

AN ARCHAEOLOGICAL SURVEY OF THE SUSITNA VALLEY

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This is a report of work done in 1953 for the University of Alaska under contract with the National Park Service¹. Investigation was to be made for sites in areas to be affected by a series of dams proposed for the Susitna River.

The Susitna drains an extensive area of the southern slopes of the Alaska Range and western slopes of the Talkeetna Mountains. Its lower course flows south-southwest and empties into Cook Inlet at a point some thirty-five miles west of Anchorage.

The 1953 survey was concentrated above the proposed site of the Devil's Canyon Dam in the region east of the Talkeetna Mountains. Included in the study area is the low-lying region of lakes Tyone, Susitna, and Louise. The lakes (approximate coordinates: 62°20'N; 146°30' W) are situated in an intermontane basin which forms part of the Susitna-Copper River watershed.

Reconnaissance preceding the survey was undertaken by Dr. Ivar Skarland during June of 1953 and was carried on by air and on foot as dictated by the terrain. It was determined at this time that the lakes area would likely suffer greatest from inundation, hence the concentration of the initial survey here.

The survey was conducted during August and September 1953. In this time the writer examined the shores of Lake Susitna, most of Tyone Lake, and the Tyone River to the point where it is entered by Tyone Creek. The hills on the southwest side of Lake Louise were also examined.

The first week was spent in the company of Jimmy Second Chief, an elderly Indian resident of the area. Second Chief pointed out most of the sites found, as well as several that were not visited. His aid is most gratefully acknowledged.

PROCEDURES

Sites were numbered serially as encountered. In some cases, what appear to be several sites were grouped under one number. These were assigned a letter in addition to the number. As the material recovered by the survey has been catalogued using this system, it is retained here.

Numbers 3 and 6 should be considered *localities*, each comprising several sites. Sites thus recognized are 1, 2, 3A, 3B, 3C, 3D, 3E, 3G,

¹This paper was originally written as a report for the National Park Service in the late summer of 1953. It was not then possible to give it the time necessary to prepare it for publication, and Frederic Hadleigh West has done me a great kindness in rewriting it entirely so that it could be published at this time. I have rewritten the final descriptive section on Early Pre-Contact Sites, and added the section Summary and Conclusions. The discussion of typology suffers from the fact that I have not seen the artifacts since 1953.

3H, 4, 5, 6A, 6B, 6C, 7, 8, 9, and 11. Number 8 could not be located; number 10 was not visited.

Following a brief description of the natural setting, the sites are arranged in a tentative chronological order.

GEOGRAPHICAL SETTING

The lakes country is strongly marked by the effects of relatively recent glaciation. Much of the topography in the vicinity of Lake Louise consists of steep, densely wooded ridges and knobs of till. Interspersed are numerous small ponds and creeks following erratic courses among drift remnants. Most of the remaining portion here is taken up by partly forested hills with long, low slopes, broad treeless marshes, meadows and many large ponds.

In general, spruce timber is thickest on dryer ground near the lakes and creek valleys. Between a third and a half of the area is treeless, and much of the remainder is but sparsely wooded, due no doubt, to local drainage conditions and recent fires. Poplar stands occur on many well-drained knobs, but these constitute a small fraction of the total area.

North and west of Lake Susitna the knobs and ridges of till are less numerous. Drainage patterns here assume a more normal appearance. Local topography is dominated by several large hills rising 500 to 1,000 feet above the lakes. Otherwise, the country is rather flat with few changes in elevation greater than 50 feet except at terraces of the Tyone River. Spruce forest occupies about three quarters of the area and there are large stretches of marsh. Dwarf birch appears in abundance in places too poorly drained to support poplar.

Low-lying vegetation is dominated by sphagnum except in the sedge meadows and marshes. Growing in or on the sphagnum, and apparently dependent on it for elevation above the standing water, are ledum, blueberries, and the lichens known as caribou moss.

Food resources available to aboriginals, in order of importance, are fish, especially whitefish, but also lake trout, ling cod, a type of herring, and grayling. In the way of large game, there are caribou moose, black and grizzly bears. Of the rest, muskrats, beaver, rabbits, ducks, geese, grouse, and ptarmigan probably were important. Such animals as porcupines and squirrels, although present, apparently did not figure importantly in the menu.

Generally most of the land-dwellers were taken individually, although, in the case of the caribou, the drive was used in several forms. Fish traps accounted for large quantities of whitefish from late summer until January. Salmon do not occur in this part of the Susitna system.

Blueberries and cranberries are abundant on hillsides and a number of edible roots and herbs are present.

Generally speaking, on a year-round basis, the country is not rich enough in these food resources to sustain large villages. On the

basis of recent houses discovered and information from local informants, it would appear that the early post-contact population was no more than one hundred persons. Presumably, these were living in scattered groups of five to thirty individuals following a semi-nomadic existence.

From Jimmy Second Chief, a willing and able informant, the following was learned. The annual cycle was divided into two major phases, dependent upon the feasibility of fishing. From midsummer through December, the principal activity was fishing. The group at this time would accordingly locate near spots suitable for using "V" and basket traps. Caribou and moose would be killed from time to time throughout the year, but were given particular attention in late summer and early fall. At this time bulls were fat and skins most suitable for clothing. Fish, however, formed the most important food item.

By midwinter, shallow places in the lake would freeze to the bottom and fishing would no longer be profitable. By this time, also, the meat stores from the previous fall would be exhausted. It was then necessary that extensive hunting of moose, bear, and beaver be carried out. It is not known whether this involved actual breaking up of the small community or whether it merely entailed groups of hunters fanning out over the countryside. Moose and caribou fences, in conjunction with snares and the surround, were used. This would continue until breakup, after which the hunters would go into the hill country often as far as the Talkeetna Mountains. Here they would remain hunting caribou until midsummer, when they returned for fishing. Travel was usually on foot; infrequently by canoe.

By tradition and geographical conditions, the people of the area are most closely associated with those of the Tazlina and Gulkana river systems. They appear to belong to the Atna (Ahtena) group, the residents of upper Copper River country. Second Chief refers to his people as "Tsathtane" (originally recorded as Tsaftane). A certain provincial feeling tends to segregate the more western members from those residing on the large streams of the Copper River drainage. Very likely this is accentuated, in the case of the lakes area peoples, by their marginal position and somewhat different ecological situation. Most notable in the latter regard is the importance of caribou and the complete absence of salmon.

Contacts with villages on the Tanana side of the Alaska Range evidently were of frequent occurrence in former times, but the nature of the relations was not learned. The people of the lower Tanana, the Yukon and Cook Inlet were more remote neighbors separated by great distances and dialectic differences. There is some indication that other upper Susitna tributaries were occupied by people closely allied to those of Tyone River and the lakes area. Cook Inlet people are referred to as "Tazna".

While communities of this area seem to have been relatively small, it appears likely that strong family ties served to foster inter-communal relationships, and it may be assumed that the residents of the three lakes and Tyone River formed a cohesive unit. Vestiges

of an elaborate system of trails may still be seen, and even now foot travel for distances of forty or fifty miles is routine.

The Tyone River people, then, are part of a cultural sub-group indigenous to the intermontane region, and think themselves different from the river people of the Copper and lower Susitna rivers. Whether the venture into this region of the Tsathane is relatively recent or not, is not known. There is, in the archaeology here, however, a certain transient character which would tend to reinforce the idea of recency and lack of long-standing stability.

POST CONTACT SITES

3A. This site is located atop a fifty-foot knoll at the southern end of the spit separating lakes Susitna and Louise. The locality is known as *tus-kut-ka*, although the term applies particularly to the prominent hill on which 3A is located. The site consists of two log structures, obviously recent, and at least six house depressions which show no indication of white contact. The log structure component is considered under the post contact heading; precontact remains are described below. The larger of the log structures is about twenty feet square and was evidently a dwelling. The smaller, about ten feet square, probably represents a cache. It seems to have been raised on short posts. Evidence of the recency of the two structures consists in their notched log construction style and the discovery in the house of a small straight-sided copper pot, a large number of glass beads, and several bits of tin and iron. The house was roofed with birch bark held in place by rocks. The floor had been excavated to a depth of two feet. Other artifacts associated with these units are part of a spruce bowl, two boulder chips, and a whetstone of the type still used in the area.

6C. This and the nearby 6A and 6B are situated on the eastern shore of Lake Tyone at a point where it is barely one hundred yards wide. According to Second Chief, the locality is designated *min-gat-ka* ("between the lakes"). The home cabins of Second Chief and Johnny Tyone are here now. Formerly, this was a focal point of the now widely dispersed group to which they belong. There has been a log bridge across the narrows here for as long as Second Chief can remember. The remains of earlier bridges, generally of lighter construction may yet be seen. The designation 6C is given a dissected ridge lying about 250 yards back from the lake. On various knolls here are found evidences of relatively recent tent camps and two recent burials. The latter are in small hand-hewn plank boxes held together with a few square nails. Most are supported by stakes driven into the ground. On one was mounted a cross bearing two diagonal limbs below the horizontal one. This was put together without nails. Another burial was surrounded by a structure which had the appearance of two wall tent frames, one set inside the other. Nearby was a shovel of modern appearance. The grave box surmounted by the cross was examined, but it contained no skeletal material. Where the skull might have lain was a fairly large rock.

Sites 1 and 2. These two sites may be briefly noted. Both are

marked only by the occurrence of a few bones and other seemingly recent debris. On neither was there any indication of structural remains. Number 2 is located on the western shore of Lake Louise with Grayling Lake lying about a half mile farther west. Number 1 is on the southwest shore of Grayling Lake approximately three miles southeast of 2.

LATE PRE-CONTACT SITES

3A. 3A, 3B, and 3C are all centered about the short creek which connects lakes Susitna and Louise. The narrow creek is an ideal place to set weirs and fish traps. Moreover, ducks gather on the low shores nearby of the two lakes. The older, house depression component of 3A, consists of six rectangular depressions ranging from ten by twelve to twenty-four by thirty feet. Slight elevations bordering each depression are evidently the remains of spoil piles. Present depths of the depressions vary from a few inches to three feet, the latter figure occurring in the largest house. Adjoining, and centered on, one of the long walls of the largest house is a twelve-foot-square depression. This is presumed to represent a sweat bath. A straight entryway comes into the house at floor level at the opposite (southeast) wall. It is ten feet long and three feet wide.

Test pits within several depressions revealed floors generally lying three to eight inches below the surface. Fire-cracked rock, bones, charcoal, and boulder chips were found in the house fill. The largest house was built in a restricted pocket of sand, either natural or brought up from the lake shore. Near this house, a test pit disclosed a midden deposit which varied in depth from six inches to a foot. Recovered here was a boulder chip (retouched along one edge), pieces of flat grinding stone and a spatulate bone implement.

If the varying depths of the house depressions be accepted as a valid criterion, it seems unlikely that all six houses were occupied contemporaneously. Additional evidence for this assumption may be the vegetational differences to be observed between the various depressions.

3B. This site is located on a wooded knoll on the spit between the two lakes, near the shore of Lake Susitna. There are at least three large, indistinct depressions here. Investigation of one of these revealed the floor to lie about three inches below the surface. Fire-cracked rocks, bone, and charcoal fragments occurred in the fill. Artificial material consisted of some sixty flint chips, three boulder chips, and one end scraper. As with the depressions at 3A, no evidence was found of white contact.

3C. A single house depression was found at this site. It is situated on a low hillock about 150 yards northeast of 3B. Part of a bifacially flaked side scraper was found here.

3D-3H. The first four sites are found on low eminences on the opposite (east) side of the creek from those discussed above. 3E and 3F consist of one house depression each. At 3D, one house yielded three boulder chips, a badly weathered antler implement, a flat, notched beach pebble, and a small rectangular hammerstone, used possibly

for cracking marrow bones. Indications at 3D are for a somewhat longer occupation than is assumed for the other small groups of this vicinity. The location in relation to the creek would seem especially favorable. 3H consists of two small pits on a point overlooking a small cove on Lake Susitna half a mile west of the creek. The cultural deposit is shallow and no artifacts were recovered.

There are doubtless other house groups in the area. Indications of occupation older than a few hundred years are lacking, but there remains the possibility that such will be discovered upon further investigation. Cultural materials are scant and only extensive excavation would yield collections of a size to be considered definitive.

6A. 6A is composed of three house pits situated on a low knoll about 150 yards northwest of the modern Indian cabins at *min-gat-ka* on Tyone Lake, mentioned above. One depression shows a present depth of two feet; the others, a few inches. Test excavation in one of the shallower depressions brought forth bone, burned rock, and charcoal. Also recovered were several boulder chips and one flint chip. Further investigation was precluded by the presence of sportsmen who set up camp on the site.

6B. A single rectangular house depression was the only feature found at this site. 6B is on a ridge about 200 yards north of 6A. The depression is small, six by eight feet, and about ten inches deep. Near one end of one of the long walls facing the river is a clearly discernible entrance passage about three feet long. In addition to refuse of the sort found in the fill of other houses, fish bones were abundant.

4. Site 4 is located on the east shore of a long peninsula which extends from the eastern side of Lake Susitna southward into that body. A single small depression, similar to those described above was discovered. Of chief interest at site 4 is an accumulation of caribou antlers lying next to the depression. This recalls similar traits found in northern Siberia, on St. Lawrence Island, and in the northern Plains.

5 and 7. Each of these two sites consists of a single house depression. Number 7 is supposed to have been the house of a very powerful chief and war leader. It is situated two thirds of the way up the south side of the hill called *su-sta-ki*, about two miles east of the point at which Lake Tyone narrows to become Tyone River. Number 5 is about five miles south on the western shore of Lake Tyone at a narrows. According to local tradition, these two sites were occupied contemporaneously. It is said that residents of one could see those of the other walking around on the hillsides.

The foregoing sites are all attributed to late Athabascan groups, some of which were probably ancestral to the present Indian inhabitants of the area. Although they were not visited, it is assumed that sites number 2 and 10 belong in this late prehistoric-early historic period.

EARLY PRE-CONTACT SITES

Sites number 9 and 11 are characterized by artifacts that probably antedate the inferred Athabascan occupation by many centuries. They

may be added to the list of flint stations reported by Skarland and Giddings in 1948.

9. This site is on the top of a hill about two miles east of the Tyone River and seven miles northwest of site 6 at *min-gat-ka*. The hill, which rises an estimated 500 feet above the river, is not indicated on the U. S. Geological Survey Alaska Reconnaissance Topographic Map of Gulkana. North and a little east of it is a lake about two miles long and a mile wide, which drains into the Gulkana system. To the south is a small, well-developed creek valley which at present is traversed by a low divide between the Tyone and Gulkana river drainages. Nearby on the Tyone River are salt licks and a caribou crossing. That locality seems to be a concentration point for game of all sorts.

The hilltop affords an excellent outlook over the nearly flat surrounding country, about half of which is thinly forested or devoid of timber. A spot about 30 feet across on the higher of two knobs is largely bare of vegetation; on the exposed but little-eroded till were found 32 implements and an assortment of other cultural debris. Most of the material was found on the southern side of the knob, which suggests use of the site during the winter months when this section would be favored by the low sun.

Nothing about the provenience of the artifacts recovered was recognized as indicative of their age or associations. The specimens are classified here on the basis of their form and imputed use.

Projectile Points:

- a) Stemless (Pl. II, no. 1) 2 specimens.
- b) Expanding stem, convex base (Pl. II, nos. 3, 4) 2 specimens.
- c) Side-notched, with concave or straight base, broad tip (Pl. II, nos. 5, 6) 3 specimens.
- d) Lanceolate, with indistinct shoulders, contracting stem (Pl. II, no. 2) 1 specimen.
- e) Point fragments too small to classify, 2 specimens.

Knives:

- a) Side blades, diagonally flaked (Pl. II, nos. 7, 8, 12) 3 specimens.

Prismatic flakes:

- a) (Pl. II, nos. 10, 11) 3 specimens, (1 doubtful).

Scrapers:

- a) Side scrapers (Pl. I, nos. 4, 5) 7 specimens.
- b) End scrapers (Pl. I, no. 3) 7 specimens.
- c) Boulder chip scrapers (*tei-thos*) (Pl. I, no. 6) 3 specimens.

Core Tablet:

- a) (Pl. I, No. 1) 1 doubtful specimen.

Miscellaneous:

- a) Retouched flakes, 3 specimens.
- b) Flakes.

- c) Unidentifiable worked stone fragments, 3 specimens.
- d) Bone and charcoal fragments.
- e) Copper float, 1 specimen.

Total: 32 classifiable implements.

11. A single prismatic flake (Pl. II, no. 9) was the only implement found at site number 11, another lookout point about 11 miles south of site 9. For convenience it will be discussed in connection with the site 9 collection.

One of the stemless points (Pl. II, no. 1), made of light gray chert, has parallel sides and is ground on the basal edges. The other (not illustrated), of dark gray basalt-like material, has converging sides and a thinned, straight base which has not been ground. Both bear a general resemblance to points from Birch Lake and Station 4 at College (Skarland and Giddings, 1948, Pl. 15A, q; Pl. 15B, d), and the Campus Site (Rainey, 1939, fig. 7, no. 3). These points, whether or not they belong to a single type, are probably both pre-Athabascan, since neither form occurs at Dixthada (Rainey, 1939) or in late sites in the intermontane region.

Of the six points with stems or notches, no two are quite alike. The classification used here may, however, develop into a series of formal types when more material becomes available. One (Pl. II, no. 3), of dark gray basalt-like material, has an expanding stem with a convex base, prominent shoulders or barbs, and notches smoothed by grinding. It measures 2 by 4 cm. Another, somewhat larger but broken (Pl. II, no. 4) has similar features including the ground notches, but lacks the prominent shoulders and has a broader stem. It is of light tan chert. Pl. II, no. 3 closely resembles one seen in the Campus Site collection, but not illustrated by Rainey (1939, 1940). It is also much like one figured by de Laguna from a late site at Halibut Cove on Cook Inlet (1934, Pl. 30, 170, 10).

Two points of chert, of which only the basal portions were found (Pl. II, no. 6) have shallow side notches and straight or slightly concave bases showing some evidence of intentional thinning. The notches of the one illustrated are ground. Both resemble a third, of quartzite (Pl. II, no. 5) which, however, has a markedly concave base and lacks grinding in the notches. The two fragmentary specimens are thought to have had broad, strongly convex tips like the complete one. The latter point is somewhat like two specimens taken from the muck near Fairbanks, illustrated by Rainey (1939, fig. 9, no. 4; fig. 11, no. 1).

The last point (Pl. II, no. 2) is roughly lanceolate in shape, with a poorly defined, converging stem and a straight base. It is relatively thick and crudely made of poor material, with no trace of basal grinding or thinning. Similar points are not hard to find in the literature of the western arctic and the northwest, but comparisons cannot be made without more detailed descriptions.

The remaining two point fragments are too small to be useful in typology.

Three fragments of diagonally flaked knives are of special interest, since the trait has not been reported before from central Alaska (Pl.

II, nos. 7, 8, 12). Pl. II, no. 7, made of a poor grade of chert, is relatively thick in cross section. Some of the flake scars are parallel and diagonal, and meet at a median ridge. Subsequent retouch along one edge indicates use as a cutting implement rather than as a point.

Pl. II, no. 8, a small fragment with converging sides, is much weathered. It is relatively thin in section, and shows well-controlled diagonal flaking from the edges to the median line.

Pl. II, no. 12, of light gray, translucent chert, has very fine diagonal flaking, and sharpening retouch along one edge. It is indistinguishable from side blade fragments characteristic of the Denbigh and related complexes — types hitherto known only from northern Alaska and western arctic Canada (Giddings, 1951; Irving, 1953; MacNeish, personal communication).

The seven end scrapers from site number 9 occur in a variety of forms. Two specimens are relatively narrow and thick, and are retouched only on the steep working edge. The illustrated scraper (Pl. II, no. 14) has a retouched notch on each lateral edge. Three others, represented by Pl. II, no. 15, are thicker and shorter relative to their length, and are retouched on all edges. Another specimen (Pl. I, no. 3) has a small notch on either side just back of the working edge. It may have some typological relationship to the notched scrapers of the eastern Archaic (Logan, 1952; Chapman, 1952). The last scraper is roughly triangular in outline, but has a markedly convex working edge (Pl. II, no. 13). It closely resembles some of the scrapers of the Denbigh Flint complex and the Campus Site (Nelson, 1935, fig. 15).

The artifact tentatively identified as a core tablet (Pl. I, no. 1) resembles a type described by Hallam L. Movius (personal communication) and recognized by others who work with Upper Palaeolithic material. The present specimen is thought to have been removed from the striking platform of a conical or cylindrical blade core, to expose a new surface and thereby refurbish the platform. So far as is known, the type has been identified in Alaska only by the writer (Irving, 1954); it occurs but sporadically in other parts of North America (Irving, notes).

Three small prismatic flakes or microblades (Pl. II, nos. 10, 11) are each fragmentary, and lack intentional retouch. The specimen from site 11 (Pl. II, no. 9), although it is larger and made of different material, conforms to the same description. These implements are difficult to compare with specimens from other sites without a sample large enough for statistical treatment.

The remaining artifacts from site number 9 consist of 7 unifacially retouched side scrapers (e.g. Pl. I, 4, 5), 3 boulder chip scrapers (*tci-thos*, known locally as *men-daw-si*), 3 retouched flakes; chipping debris, unidentifiable worked stone fragments, a small flat piece of copper float, and bone and charcoal fragments.

SUMMARY AND CONCLUSIONS

Five of the 11 sites reported here (nos. 3 and 7) have remains of semi-subterranean houses. The number of house sites is actually greater

than this, for numbers 3 and 6 each comprise several separate components. Most of the houses are clearly rectangular. Where entrances are visible, they extend toward the river or the lake from the middle or one end of a long side. Sweat baths were noted at the rear of some of the larger houses at site 3A (but see below). The houses vary in size from about 6' by 8' to 24' by 30'; the larger houses are generally located on higher hills than are the others. Rectangular storage pits were noted at most of these sites.

Settlements in most cases consist of from 1 to 3 dwellings. The larger structures may well have housed groups larger than the nuclear family. Brief occupation of most of the sites is indicated by the slight accumulation of midden in all but a few cases.

Further work in the locality should make it possible to interpret the pattern of settlement in terms of the ethnographic annual cycle and the social organization of the Tsathtane. The large houses on hills represent occupations different from those at sites clustered near fishing spots on small natural mounds; the latter, in turn, differ from sites such as numbers 1 and 2, where no evidence of structures was found. It may be possible to infer distinctions of rank and wealth, and occupations at different seasons, from the location and character of sites.

In general, the houses and the few artifacts recovered resemble those described by Rainey (1939) on tributaries of the upper Copper River, all of which he thinks are late. Some of the houses described here contain trade materials, and sites 3, 5, 7, and probably 10 (not visited, but described by Second Chief) are said by Second Chief to have been occupied by members of his band, presumably no more than three or four generations ago.²

The houses found on Cook Inlet by de Laguna (1934) and ascribed by her to the latest pre-historic period (Kachemak Bay III), when Indian influence was ascendant, conform closely in ground plan to the larger houses treated here. De Laguna notes that the small rooms in back of her houses were used for sleeping as well as bathing. It is curious that on Cook Inlet the territorial expansion of Athabaskans at the expense of Eskimos in late times is accompanied by an increase in the importance of ground slate implements, whereas in the present Athabaskan locality, well within trading range of the inlet, no trace of a ground slate industry has yet been found.

Sites 9 and 11 are of special interest, for although stratigraphic information is lacking, their implement types are evidence of wide-ranging cultural affiliations at a very early date.

One group of implements is probably related to recent Athabaskan occupations such as were described above. It includes boulder chip

²When Second Chief drew for me what he considered the aboriginal winter house, he indicated a shallow semi-subterranean dwelling with a central fireplace, possibly a sweat lodge at the back, but without an entrance passage. The superstructure he showed to consist of light poles bent to form a dome, over which was piled moss and dirt. It is difficult to tell from his drawing whether the dwelling was oval or rectangular with rounded corners.

scrapers, and probably some of the end scrapers. The stemmed point without basal grinding (Pl. II, no. 2) may also belong here, although it is considerably larger than most of those from Dixthada, and somewhat different from them in form.³ The specimen may resemble more closely two points from the second period at Yukon Island (Cook Inlet), which suggests a somewhat greater age (de Laguna, 1934, Pl. 30, nos. 3, 7).

Of more certain antiquity are the three small diagonally flaked side blades, which are quite unlike any central Alaskan types. They are very similar in form and workmanship to side blades of the Denbigh Flint complex. This suggests a relatively early date, but the technological tradition represented by the Denbigh complex lasted for too long to permit even a rough cross dating on this basis. All that can be said is that workmanship of the style and excellence of Pl. II, no. 12 was discontinued well before the end of the first millennium B. C. at Cape Denbigh (Hopkins and Giddings, 1953). The specimens could be several thousand years older than this.

In any case, the fact of greatest significance is the occurrence here of a type characteristic of, and so far as is known, peculiar to the country beyond the forest border. Elsewhere the writer (1955) has pointed out some of the differences between early industries of the boreal forest (e.g. the Campus site and Pointed Mountain, N.W.T.) and what he proposes now to call the "arctic small-tool tradition", represented at the Denbigh type site and sites in the Brooks Range (Giddings, 1951; Irving, 1953, 1954).⁴ Here on the Tyone River is the only instance reported so far of a distinctive trait of the arctic small-tool tradition occurring in the province of the forest complexes. It is also the most southerly occurrence of this particular trait in western North America. One may hope that further work in this area will clarify the important relationship between the arctic and boreal forest traditions. The questions of which came first in Alaska, and when and where they diverged from their common predecessor are some of the most intriguing ones in arctic archaeology.

The last group comprises the seven remaining projectile points. These are not necessarily associated with one another; they simply belong neither to the arctic small-tool tradition nor to the recent Athabascan culture.

Especially worthy of note are the three points with shallow side

³The problem of deciding which of the Dixthada chipped stone types are recent Athabascan and which are earlier won't be dealt with here (c.f. Rainey, 1953). Both Rainey (1939) and the writer found that chipped implements are scarce in single component sites known with fair certainty to be Athabascan. Most of these, however, are fishing sites, unlike site 9.

⁴The arctic small-tool tradition has not yet been defined formally, although Giddings in 1954 and the writer in 1955 made preparatory essays in this direction. I would exclude from it, tentatively, the Anangula blade industry (Laughlin, 1954) and material from the Alaska Highway reported by Johnson in 1946, because they lack certain types of side blades and burins.

notches and straight or concave bases (Pl. II, nos. 5, 6). These and two similar specimens in the University of Alaska Museum look very much like a type from Natakuz Lake in central British Columbia illustrated by Borden (1952, Pl. II, no. 15). The Natakuz collection includes larger stemless points, oval bifaces, and prismatic flakes and cores. These traits also occur at the Campus Site and at Pointed Mountain; however, the points in question are not found at the latter sites. The Natakuz specimens came from a large rectangular semi-subterranean house. A series of points from the Mortlach site in central Saskatchewan (Wettlaufer, 1955) also resembles the Alaskan examples (especially Wettlaufer's Pl. 5, no. 1). The long range comparisons are of questionable significance, since none of the specimens, including those from site 9, is described in sufficient detail. However, points of this rather specialized shape are so uncommon that their distribution in northwestern North America probably has historical significance. It is possible that in Alaska they represent a period between the time of the Campus Site and that of the late pre-historic houses. Photographs of specimens recently found in the Tangle Lakes district near the Alaska Range, sent to me by Ivar Skarland, illustrate points that may also belong in this category. With these specimens, it may be possible to set up a formally defined type with time and space limitations.

The two stemless points (Pl. II, no. 1) are too unspecialized to merit much discussion without a more adequate description. Points of this general form are found at the Campus Site, Natakuz Lake, and in the Tangle Lakes collections.

The resemblance of the expanding-stemmed point with a convex base (Pl. II, no. 3) to a point from the Campus Site has already been noted. Pl. II, no. 4 may share this resemblance, but here the likeness is less clear. Points of this general description, but not always with ground notches, occur throughout a vast range of time in the United States (Fowler, 1956; Williams, 1957). They are unusual in Alaska, and may ultimately prove to be of diagnostic value. Another example, much like Pl. II, no. 3, is shown by de Laguna from a site on Cook Inlet (1934, Pl. 30, no. 10); provenience and data are uncertain.

The four prismatic flakes from sites 9 and 11 are of little diagnostic value. Without a sample large enough for statistical treatment (e.g. Irving, 1953) it is not worthwhile to hazard a guess as to whether they represent the arctic small-tool tradition or the forest tradition of the Campus Site and Dixthada.

As a general rule, archaeological collections from the northern part of the boreal forest have been small and of "low characterization". It is clear from an examination of the material reported on here, however, that even without large collections and stratified sites it is possible to identify complexes and give them dates on the basis of comparative typology. Although much of the archaeology of the northern forest appears to be part of a nebulous continuum with poorly defined relationships to cultures of other areas, in some cases there are types and complexes of diagnostic value and limited distribution.

There are also instances of what appear to be sharp boundaries between regional cultures, such as that which apparently separates the slate-using province of southwestern Alaska and the province of the interior caribou hunters, and the boundary between the arctic small-tool tradition and the early complexes of the boreal forest, which may have followed the forest border. The significance of these distributional peculiarities for non-material aspects of culture is still an enigma.

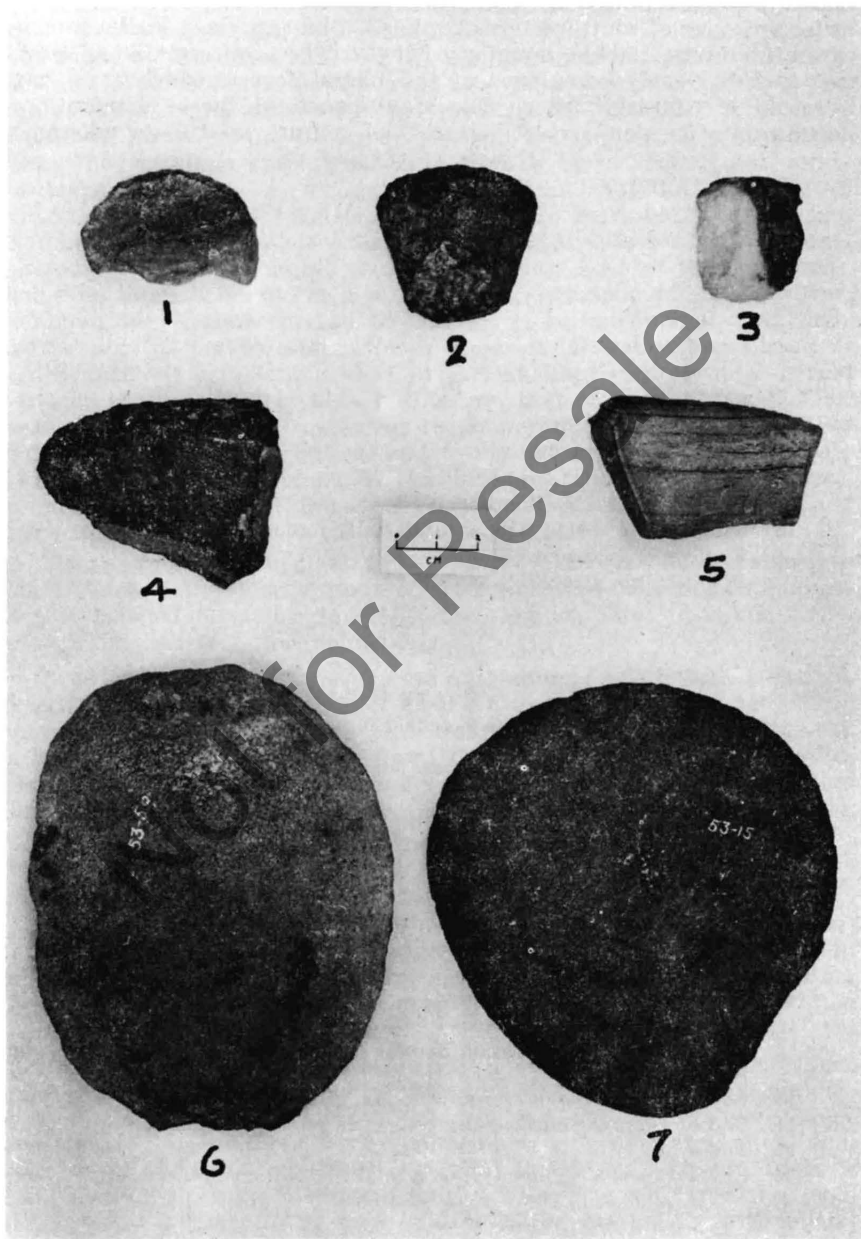
PLATE I

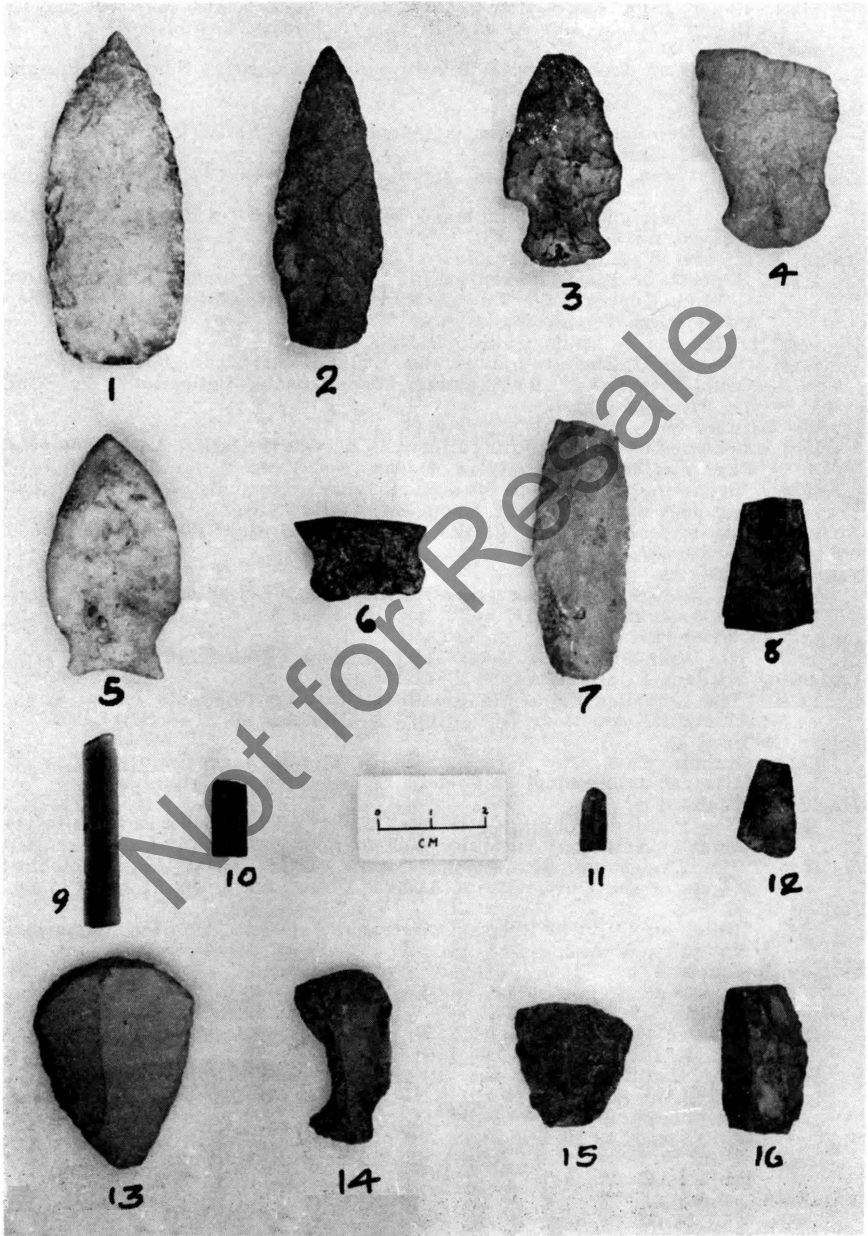
1. Core tablet (?) Site 9.
2. End scraper. Site 3B.
3. Side-notched end scraper. Site 9.
4. Convex side scraper, unifacially retouched. Site 9.
5. Straight-edged side scraper, unifacially retouched. Site 9.
6. Boulder chip scraper. Site 9.
7. Boulder chip scraper. Site 3B.

PLATE II

(all from site 9, except for number 9)

1. Stemless point, ground on basal edges.
2. Lanceolate stemmed point.
3. Stemmed, expanding based point, ground in notches.
4. Stemmed, expanding based point, ground in notches; fragmentary.
5. Side-notched, concave-based point; no basal grinding.
6. Side-notched, straight-based point; ground in notches.
7. Side blade; parallel flaking median ridge; thick section.
8. Side blade; parallel flaking to median ridge; thin section.
9. Prismatic flake; no retouch.
10. Prismatic flake; no retouch.
11. Prismatic flake; no retouch.
12. Side blade, parallel flaking; several scars from edge to edge; lenticular section.
13. End scraper, unifacially retouched on all edges.
14. End scraper, with unifacially retouched notches on both sides.
15. End scraper.
16. Side scraper; steep retouch on straight working edge.





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