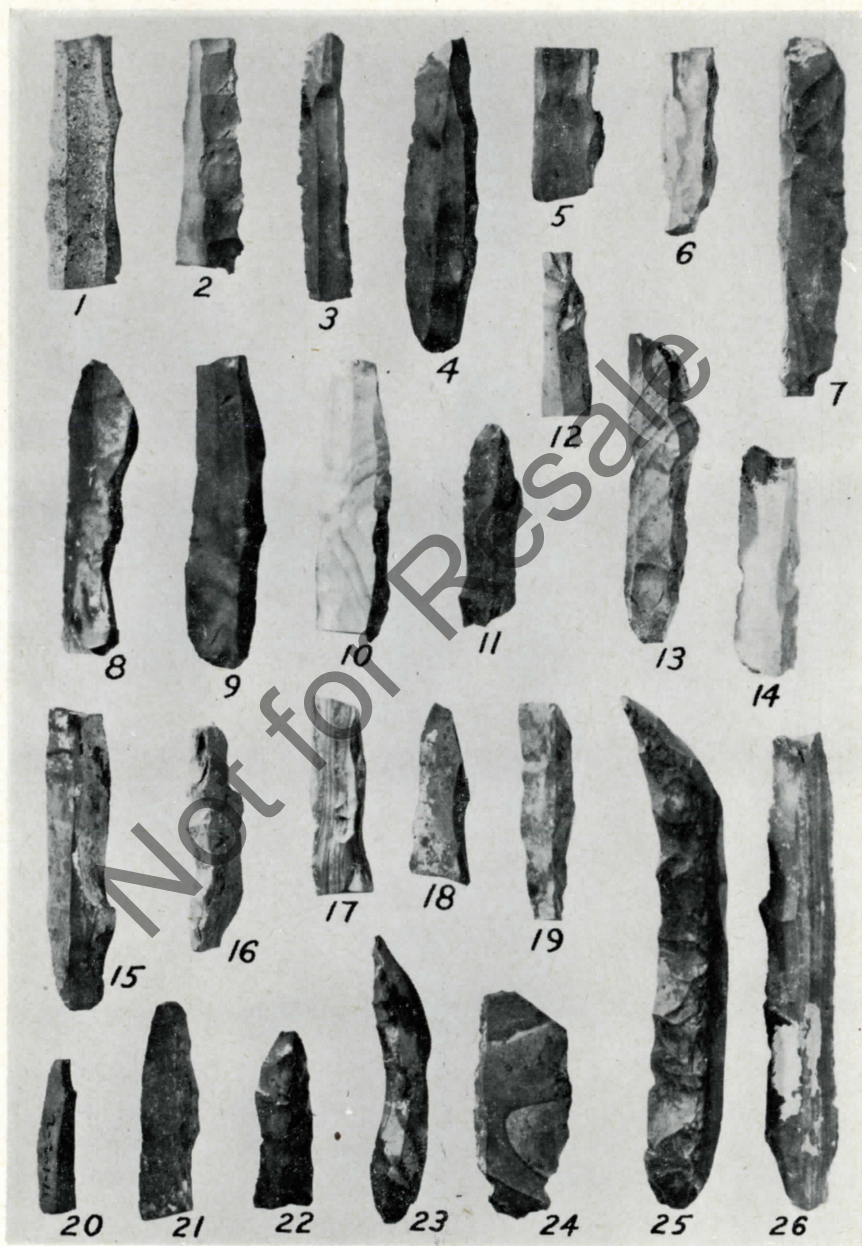


Plate V. Backed blades from T 1. Chert. Natural Size.



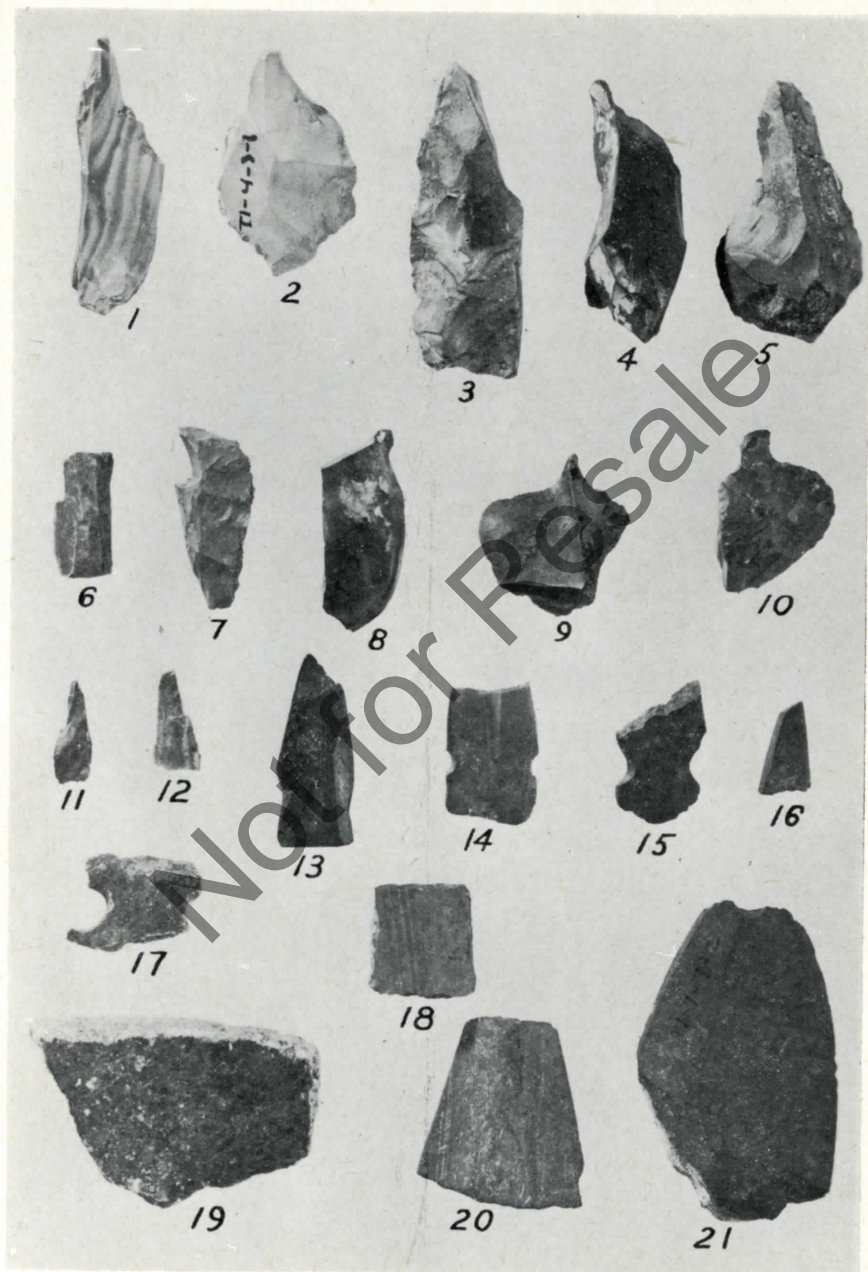


Plate VI. Burins, gouges, and graters, chert; nephrite implements with rubbed edges; steatite potsherds, and slate blades. T 1. Natural Size.

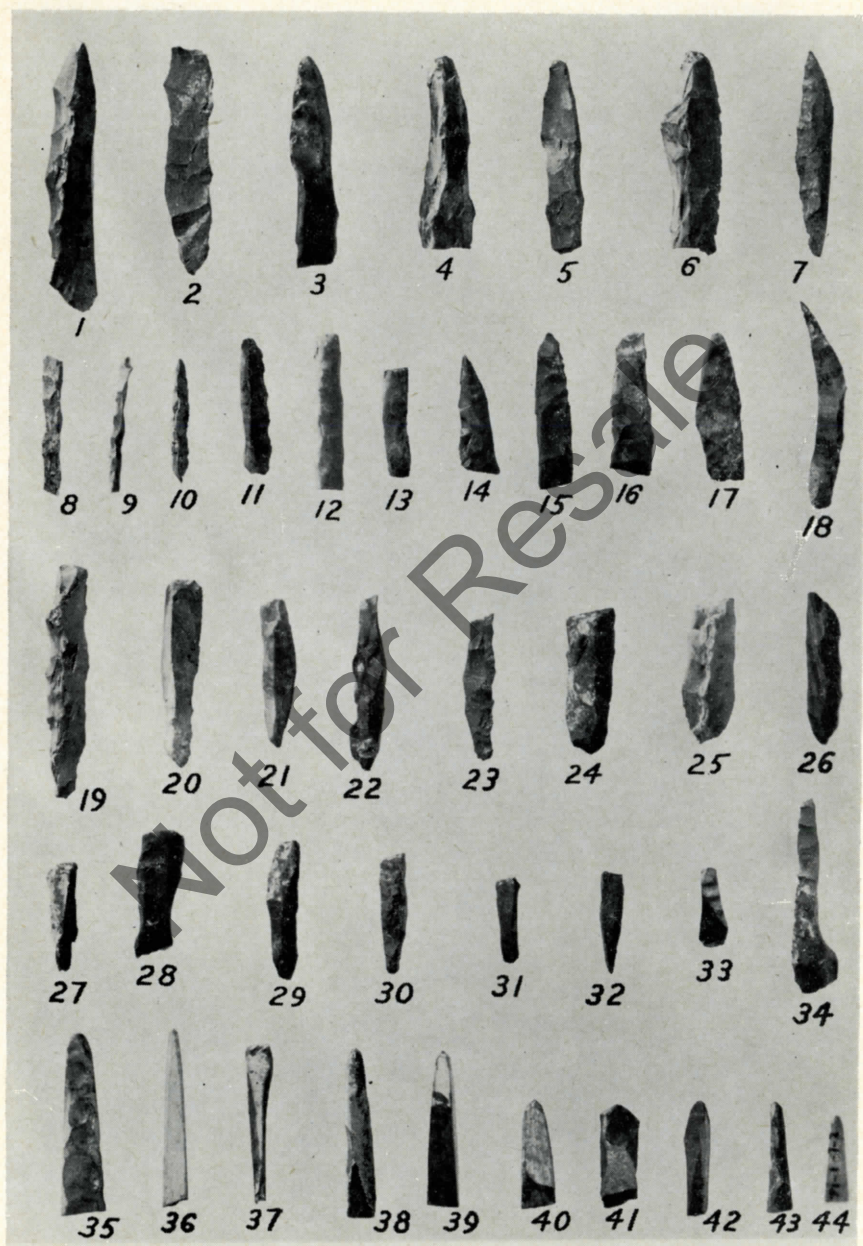


Plate VII. Spall implements from T 1. Chert. Natural size.



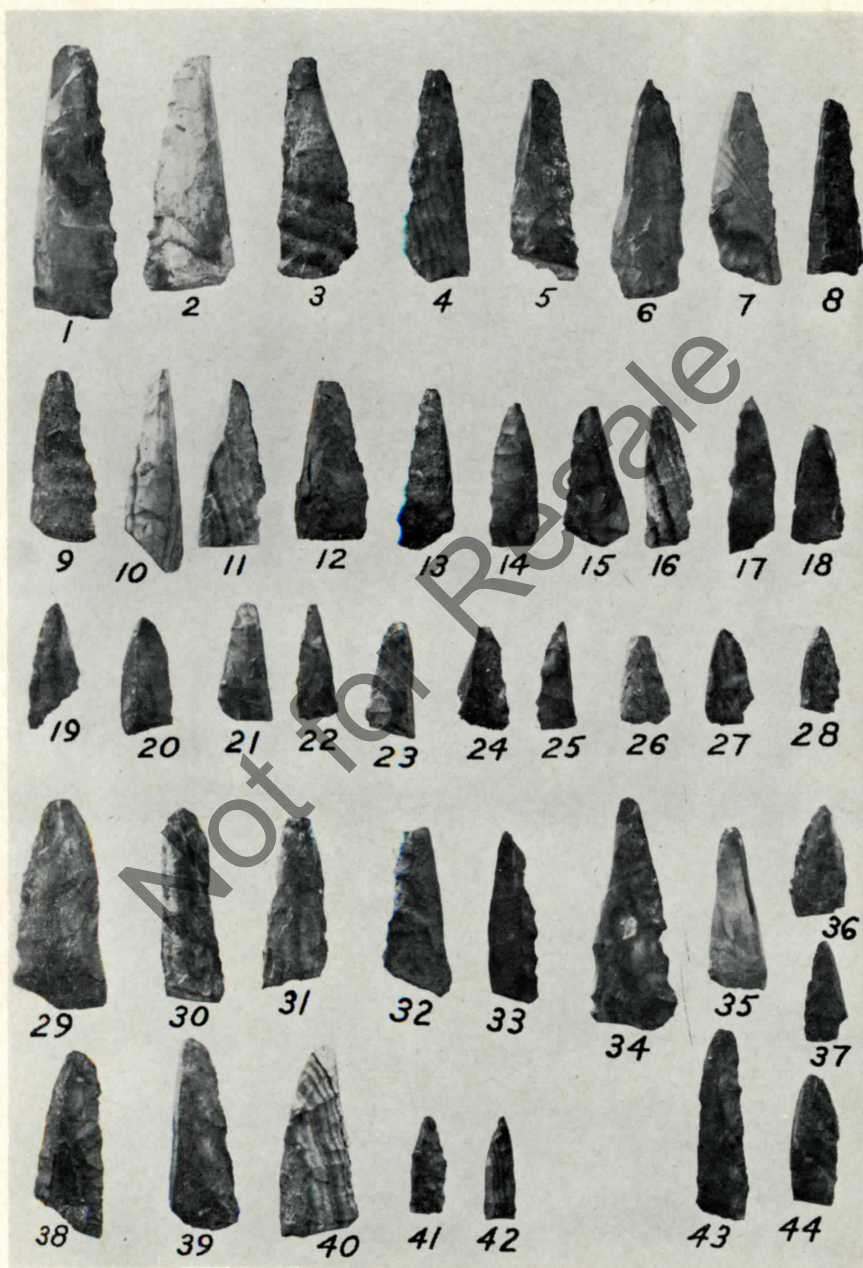


Plate VIII. Triangular microliths from T 1. Chert. Natural size.

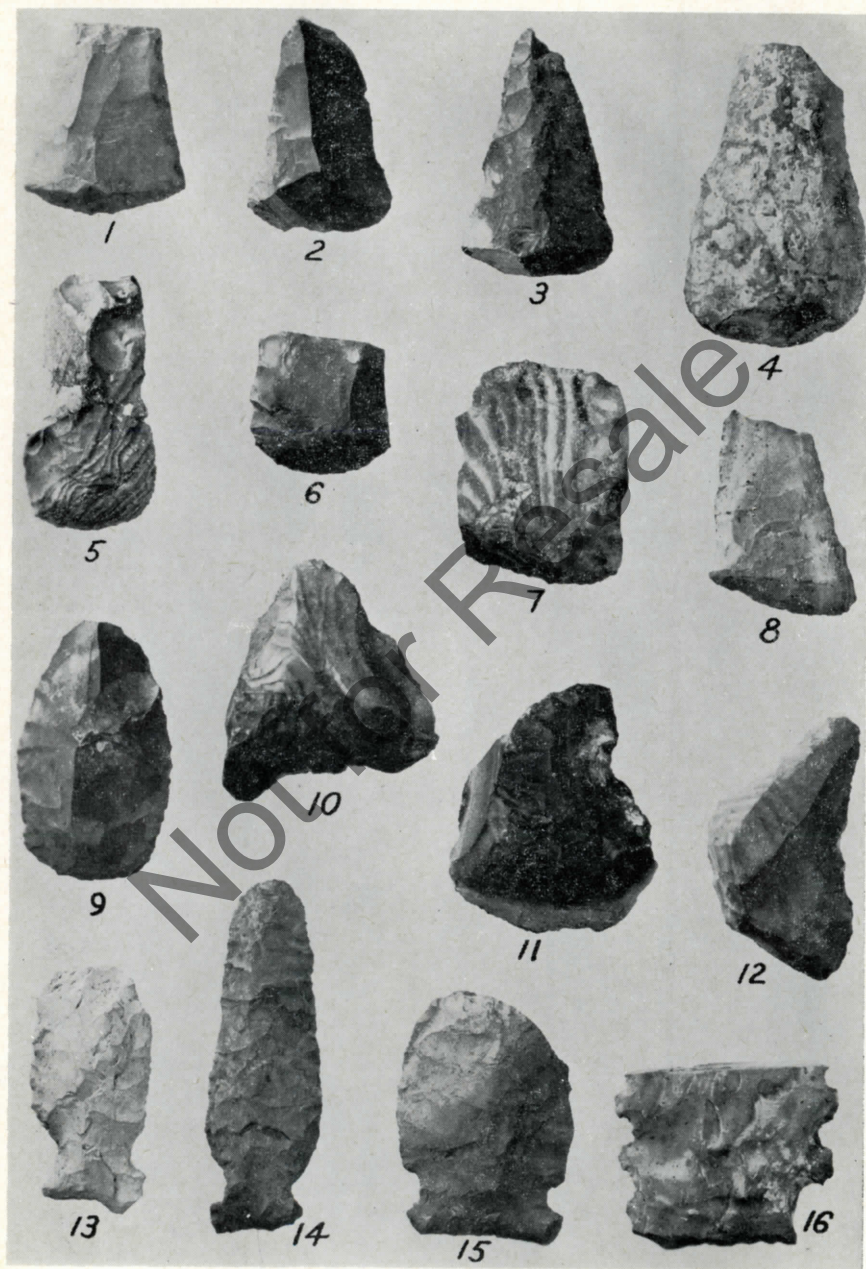


Plate IX. Scrapers from T 1. Chert. Natural size.



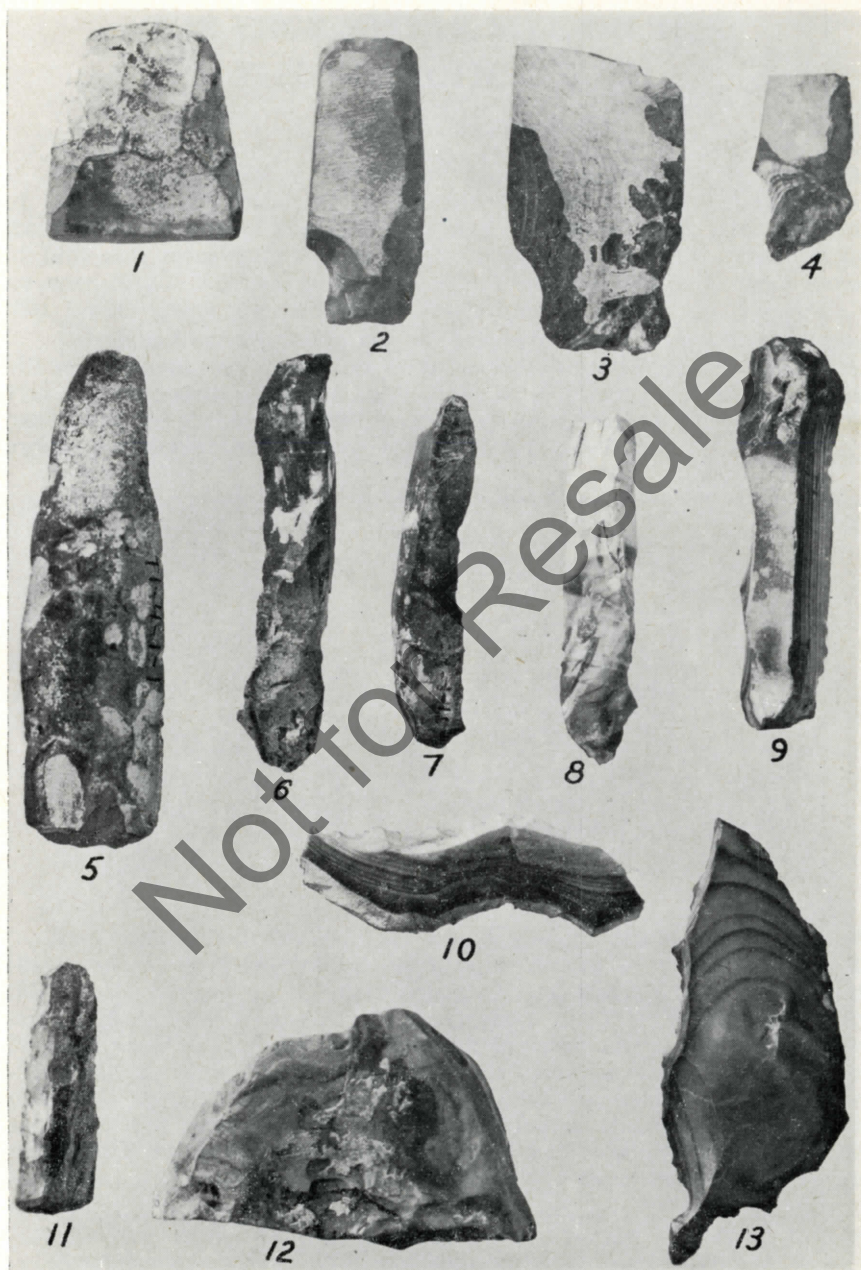


Plate X. Scrapers, implements with rubbed edges, heavy flakes, and core.  
T 1. Chert. Natural size.

Not for Resale

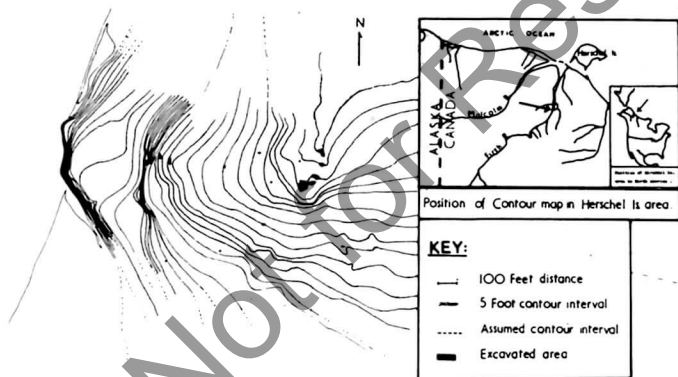
# THE ENGIGSTCIAK SITE ON THE YUKON ARCTIC COAST

RICHARD S. MACNEISH

This paper is but a preliminary progress report on the activities of the National Museum of Canada in the northernmost Yukon. Excavation of one of the key sites will be continued in the summer of 1956 and more data should be forthcoming. Thus this report is in no way final. Much of the data is incomplete and any conclusions that I may draw are necessarily tentative.

I shall not endeavour to give full descriptions of the artifact types but merely mention them and refer to their illustration in the plates. The few comparisons that I shall make with other areas will, for the most part, be speculative and their purpose rather to define archaeological problems than arrive at any final conclusions.

FIGURE 1. Map of the Engigstciak site.



This site, called Engigstciak, was originally found in the fall of 1954<sup>1</sup> and the first excavations took place during July and August of 1955. It is located on a small erosional remnant at the foot of the British Mountains on the Arctic coast about 16 miles from the Arctic Ocean. (See Fig. 1). This mesa is along the east side of the Firth River about half a mile north of where the narrow steep canyon of the Firth gives way to the relatively wide valley that becomes the Firth River delta. For the most part the land to the north of the site is rolling and pitted with numerous small lakes and areas of muskeg. This territory is covered with tundra flora. North of the site there are only two side

<sup>1</sup>I would like to thank Alex and Frank Stefansson who were guides and pilots during the original survey and Old Roland who led me to Engigstciak in 1954. During the 1955 expedition I was indebted to Mabel Steffansson, Georgina Steffansson, Frank Stefansson, Willy Stefansson, Sandy Stefansson, Alex Stefansson, Hugh Smith, Elijah Allen, and Jalil Jawad, who assisted in the excavations.



streams into the Firth. They have deep valleys and willows on their bottoms and along their sides. South of the site, upstream, the valley of the Firth River becomes narrower and steeper and the third steep canyon entering the Firth to the south sees the northern limit of trees. Here there are large stands of poplar and pine as well as willow, though for the most part the valleys are grassland or have a tundra-like flora. Because of this occurrence of trees only ten miles south of the site and the widening of the valley right at the site, there are to be found on the river flats large quantities of driftwood which enhance this location as a camp spot. The fauna of the region varies seasonally. Black bear, Alaskan brown bear, wolves, mountain sheep, and some caribou occupy this region the year round. In both the fall and spring there are large numbers of ducks and geese as well as ptarmigan. Early in the spring the salmon move down the Firth to the ocean and return in the fall. The site is at one of the most convenient spots for setting up nets in the Firth as to the south the canyon is too steep and the river too deep, while just to the north the many channels of the Firth give the fish a variety of routes to move up or down river. The major animal movement during the late summer and early spring is by the caribou. Both in moving down to the coast and in moving from the coastal plain back into the mountains extensive use is made of the Firth River valley. The site is situated just below the canyon at one of the best caribou crossings of that river while Engigstciak, a thrust of rock 200 feet high and just a few hundred yards east of the site, is an excellent observation post for anyone looking for caribou between the mountains and the Arctic Ocean.

The erosional remnant or small plateau on which the site is located is about a mile long and half a mile wide, most of its top surface being 200 ft. above the Firth River though the pinnacle at its eastern extremity rises to 400 feet above the Firth. Excavation and testing of this site has revealed that only the southwest portion of the plateau was occupied extensively, the occupation area encompassed being about 1200 feet by 600 feet. This portion of the mesa has the advantage of being on the southern slope of the plateau so that the inhabitants were partially protected from the icy blasts off the Arctic Ocean, and furthermore, their camps would have been hidden from the eyes of the caribou which might have traversed the coastal plain to the north.

In the beginning of our excavations a series of test pits were sunk into the site at regular intervals from east to west for a distance of 1200 feet. It soon became apparent that nowhere were there extensive deep deposits of human refuse but that certain areas had pits and patches of refuse that evidently represented occupations by small groups for a limited time. In a few areas on the top of the plateau where the pits were most numerous, different pits contained different artifact complexes and were intrusive either into another pit or into an area of refuse belonging to a different cultural complex. These pit areas or refuse patches yielded the largest amount of artifacts. However, along the flanks of the plateau the stratigraphy was rather different in that there were a series of thin lenses of refuse superimposed, one upon the

other, with intervening culturally sterile layers of loess or clay. In these areas the cultural stratigraphy was clear-cut but, unfortunately, the number of artifacts from each of these lenses was usually quite small.

As excavation progressed it became apparent that there were nine different archaeological complexes that re-occurred in different lenses or areas, or pits. Unfortunately, nowhere were we able to find all nine of these complexes, one on top of the other. Nevertheless from the areas where there were lenses of interdigitating refuse it became possible to align these archaeological complexes into a tentative sequence which we hope to further verify in our future excavations. One area in the southeast portion of the site was particularly enlightening from a stratigraphic standpoint. Here on the surface and in patches where the tundra had been removed by wind-action were found a few pieces of Thule Eskimo materials. In the underlying humus and in a pit intrusive from the humus, called Pit 11, were found a series of artifacts associated with combed pottery that I consider belong to my Firth River Combed horizon. One corner of Pit 11 had cut through a portion of Pit 7 that had an artifact complex associated with what I believe is cordmarked pottery. This complex I consider to represent the Firth River Corded horizon. Both of these pits were cut into refuse under the humus which contained still another artifact complex, without pottery. This complex is called the New Mountain Complex. In the eastern portion of the excavation this refuse overlay sterile loess or sand. In lenses in this sand and in a pit (Pit 7A) extending down from the sand were a few spear points and artifacts that I consider to belong to the Flint Creek horizon. The humus, Pit 11, 7 and 7A, the refuse under 11 and 7 and the sand all overlay a stratum of tightly-knit dark gray clay. This stratum varied between six inches and three feet in thickness and was present over most of the top of this plateau. Underlying this gray clay was to be found either the basic shales of the plateau or thin laminae of sand interspersed with dark layers of muck or ancient humus. A few of these dark layers contained bone materials, flint chips, and, in toto, ten very crude artifacts. These ten artifacts compose the ill-defined British Mountain Complex. It is hoped that future excavations will greatly enlarge as well as define this evidence of our earliest human occupation. Using the stratigraphy in this area as a basis, it was possible by comparison to align the other areas with cultural stratigraphy, as well as the individual pits with a single cultural complex, into a tentative sequence. The following chart presents the stratigraphies and the over-all sequence.

As may be seen from the chart, the top three cultural complexes cannot be aligned in order on the basis of the stratigraphy of this site though they are above all the earlier six horizons. Fortunately the artifacts from these three horizons belong to Eskimo complexes that have been placed in chronological order in excavations in Alaska.<sup>2</sup> It is assumed that their sequence is the same along the Firth River. Perhaps future excavations will find them stratified at this Yukon site. Of the earlier six horizons only one, the Firth River Dentate-impressed

<sup>2</sup>H. B. Collins, 1954.

# STRATIFIED AREAS

Pit 9	Pit 4	Pit 1	Pit 7	Pit 3 and Pit 6	Pit 17	Pit 16 intrusive into Pit 18	Pit 22	Pit 14 area	Pit 12	Isolated sites or pits	TOTAL SEQUENCE OF COMPLEXES
			surface	surface					surface	NiVc 2 NhVc 1	Herschel Island Thule
							surface			NeVc 1	Whitefish (Early Thule-Late Birnirk)
								Level 1-2	1		Cliff (Norton Complex)
									Level 2-3		Firth River Grooved Horizon
		Level 1	Pit 11 and Level 1	Pit 6A	Level 1-3	Pit 16	Level 1-2			Pit 13	Firth River Dentate Horizon
	Pit 1-4		Level 2-4							Pit 19	Firth River Cordmarked
Level 1-4	Pit 15	Level 2-4	Refuse under Pit 7	Pit 3 Level 1-4 and Pit 6		Pit 18	Level 3-4	Level 3, 5, 6		Pit 21 Pit 5 Pit 2 Pit 20 Pit 8, Pit 9	New Mountain Complex
			Pit 7A Level 2-4		Refuse under Pit 17						Flint Creek Complex
Level 6	Level 6	Level 6	Level 6	Level 6 of Pit 3							British Mountain Complex

Complex cannot be aligned on the basis of stratigraphy. It has been placed in its chronological position on the basis of seriation. With the Dentate-impressed pottery three micro-blades were found. This would indicate that it is before the Eskimo-like Norton Complex without micro-blades and after the New Mountain Complex with micro-blades but without pottery. Whether it is before or after the Grooved Pottery or Cordmarked Pottery horizons cannot be surely determined, but since grooved pottery continues into Eskimo horizons it seems likely that it is before the Firth River Grooved Paddle horizon. It is hoped that future excavations will find this complex in stratigraphic relationship to the other horizons.

On the basis of the correlations shown above in the chart and by comparisons of artifact types, we have been able to definitely establish nine sequential artifact complexes. Some of these artifact complexes are represented by rather poor samples and undoubtedly there are included with them a few artifacts from early horizons that do not belong. These occurrences of earlier artifacts in pits or refuse areas belonging to later horizons is to be expected on a site where there are numerous occupations by people who were digging pits and who, of course, occasionally would dig into earlier refuse areas and thereby include earlier artifacts in occupation areas with their own.

The earliest materials found under the gray clay at four different spots at the site consist of two thin flake side-scrapers, (See Plate I, No. 19), two thick flake side-scrapers, two large bifacially chipped nodules with battering along one edge indicating their use as choppers (See Plate I, No. 20), and four large plano-convex crude scrapers with retouching along a small portion of an edge on the convex side which I am calling scraping planes (See Plate I, No. 18). These few artifacts compose the British Mountain Complex and are, of course, of a very generalized nature. Their position under gray marine clays<sup>3</sup> and with a bone of an extinct bison<sup>4</sup> may indicate considerable antiquity. Until we know more about the content and age of this horizon it seems useless to speculate about its cultural relationships.

The second complex in our sequence is called Flint Creek. Artifacts belonging to this complex were found in Pit 7A above those containing the British Mountain Complex and in sands which underlay refuse containing New Mountain artifacts. They also occurred in refuse underlying Pit 17 which contained comb-marked sherds. Actually 72 artifacts belonging to this complex came from these two areas. More than half of these were of a general nature and included one crude chopper, eight thick side-scrapers, ten thin side-scrapers, five spear tips, four large ovoid blades, two fragments of bone awls, and two tear-drop shaped points (See Plate I, No. 2). Also occurring was a large

<sup>3</sup>Dr. F. J. Wagner of the Section of Stratigraphic Palaeontology, Geological Survey of Canada, Department of Mines and Technical Surveys, identified the invertebrates in the gray clay as being of marine origin.

<sup>4</sup>Identification by A. E. Cameron of the Division of Zoology, National Museum of Canada.

ovoid end-scraper (See Plate I, No. 16), a small chipped disc chopper (See Plate I, No. 15), a small keeled end-scraper, a spoke shave (See Plate I, No. 12), and a small turtle-shaped end-scraper. Artifacts such as the latter group are also rather generalized but do appear with seemingly early complexes in the Northwest Territories<sup>5</sup> and the Great Plains.<sup>6</sup> However, diagnostic of this horizon are fragments of twelve Angostura points (See Plate I, No. 3-6), and one Plainview point (See Plate I, No. 7).<sup>7</sup> Two other projectile points are of special interest. One (See Plate I, No. 1) has the general shape of a short wide Angostura point but it is made from a prismatic flake that has been retouched on only one surface like those from the Neolithic of Siberia.<sup>8</sup> The other (which was not pieced together when the photographs were taken) is of the same shape but bifacially chipped and with a flute extending its whole length on one surface. Fourteen crude prismatic blades (See Plate I, No. 13), two of which have retouching, as well as a fragment of a polyhedral core (See Plate I, No. 14), of the conical variety from which these blades may have been struck occurred. There is also one small fragment of a micro-blade that appears to have been struck from a tongue-shaped polyhedral core. Perhaps of even greater significance with these Early Man points are the presence of five burins (See Plate I, No. 8-11). All of these are crude, not unlike those found with micro-blades in the interior of the Canadian northwest.<sup>9</sup> Two of there are angle burins made from a flat flake without trimming (See Plate I, No. 9). A rectangular flat flake with bifacial retouching on its shorter ends and each of the four corners has received a number of burin blows. (See Plate I, No. 8). The other two burins are both flat flakes roughly half-moon in shape. The convex edge of both has crude bifacial trimming. One of these (See Plate I, No. 10) has an angular blow struck at its straight edge to form an angle burin, while the other (See Plate I, No. 11) has burin blows struck from opposite directions on its straight edge and one blow struck along the extremity of each of its convex edges. All these burins are extremely crude and their surfaces are not retouched and the trimming along their edges is poorly done when it occurs. Generally speaking, they are relatively thick and would have made rather wide slots. Burins such as these seem to be rare or absent in other Arctic sites belonging to the so-called Paleo-Eskimo cultures but are similar to some of the crude ones found in interior.<sup>10</sup>

As yet flint complexes like that of Flint Creek have not been found in the Arctic. The nearest thing to it seems to be that found in the Trail Creek cave where Angostura and Plainview points occurred with micro-blades.<sup>11</sup> In the Northwest Territories, the Artillery Lake, <sup>12</sup>

<sup>5</sup>MacNeish, 1951, 1953, 1956.

<sup>6</sup>Hughes, 1949.

<sup>7</sup>Suhm, Krieger, and Selks, 1954, pp. 402 and 472.

<sup>8</sup>Okladnikov, 1950.

<sup>9</sup>MacNeish, 1954.

<sup>10</sup>Ibid.

<sup>11</sup>Larsen, personal communication.

<sup>12</sup>MacNeish, 1951.



and Great Bear River complexes<sup>13</sup> have Angostura or Angostura-like points but lack the burins and prismatic blades. The question is, are all these complexes with similar points related? If they are, does the Flint Creek Complex with its prismatic blades and burins represent an ancestral stage which loses its Asiatic traits as the complex moves south and east? Or does Flint Creek represent a late stage, being the result of a fusion of a complex with Angostura points that had long been established in the New World with a complex of tools (crude burins and blades) that more recently spread to the New World from Asia?

The next artifact assemblage that appeared at the Firth River site has been called the New Mountain Complex. This assemblage is represented by an adequate sample of over 600 artifacts. Particularly distinctive of this horizon is a large series of small bifacially chipped bladelettes which often have on their surfaces ripple or "Yuma" flaking. Thirty-eight fragments of these occurred. Most were half-moon shaped side-blades (See Plate II, No. 27). Also there were very small side-blades which were lenticular in outline (See Plate II, No. 4), unifacially chipped side-blades of roughly the same shape (See Plate II, No. 29), and one whole rectangular side blade (See Plate II, No. 28). Beside these side-blades there were small end-blades. In what seems to be the earliest phase of this culture there were 26 lanceolate-shaped arrow points with straight or slightly concave bases (See Plate II, No. 5 and 6). These look like diminutive Angostura points. In four pits that I consider to be late in this phase there were five contracting-stemmed points, one narrow-stemmed arrow point, three round-based arrow points, three double-pointed arrow points, and one triangular arrow point (See Plate III, No. 2). However, beside these smaller delicately chipped points are ten bases of Angostura points (See Plate II, No. 1), and 19 large projectile point tips and a single large triangular point (See Plate II, No. 2).

As distinctive as the small bladelettes are a wide variety of burin types. Forty-nine burins belonging to fourteen different varieties occurred as well as 42 burin spalls, 12 of which have retouched ends. Most numerous are angle burins with one edge trimmed and both surfaces well chipped to form a rounded base and a well blunted back (See Plate II, No. 8-15). Closely related to these small ones are two relatively large ones that look as though they had been fashioned from tear-drop shaped projectile points, and one of these has quite a bit of smoothing on its two surfaces adjacent to where the burin blow had been struck (Plate II, No. 8). A few of the burins (6) are relatively crude corner burins (See Plate II, No. 7) with no retouching and are like those found in the earliest horizon, as are two crude angle burins.

There are also a number of corner burins. Three of these are roughly rectangular in outline with one edge trimmed (See Plate II, No. 10) and the other three edges bifacially chipped (See Plate II, No. 11), and there are two that are chisel burins (See Plate II, No. 19 and 20). In a few cases some of these well-made burins are trimmed

<sup>13</sup>MacNeish, 1956.

at two or more corners (See Plate II, No. 9 and 16). However, these are rare specimens and seem to be but variations on a major theme. There are also three lamellar flakes that have had one of their sides trimmed to form a burin (See Plate II, No. 21). Besides these types that are dominant, three types of gravers appear in what seems to be a late part of this horizon and these types become more prevalent at a later time. The angle burins are characterized by retouching on only one surface. On three of these the retouching is opposite the trimmed portion (See Plate II, No. 18), while in one of these the retouching is adjacent to the trimmed portion. (See Plate III, No. 21). Also appearing late are three flakes that have pointed retouched ends (See Plate IV, No. 10). Besides piercing or drilling, these latter tools could also have been used for engraving and slotting bone. They became more prevalent in the later horizons and continue to be used after burins finally died out.

Numerically one of the dominant characteristics of this archaeological phase are micro-blades (or lamellar flakes) and larger crude prismatic blades. Ninety-one are micro-blades which are very narrow and relatively thick with one to five ridges on their raised surface (See Plate II, No. 24). These seem to have been made from tongue-shaped polyhedral cores, of which we found three (See Plate II, No. 26). Extremely similar to these micro-blades are 13 thinner and wider ones usually having a single ridge on one surface (See Plate II, No. 23). These micro-blades appear to have been made from crude conical polyhedral cores with the striking platform at an acute angle to the fluted sides. Four of this variety occur and all of them appear in pits of the late phase. Also in these same pits were two end-of-the-blade scrapers made from thin wide prismatic blades. Beside these neatly made micro-blades are 32 larger and cruder blades, 8 of which have retouching along their longer edges (See Plate II, No. 25).

There are a number of other tools with a variety of functions that make this horizon distinguishable, such as one bone foreshaft of a spear or dart with a clip base and a long groove for a side-blade (See Plate III, No. 29), 8 small double-pointed bone fish gorges appeared (See Plate II, No. 33) and there is a thin fragment of bone that may have been part of a needle. A hollow cut bird-leg bone with polishing at one end may have been a sucking tube (See Plate IV, No. 22), and there is a bone pentagonal pendant (See Plate II, No. 31), two bone rings, and a double-pointed fragment of a long bone, and a pierced caribou phalanx. There also are three fragments of antler that may be proximal ends of arrow points, and there is a single slotted distal end of an arrow foreshaft. Besides these relatively specialized traits there are many of a more general nature. These include 33 thick flake side-scrapers, 48 thin flake side-scrapers, three turtle-back scrapers (Plate II, No. 35-36), two thin scrapers that look like fish scales, one keeled end-scraper, 14 flat triangular end-scrapers (Plate II, No. 34), 6 rectangular flat end-scrapers (Plate III, No. 11), and a single spoke shave. Fragments of large bifacially-chipped knife blades are fairly common as 21 occurred. There are ten points roughly tear-drop shaped

in outline, along with a single chipped disc chopper, two hoe-like scrapers, and a single large half-moon shaped side-blade (See Plate II, No. 37).

In the latest part of this phase, and evidently continuing into the later phases, is a single chipped adze with truncated outline and with polishing on its surface perhaps due to use wear (See Plate III, No. 25). There also is a series of bone tools as well as 14 pieces of cut bone and antler that may very well represent unfinished tools. Thirteen of the tools are ulna awls, while there are 9 split bone awls, one antler flaker, one caribou rib that may have been used as a knife, two well-polished awls with pointed bases (See Plate II, No. 30), a mountain sheep horn made into some sort of a gouge, and a single small rectangular piece of bone with a single groove running lengthwise on each of its surfaces.

Along with these artifacts a vast quantity of bones was uncovered in refuse. They are predominately from caribou but a few teeth and limb bones occur belonging to buffalo, elk, muskox, and some variety of mountain goat that seems to be larger than those living in the regions today.<sup>14</sup> Since all these animals are not present in the region, such material is significant. It may well indicate a slightly different climate and eventually may be brought to bear on the problems of the dating of this complex.

Though it perhaps is too soon to draw any conclusions about relationships of this horizon based upon comparisons of artifact types, it is obvious that the New Mountain Complex is somehow connected with those Cape Denbigh or Cape Denbigh-like horizons.<sup>15</sup> It certainly might well fall within the 5,000 to 9,000-year-old range of dates that have been assigned to Denbigh.<sup>16</sup> If the division of the New Mountain horizon into an earlier and later phase is valid, I can't help but wonder if the Cape Denbigh Flint Complex and the late phase of the New Mountain complex are not related, for besides a host of burin types, similar micro-blades, similar side-blades, and many similar general traits, they have in common such diagnostic traits as contracting-stemmed points, double-pointed points, and triangular points with concave bases. Also, the remains that Solecki<sup>17</sup> and Hackman<sup>18</sup> collected from Anaktuvuk Pass might belong to this horizon. Some of the remains that Irving found in the Brooks Range<sup>19</sup> have only lanceolate-shaped projectile points as does Early New Mountain. These points as well as the burin types, micro-blades, side-blades, and other traits might be connected with the early phase of the New Mountain Complex. While in the realm of speculation, it seems worth while to consider the earliest remains found in the eastern Arctic. Sarqaq, the earliest levels of Disko Bay,<sup>20</sup> and other sites in Greenland,<sup>21</sup> as well as the earliest

<sup>14</sup>Identified by A. E. Cameron, Division of Zoology of the National Museum of Canada.

<sup>15</sup>Giddings, 1951.

<sup>16</sup>Giddings, 1955.

<sup>17</sup>Solecki, 1951.

<sup>18</sup>Solecki and Hackman, 1951.

<sup>19</sup>Irving, 1953.

<sup>20</sup>Meldgaard, 1952.

<sup>21</sup>Knuth, 1954.

remains from Igloodik in the central Arctic,<sup>22</sup> and Thyazzi (Manitoba)<sup>23</sup> are very similar to the Cape Denbigh Flint Complex. These have contracting-stemmed, narrow-stemmed, double-pointed, and a few triangular points as well as triangular adzes, and thus seem related to the late phase of the New Mountain Complex. Thus it may well be that Early New Mountain and Irving's Brooks Range material are ancestral to other Arctic micro-tool cultures. All these relationships are highly hypothetical and must await further research in the Arctic.

Stratigraphically over the New Mountain remains occur the Firth River Cordmarked horizon. The 119 artifacts for the most part are very much like those found in the late part of the New Mountain Complex. With them are 315 pieces of pottery. This pottery has roughened surfaces that looks very much like cordmarking and is identical to those from Cape Denbigh that were considered to be cordmarked.<sup>24</sup> Dr. James Griffin, in studying these sherds, did not now think they had been struck by a cord-marked paddle but rather by some sort of a grooved paddle. Unfortunately none of the sherds we have at present allow for clear enough impressions to resolve this question. Associated with these sherds are ten micro-blades. Half-moon side-blades (See Plate III, No. 13-14), both large and small, occur as do snub-nosed scrapers (Plate III, No. 11), and an end-of-the-blade scraper (See Plate III, No. 12). Burins (21) still are present and most of them are of the corner variety with retouching on one of their flat surfaces (See Plate III, No. 21 and 22). Projectile points are much the same as those found with late Pointed Mountain remains (See Plate III, No. 1-10), and include double-pointed contracting-stemmed, narrow-stemmed, round-based, and lanceolate varieties. Also occurring are side-scrapers, a large bifacial blade (See Plate III, No. 23) and a chipped adze (See Plate III, No. 25). One bone fishhook (See Plate III, No. 24), and the front of a bone arrowshaft with a slot for a point (See Plate III, No. 28), complete the inventory.

On the basis of our present evidence, this complex certainly seems to have developed from that of New Mountain. The question now becomes, does this represent the first pottery in the Arctic area and does it have bearing on the problem of Woodland and Siberian ceramic relationships?

As I pointed out in the section on stratigraphy, the Firth River Dentate horizon may be next. There is as yet no stratigraphic evidence to confirm this assumption. The materials belonging to this complex came from one isolated pit not near the others and included mainly 916 potsherds (See Plate V, No. 9-11). These are relatively thick and appear to be coil-made. Their outer surfaces bear dentate-stamp impressions which have been applied haphazardly. Other artifacts include end-scrapers (See Plate V, No. 4), a few micro-blades (See Plate V, No. 5 and 6), contracting-stemmed (See Plate V, No. 1 and 3), and lanceolate projectile points (See Plate V, No. 2), a large side-blade (See Plate V, No. 8), and side-scrapers.

<sup>22</sup>Meldgaard, personal communication.

<sup>23</sup>Giddings, 1956.

<sup>24</sup>Griffin, 1953.

The main problem at present is to obtain larger amounts of this artifact complex in better stratigraphic position. The pottery is certainly unique for the Arctic and, again, may have bearing on the Woodland-Siberian ceramic relationships.

The Firth River Grooved Pottery horizon occurs over both the Flint Creek, New Mountain, and British Mountain complexes. It is our second largest complex including 217 artifacts and 1,249 pieces of pottery. The pottery is all of a type defined by Oswalt as Norton Linear Stamp.<sup>25</sup> (See Plate IV, No. 14). It is associated with a number of smooth sherds with the same general paste. In one pit with it were three sherds of Norton Check-stamped.<sup>26</sup> The other associated artifacts give this complex a distinctive mien. Projectile points are five contracting-stemmed (See Plate IV, No. 4), four lanceolate (See Plate IV, No. 7), six round-based (See Plate IV, No. 5), three straight-stemmed points (See Plate IV, No. 2 and 3), and a double-pointed one (See Plate IV, No. 6). Half-moon side-blades, both large and small, are proportionately frequent (13), as are larger bifacially-chipped tear-drop shaped knife blades (Plate IV, No. 18). Micro-blades (See Plate IV, No. 19 and 20), are very rare even though we found two polyhedral cores (See Plate IV, No. 12 and 13), with an angle striking platform. Ten angle burins occur and, for the most part, are poorly made (See Plate IV, No. 15 and 16). They are made from flat flakes which are unifacially retouched. Two of them have smoothing on their surfaces. Along with these burins are flat flakes that have been chipped to a small beaked point (See Plate IV, No. 10 and 17). Snub-nosed scrapers (See Plate IV, No. 8-9), chipped adzes (See Plate IV, No. 11), and flake side-scrapers are fairly numerous. Bone tools for the first time appear in some numbers. They include a cylindrical antler flaker (See Plate IV, No. 26), a notched leister prong (See Plate IV, No. 25), marrow gouges (See Plate IV, No. 24), a sucking tube (See Plate IV, No. 22), bone awls, scraper handles and large antler scrapers (See Plate IV, No. 21). The most distinctive bone tool is a single detachable bone spear or arrowhead (See Plate IV, No. 27). It has a square wedge-shaped base, a diamond-shaped stem with a line-hole *not* made with a bow drill, bilateral single barbs, and a slot for an end-blade.

This complex of tools is not like anything previously found in the Arctic. Its few burins, micro-blades, and side-blades may indicate relationships with earlier cultures, while the Grooved and Check-stamped pottery, stemmed arrows, detachable bone point, and other tools, seem to indicate some sort of relationship with early Eskimo remains.

The next complex in our sequence is represented mainly by 2640 Norton Check-stamped sherds (See Plate V, No. 12 and 15) in a pit extending down from the humus.<sup>27</sup> This assemblage I call the Cliff Complex. It definitely seems to be connected with the early ceramic remains in Alaska. The only other tools with this pottery are two snub-nosed end-scrapers (See Plate V, No. 16-17), a half-moon side-

<sup>25</sup>Oswalt, 1955.

<sup>26</sup>Griffin, 1953.

<sup>27</sup>Griffin, 1953.



blade (See Plate V, No. 14), a straight-stemmed point (See Plate No. 13), a bone ice pick (See Plate V, No. 18), and three net sinkers.

Certainly this pottery has affiliations with the Norton<sup>28</sup> and Near Ipiutak horizons<sup>29</sup> of Alaska. Just how close this relationship is can only be determined by the finding of more materials in better stratigraphic position at the Firth River site.

The two final complexes occur in the humus and on the surface of the Firth River site. Both of them are known from previous work along the Yukon Arctic coast. In one area a sherd of Barrow Curvilinear-Paddled (See Plate VI, No. 7),<sup>30</sup> was found with a piece of ground slate (ulu) (See Plate VI, No. 8), and a contracting-stemmed point (See Plate VI, No. 9). The sherd is very much like one that occurred at the Whitefish Station site along with an unbarbed arrow-point (See Plate VI, No. 10) and a large open-socketed harpoon with single bilateral barbs (See Plate VI, No. 11).<sup>31</sup>

On the east end of the site we picked up a number of sherds of thick fibre-tempered St. Lawrence Plain type (See Plate VI, No. 5).<sup>32</sup> There are also a number of fragments of ground slate including a man's knife blade (See Plate VI, No. 1), and a triangular harpoon point. We never actually had time to dig in this region but there is probably a brief Thule occupation of the Herschel Island variety which has closed-socket harpoons (See Plate VI, No. 3-4), and straight-stemmed arrows (See Plate VI, No. 2).<sup>33</sup>

#### SUMMARY

In conclusion, the preliminary excavation on the Firth River indicates a tentative sequence of nine culture complexes. The earliest one, the British Mountain Complex, is represented by a poor sample of generalized choppers and scrapers. At the present time its cultural affiliations are impossible to determine. The Flint Creek Complex appears above it. Its relationships are towards the interior of the Canadian Northwest (and perhaps further south) even though the presence of such Old World tools as burins and blades make it different from anything previously found. The Pointed Mountain Complex with its micro-tools, while bearing similarities to archaeological complexes in Siberia, shows the greatest resemblance to the earliest remains so far found in the western Arctic (Cape Denbigh Flint Complex) and in the eastern Arctic (Sarqaa and Thyazzi). Next are the Firth River Cordmarked and Firth River Dentate horizons whose small tools may have been derived from the previous complex but whose pottery gives them a distinctive mien. These pottery complexes, once they are well defined and dated may contribute to the solution of the problem of the Asiatic derivation of Woodland ceramics. The Firth River Grooved Pottery horizon has some tools indicating a possible derivation from

<sup>28</sup>Giddings, 1951.

<sup>30</sup>Oswalt, 1955.

<sup>32</sup>Oswalt, 1955.

<sup>29</sup>Larsen and Rainey, 1948.

<sup>31</sup>MacNeish, in press.

<sup>33</sup>MacNeish, in press.

the earliest complexes of the Firth River, but its ceramics seem to tie it with the earliest Eskimo assemblages (Ipiutak excepted.) The Cliff Complex with its Norton Check-stamped pottery is obviously related to the Near Ipiutak and Norton complexes of Alaska. The Whitefish Station and Herschel Island complex are Thule and may well be ancestral to the Eskimo of the Yukon Arctic coast.

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National Museum of Canada  
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PLATE I  
( $\frac{1}{2}$  natural size)

**Flint Creek Complex—1-17**

- 1 - 7. Projectile points
- 8 -11. Burins
- 12. Spoke shaver
- 13. Prismatic blade
- 14. Core

- 15. Bifacial disc

- 16-17. End scrapers

**British Mountain Complex—18-20**

- 18. Scraping plane
- 19. Side-scraper
- 20. Chopper

PLATE II  
( $\frac{1}{2}$  natural size)

**Pointed Mountain Complex**

- 1 - 6. Projectile points
- 7 -22. Burins
- 23-25. Prismatic blades
- 26. Polyhedral core

- 27-29. Side-blades

- 30-33. Bone tools

- 34-36. End scrapers

- 37. Large side blade

PLATE III  
( $\frac{1}{2}$  natural size)

**Late Pointed Mountain and Firth River Corded Complex**

- 1 -10. Projectile points
- 11-12. End-scrappers
- 13-14. Side-blades
- 15-17. Prismatic blades
- 18. Polyhedral core
- 19-20. Large side-blades

- 21-22. Burins

- 23. Large biface

- 24. Bone fish-hook

- 25. Chipped adze

- 26-29. Bone tools

PLATE IV  
( $\frac{1}{2}$  natural size)

**Firth River Grooved Pottery Complex**

- 1 - 7. Projectile points
- 8 - 9. End Scrapers
- 10 and 17 Beaked gravers
- 11. Chipped adze
- 12-13. Polyhedral cores

- 14. Grooved pottery

- 15-16. Burins

- 18. Side-blade

- 19-20. Micro-blades

- 21-28. Bone tools

PLATE V  
( $\frac{1}{2}$  natural size)

Upper half: **Firth River Dentate Complex**

Lower half: **Cliff Complex**

- 1 - 3. Projectile points
- 4. End-scraper
- 5 - 6. Prismatic blades
- 7. Beaked graver
- 8. Side-blade
- 9 -11. Firth River Dentate-stamped pottery

- 12 and 15. Norton Check-stamped pottery

- 13. Projectile point

- 14. Side-blade

- 16-17. End scrapers

- 18. Bone ice pick

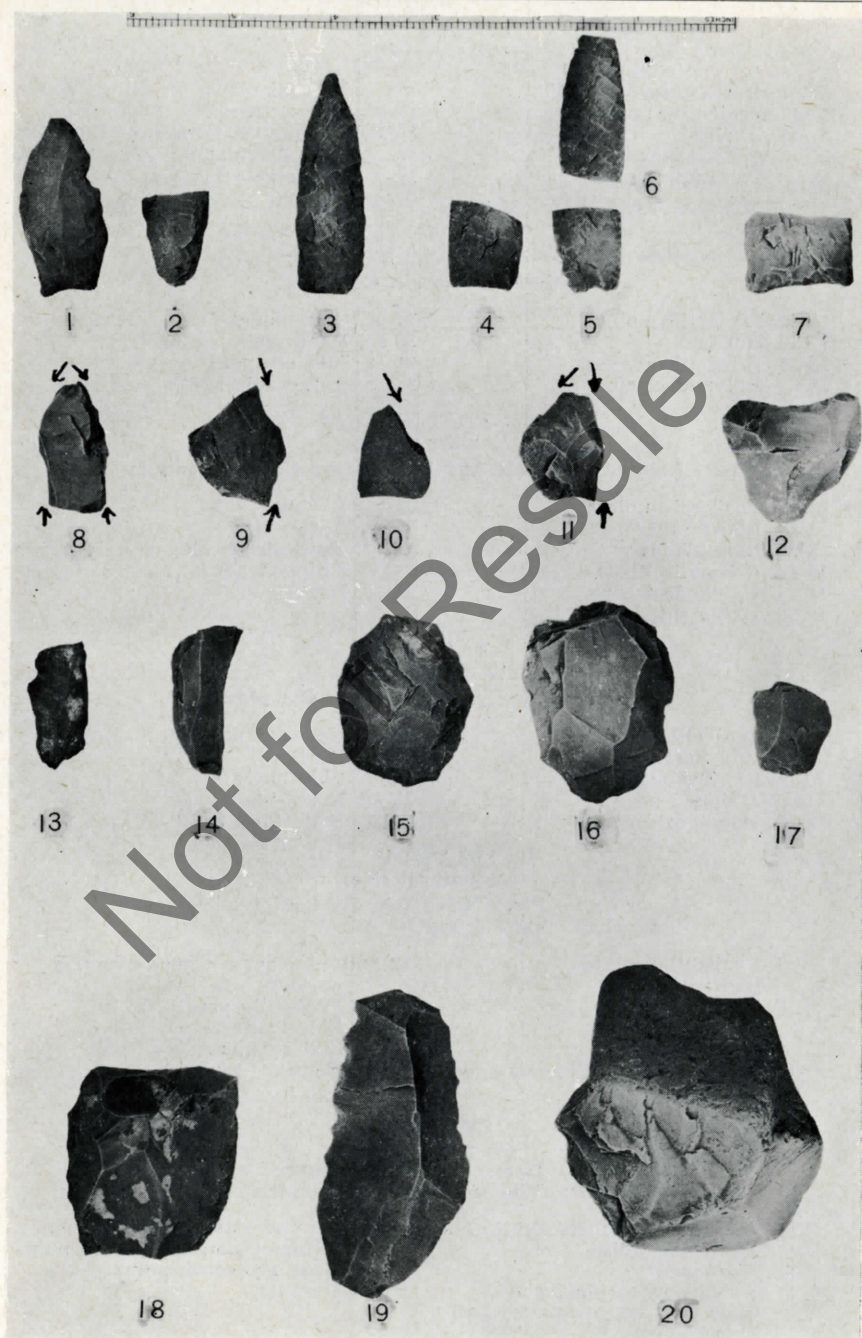
PLATE VI  
( $\frac{1}{2}$  natural size)

Upper half: **Herschel Island Complex**

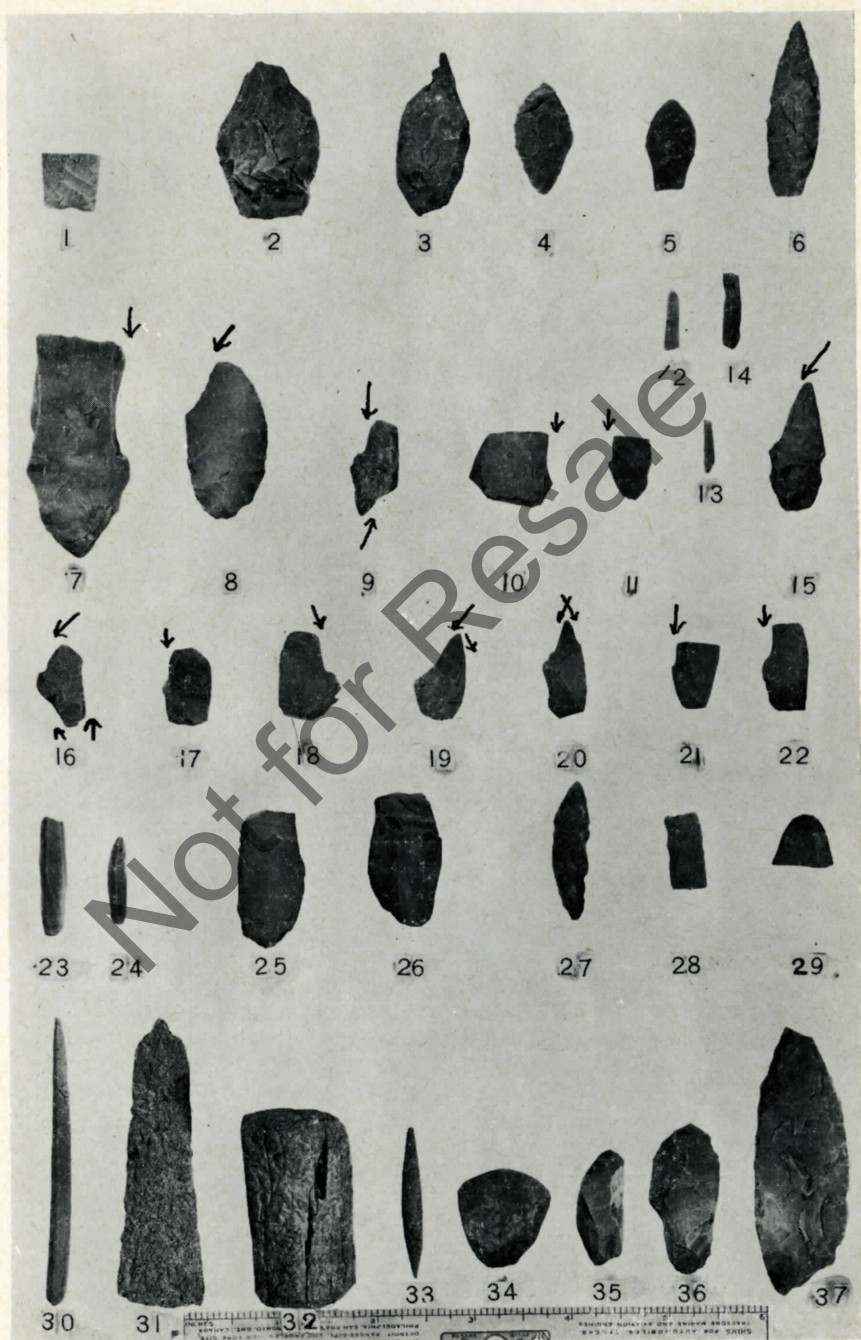
Lower half: **Whitefish Station Complex**

- 1. Ground slate man's knife blade
- 2. Projectile point
- 3-4. Harpoons
- 5-6. St. Lawrence plain sherd
- 7. Barrow Curvilinear-stamped sherd

- 8. Ground slate blade fragment
- 9. Chipped stone projectile point
- 10. Bone projectile point
- 11. Harpoon







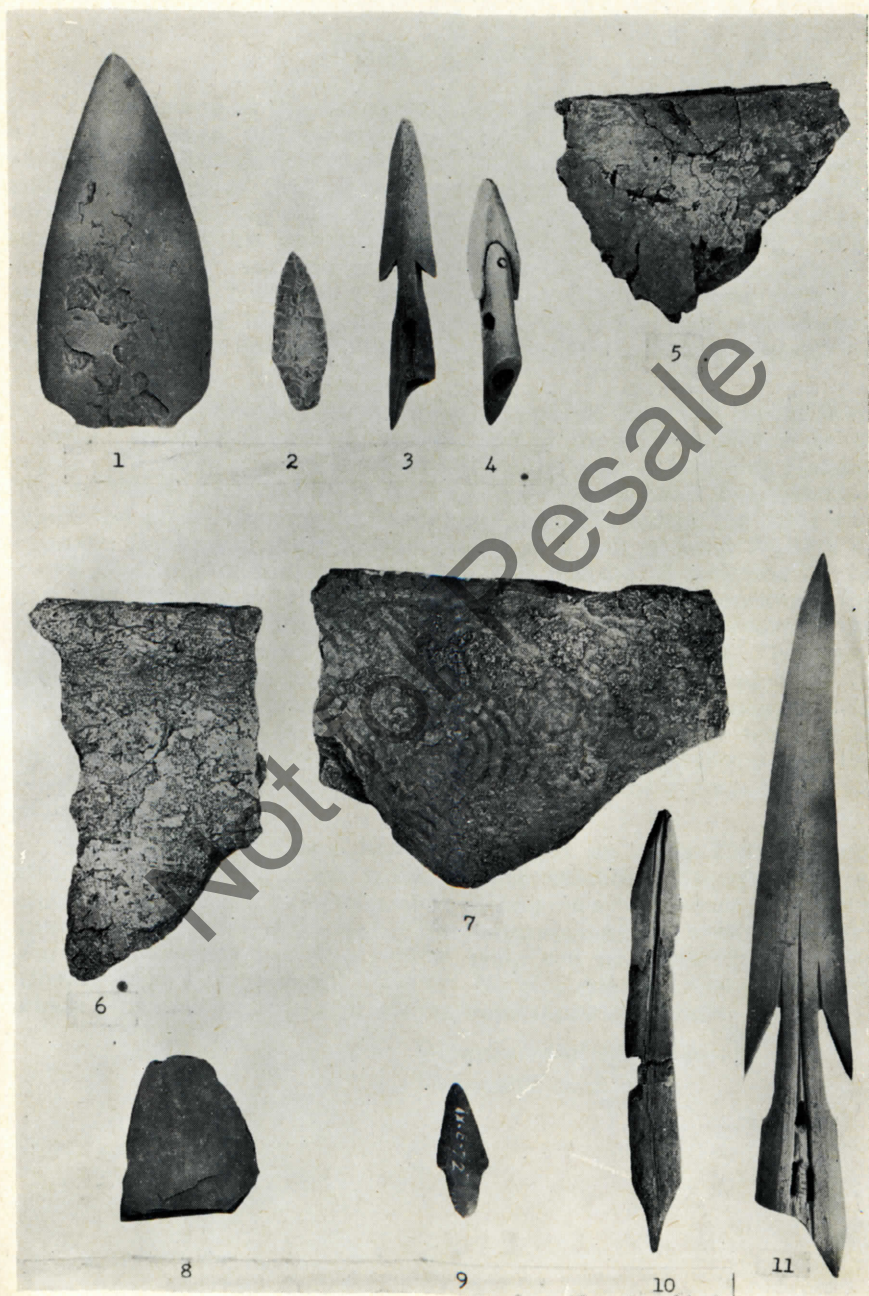














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# A STONE LAMP FROM YUKON ISLAND, ALASKA

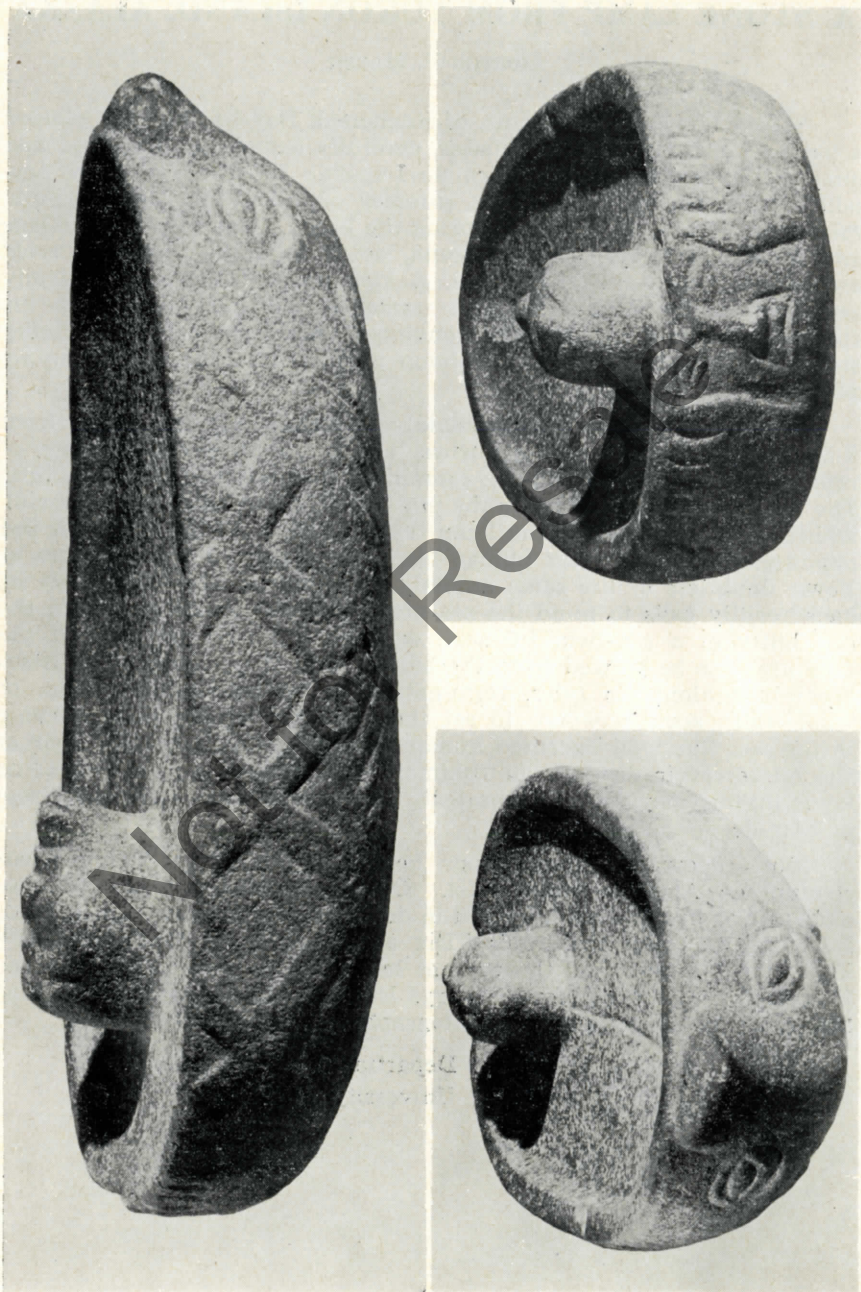
GORDON H. MARSH

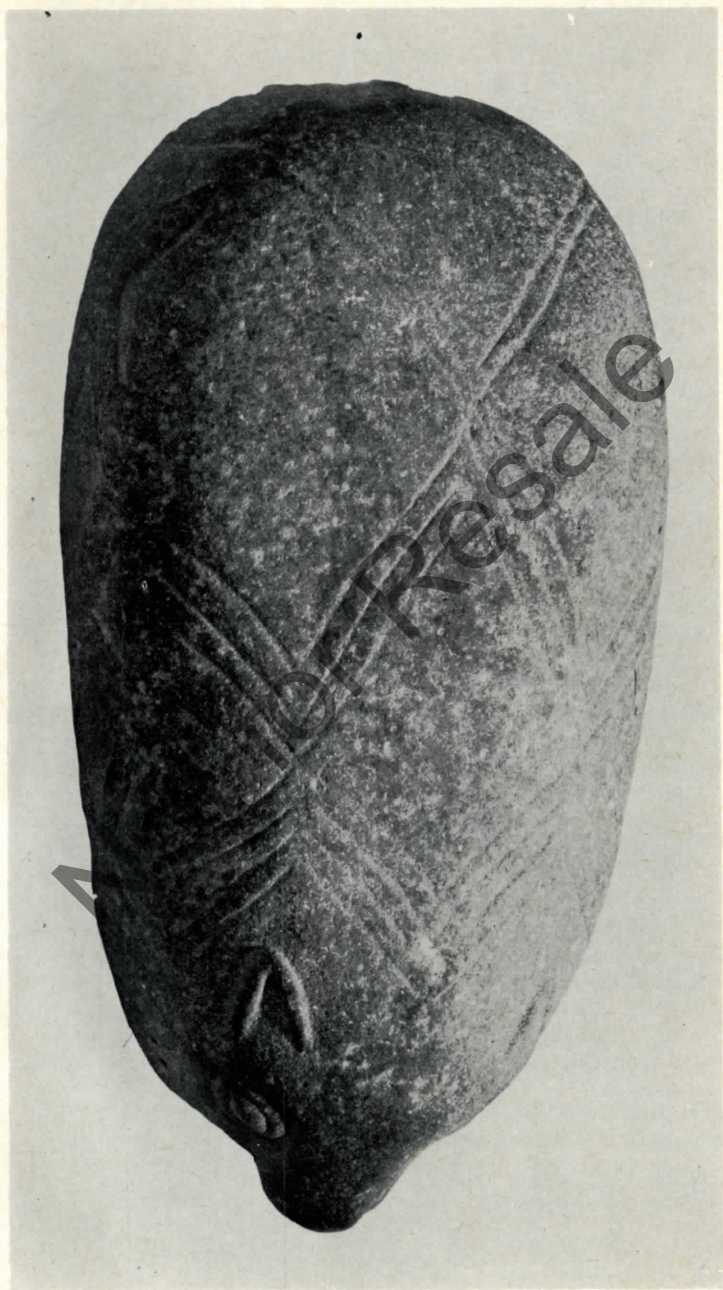
Yukon Island at the mouth of Kachemak Bay has already yielded a treasure of early Eskimo remains, carefully excavated, described and analysed by Professor Frederica de Laguna. To these we may now add a new, chance find of the summer of 1955. Mr. George Yuth, formerly of Seldovia, while exploring the beach lying below the village site investigated by Dr. de Laguna, spied a strange looking 'rock' embedded in the sand and gravel. A kick testified that it was firmly anchored, so he bent down and scratched the rock loose with his fingers, becoming increasingly convinced that this was no ordinary stone. His efforts exhumed the lamp portrayed in the accompanying plates.

The lamp measures approximately 17 inches long and tapers from 9 inches wide to about 5½ inches, and is in an excellent state of repair. The carving on the lamp constitutes its most outstanding feature. The narrower, wick end bears the pug-nosed, eared head of a mammal, which lies on its back as the lamp rests upright. Across the wide end opposite, flanking a gruff human face, rise a pair of hind flippers or paws, doubtless of the same animal. This posture of reclining on its back readily calls to mind the sea-otter, but we cannot eliminate the possibility of a sea-lion, fur-seal, or even a beaver or bear, if the creature is to be viewed from the bottom side of the lamp. The criss-cross bars along its sides, terminating in conventionalized fish- or whale-tails, seem however to set the ambiance of the main carving in the sea. The well-executed human head that dominates the rear of the oil reservoir displays an Eskimoid face with a groove across the lower lip that may depict a labret slit, and indications of some headdress or hair-do.

Such decorated stone lamps belong to an early Eskimo-Aleut stratum on Alaska's south coast. Other examples, though none so elaborate as this one, are pictured in de Laguna's "Archaeology of Cook Inlet, Alaska" and Hrdlicka's "The anthropology of Kodiak Island". Further information on the present lamp can be procured from the Homer Society of Natural History, Homer, Alaska, who have most kindly provided the data and photographs reproduced here.

Department of Anthropology  
University of Alaska





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## "PILLOWS" AND OTHER RARE FLINTS

J. L. GIDDINGS

Eskimos are often as perplexed as excavators about the meaning of some of the flints that turn up in the old Arctic sites. Flint of all kinds were quite puzzling to our Eskimo assistants at Cape Denbigh in 1948 and later. The use of a flint as an arrow point or a harpoon point could be outlined in terms of slates, but such things as side blades and burins had to be explained at length from a non-local background of technical knowledge. Sometimes none of us attempted to divine the functions of flints, falling back upon useful descriptive names. Thus a class of high-backed unifaces that looked like hair fasteners became known as "barrettes." Then, one day, we all debated for some time over a curious biface (Fig. 1, 5) from Norton culture levels (palae-Eskimo) that had been carefully flaked about all four of its edges on both faces. It was not the part of a broken point, as we first thought, but it appeared to have been intended as the finished rectangle that it was for some specific purpose. One of the Eskimos called it a "pillow." When the two other similar pieces (Fig. 1, 6 and 7) later turned up, they were calmly accepted as pillows, the function of which we could not guess.

From time to time since field days these small, symmetrical, and carefully fashioned objects have become the focus of attention. If they were to be explained functionally, a reason would have to be found for the equal treatment of all four edges. Some encouragement to regard them as useful pieces, rather than as eccentrics, came upon finding two closely similar flints illustrated from the Near Ipiutak burials at Point Hope.<sup>1</sup> These were listed as unidentified flint blades, possibly knives "with sharp retouched edges along ((the)) entire margin."

Upon closely examining the Van Valin collection of Birnirk period artifacts from the pure Birnirk site at Point Barrow<sup>2</sup> in 1950, a possible solution to the flint rectangles came to light. One of the harpoon heads, an eroded specimen of antler, was narrow in the plane of the line hole. Like more than half of the Birnirk harpoon heads from this site, this specimen was equipped with side blades. Part of the harpoon head had disintegrated in such a way, however, as to expose a wide section of "one of" the side blades, and to suggest that this was not a matter of the inseting of two separate blades, but of the insertion of a single flint through the width of the harpoon head (Fig. 2, 1 upper). None of the other thin, or narrow, harpoon heads were equipped with side blades on both sides, and most of the wide harpoon heads provided

<sup>1</sup>Larsen, Helge and Froelich Rainey. Ipiutak and the Arctic Whale Hunting Culture. Vol. 42, **Anthropological Papers of the American Museum of Natural History**, 1948. Plate 81, 2 & 3.

<sup>2</sup>Mason, J. Alden. Excavations of Eskimo Thule Culture Sites at Point Barrow, Alaska. **Proceedings of the Twenty-third International Congress of Americanists**, September, 1928. Pages 383-394.

with double side blades appeared on the surface to have the usual pair of blades (Fig. 2, 2 and 3 upper). The harpoon head with the presumed pillow-flint inserted was still firm enough to prevent us from loosening the flint without the danger of breakage. This problem has recently been taken up with John Hale, Physicist of the Radiology Department of the University of Pennsylvania Hospital, who offered to expose for us several plates of X-rays. The best results from a range of exposures were obtained at 100 milliamperes seconds at 80 kilovolts, target 40 inches, as shown in Figure 2, 1-3 lower.<sup>3</sup> The pillow flint (Fig. 2, 1) is shown in this radiograph to be, as suspected, a single piece, fitting into a slot that appears to have been formed by grooving from both sides of the harpoon head until the groove met and could be widened to receive the blade. The other two harpoon heads, of antler (Fig. 2, 2) and ivory (Fig. 2, 3) show in the radiograph that they were provided with double side blades, a fact that was not readily determined by outward examination alone. One of these wider specimens (Fig. 2, 3) appears to have its side blade slots meet at the center, even though separate blades were inserted.

The X-ray method of examining side blades thus proves to be useful in determining the forms of flints still held in place, where these flints may be needed for comparative purposes without tearing them loose from their matrix.

We can now feel better supported in a belief that the pillow flints were functional after all, and that those found out of context in Norton culture and Near Ipiutak culture sites are rather strong evidence for antiquity in a thin harpoon head like the one unusual form from the Van Valin site. Perhaps the large Birnirk collections soon to be published by James Ford and by Wilbert Carter, will cast further light on this subject.

Certain other flints of unusual form, this time from the Denbigh Flint complex at Cape Denbigh, may be considered in light of the pillow flints. Figure 1, 4 is a handsome four-pronged object of translucent chalcedony, of approximately the same size as the rectangles, all edges of which have been carefully trimmed on both faces. The lower two prongs are larger than the upper two, and the object is vertically bisymmetrical. It is difficult to imagine how a flint of this kind might be used, and it is hardly enough to assume that it, also, formed a double side blade. The possibility that it is an "eccentric," or simply the by-product of a talented flint knapper, deserves little support in the absence of any other such casual work at the site.

Still another form of unusual flint is seen in Figure 1, 3, a bifaced object of red jasper, broken at the left margin, where apparently there had been an extension similar to that of the right margin. The upper shallow projection is sharpened by careful flaking from both faces, as though to give precisely the form shown. This object was found in Norton cultural levels, although it is suspected of being one of the many displaced samples of Denbigh Flint complex workmanship to

<sup>3</sup>Prints of the radiographs, as well as the other photographs, were made by Reuben Goldberg, Staff Photographer of the University Museum.

be found in these levels. Our main reason for associating this with the Denbigh Flint complex is that four other fragments, two of which are illustrated (Fig. 1, 1 and 2) were found *in situ* in the flint complex. In each of these chert fragments the breaks occur in such a way as to suggest a bi-pronged form like that of Figure 1, 3. Figure 1, 2, in particular, shows signs of narrowing at the right hand margin. These bifaced flints, if indeed their form is two-pointed with a wide portion on one edge at center, can hardly have served as single side blades in any form that we know. A guess as to their method of hafting would involve wrapping of fastening about the center, somehow, so that the two prongs stood out toggle-fashion. We have no cultural authority for suggesting that these were used as toggles, because flints would seem improbable as buttons, line fasteners, or the like. If they could have been effective as fish or gull gorges, we have no knowledge of a similar usage of a flinty material. Nevertheless, all of the flints in Figure 1 call for comparison as thin bifaces flaked on all margins, the bilateral symmetry of which may have a common meaning.

No doubt all of these forms will turn up again as the earlier sites of the American Arctic are excavated, and it is to be hoped that their function will be elucidated when they are found in permanently frozen contexts.

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Philadelphia, Pennsylvania

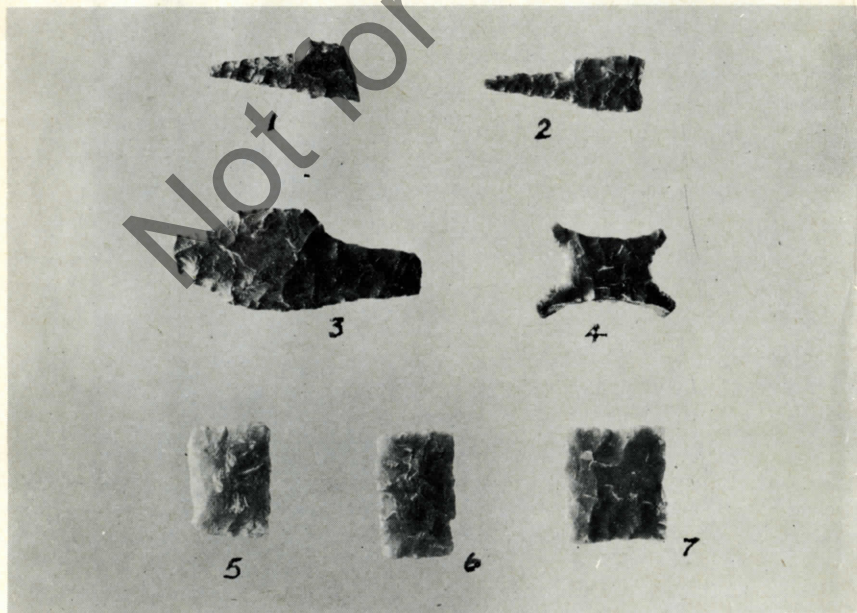


FIGURE I



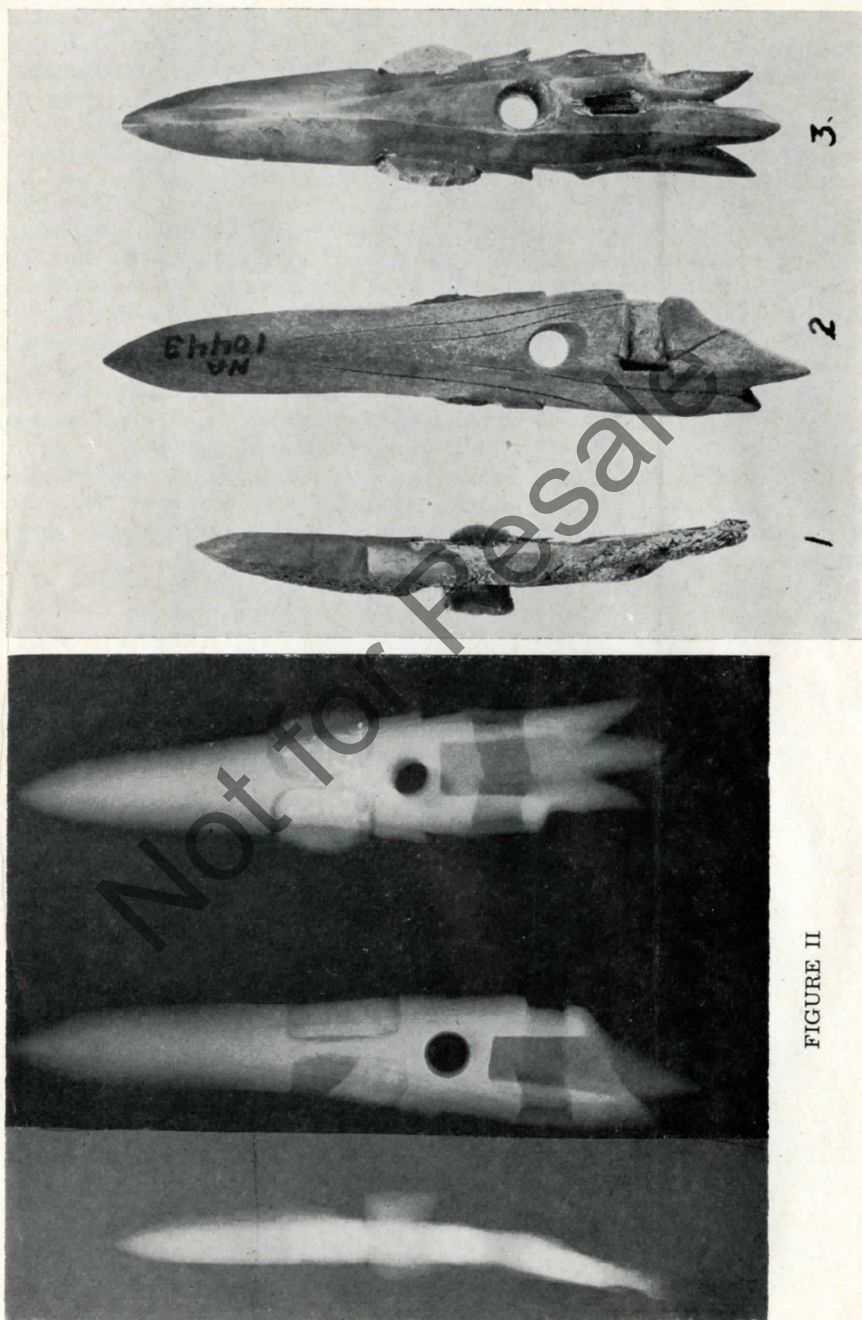


FIGURE II

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