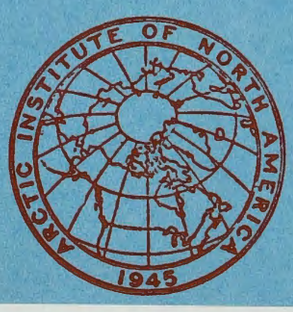
ARCTIC INSTITUTE OF NORTH AMERICA

TECHNICAL PAPER NO. 8

THE ARCHAEOLOGY OF THE LOWER AND MIDDLE THELON, NORTHWEST TERRITORIES

By

ELMER HARP, JR.



Final Copy

PUBLISHED DECEMBER 1961

THE ARCTIC INSTITUTE OF NORTH AMERICA

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Elmer Harp, Jr.[1]

Acknowledgements

No archaeological venture can ever be fruitful without the help of many, and I take great pleasure in recording here the institutions and individuals who contributed so much to this one.

First of all, I am grateful to the Arctic Institute of North America for major financial support, and to the Research Committee of the Faculty of Dartmouth College for a subsidiary grant-in-aid. In Ottawa, officials of Canada's Department of Northern Affairs and National Resources, particularly G. W. Rowley, B. G. Sivertz, and V. F. Valentine, were most cooperative, as always, in paving the way north. To my friend and colleague, Robert McKennan, go special thanks for unfailing good companionship and untiring effort in the field, and I speak for him in saying that we miss our friend, the late Aliktikshak, E2-273, who acted as our boatman on the Thelon. Still another friend and companion of a former expedition has been lost since then: Ralph Miller, M.D., flew his light aircraft north to visit us on the Barren Grounds, and while there he contributed greatly with his enthusiastic airlifts.

At Baker Lake we had invaluable advice and help from Alexander Lunan, Manager of the Hudson's Bay Company post, now retired, Corporal Clare Dent of the R.C.M.P., and Douglas Wilkinson, then Northern Service Officer. Their friendship and warm hospitality, as well as that shown us by the staff of the local Department of Transport station, will not soon be forgotten. When transportation schedules went awry, William Remington, field manager of the Tower Company, welcomed us aboard a company charter aircraft for the flight out to Churchill.

I am deeply appreciative of the willingness of the Reverend Guy Mary-Rousselière, O.M.I., that I should complete investigations of several sites that he discovered at Baker Lake, and of the efforts of William E. Taylor, National Museum of Canada, who arranged the loan of Father Rousselière's collections for my further study. Finally, during residence in Copenhagen in 1959–60, as a Fulbright Research Fellow, I had an unusual opportunity to examine archaeological collections in the National Museum of Denmark, and to discuss the problems of this work with my friends Kaj Birket-Smith, Helge Larsen, and Jørgen Meldgaard. I am much indebted to them for helpful criticism, although, of course, they are not responsible for errors that I have made, nor are they necessarily in agreement with all of my interpretations.

[1]Dartmouth College Museum, Hanover, New Hampshire.

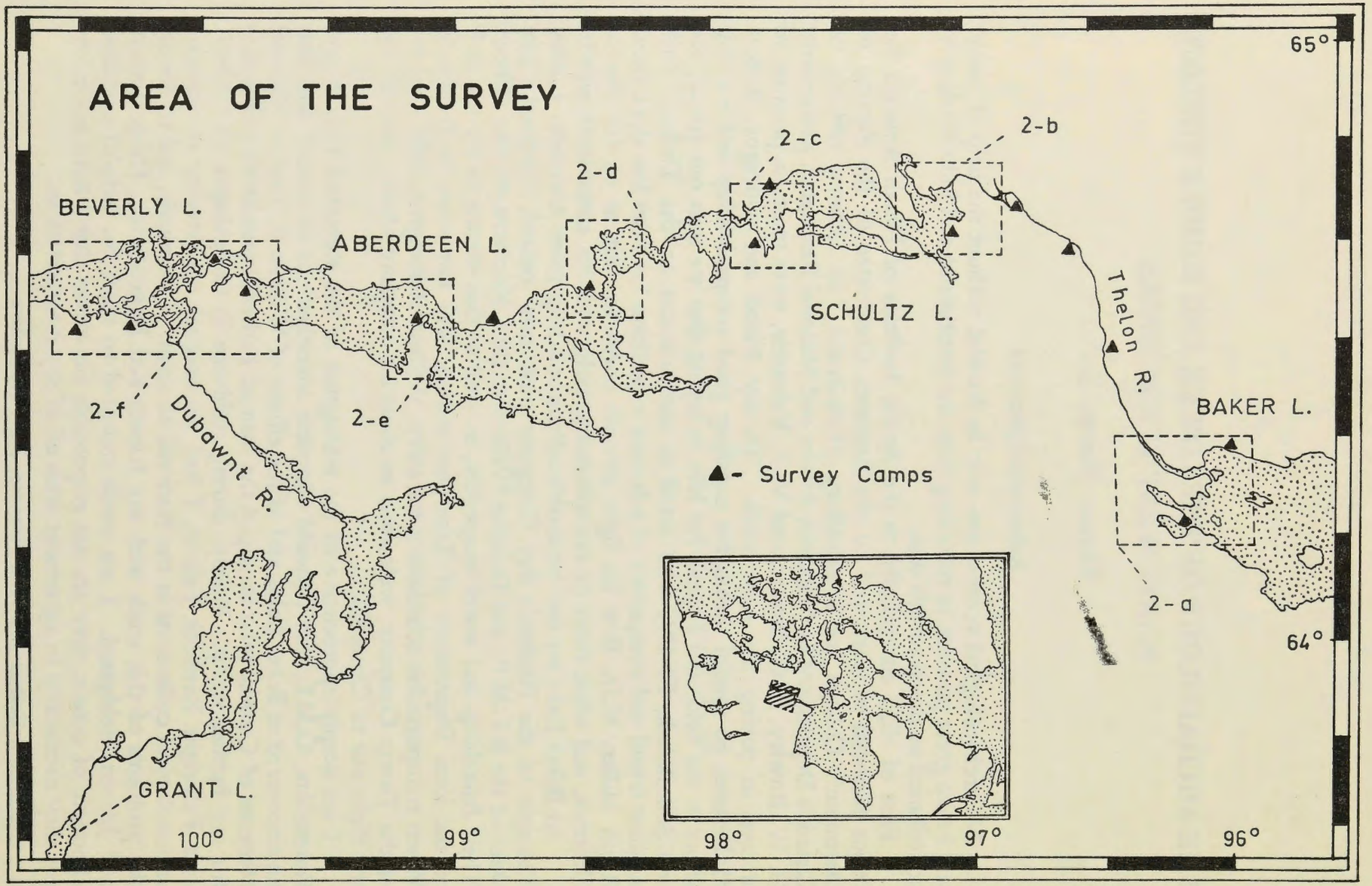


Fig. 1. Area of the survey.

I. The Survey

During the summer of 1958 I made an archaeological reconnaissance of the Thelon River country west of Baker Lake, District of Keewatin, Northwest Territories, an area which had never been explored for that purpose. The Thelon, which rises in transitional forest lands to the southwest, flows for several hundred miles across the barrens and empties at last into Baker Lake; the latter is essentially an extension of Chesterfield Inlet and hence may be associated with the ecological province of Hudson Bay and its littoral. Because of the geographical position I believed that here might be found evidence of cultural diffusion among prehistoric hunters of the boreal forest, the tundra, and the coastal fringes. More specifically, I hoped that any information obtained might be helpful in clarifying the origins and development of pre-Dorset and Dorset Eskimo culture phases in the eastern Arctic, and of the interior-hunting Caribou Eskimos. I was accompanied throughout the trip by my friend and colleague, Professor Robert A. McKennan, also of Dartmouth College.

We arrived by air at Baker Lake on July 9 and stayed at the Canadian Department of Transport station for the next nine days. During this period we explored a coastal strip of some twenty square miles around the northwest end of the lake, extending from the mouth of the Thelon to a point several miles east of the settlement. In this area we excavated a site that had been discovered and partially dug by the Reverend Guy Mary-Rousselière, O.M.I., in 1955, and, in addition, we found and worked four other sites (Rousselière, 1955). From July 18–25 we were encamped on the southwest shore of Baker Lake at a place known as *Kikertauyak*, and there we discovered four more sites (Fig. 2a).

After two days of organizing and provisioning at the Baker Lake settlement we departed on the morning of July 28 for the interior Thelon country. This trip, which was to carry us on a three-hundred-mile circuit during the next four weeks, was made in company with the Caribou Eskimo Aliktikshak in his 20-foot Peterborough canoe, powered by a 7 h.p. outboard motor. It took us four days to beat up-river to the location of our second major camp at the southeast end of Schultz Lake, a distance of about fifty miles in from the Baker Lake post. Then, in the ensuing days we worked through a series of camps at the southwest end of Schultz Lake, the northeast end, central narrows, and western narrows of Aberdeen Lake, the narrows just east of Beverly Lake near the mouth of the Dubawnt River, and on August 16 we established our westernmost camp, No. 11 (Fig. 2f), about midway along the south shore of Beverly Lake.

Previous to this time, on August 4 in southwestern Schultz Lake at Camp 6, we had been joined by Dr. Ralph Miller who flew in accompanied by Mr. John Withee. (Dr. Miller and I made an airborne archaeological reconnaissance in the Coronation Gulf region in 1955). These friends remained with us for six days, and during this period Dr Miller and I flew one hundred miles southwest in to Grant Lake where I investigated two sites discovered in 1955 by Arthur Moffatt. These are situated on the prominent drumlinoid hill on the eastern shore close to the outlet of the lake.

On the night of August 19, after being storm-bound for two days, we began our eastward return from Beverly Lake, making camps on an island

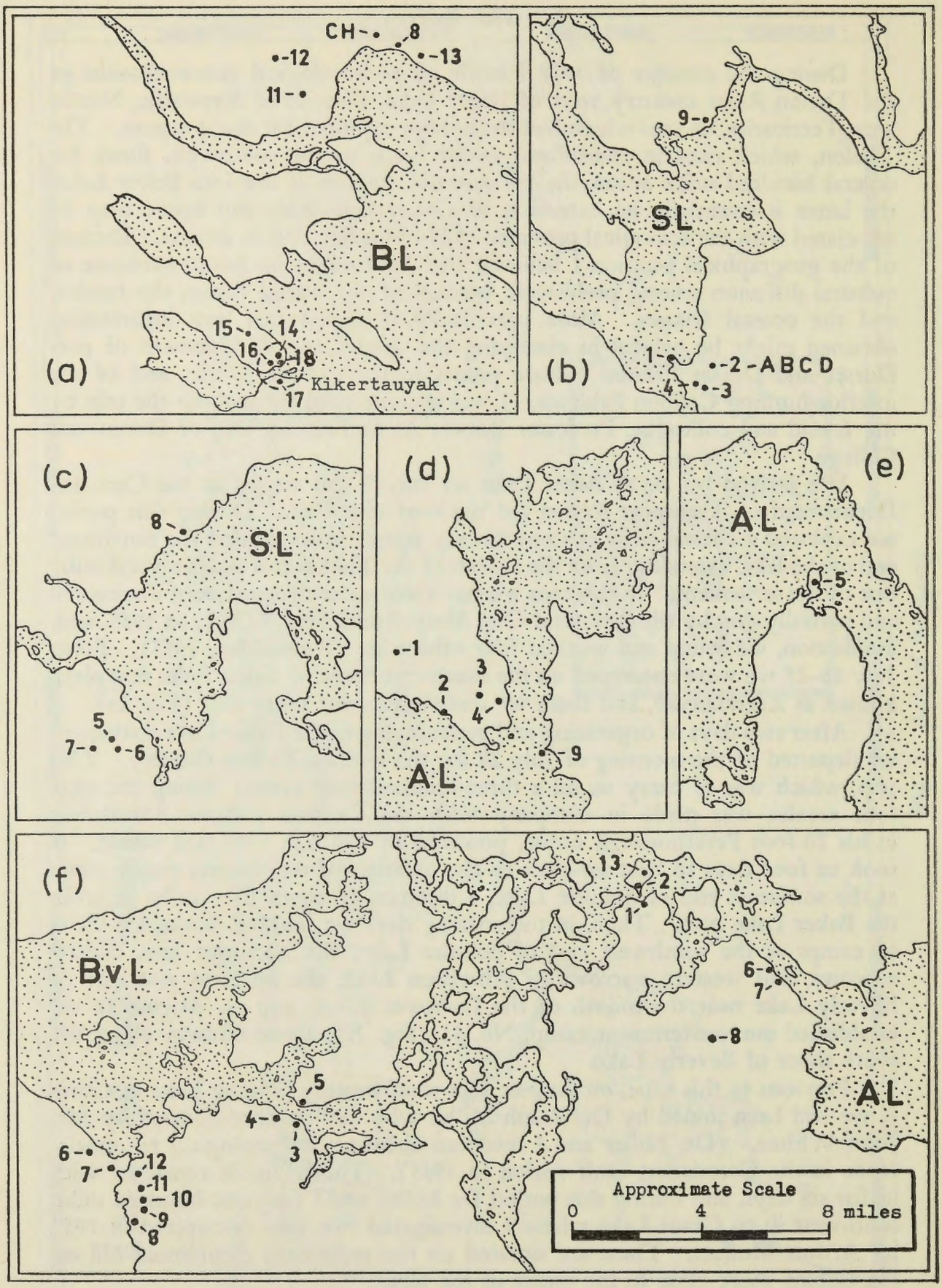


Fig. 2. Primary site areas.

about five miles west of Aberdeen Lake, on the north shore of Aberdeen Lake, and at the northwest end of Schultz Lake. On the evening of the 22nd we ran the upper rapids of the Thelon, camped just below them, and arrived the following afternoon at the settlement of Baker Lake. Further investigations had been planned for the Prince River area, a few miles east of the Baker Lake post, but altered transportation schedules made it necessary for us to take the first available aircraft from Baker Lake to Fort Churchill on August 28.

In all, 42 sites were discovered, and 4 others, previously known, worked in. Their distribution follows: 10 at the western end of Baker Lake (Fig. 2a), 12 on Schultz Lake (Fig. 2b,c), 9 around Aberdeen Lake (Fig. 2d,e,f), 13 on Beverly Lake (Fig. 2f), and 2 on Grant Lake. A total of 734 specimens was collected, of which more than 98 per cent are chipped stone artifacts. Because the survey was of a reconnaissance nature, no intensive excavations were made. Upon discovery each site was mapped, photographed, and all specimens visible on the surface were collected. In most cases test trenches or pits were dug to establish the relationship between the culture-bearing horizon and any soil deposit or vegetation layer. Several house or tent foundations of stone were entirely excavated. Whenever it was deemed to be of possible significance, as on certain raised strand-lines, site elevations above contemporary lake levels were measured by traverse with a hand-held levelling tube.

The entire collection has now been returned for permanent keeping to the National Museum of Canada in Ottawa.

II. The Sites

All subsequent reference to sites will be made in terms of the initial letters of the lakes. Thus, for BL, SL, AL, BvL, and GL read Baker Lake, Schultz Lake, Aberdeen Lake, Beverly Lake, and Grant Lake, respectively. Each local numerical sequence is based on the order of discovery around a given lake. Location coordinates have been determined on the 1:506,880 maps of the National Topographic Series of Canada.

BL-8 (Fig. 3a): This site was first noted by the Reverend Rousselière. It is located along the crest of an elongated, rocky hill directly behind the D.O.T. station at the eastern end of the Baker Lake settlement. Locally, this hilltop is known as *Ikubvravik*, that is, the place where there are V-shaped kayak stands, although I could not find any such structures there (cf, however, the Cemetery Hill site, p. 14 and Fig. 3b). At least thirteen stone tent rings and heavier foundations are scattered along an east–west range of about 200 yards, and there are perhaps four others which are less certain because they seem to have been partially destroyed or broken down for building materials by a later occupation. Several oval meat caches were also noted in the central part of the site. The easternmost ring, No. 13, is a heavy stone structure of upright stone slabs and measures roughly 12 feet in diameter. Number 11 stands on the highest part of the site, 164 feet above present Baker Lake level. It is the largest of all structures on the bluff, with an average diameter of 20 feet, and presumably it was set up as an open assembly place for ceremonial use. All of the rings are based on rock, and there is no soil cover other than shallow

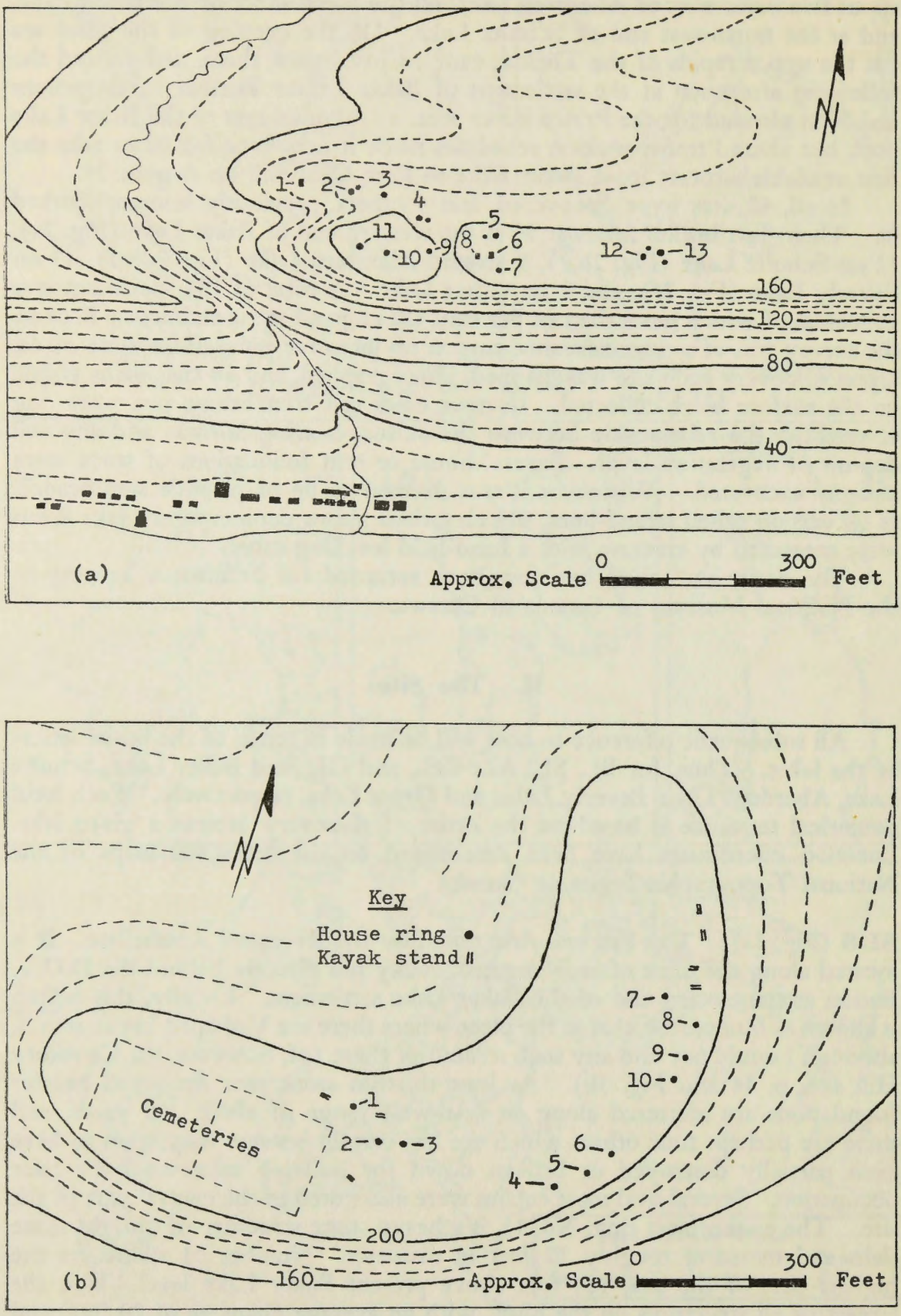


Fig. 3. (a) BL-8 Site, sketch-map.
(b) Cemetery Hill Site, sketch-map.
(*Elevations in feet above Baker Lake*).

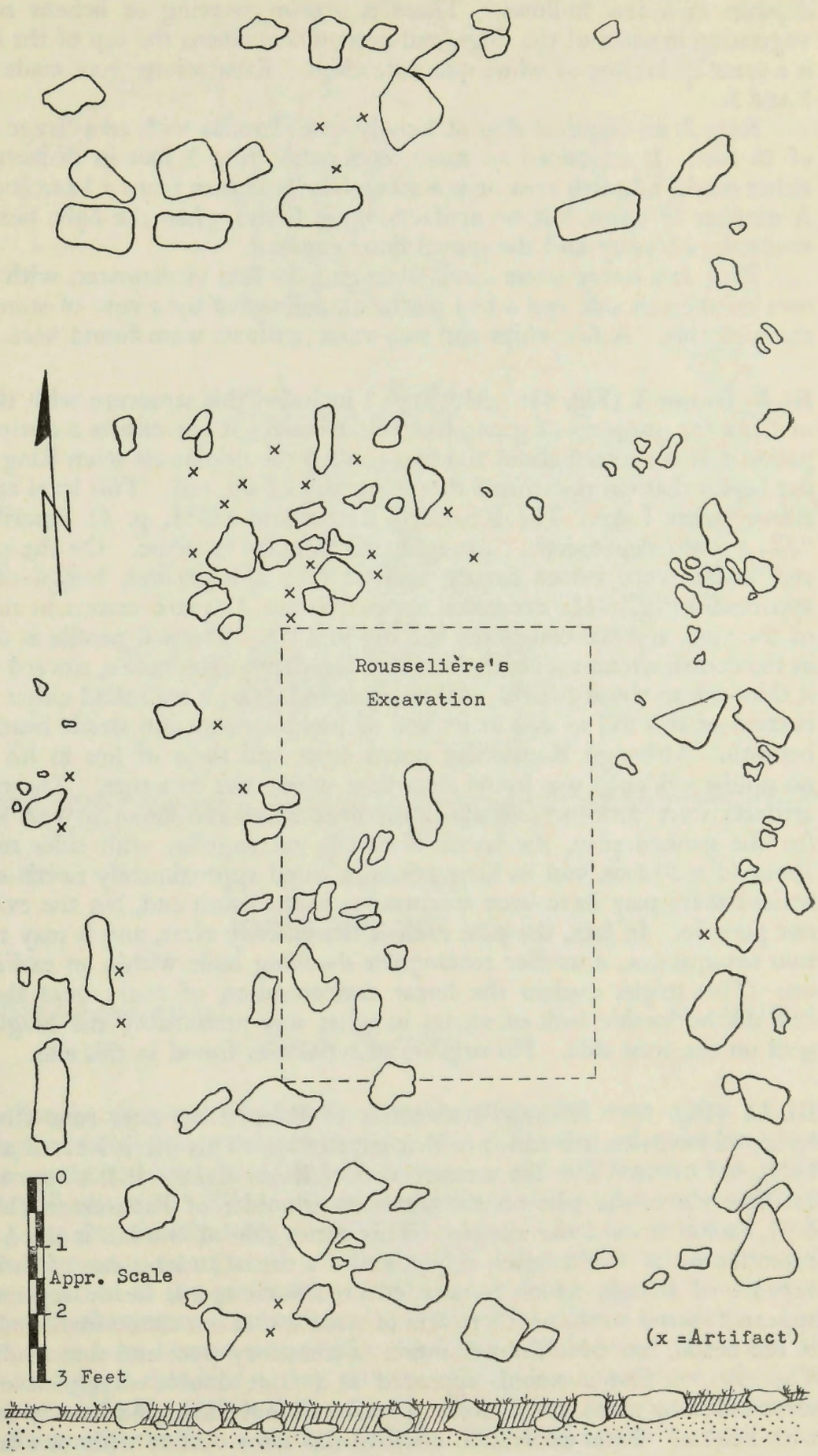


Fig. 4.
BL-8,
House 1.

deposits in a few hollows. There is a thin covering of lichens and heath vegetation in some of the rings, and everywhere across the top of the hill there is a scant sprinkling of white quartzite chips. Excavations were made in Rings 2 and 5.

Ring 2: an elliptical ring of loosely spaced rocks with an average diameter of 18 feet. It contained an inner, concentric ring 7 feet in diameter which either marks a hearth area or is a secondary structure from a later occupation. A number of chips, but no artifacts, were found when the light heath cover was stripped away and the gravel floor exposed.

Ring 5: a heavy stone circle averaging 19 feet in diameter, with a hearth area on the east side and a bed platform, delineated by a row of stones, along the west side. A few chips and two stone artifacts were found here.

BL-8, House 1 (Fig. 4): Although I included this structure with the others of BL-8 for purposes of general survey, I believe it constitutes a distinct occupation. It is situated about 200 feet toward the northwest from Ring 11, on a flat bench that curves around that extremity of the hill. This level is 144 feet above Baker Lake. The Reverend Rousselière (1955, p. 5) describes it as ". . . a slight depression . . . roughly rectangular in shape. On the perimeter and inside were stones deeply imbedded in the ground, but without any apparent order." He excavated approximately 3 square metres in the centre of the ruin, and we completed the dig in 1958. The soil profile is depressed in the centre where accumulation reaches a depth of 6 inches; toward the sides it thins out to about 1 inch. All artifacts and chips were found either near the bottom of this soil or else at its line of junction with the sterile beach gravel beneath. Although Rousselière noted ashes and signs of fire in his test pit, no similar evidence was found elsewhere within the structure. The chips and artifacts were concentrated along the centre-line and into the west half. As for the general plan, the house is clearly rectangular, with sides measuring about 11 x 20 feet, and its long axis is oriented approximately north–south. I believe there may have been an entrance in the south end, but the evidence is not positive. In fact, the plan itself is not entirely clear, and it may represent two occupations, a smaller rectangular dwelling built within an earlier larger one This might explain the linear concentration of rocks near the centre and the noticeable lack of stones in what was presumably the longer, outer wall on the west side. No organic material was found in this site.

BL-11 (Fig. 5): (Rousselière's series of Baker Lake sites runs from 1–10, hence all new sites are added to that sequence). This site is located at 64° 18′ 06N., 96° 07′ 18W., at the western end of Baker Lake. It lies approximately 250 feet above the lake on the southeast shoulder of *Paonrartok* (blueberry hill), facing toward the airstrip. This entire side of the hill is lined with an extensive series of old beach ridges, and the site occurs on one of these, a flat expanse of shingle which is now covered with sparse heath vegetation. It appears to stand on the northern arm of what was at one time a small embayment in the beach, but which now contains a transitory pool and surrounding bog. The ruin, as first detected, appeared as a faint double alignment of stones surrounded by an elliptical circle of rocks, all embedded and heavily encrusted with lichens. Total excavation clarified this same outline without change and

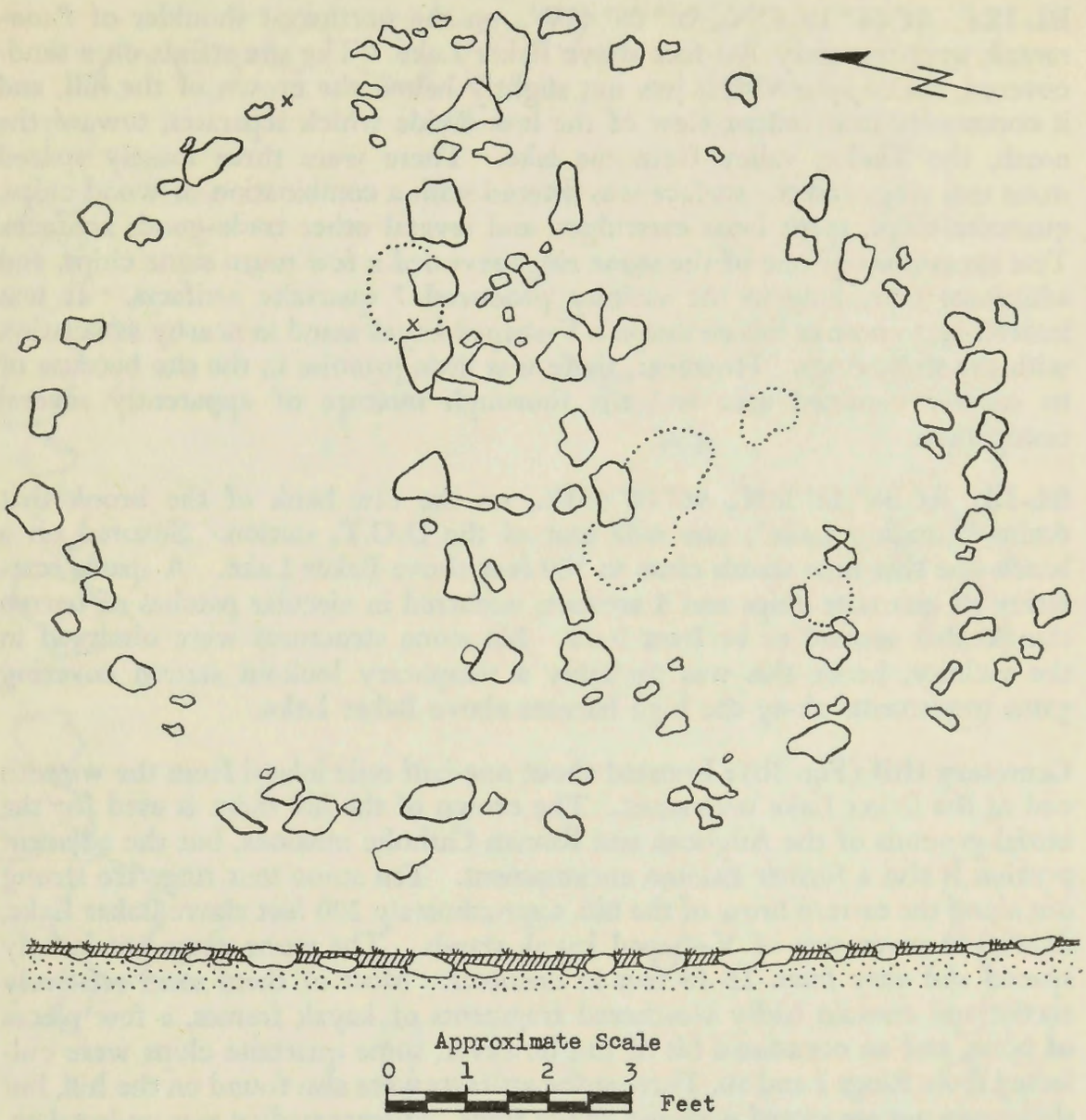


Fig. 5. BL-11 Site.

showed that the structure was based on sterile beach sand over which a 1- to 3-inch layer of soil had subsequently formed. A number of quartzite chips and two specimens were found at the bottom of the soil layer, close to its junction with the sand. There was no organic material. The rocks near the centre of the double alignment were cracked, and had a fire-darkened look, although there were no signs of ash or charcoal. One definite concentration of chips occurred in the northeast quadrant beside the supposed hearth area, but elsewhere they were scattered rather widely through the dwelling. This is presumed to have been a temporarily occupied, skin-hunting camp, and all indications suggest that it is a very old one, dating back to a time when the lake was considerably higher than now, if not at the level of this particular beach. Currently the site is nearly a mile back from the water's edge.

BL-12: At 64° 18′ 42N., 96° 08′ 48W., on the northwest shoulder of *Paonrartok*, approximately 300 feet above Baker Lake. The site stands on a sand-covered, rocky spur which juts out slightly below the crown of the hill, and it commands an excellent view of the low divide which separates, toward the north, the Thelon valley from the lake. There were three loosely spaced stone tent rings and the surface was littered with a combination of wood chips, quartzite chips, spent brass cartridges, and several other trade-goods artifacts. Test excavation of one of the stone rings revealed a few more stone chips, and additional trowelling in the vicinity produced 7 quartzite artifacts. It was interesting to note at this elevation a V-shaped kayak stand in nearby association with the stone rings. However, there was little promise in the site because of its strictly confined area and the thorough mixture of apparently several occupations.

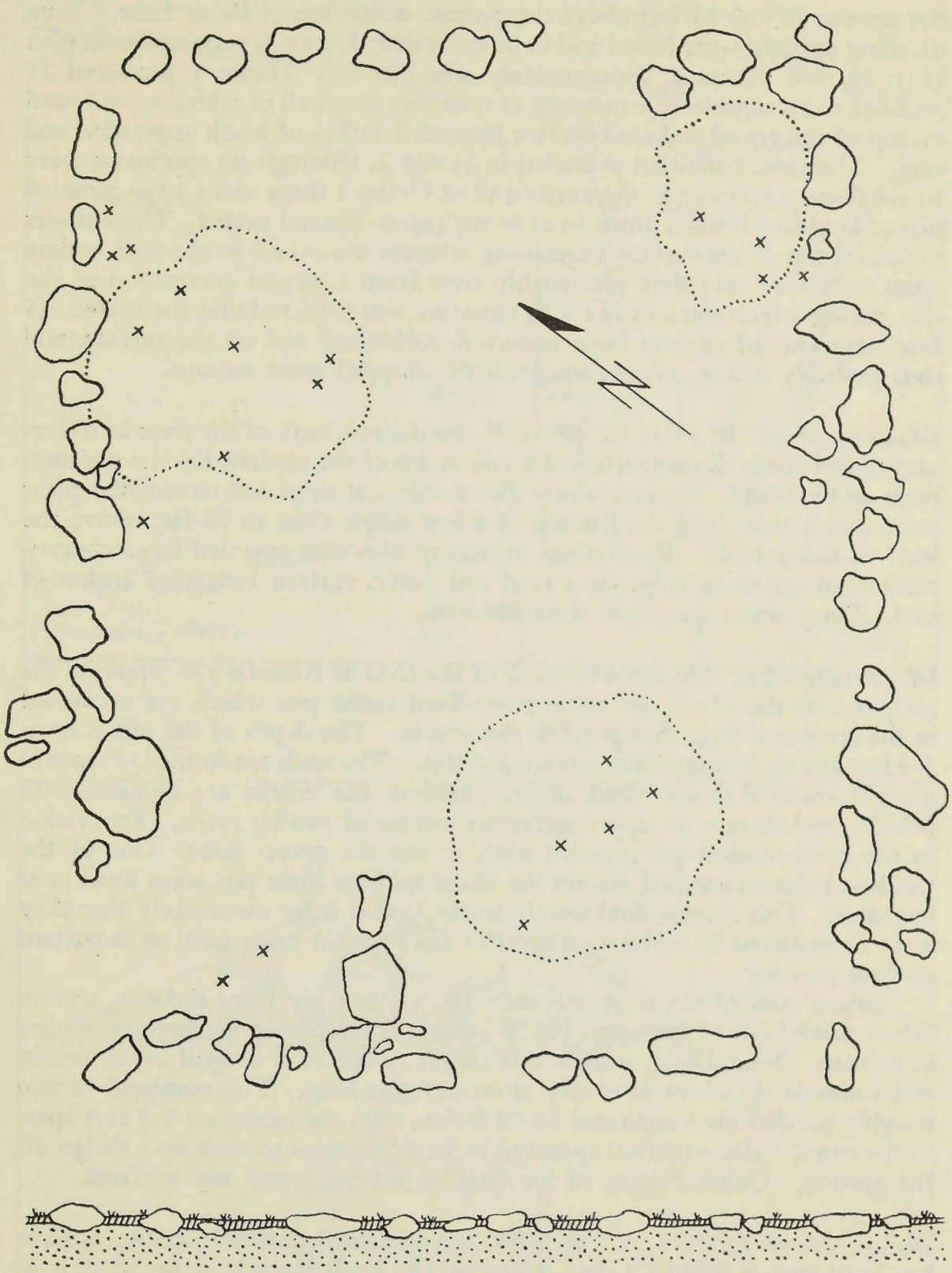
BL-13: At 64° 18′ 36N., 96° 00′ 06W., on the east bank of the brook that drains "Landing Lake", one mile east of the D.O.T. station. Situated on a beach-line that now stands close to 100 feet above Baker Lake. A sparse scattering of quartzite chips and 3 artifacts occurred in circular patches of barren shingle that seemed to be frost boils. No stone structures were observed in the vicinity, hence this was probably a temporary lookout station covering game movements along the high barrens above Baker Lake.

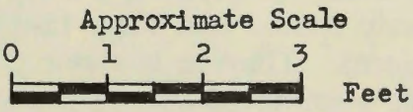
Cemetery Hill (Fig. 3b): Located about one-half mile inland from the western end of the Baker Lake settlement. The crown of the hill there is used for the burial grounds of the Anglican and Roman Catholic missions, but the adjacent portion is also a former Eskimo encampment. Ten stone tent rings are strung out along the eastern brow of the hill, approximately 200 feet above Baker Lake, as well as seven sets of V-shaped kayak stands. The stone rings are loosely spaced and vary from 12–18 feet in diameter. Most of them seem relatively recent and contain badly weathered fragments of kayak frames, a few pieces of bone, and an occasional bit of tin; however, some quartzite chips were collected from Rings 2 and 10. Three stone artifacts were also found on the hill, but they were not associated with any of the rings. No excavation was undertaken.

BL-14 (Fig. 6a): At 64° 11′ 12N., 96° 07′ 48W., about one-quarter mile northwest of the river mouth at *Kikertauyak* and 400 yards south from the Baker Lake shoreline. Situated on top of a gravel knoll 23 feet above waterline. There were half a dozen modern stone tent rings nearby, but they were not associated with three concentrations of quartzite chips which lay exposed in shallow blowouts on the knoll. We excavated 15 square yards, obtaining 15 specimens, and noted that the material occurred on top of beach sand and gravel, covered by a mere one inch of heath and moss.

BL-15: At 64° 11′ 54N., 96° 09′ 54W., on a 50-foot beach level, about one and one-half miles northwest of the river at *Kikertauyak*. A small chipping station occurred here on the gravel surface, covered by spotty heath and *dryas*, but no artifacts were found.

BL-16 (Fig. 7): At 64° 11′ 02N., 96° 08′ 12W., some 250 yards west of the river, and opposite the upstream end of the island at *Kikertauyak*. Elevation





(... =Chip Concentration) (x =Artifact)

Fig. 6. BL-16, House 1.

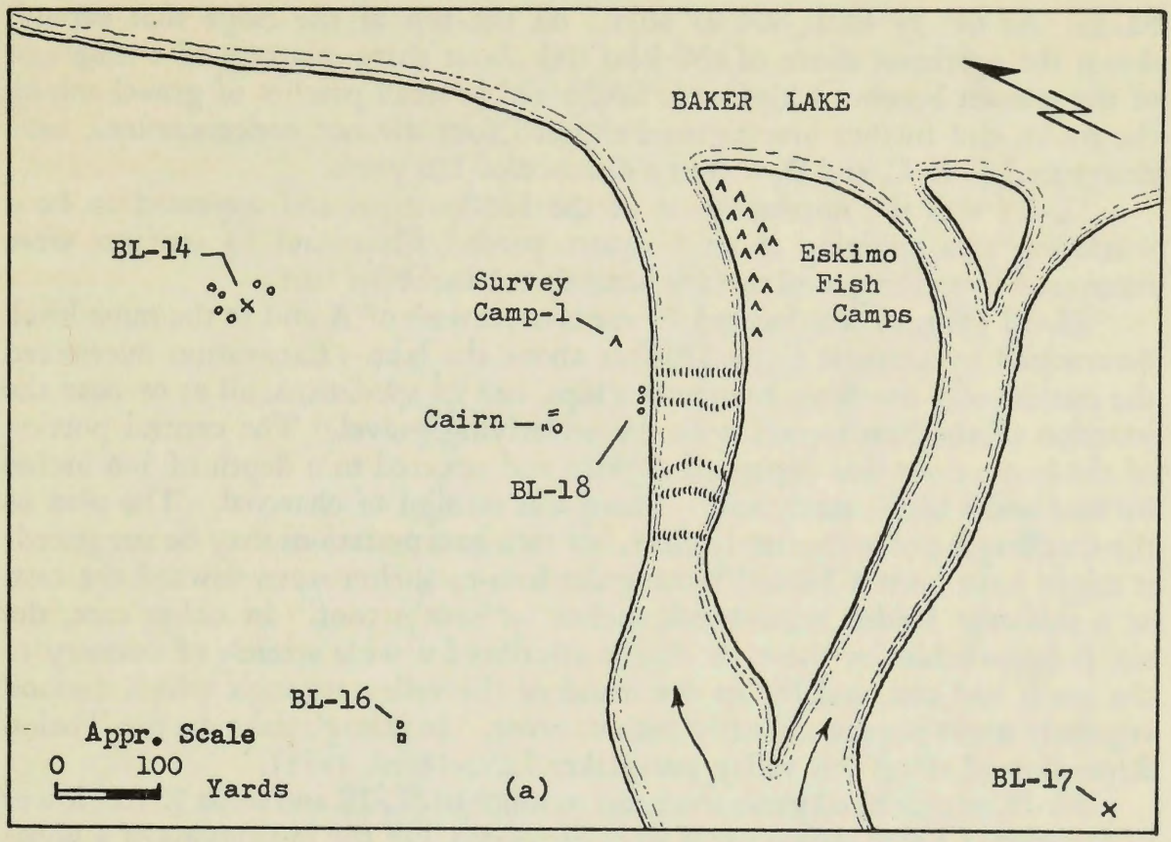
the same as BL-14, 23 feet above the present water-line of Baker Lake. Two dwelling outlines were found and both excavated: House 1, rectangular in plan (Fig. 7), and House 2, approximately semi-circular. House 1 produced 21 artifacts and a considerable quantity of quartzite chips, all of which were found on top of the gravel and sand surface beneath 2 inches of heath vegetation and turf. The same condition prevailed in House 2, although no specimens were found there. Midway in the north wall of House 1 there was a large jumbled pile of boulders, broken down so as to suggest an opened cache. These stones rested on top of the surface vegetation, whereas the others in the wall outline were embedded, and they presumably stem from a second occupation of the site, during which some of the wall structure was used to build the cache. A few fragments of caribou bone occurred in the turf and on the surface, and thus probably had no connection with the chipped stone culture.

BL-17: At 64° 10′ 36N., 96° 07′ 48W., on the east bank of the river at *Kikertauyak* and about three-quarters of a mile south of the modern Eskimo encampment on the island. Several faintly discernible tent rings and rectangular plans were noted here along the flat top of a low ridge, close to 50 feet above the level of Baker Lake. Excavations in nearby blowouts revealed large concentrations of quartzite chips on a sand and gravel surface beneath 2 inches of turf. Forty-seven specimens were obtained.

BL-18 (Fig. 6b): On the west bank of the river at *Kikertauyak*, opposite the midpoint of the island, are three stone-lined cache pits which are excavated in the ice-shove ridge that parallels the stream. The depth of the pits is from 3–4 feet and their inner diameters are 5–6 feet. The walls are formed of massive upright rocks that are tilted slightly inward; the cracks are chinked with pebbles, and there is an upper secondary course of smaller rocks. Excavation in the northernmost pit revealed nothing but the gravel floor. One of the Caribou Eskimos camped out on the island told me these pits were lived in at one time. This is most doubtful, however, and it is far more likely that they were constructed to cache meat at what has been, in years past, an important caribou crossing.

Inland toward the west, less than 100 yards away from the pits, was an 8-foot cairn built of large and heavy rocks and containing an empty chamber in its base. Near this lay a stone tent ring, two sets of V-shaped kayak stands, and a double alignment of smaller stones, 15 feet long. This consisted of two roughly parallel rows separated 24–30 inches, with the stones set 2–3 feet apart in the rows. The structure appeared to be a base used to rack up a sledge off the ground. Quick digging in the vicinity did not reveal any artifacts.

SL-1: At 64° 39′ 50N., 97° 06′ 30W., on the small peninsula in the extreme southeast end of Schultz Lake. Here, on the knoll top with a broad view in all directions, was a loosely spaced tent ring, 15–18 feet in diameter, with a well-delineated bed platform. The site is about 50 feet above the lake, and three sets of kayak stands were noted around the west side, 15–20 feet lower than the ring. A few quartzite chips occurred in the southeast quadrant of the ring, but there was no opportunity to excavate and no specimens were collected.



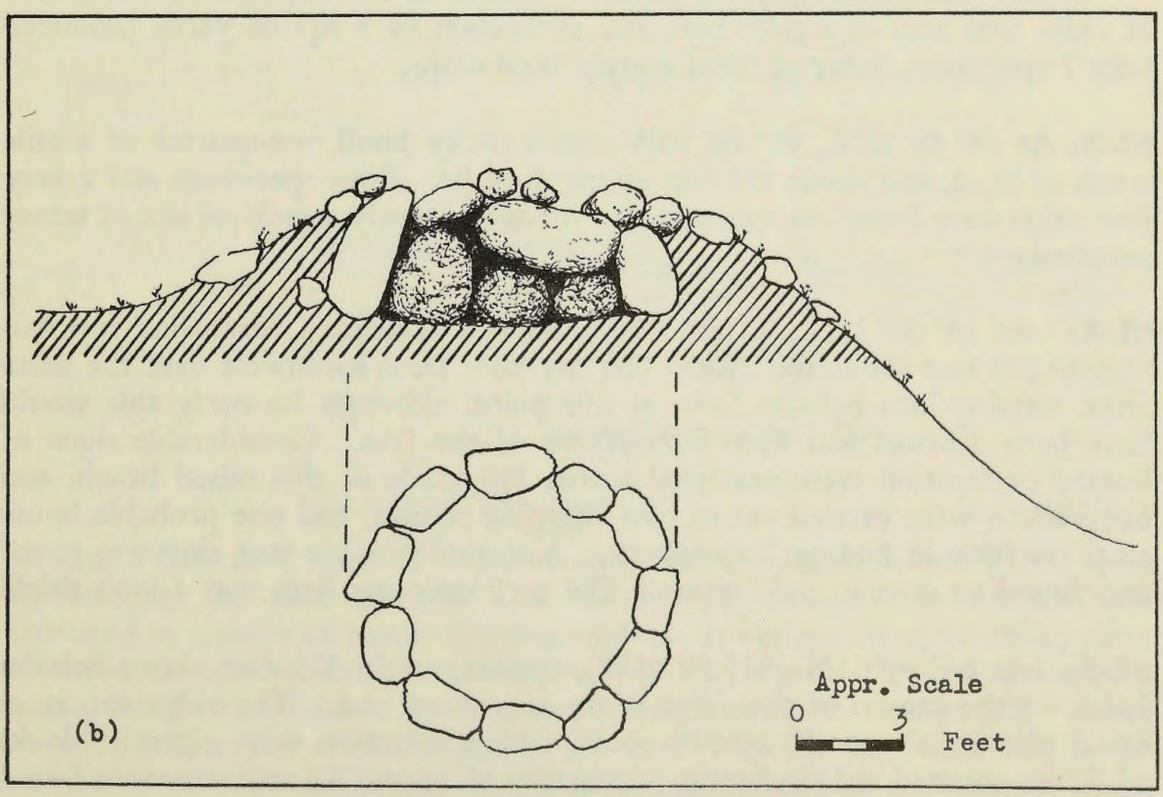


Fig. 7. (a) Kikertauyak Sites, Baker Lake, sketch-map.
(b) Cache Pit No. 1, Kikertauyak.

SL-2: At 64° 39′ 40N., 97° 03′ 50W., on the top of the ridge that extends down the southeast shore of the lake and about three-quarters of a mile east of the present beach. Chips were first noted in small patches of gravel among the rocks, and further investigation exposed four distinct concentrations, here designated A, B, C, and D, within a distance of 150 yards.

SL-2A was the northernmost of the four centres and appeared to be a workshop area covering about 5 square yards. Chips and 10 artifacts were recovered from the gravel surface beneath 1–2 inches of turf.

SL-2B (Fig. 8) was located 40 yards southwest of A and at the same level, determined by traverse to be 230 feet above the lake. Excavation uncovered the outline of a dwelling, numerous chips, and 24 specimens, all at or near the junction of the thin topsoil with the underlying gravel. The central portion of the house floor was depressed slightly and covered to a depth of 5–6 inches by turf and a black, sandy soil. There was no sign of charcoal. The plan of the dwelling is not immediately clear, but two interpretations may be suggested: it might have been a 3-sided rectangular lean-to shelter open toward the east, or a similarly 3-sided wind-break shelter without a roof. In either case, the site is remarkable for the view that it affords of a wide stretch of country to the south and east, and for its command of the valley through which caribou regularly move northward early each summer. In interglacial time the Thelon River flowed along this valley into Baker Lake (Bird, 1951).

SL-2C occurred 60 yards southeast to south of SL-2B and some 10 feet lower in elevation. Eight square yards were excavated, but the indications of a house plan were not substantiated. Thirty-two specimens were found on the gravel and sand surface beneath 1–2 inches of turf.

SL-2D was found 40 yards to the southeast of C. A small concentration of chips was seen in a frost boil, but excavation of 3 square yards produced only 7 specimens, most of them merely used chips.

SL-3: At 64° 39′ 22N., 97° 04′ 10W., on a rocky knoll one-quarter of a mile south of SL-2, and about 175 feet above the lake. Four specimens and a very few chips were found on the surface. It was evidently a lookout site of minor proportions.

SL-4: At 64° 39′ 25N., 97° 04′ 50W., on a well-defined beach-line approximately 100 feet above the lake. The site now faces southwest over the small river running into Schultz Lake at this point, although formerly this would have been a broad and deep embayment of the lake. Considerable signs of human occupation were scattered across 100 yards of this raised beach, and excavations were carried out in two chipping stations and one probable house ring, resulting in finding 7 specimens. A second possible tent ring was tested and found to contain only chips. The turf covering here was 1-inch thick.

SL-5: At 64° 40′ 55N., 97° 50′ 15W., approximately 275 feet above Schultz Lake, on the crown of the ridge at the southwest end. The ridge top is an ovoid plateau, about 150 by 300 yards, which is strewn with gigantic blocks of lichen-covered red sandstone. Quartzite chips and 47 artifacts were found on the surface in a 30-foot band around the south- and east-facing slopes of the

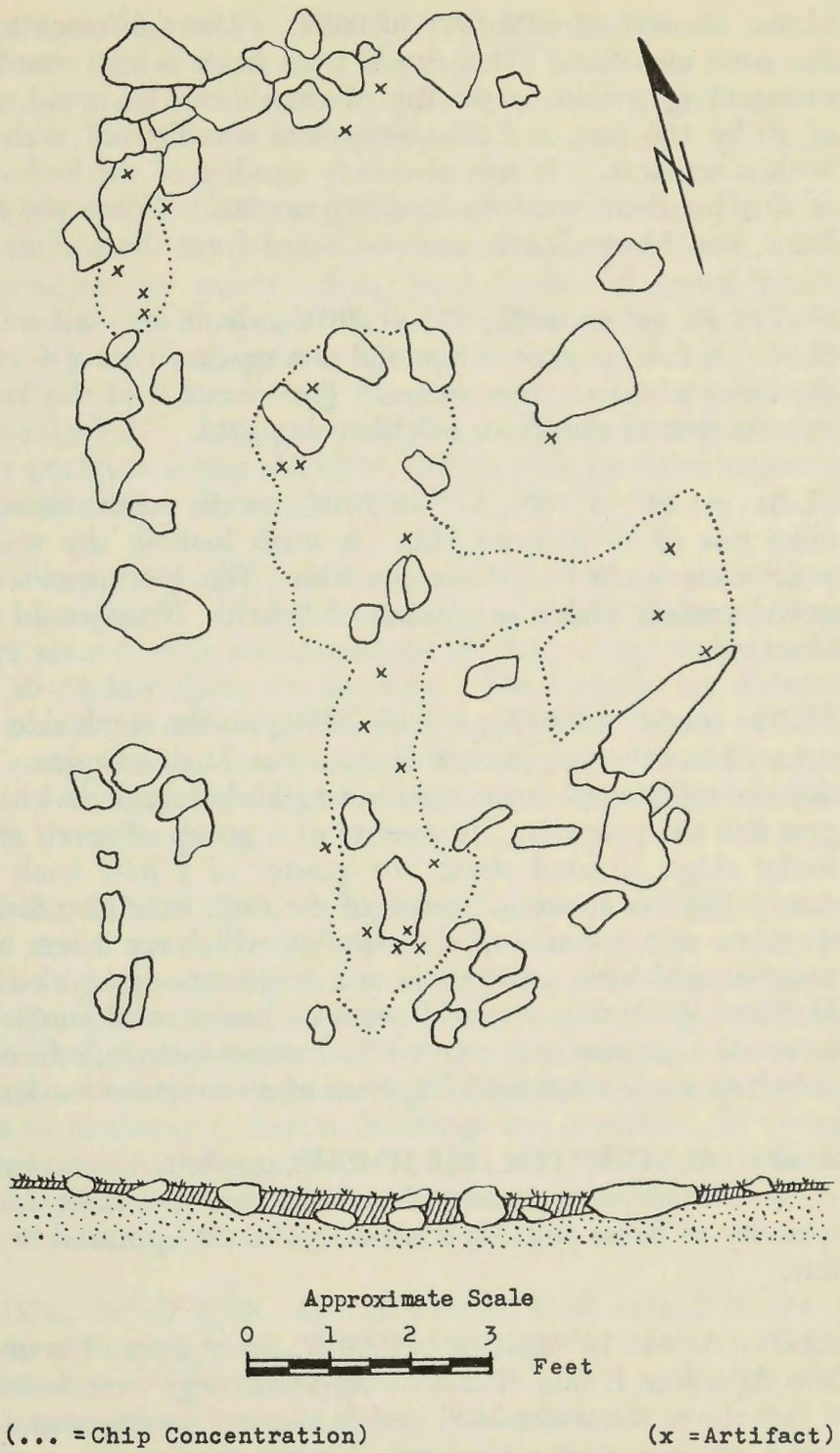


Fig. 8.
SL-2B Site.

plateau. This is a splendid lookout site which commands the game trails approaching the first narrows west of Schultz Lake. The material was deposited in a series of small chipping stations; as verified by excavation, these occurred directly on the gravel surface, but were covered here and there by sparse, thin heath, and in a few hollows by as much as 2 inches of soil. There were no indications of dwellings on the site. Nearby we found two badly weathered muskox skulls, one of which had been used as a chopping block. The cut marks on it had clearly been made by a steel blade.

SL-6: At 64° 40′ 40N., 97° 50′ 00W., a short distance south of SL-5 and at the same elevation. This site is on a kame which stands 15 feet above the surrounding terrain on the top of the ridge. Its ovoid surface has diameters of 50 by 100 feet, and this entire area was littered with quartzite chips and broken artifacts. It was obviously another of the lookout-workshop variety of site, for there were no dwelling remains. There was no soil cover on the kame, and 50 specimens were collected from the surface.

SL-7: At 64° 40′ 40N., 97° 51′ 20W., about one-half mile west of SL-5 and SL-6. A few quartzite chips and one specimen were found on the surface in the vicinity of two stone cairns. The elevation of this lookout was about the same as that of the above neighbouring sites.

SL-8: At 64° 46′ 10N., 97° 45′ 30W., on the north side of the lake about two miles east of Whalebone Hill. A small lookout site was found on a rocky point close to 50 feet above the lake. Ten specimens were collected on the gravel surface under 1–2 inches of lichen. No signs of any dwellings were observed.

SL-9: At 64° 46′ 05N., 97° 04′ 45W., on the north side of the lake where it narrows and the fast current of the lower Thelon begins. As it was late in the day and we wanted to run the main rapids before dark, I had no time to investigate this site properly. It consists of a group of seven stone rings built on a rocky ridge, situated about one-quarter of a mile back from the river and nearly 100 feet above it. Some of the rings have diameters up to 12 feet, and there are sections of wall still standing which are 3 feet high. Most of them were littered with wood chips and fragments of kayak frames. The surface of the ridge here is a combination of heavy rock outcrop and deep beds of moss and Labrador tea. No worked stones were found, and the only specimen collected was a weathered fragment of a wooden snow-knife handle.

AL-1: At 64° 37′ 50N., 98° 31′ 50W., on the northeast end of Aberdeen Lake. A lookout-chipping station about 300 feet above the lake produced a small quantity of flakes and 2 specimens. The site appeared to be on an old beach-line.

AL-2: At 64° 35′ 45N., 98° 29′ 00W., on the tip of a small peninsula jutting into Aberdeen Lake. Three modern tent rings were found here on a sand flat 8 feet above the water-level, and in the intervening area a few quartzite chips and 4 artifacts were picked up. Excavation was not possible.

AL-3: At 64° 36′ 35N., 98° 27′ 10W., another lookout site located on the highest part of the ridge which trends southeast to the narrows, at an elevation of approximately 300 feet above the lake. The surface of the ridge is a felsenmeer, and on the crest is an alignment of three cairns, together with two recent tent rings. Pockets of quartzite chips were scattered among the rocks over an area of 100 square yards, but the chips were most difficult to retrieve because they had filtered downward among the interstices. Five specimens were found on the surface.

AL-4: At 64° 36′ 25N., 98° 26′ 00W. This was probably the site of a caribou kill, located one-half mile east of AL-3 on a raised gravel beach-line about 150 feet above current water-level in the narrows. Six specimens were found on the surface, but there was no evidence of chipping.

AL-5: At 64° 33′ 40N., 99° 07′ 10W., near the tip of the point that juts from the south shoreline and forms the central narrows of Aberdeen Lake. The terrain here is characterized by gently rolling sand dunes and gravel knolls, some of which are covered with a sparse, dry heath. In some of the hollows there are frost boils. Quartzite chips and 29 specimens were found widely scattered over an acre of this ground along the eastern shore of the point and from 20–30 feet above the lake. There were several modern tent rings nearby, but no signs of older occupation that might be linked with the stone artifacts. Numerous test excavations were all unproductive.

AL-6: At 64° 37′ 35N., 99° 50′ 25W., on the south shore of the narrows at the west end of Aberdeen Lake. About one-quarter of a mile upstream from the island there were several small concentrations of chips along the top of a bluff, varying from 30–50 feet above the narrows. The material lay directly on top of sand and gravel, covered here and there by an inch or two of drift sand and lichen. Ten specimens were collected from the surface and several test diggings. There were two modern graves on the site, but no sign of older habitation, other than the stone chips.

AL-7: At 64° 37′ 20N., 99° 49′ 35W., on the same bluff as AL-6 but extending for a distance of almost one-half mile opposite the island. This was a far more extensive site than AL-6, and I believe it would repay a planned excavation. Quartzite chips and 48 artifacts were found in a band extending 100 feet back from the edge of the bluff, and excavation of 4–5 square yards traced them to a sand and gravel surface which was overlain by 2–6 inches of black sandy soil and turf. Although no evidence of former dwellings was observed, the broad inventory of tool types obtained suggests a habitation area. As in the case of AL-6, the flat top of the bluff is 30–50 feet above the water-level in the narrows. There are numerous recent stone tent rings in the vicinity.

AL-8: At 64° 35′ 45N., 99° 52′ 55W., on the western crest of a drumlinoid hill about two miles southwest of AL-7. Three loosely spaced stone tent rings, averaging 10 feet in diameter, were found on the barren gravel of the hill, and there were a few quartzite chips in one of them. There were no artifacts.

AL-9: At 64° 35′ 15N., 98° 23′ 20W., on a small island off the east shore of Aberdeen Lake, just at the beginning of the narrows that run toward Schultz Lake. The island is about one-quarter of a mile in diameter, separated from the mainland by a 200-foot channel, and its crown averages 25 feet above the water-line Its surface is a felsenmeer which is blanketed by a 2-inch cover of dead caribou moss, with a few pockets of Labrador tea. For 250 yards along the crest there is an almost continuous train of quartzite chips beneath the dead lichen, and by stripping this back in several spots we found large concentrations of workshop scrap, including 27 artifacts. At the channel end

of the crest were three stone cairns and a recent tent ring with a bone midden. This site commands a full view of the eastern approaches to the caribou crossing.

BvL-1 (Fig. 9a): At 64° 39′ 05N., 99° 56′ 40W., on the south mainland side opposite a prominent gravel island. An esker trends to the shoreline from the southeast, and the site occurs on a terrace on its western slope, from 30–40 feet above the lake. A number of quartzite chips and 11 specimens were collected in an area of 300 square feet, on the surface of the sand and gravel, but there was no evidence of dwellings.

BvL-2 (Fig. 9a): At 64° 39′ 25N., 99° 57′ 25W., directly across the narrows from BvL-1, on the southern extremity of the island. Essentially the island appears to be a continuation of the mainland esker, and on the southwestern slopes of its ridge there is an extensive terrace which equates with the 30- to 40-foot level on the mainland shore. The site occurs on this flat, over an area of approximately 100 square yards, and numerous chips and 17 artifacts were collected from the sand and gravel surface. In places the cultural debris was covered by as much as 6 inches of dune and spotty vegetation, but excavation did not reveal any other occupation surface. There were modern tent rings on the terrace, as well as several which were embedded and thus appeared to be older. On the crest of the ridge, averaging 30 feet higher than the terrace, was a row of *nangissat*, or hopping stones. This was oriented northwest-southeast, following the crown of the ridge, and it measured 228 feet in length. A stone cairn was built near the southern end. Although a few stones were apparently missing from the alignment, we counted 99, making the average distance between stones about 2.2 feet. The individual stones varied from 6–12 inches in diameter, and many of them were deeply embedded in the sand and encrusted with lichen. Thus, in appearance, the *nangissat* seemed to be of the same age as the older-looking stone tent rings on the terrace below, although these rings did not yield any specimens.

BvL-3: At 64° 33′ 20N., 100° 18′ 15W., on the south shore of the first narrows east of the main body of Beverly Lake. This small site was found on the terrace 30-feet above water level, and only a few chips and 3 specimens were collected from the surface. Several hundred yards farther to the east there are from 20–25 recent stone rings scattered along the terrace and back up on to the knoll to an elevation of 60 feet. Six recent graves were also observed in the vicinity and a few modern specimens collected.

BvL-4: At 64° 33′ 35N., 100° 19′ 00W., about one-half mile west of BvL-3 and on the same terrace. Here there was a considerable concentration of quartzite chips and 29 specimens within an area of 100 square feet. They were discovered on the sandy surface in a blowout, but it was found by excavation that the occupation was in fact on the present surface, covered only by a thin growth of lichen. There were no signs of any dwelling nearby.

BvL-5: At 64° 33′ 55N., 100° 17′ 50W., on the north shore of the narrows directly across from the above two sites. On a small rocky point, 20–30 feet

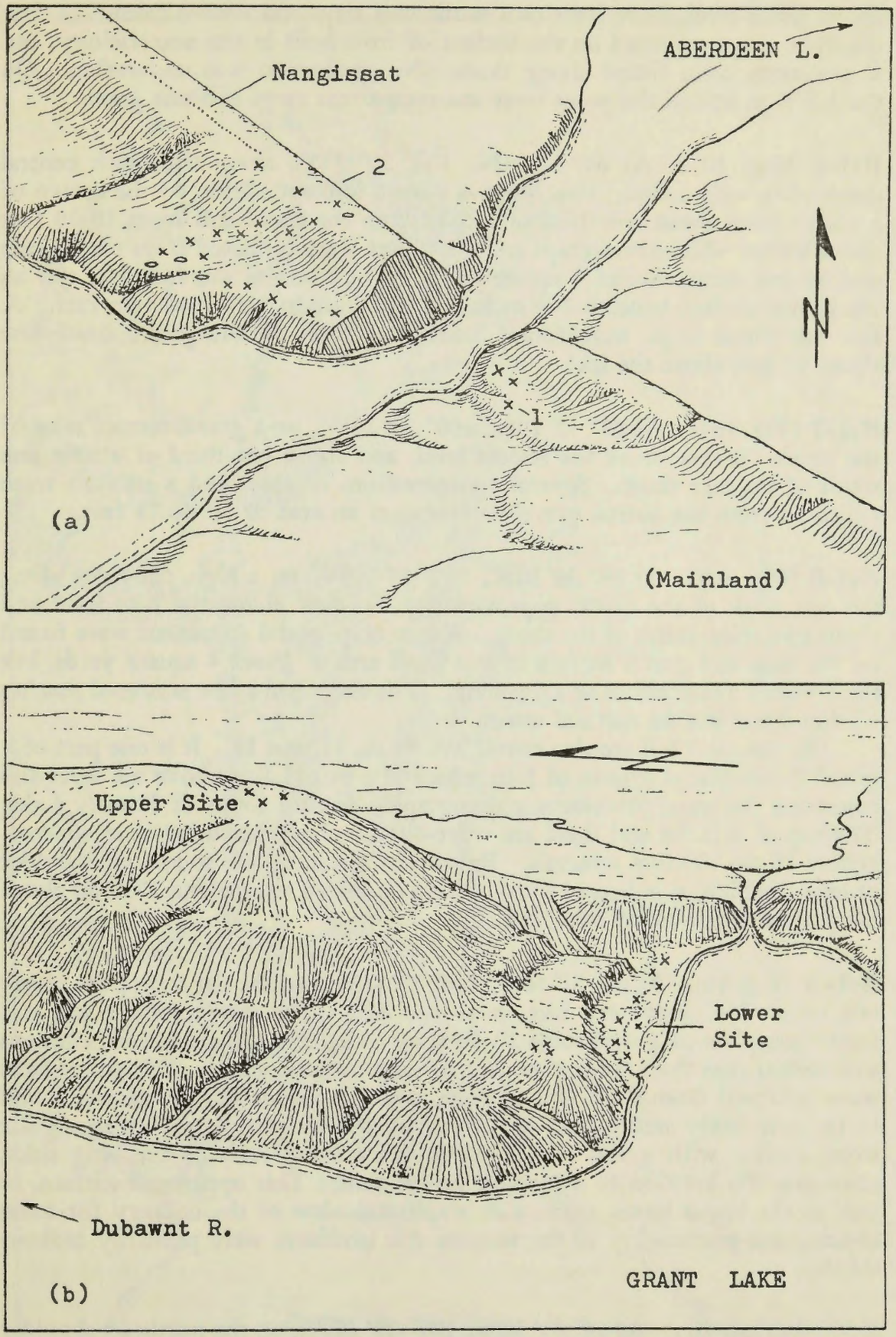


Fig. 9. (a) Sites BvL-1 and BvL-2, sketch.
(b) Grant Lake drumlin sites, sketch.

above water-level, there were two sterile tent rings and several cairns. A few quartzite chips appeared on the surface of frost boils in the near vicinity, and 2 specimens were found abong them. No excavation was undertaken. On the hill tops behind the point were ten recent tent rings and one grave.

BvL-6 (Fig. 10): At 64° 32′ 35N., 100° 30′ 15W., along the south central shore of Beverly Lake. This site was a small lookout station on the crown of a rocky knoll about one-third of a mile from the shore and from 10–20 feet above water. Numerous chips and 8 artifacts were collected from the surface and by test excavation of 4 square yards. The material was found *in situ* on the gravel surface beneath 2–4 inches of black sandy earth and thin turf. A few additional chips were found below the knoll on the grassy beach-line about 10 feet above the lake.

BvL-7 (Fig. 10): At 64° 32′ 10N., 100° 29′ 10W., on a gravel terrace west of the creek, 20 feet above the stream level, and about one-third of a mile due south of the lake shore. Several concentrations of chips and 8 artifacts were collected from the barren gravel surface over an area of 30 by 75 feet.

BvL-8 (Fig. 10): At 64° 30′ 50N., 100° 28′ 00W., on a high, flat ridge along the east bank of the creek, approximately 275 feet above the lake level and about two miles south of the shore. A few chips and 3 specimens were found on the sand and gravel surface in one small area of about 4 square yards, but there were no indications of a dwelling. The ridge had a few scattered patches of thin *dryas* but no real soil cover.

On this same hill are also found BvL-9, 10, 11, and 12. It is one part of a grand fluvio-glacial system of hills which rise to 615 feet above sea level and constitute the most prominent physiographic feature south of Beverly Lake. The top of it is flat and there are wave-cut benches contouring it at approximately 75- to 100-foot intervals. BvL-8 was found on the southwest shoulder of level 3 which, as indicated above, I have estimated to be about 275 feet above the present shoreline of Beverly Lake.

BvL-9 (Fig. 10): At 64° 31′ 10N., 100° 27′ 40W., on the flat top of the above hill, or level 4, about 350 feet above the lake. The crown of the hill is a featureless plain of gravel some 20–30 acres in extent, and around its southern and eastern rims there were a number of chip concentrations. Fifteen artifacts were collected from these, but in every case the subsurface gravel was found to be completely sterile. At the northeast end of level 4 was a rectangular stone outline with a row of heavy boulders along each of the long sides, obviously the location of a modern canvas tent. This uppermost surface, as well as the lower levels, commands a splendid view of the country for miles around, and presumably all the sites on this landform were primarily lookout stations.

BvL-10 (Fig. 10): At 64° 31′ 30N., 100° 27′ 40W., on the northeast shoulder of level 3, 275 feet above the lake. A few quartzite chips and one specimen were found here on the surface.

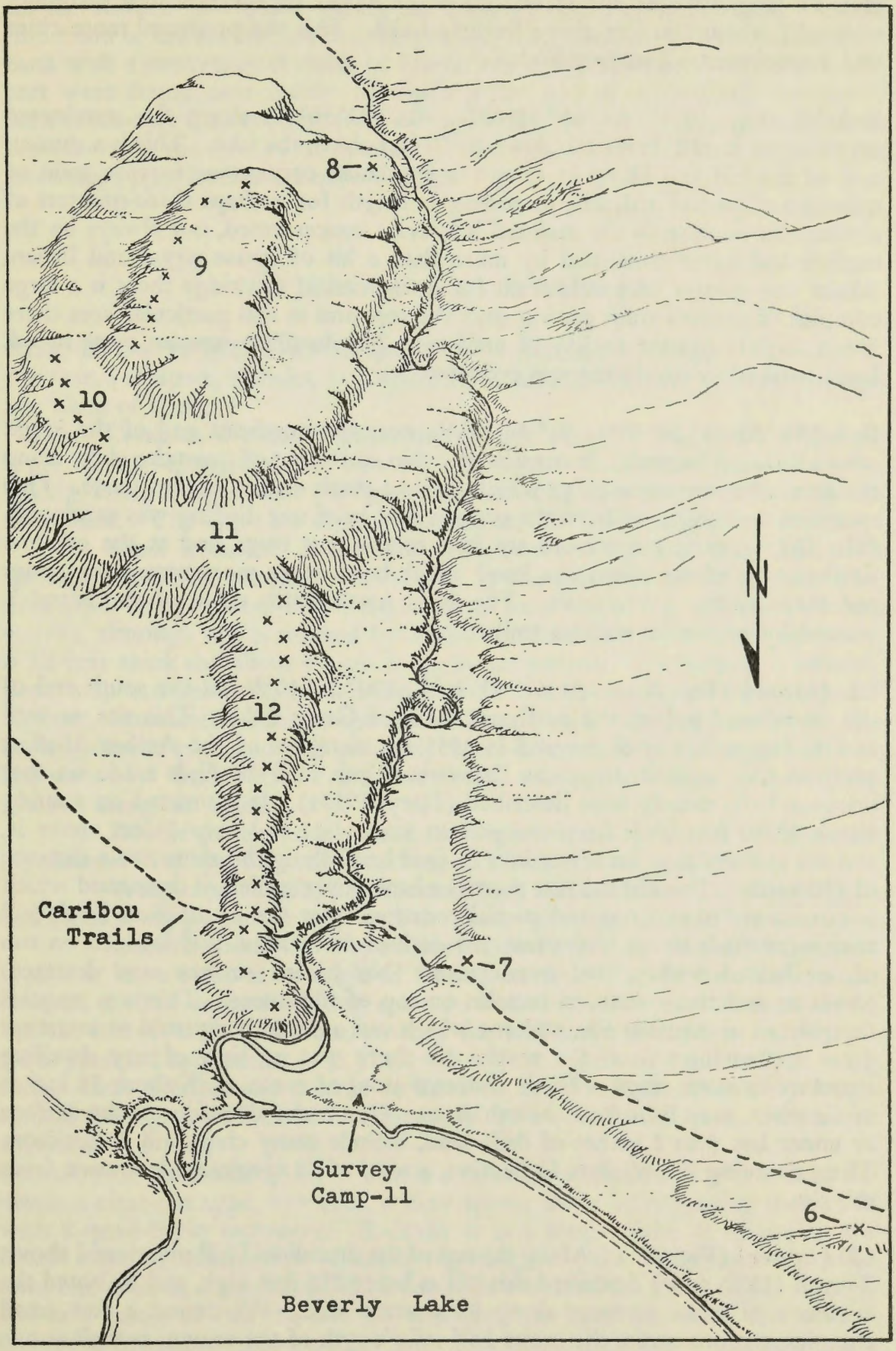


Fig. 10. Sites BvL-6 to BvL-12, sketch.

BvL-11 (Fig. 10): At 64° 31′ 40N., 100° 27′ 45W., on the northern extremity of level 2, about 200 feet above Beverly Lake. This site produced more chips and 3 specimens, all surface finds.

BvL-12 (Fig. 10): At 64° 32′ 00N., 100° 27′ 50W., along the northward extension of level 1, from 150 down to 50 feet above the lake. This is a sinuous arm of the hill and along its crown is an almost continuous narrow train of quartzite chips and artifacts, extending in length for perhaps three-quarters of a mile. In some spots the material is heavily concentrated, but always on the surface and never concealed by more than a bit of sparse *dryas* and lichen. About one-quarter of a mile from the lower end of the ridge there is a large complex of caribou trails passing over the top, and in this particular area there was a slightly greater variety of artifacts. No dwelling remains were noted, but a total of 49 specimens was collected.

BvL-13: At 64° 39′ 40N., 99° 56′ 55W., near the northeast end of the island where BvL-2 is located. It consists of a thin scattering of quartzite chips along the crest of a transverse ridge which forms a point on the eastern shore. One specimen was collected from the surface, and brief test digging was unsuccessful. On the same ridge there are four recent tent rings, and at the extreme northeast tip of the island is a knoll which bears three more recent tent rings and three empty grave ovals. The main north–south ridge of the island is scarred by numerous caribou trails.

GL (lower) (Fig. 9b): At 63° 43′ 20N., 100° 26′ 10W., at the south end of the drumlinoid hill on the northeast shore of Grant Lake. This site, as well as GL (upper), was discovered in 1955 by members of the Arthur Moffatt party as they canoed down the Dubawnt River, and the finds made on that occasion have already been described (Harp, 1959a). It is situated on a sandy beach 30–40 feet back from the present water-line and only 5 feet above it, and the cultural remains occur in a 20-foot band along the shore for a distance of 150 yards. Toward the rear there is a heavy overburden of dune sand which is extensively blown out and partially drifted over the occupation level, and tests were made to see if the material derived from some turf horizon on top of, or buried within, this overburden. No buried surface was detected, however, and there were no remains on top of the dunes. This was unquestionably an occupation site, and one which was admirably situated to intercept game approaching from the south, yet there was no sign of any dwelling structure or stone rings. Three concentrations of rocks, each about 36 inches in diameter, may have been hearth areas. Our finds, all made on the surface or under less than 2 inches of drift sand, include many chips and 36 artifacts. Thus, counting the Moffatt Collection, a total of 68 specimens is known from this site.

GL (upper) (Fig. 9b): Along the top of the drumlinoid hill mentioned above. Tyrrell (1897, 64 F) described this hill as being 270 feet high, and he noted the existence of three terraces along its western side. We found a few small chipping stations across the entire half-mile length of the crown, as well as one other on a southwest shoulder about 80 feet above the lake. These occurred

on the surface, and quick testing turned up nothing from beneath. At the north end of the summit are four recent tent rings from 10–15 feet in diameter, each with a conventional circle of hearth stones inside, but no artifacts of any sort were found near them. Moffatt's group picked up a badly weathered bone knife-haft with copper rivets on top of the hill, and I presume it may have been found in the vicinity of these rings. Moffatt collected 14 stone specimens from this upper level and I have 8 more.

III. Description of the Artifacts

BL-8, House 1: (Pl.1:a–n) 50 specimens: 8 points, 10 knives, 2 adze blades, 1 graver, 5 scrapers, 2 blades, 11 fragments, 11 used flakes. All quartzite, except one blade of chert.

Points: Contracted stem: 6 specimens, as in Pl.1:a,b,c. This is the dominant type, but it is represented only by stem fragments. These have bifacial pressure flaking, straight edges that are lightly ground, and they measure from 6.2–7.3 mm. thick. The bases are slightly convex and abruptly thinned.

Small isosceles: 2 specimens, Pl.1:d,e. This is a thin, delicately worked end blade, probably for hafting in the foreshaft of an arrow. The sides taper straight from maximum width at base toward tip, and the bases are convex, although one is marked by a small median nub. The latter specimen is 3.8 mm. thick and about 4.1 cm. long, by projection. The flaking is bifacial, done with extreme fineness, and the lateral edges have incipient serrations.

Knives: Semilunar biface: 4 specimens, as in Pl.1:f. This appears to be the most common type and was probably hand-held, although all specimens are fragmentary. Both surfaces are completely worked and there is secondary retouch along the edges.

Double-pointed side blades: 3 specimens, as in Pl.1:g,h. Somewhat asymmetric in shape, bifacially worked, and from 4.9–8.7 mm. thick.

Winged semilunar: 1 specimen, Pl.1:i. This unique specimen is thick and blunt along its convex edge and thus may have seen some use as a scraper.

Crooked end-knife: 2 specimens, as in Pl.1:k. A very skilfully made type that has a blade at an angle of 29 degrees from the vertical of the stem. Smooth, shallow pressure flaking creates a flat biconvex section 3.9 mm. thick, but the stem is slightly thicker, possibly for additional strength in hafting.

Adze blades: 2 specimens, as in Pl.1:j. Roughly flaked on both surfaces, with rather sinuous edges and convex ends. One end has been thinned by longitudinal flaking, no doubt to facilitate hafting in a socketed head. Maximum thickness 11.5 mm.

Graver: One specimen, Pl.1:l. This is a borderline implement which is by no means a clear-cut type; however, it does appear to be an engraving tool made with a quasi-burin technique. Basically it is a simple flake of quartzite, the lateral edges of which show minute retouching or spalling from use. In addition, one median, longitudinal flake has been removed from the upper surface, and as a result of this the striking platform has been narrowed and a beak created at the upper right-hand corner. The transverse edge of this beak bears signs of cutting or engraving.

Scrapers: Thumbnail: 1 specimen, not illustrated. Apparently made of a surface trim chip removed from a larger artifact.

Amorphous: 4 specimens, as in Pl.1:m,n. Shapeless flakes that have been converted into end or side scrapers by partial retouch of the edges. Pl.1:n has two prepared edges, one on each of the opposing surfaces of the chip.

Prismatic blades: Two specimens indicate that techniques of small blade manufacture were known at this site. One of them is indeed a true microblade and one of three chert specimens in my entire collection.

Miscellaneous: There are 11 unidentifiable specimens which are probably portions of biface knives, and 11 other chips, the scarred edges of which indicate that they have been used as temporary knives or scrapers.

BL-8, Ring 2: This structure was excavated but no artifacts were found.

BL-8, Ring 5: (Pl.1:r). 1 quartzite hammerstone and 1 silicified red slate knife.

Hammerstone: An elongate pebble with small abraded surfaces at both ends: 10.5 cm. long.

Knife: Pl.1:r. A rather coarsely flaked slab, ovoid in shape, with a median apex on one of the long sides, possibly for hafting as an ulu; 14.0 cm. long, 7.5 cm. maximum width, 11 mm. thick.

BL-11: (Pl.1:o) 2 specimens: 2 quartzite knives.

Knives: Pear-shaped side blade: 2 specimens, as in Pl.1:o. The blade is 8.1 mm. thick, and the straighter of the two lateral edges, which is slightly dulled, seems to have been the cutting edge.

BL-12: (Pl.1:p,q) 14 specimens: 7 quartzite scrapers and used flakes, 1 bone knife handle, 1 wood button, 2 wood toy boats, 1 piece of worked bone, 1 glass bead, several cartridge primers.

Scrapers: Thumbnail: 3 specimens, as in Pl.1:p,q. Made on plano-convex chips, roughly discoidal in outline, and chipped around the entire periphery.

Amorphous: 4 specimens, all shapeless flakes that have been partially retouched.

Miscellaneous: The other specimens noted clearly stem from a very recent occupation of this site, and hence they need not be described here.

BL-13: (Pl.2:a) 3 specimens: 1 projectile point or knife, 1 point stem, 1 used chip. All quartzite.

Points: Triangular: 1 specimen, Pl.2:a. This is a mid-blade fragment of a point which measures, by projection, approximately 5.6 cm. long, 3.4 cm. wide at the base, and 4.5 mm. thick. The sides are straight to slightly concave, the cross-section biconvex, and the pressure flaking fairly smooth and shallow.

Tapered stem: 1 specimen. This is only a stem fragment and hence the over-all dimensions of the point cannot be estimated. However, the stem itself is 1.0 cm. long and it tapers from an upper width of 1.2 cm. down to 0.6 cm. at the bottom. The remaining portion of the blade above the stem is 1.6 cm. wide, 4.8 mm. thick.

Cemetery Hill: 3 specimens: 1 scraper, 1 used chip, 1 core or blank. None illustrated. All quartzite.

Scraper: A fragment of plano-convex chip with steep retouch along one side. May be a side or an end scraper.
Core or blank: A large, triangular chunk of quartzite with very coarse percussion flaking on both faces.

BL-14: (Pl.2:b–d) 15 specimens: 1 point, 5 scrapers, 1 hammerstone, 2 prismatic blades, 2 core fragments, 3 used chips, all of quartzite, and 1 piece of worked wood.
Point: Lenticular: 1 specimen, Pl.2:b. Crudely flaked on both surfaces, although essentially plano-convex in section, with a scarfed stem. Probably unfinished.
Scrapers: Concavo-convex: 1 specimen, Pl.2:c. This is clearly a stylized implement with a two-fold working edge. Made on a plano-convex flake, 1.5 cm. thick, and worked on one face only.
Amorphous: 4 specimens, as in Pl.2:d. All are fragments with retouched edges.
Hammerstone: 1 specimen, an elongate pebble used as a hammer at both ends, and split by heavy pounding; 7.7 cm. long and 3.8 cm. in diameter.
Prismatic blades: 2 specimens indicate a positive knowledge of blade-making technique at this site, but are otherwise unworked.
Cores: 2 fragments of tortoise-like cores.
Miscellaneous: The used chips are like those noted before, and the fragment of worked wood, possibly a haft, must be attributed to some recent occupation of the site.

BL-15: This site yielded only scrap chips.

BL-16, House 1: (Pl.2:e–i) 21 specimens: 4 points, 2 knives, 3 scrapers, 3 cores or crude choppers, 2 prismatic blades, 7 fragments or used chips. All quartzite.
Points: Contracted stem: 1 specimen. The same type as noted for BL-8, House 1.
Lenticular: 3 specimens, as in Pl.2:f,g. The same type as noted for BL-14.
Knives: Asymmetric side blade: 2 specimens, Pl.2:e,i. The former, by projection, is about 6.8 cm. long, has a maximum width of 3.0 cm., and is 9.2 mm. thick. Both specimens are bifacially trimmed. The type is almost semilunar and not pear-shaped, as in the BL-11 specimens.
Scrapers: Thumbnail: 1 specimen, as in BL-8, House 1.
Amorphous: 2 specimens, as in Pl.2:h.
Cores: 3 specimens that are either fragments of cores, crude unfinished blanks, or possibly rough chopping tools.
Prismatic blades: 2 specimens similar in general size and proportion to those noted above for BL-8, House 1 and BL-14. Not worked.

BL-16, House 2: No artifacts recovered here.

BL-17: (Pl.2:j–s) 47 specimens: 3 knives, 4 scrapers, 3 gravers, 3 cores, 8 prismatic blades, 10 trim chips, 16 used flakes. All quartzite.
Knives: Asymmetric side blade: 1 specimen, Pl.2:j. This basal fragment projects to a length of about 6.0 cm., has a width of 3.3 cm. and is 9.3 mm. thick.

It is bifacially worked but has a residual hump on one face. One lateral edge is noticeably duller than the other.

Thick biface: 2 specimens are coarsely flaked fragments of knife blanks that were probably leaf-shaped.

Scrapers: Offset end: 1 specimen, Pl.2:k. This is a deliberately shaped type which appears to have served both as a side and an end scraper.

Amorphous: 3 specimens.

Gravers: Amorphous: 2 specimens, as in Pl.2:m. These are random chips which have been used as engraving tools, but are not otherwise stylized.

Quasi-burin: 1 specimen, Pl.2:l. A thin, rectanguloid flake which seems to have been trimmed into a corner burin. At the upper left-hand corner, as illustrated, at least four minute burin spalls have been removed, and on the reverse face a single longitudinal flake has been detached to thin the cutting edge of the implement still further. The width of this cutting edge is 0.7 mm. In making such an identification it should be noted, in all fairness, that it is most difficult to diagnose manufacturing techniques in this coarse-grained quartzite, and hence the specimen must be regarded only as a possible, or quasi-burin.

Cores: Fluted: 2 specimens, as in Pl.2:r. One of these examples has two prepared striking platforms, from one of which several rather crude blades have been struck. The illustrated specimen, however, is a true fluted core which has been the source of a number of prismatic and microblades. It has a "dished" striking platform with upturned edges, created by the removal of a single large flake. This type of striking platform is frequently associated with short blade cores in Mesolithic and Neolithic cultures of widespread distribution (cf. Barnes, 1947, pp. 104–7).

Tortoise: 1 specimen may be either a variety of tortoise core or a fragment of a crudely chipped blank.

Prismatic blades: 8 specimens, as in Pl.2:o-q. These closely resemble in size and proportion the prismatic blades found in the other Baker Lake sites. Several of them have a strong longitudinal curvature and they could have been derived from the fluted core described above.

Trim chips: 10 specimens, as in Pl.2:n,s. These are an accidentally stylized by-product of the industry carried on at this site. Each has a humped, facetted dorsal surface and a relatively smooth, concave, ventral surface with a well-developed bulb of percussion. As described elsewhere (cf. Paterson and Tebbutt, 1947, p. 42), they are believed to have been derived from the primary working of large biface tools.

BL-18: No artifacts recovered.

SL-1: No artifacts recovered.

SL-2A: (Pl.3:a,b) 10 specimens: 1 knife, 3 scrapers, 1 hammerstone, 5 fragments and used chips. All quartzite.

Knife: Large biface: 1 specimen, a tip fragment, may be part of a semilunar. Expertly and smoothly flaked, 17.8 mm. thick.

Scrapers: Triangular: 1 specimen, with steep retouch along one side only. Probably hand-held. Pl.3:a.

Combination: 1 specimen, Pl.3:b. One lateral edge has been bifacially trimmed as a knife, while the opposite edge has been retouched on one face only.

Amorphous: 1 specimen may be a spent core that has been used at both ends as a scraper.

Hammerstone: The single specimen is an elongate, water-rolled pebble, 11.0 by 5.5 cm.

SL-2B: (Pl.3:c–f) 24 specimens: 2 points, 6 knives, 2 scrapers, 1 burin, 1 pick, 5 blanks, 7 fragments and used flakes. All quartzite.

Points: Lanceolate: 2 specimens, as in Pl.3:e. The maximum width of this type falls between the midpoint and the tip, and the execution is extremely competent, considering the coarseness of the material, with smooth, shallow pressure flaking. The base is slightly convex, and both the base and the edges are ground smooth. In the specimen illustrated, this grinding extends for a distance of 2.1 cm. toward the tip; the maximum width is 2.1 cm. and the maximum thickness 8.8 mm. A strange feature of this same specimen is the removal of two burin spalls from the right side. One wonders how a striking platform was obtained on the sharp edge, but the technique is obvious. Possibly the purpose was not to make a burin out of the point, but to obtain the spalls for auxiliary tools.

Knives: Round-based leaf shape: 2 specimens, as in Pl.3:c. This type is likely to be quite variable in size, and in addition to finished examples there are frequent roughly flaked blanks, particularly in workshop sites. This is bifaced.

Discoidal biface: 1 specimen is a fragment of what appears to be such a type approximately 6.7 cm. in diameter.

Side blade, willow-leaf: 1 specimen, Pl.3:d. This is a plano-convex blade 9.2 mm. thick, made on a flat flake that is worked all over the dorsal surface but only along the edges of the opposite face.

Amorphous: 2 specimens definitely knives, with one or more edges bifacially trimmed, but no particular form.

Scrapers: End scraper, triangular: 1 possible specimen, a stem fragment with straight tapering sides.

Amorphous: 2 specimens, one of them a retouched flake that has one side and an adjoining end prepared.

Burin: 1 specimen, Pl.3:f. This tool is a re-used lanceolate point of the type described above for this site. Although there was some question about the quasi-burin (point) noted above, this specimen cannot be doubted. Burin strikes have been made down both lateral edges, with as many as four spalls having been removed on the right. There has been no thinning of the upper transverse edge of the implement, which is 7.5 mm. thick, and therefore it seems that it could not have been intended as a burin, but that, on the other hand, the artisan wished to obtain spalls for other specific jobs.

Pick: 1 specimen, fragmentary, which has a definite counterpart in the inventory of SL-2D.

Blanks: 5 specimens of coarsely flaked blades or fragments which appear to be preliminary stages of biface knives, mostly round-based leaf shapes, as noted before.

SL-2C: (Pl.3:g–n) 32 specimens: 1 point, 15 knives, 5 scrapers, 1 adze, 2 prismatic blades, 8 fragments or used flakes. All quartzite, except the adze which is made of silicified slate.

Point: 1 specimen, presumably a mid-fragment of a projectile point. It is 2.1 cm. wide, 9.6 mm. thick, biconvex in section, and neatly pressure-flaked over both surfaces.

Knives: Side blade, asymmetric leaf shape: 8 specimens, as in Pl.3:h,i. The several whole specimens of this type are roughly flaked, and thus probably unfinished. They are bifacially worked, but one example is made on a flat blade and is plano-convex in section. The blades are all asymmetrical and vary in thickness from 9.8–13.5 mm.

Thin, broad biface: 4 specimens, as in Pl.3:g. This type could have been either end-hafted or hand-held; its thin, flat section is distinctive.

Chopper biface: 2 specimens. Both are fragmentary, but the type seems to be a large, thick biface tool, coarsely flaked and probably useful as a chopper. These could also be unfinished blanks.

Side blade, rectanguloid: 1 specimen, Pl.3:j, unique in the collection. It shows delicate bifacial retouch along portions of both lateral edges.

Scrapers: Among the 5 specimens there is no consistency of type, but three are illustrated in Pl.3:k,l,m. The first of these is a double-pointed blade, roughly flaked, with most of its long sides retouched on one face. The second is a blade with the edges unifacially retouched on alternate sides. The third is a large snub-nosed end scraper which has not been retouched, but it does appear to have been used in its original state, as struck from a core. Two other specimens of scrapers are amorphous flakes that have been partially retouched.

Adze: 1 specimen, unique in the collection, Pl.3:n. It measures 11.7 cm. long, 4.8 cm. wide, and 17.5 mm. thick, and it has been shaped by rough bifacial percussion flaking followed by grinding and polishing of the working edge on both faces.

Prismatic blades: 2 specimens indicate a knowledge of blade-making technique at this site, but they are relatively much larger than those described for the Baker Lake sites.

SL-2D: (Pl.4:a) 7 specimens: 1 pick, 6 fragments. All quartzite.

Pick: This is the counterpart of the type mentioned above for SL-2B. As shown in Pl.4:a, it is a dagger-like tool that has been roughly percussion-flaked with straight tapering sides and the cross-section of an isosceles triangle. At the bottom end the width of the base is 2.5 cm., and the length of each of the other two sides is 3 cm. At the pointed end there are several longitudinal flake scars, suggesting that the implement has been used as a pick. This appears to be the entire tool and not just a fragment, because the base is evenly convex and shows signs of chipping.

SL-3: (Pl.4:b) 4 specimens: 1 knife, 2 scrapers, 1 used flake. All quartzite.

Knife: Biface, symmetric: 1 specimen, Pl.4:b. This tool is essentially double-pointed, roughly flaked by percussion, as if unfinished, and has a maximum thickness of 14.6 mm.

Scrapers: Amorphous: 2 specimens of side scrapers made on blade fragments.

SL-4: (Pl.4:c–e) 7 specimens: 4 knives, 2 used fragments, 1 hone. All quartzite except the hone which is silicified slate.

Knives: Biface, symmetric: 1 specimen, Pl.4:c. This is a well-executed double-pointed knife made on a thin blade. It is 5.7 mm. thick, the pressure flaking is shallow and mostly unifacial, while the edges are bifacially retouched.

Biface, round-based leaf shape: 1 specimen, Pl.4:d. This may be simply an unfinished blank; it is alternately flaked by percussion on both faces and sinuous-edged.

Side blade, asymmetric: 1 specimen similar to the type described for SL-2C.

Hone: 1 specimen, unique in the collection, Pl.4:e. The piece is 5 mm. thick, and one of its lateral edges has been rubbed smooth.

SL-5: (Pl.4:f–m; Pl.5:a–d) 47 specimens: 3 points, 14 knives, 5 scrapers, 2 prismatic blades, 10 blanks, 13 fragments and used flakes. All of quartzite except one knife of silicified red slate.

Points: Lanceolate: 1 specimen, Pl.4:f. This skilfully made point, with smooth, shallow bifacial pressure flaking, is similar to the type already described for SL-2B. It differs, however, in that its greatest width is at the midpoint of the blade and there is a strong suggestion of apex from which the sides fall away straight to base and tip.

Lanceolate, large: 2 specimens are fragments of a biface lance type, longer and heavier than the lanceolate point mentioned above.

Knives: Biface, round-based leaf shape: 9 specimens, as in Pl.4:h,i,j. Most of these have the appearance of semi-finished blanks with rough flaking and no retouch.

Semilunar biface: 3 specimens, as in Pl.4:k. These are thin blades in relation to their over-all size, and for the most part are retouched around the edges.

Side blade, willow-leaf: 1 specimen, as in Pl.4:g. The blade is 7.2 cm. long, by projection, and 8.8 mm. thick. It has one small side notch near the tip.

Chopping blade: 1 specimen is a fragment of a large, thick biface of indeterminate shape.

Scrapers: Blade-end: 1 specimen, Pl.5:a. A fragment of heavy blade, triangular in section, which has had several longitudinal flakes removed from its upper end.

Spall scraper: 2 specimens, as in Pl.5:b.

Turtleback: 1 specimen, Pl.5:c. This is a heavy plano-convex flake which averages about 2.1 cm. in thickness; both of its lateral edges have been steeply flaked.

Amorphous: 1 specimen.

Prismatic blades: 2 specimens, Pl.4:l,m, fall within the size range of specimens from the Baker Lake sites, although the general inventory of SL-5 does not otherwise suggest a relationship.

Blanks: 10 specimens are massive blanks, crudely flaked by percussion on one or both faces. No doubt they represent several types in an unfinished state. See, for example, Pl.5:d.

SL-6: (Pl.5:e–k) 50 specimens: 1 point, 26 knives, 3 scrapers, 7 blanks, 13 fragments and used flakes. All quartzite.

Point: 1 specimen is the tip fragment of a probable lanceolate type.
Knives: Side blade, asymmetric: 3 specimens, as in Pl.5:f. This is a broad, leaf-shaped type which might be mistaken for a large projectile point were it not for the fact that one lateral edge is distinctly duller than the other, which suggests side-hafting.

Side blade, willow-leaf: 2 specimens similar to the type described for SL-5.

Side blade, semilunar: 1 specimen, Pl.5:e. This is a long thin blade which, by projection, may have a length of 9.2 cm.

Semilunar, large: 6 specimens, as in Pl.5:i. These are all fragments which extend up to an estimated length of 14–15 cm.

Discoidal: 2 specimens, as in Pl.5:g. The type has a biconvex cross-section 9.2 mm. thick, and is slightly pointed.

Biface, round-based leaf shape: 12 specimens, mostly fragmentary, as in Pl.5:h. Similar to the type mentioned before for SL-2B and SL-4.
Scrapers: Turtleback: 1 specimen, Pl.5:k. The same type has already been noted for SL-5.

Amorphous: 2 specimens, as in Pl.5:j.
Blanks: One of the 7 specimens bears a marginal resemblance to the pick type in SL-2B and SL-2D.

SL-7: 1 specimen, a bifaced fragment of a round-based, leaf-shaped knife. Quartzite.

SL-8: (Pl.6:a,b) 10 specimens: 1 point, 2 knives, 1 scraper, 1 prismatic blade, 5 fragments and used flakes. All quartzite.
Point: Lanceolate: 1 specimen, Pl.6:a, as described for SL-2B and SL-5.
Knives: Biface, round-based, leaf shape: 2 specimens.
Scrapers: Spall scraper: 1 specimen, Pl.6:b. This is a true Tci-tho, a pebble or boulder spall that has been quickly converted into a side scraper by rough abrasion-chipping along one convex edge.
Prismatic blade: 1 specimen with a deep, triangular cross-section, but equating in general size and proportion with specimens already noted in BL-8, House 1, BL-17, and SL-5.
Fragments: 1 of 5 specimens may be a mid-blade portion of a heavy lance point.

SL-9: No stone artifacts collected.

AL-1: 2 specimens, both used quartzite flakes.

AL-2: 4 specimens: 1 knife, 3 used flakes. All quartzite.
Knife: Biface, round-based, leaf shape: 1 specimen that seems like a coarsely flaked blank.

AL-3: (Pl.6:c) 5 specimens: 1 knife, 1 scraper, 1 prismatic blade, 1 blank, 1 fragment. All quartzite.
Knife: Side blade, willow-leaf: 1 specimen, a fragment, is plano-convex in section and shows edge retouch on one face only.
Scraper: Thumbnail: 1 specimen averaging 2.3 cm. in diameter. This is a thin

chip of quartzite the edges of which appear to have been chipped through use. Not as positive as the type noted for several of the Baker Lake sites.
Prismatic blade: 1 specimen, Pl.6:c, is much larger and heavier than those occurring in the Baker Lake sites. It has a triangular cross-section 11.4 mm. thick, and although the blade has not been retouched or otherwise worked, the edges are dulled, possibly through use as a knife.

AL-4: (Pl.6:d–f) 6 specimens: 3 knives, 1 core, 2 flakes. All quartzite.
Knives: Biface, round-based, leaf shape: 2 specimens, as in Pl.6:e.
Discoidal: 1 specimen, Pl.6:d, is a smoothly flaked biface 9.7 mm. thick which, by projection, seems to be ovoid or discoidal.
Core: Tortoise or conical: 1 specimen, Pl.6:f.

AL-5: (Pl.6:g–k) 29 specimens: 1 point, 12 knives, 4 scrapers, 2 blanks, 1 core, 9 fragments and flakes. All quartzite.
Point: Corner-removed: 1 specimen, Pl.6:g. This fragment has a biconvex section and is 9 mm. thick. It differs from the contracted stem type of the Baker Lake sites in that this stem is considerably narrower in relation to the width of the blade and its sides are markedly concave.
Knives: Side blade, asymmetric leaf shape: 3 specimens, as in Pl.6:h.
Biface, round-based, leaf shape: 9 specimens, as in Pl.6:i, covering a wide range in size, although the one illustrated is the only whole example.
Scrapers: Discoidal: 2 specimens, as in Pl.6:j. These appear to be trim chips, like the type noted for BL-17, which have been retouched around the edges.
Blade-end scraper: 1 specimen, Pl.6:k, is a prismatic blade which shows signs of use or minor retouching across its upper end.
Core: Tortoise: 1 specimen with a maximum thickness of 5 cm.

AL-6: (Pl.7:a) 10 specimens: 5 knives, 2 blanks, 3 fragments. All quartzite.
Knives: Semilunar, large: 1 fragment, Pl.7:a.
Biface, round-based, leaf shape: 2 specimens.
Amorphous: 2 specimens.

AL-7: (Pl.7:b–o) In addition to a few modern specimens, 48 stone specimens were collected: 11 points, 12 knives, 14 scrapers, 2 prismatic blades, 6 blanks, 3 fragments. All quartzite.
Points: Corner-removed: 2 specimens, as in Pl.7:b. This type is similar to the one described for AL-5, but the sides of the stem are straighter. It is smoothly pressure-flaked on both faces, and the stem edges are lightly ground. The example shown projects to a length of about 7 cm.
Side-notched: 2 specimens, as in Pl.7:c.
Lanceolate, large: 7 specimens, all fragmentary, as in Pl.7:d,e. This is a well-executed type, bifacially prepared, with convex base and straight to slightly convex sides. It is impossible to estimate the length with accuracy because there is no indication of tip curvature in any of the specimens.
Knives: Biface, asymmetric: 9 specimens, as in Pl.7:k.
Biface, semilunar: 1 specimen, Pl.7:n. This is an unusually large fragment which projects to an approximate length of 27 cm.
Discoidal: 1 specimen, Pl.7:l. A relatively crude, unfinished example.

Amorphous: 1 specimen, Pl.7:m, is a Levalloisian-like flake with unifacial retouch on its lateral edges. It is classed as a knife because of the thinness of these edges.

Scrapers: End scrapers: 3 variant sub-types occur at this site.

a. concave stem: 3 specimens, as in Pl.7:f.
b. triangular, tapered stem: 3 specimens, as in Pl.7:g.
c. pear-shaped, convex stem: 2 specimens, as in Pl.7:h.

Amorphous: 6 specimens of side and end scrapers made on flakes of various sizes, as in Pl.7:i,j.

Prismatic blades: 2 specimens, as in Pl.7:o, are much larger than those described for the Baker Lake sites. The one shown is peculiar in that several step-flake scars are to be seen on its outer face. These are reminiscent of burin blows, but they may be accidental.

AL-8: No specimens recovered.

AL-9: (Pl.8:a–c) 27 specimens: 19 knives, 3 scrapers, 1 hammerstone, 3 cores, 1 used flake. All quartzite.

Knives: Biface, symmetric: 1 specimen, Pl.8:a.
Biface, semilunar: 3 specimens, as in Pl.8:b,c.
Fifteen other knife fragments belong to one or the other of the above types. All of these specimens are biconvex in section and rather roughly flaked by percussion. There is no sign of retouching.

Scrapers: Turtleback: 1 specimen.
Spall scraper: 1 specimen.
Amorphous: 1 specimen.

Hammerstone: 1 specimen, a heavy quartzite pebble with one end split away, shows abrasion at several points.

Cores: Tortoise: 1 specimen.
Two other examples are not distinctive.

BvL-1: (Pl.8:d–f) 11 specimens: 2 points, 3 knives, 3 blanks, 3 used flakes. All quartzite, except one of chert.

Points: Leaf-shaped: 1 specimen, Pl.8:d. A small point of chert, crudely chipped on both faces, possibly stemmed but not certainly, because of the jagged outline.

Corner-removed, tapered stem: 1 specimen, Pl.8:e. This is the basal fragment of a well-made specimen, pressure-flaked on both faces, 7.8 mm. thick. Length uncertain.

Knives: Biface, symmetric: 3 specimens, as in Pl.8:f. These are flaked over all surfaces with occasional finer retouch of the edges.

BvL-2: (Pl.8:g–k) 17 specimens: 1 point, 8 knives, 3 scrapers, 1 graver, 4 blanks. All quartzite, except one of red slate and one of chert.

Point: Lenticular: 1 specimen, unique in this collection, Pl.8:g. A ground slab of silicified red slate 7.3 mm. thick. There is some indication of chipping along portions of the edges, but they are quite blunt, and the specimen was apparently never completed.

Knives: Biface, round-based leaf shape: 4 specimens, as in Pl.8:j.

Biface, semilunar: 1 specimen.

Amorphous: 1 retouched Levalloisian-like flake, as in AL-7, and 2 unidentifiable fragments.

Scrapers: End scraper, triangular, tapered stem: 2 specimens, as in Pl.8:h. These are like the variant (b) in AL-7 (Pl.7:g). One has been eroded by wind-blown sand or water-rolling.

End scraper, offset: 1 specimen, unique in the collection, Pl.8:i. This is a fragment of chert blade with steep and delicate retouch across its angular end and around its tip.

Graver: 1 specimen, Pl.8:k. A fine-grained quartzite pebble fragment pointed by the removal of several longitudinal flakes at one end, with definite signs of use at the tip.

BvL-3: (Pl.9:a) 3 specimens: 3 knives. All quartzite.

Knives: Biface, ovoid: 2 specimens. Crudely flaked.

Side blade, asymmetric: 1 specimen, Pl.9:a. Roughly chipped surfaces, slightly pear-shaped, and 12.8 mm. thick, with noticeable wear along the straighter edge.

BvL-4: (Pl.9:b–i) 29 specimens: 7 points, 2 knives, 2 adze blades, 4 scrapers, 1 blank, 11 fragments and used flakes, 2 hammerstones. All quartzite.

Points: Corner-removed: 1 specimen, Pl.9:b. This duplicates the type in AL-7 and, by projection, is 7.5 cm. long.

Lanceolate, large: 6 specimens, as in Pl.9:c,d. These also have their counterpart in AL-7, although their lateral edges are perhaps slightly more convex.

Knives: Biface, symmetric: 2 specimens, as in Pl.9:f.

Adze blades: 2 specimens, as in Pl.9:e. These are like the type first noted in BL-8, House 1, although they vary slightly in their straighter sides and ends.

Scrapers: End scraper, triangular, tapered stem: 3 specimens, as in Pl.9:g.

Blade side scraper: 1 specimen, Pl.9:i. This is a prismatic blade which has been retouched on both sides near the bulbar end.

Hammerstones: 2 specimens, as in Pl.9:h.

BvL-5: (Pl.9:j) 2 specimens: 2 knives. Quartzite.

Knives: Amorphous: 1 specimen is a pebble spall, ovoid in shape, with one of its long edges bifacially retouched, Pl.9:j. One other specimen is a tip fragment of a bifaced knife of indeterminate type.

BvL-6: (Pl.9:k,l) 8 specimens: 5 knives, 3 fragments. All quartzite.

Knives: Biface, round-based leaf shape: 3 specimens, as in Pl.9:k,l. These are plano-convex in section although they are partially worked on both surfaces.

Uncertain type: 2 biface fragments.

BvL-7: (Pl.10:a,b) 8 specimens: 4 knives, 2 scrapers, 2 blanks. All quartzite.

Knives: Biface, uncertain shape: 1 specimen, Pl.10:a.

Amorphous: 3 specimens of flake knives, as in Pl.10:b, with one or more edges bifacially retouched.

Scrapers: Snub-nosed, unshaped: 2 specimens made on random flakes with steep retouch at one end.

BvL-8: (Pl.10:c–e) 3 specimens: 1 point, 2 knives. All quartzite.
Point: Corner-removed, tapered stem: 1 specimen, Pl.10:c. Much like the type described for BvL-1, although smaller.
Knives: Side blade, willow-leaf: 1 specimen, Pl.10:d, conforms well to the type described for SL-5, but it is made with greater excellence and smoothly pressure-flaked over both surfaces.

Biface, round-based leaf shape: 1 specimen, Pl.10:e. This is made on a flat flake with edge retouch on both faces; the base has been thinned and is slightly scarfed, as if for end-hafting.

BvL-9: (Pl.10:f–j) 15 specimens: 8 knives, 1 burin, 2 blanks, 1 core, 3 used flakes. All quartzite.
Knives: Slide blade, asymmetric: 3 specimens, as in Pl.10:g. The same type occurred in SL-6.

Biface, semilunar: 1 specimen, Pl.10:h, is the same type as noted in AL-9.

Stemmed knife: 1 specimen, Pl.10:i, may be the basal fragment of a type which seems to have a definitely contracted and narrowed end, as if for a stem.

Biface, uncertain type: 3 specimens.
Burin: 1 specimen, Pl.10:j. This appears to have been a corner-removed point similar to the type noted for AL-7 and BvL-4, but subsequently it has been altered by a broken tip and the removal of a burin spall from the upper left-hand corner. The resulting chisel tip is thick and heavy because there has been no further thinning of the blade, hence the primary purpose may have been to obtain a spall.
Core: 1 specimen, Pl.10:f, is a wedge-shaped core with a broad striking platform that has been shaped by the removal of several flakes from various edges. One face shows highly irregular blade scars, indicating some knowledge of blade-making technique, but no particular skill.

BvL-10: 1 specimen, a fragment of a quartzite blank or a crudely flaked knife.

BvL-11: 3 specimens: 1 point, 2 knives. All quartzite.
Point: Lanceolate, large: 1 specimen, although fragmentary, appears to be the same as the type noted for BvL-4 and AL-7.
Knives: Biface, uncertain type: 2 specimens.

BvL-12: (Pl.11:a–j) 49 specimens: 37 knives, 2 scrapers, 5 blanks, 5 fragments and used flakes.
Knives: Side blade, asymmetric: 9 specimens, as in Pl.11:a–c. Much like a number of specimens from SL-6 and BvL-9, although varying in size and slightly in proportion.

Biface, semilunar: 9 specimens, all fragmentary, which resemble the type noted for SL-6, AL-9, and BvL-9.

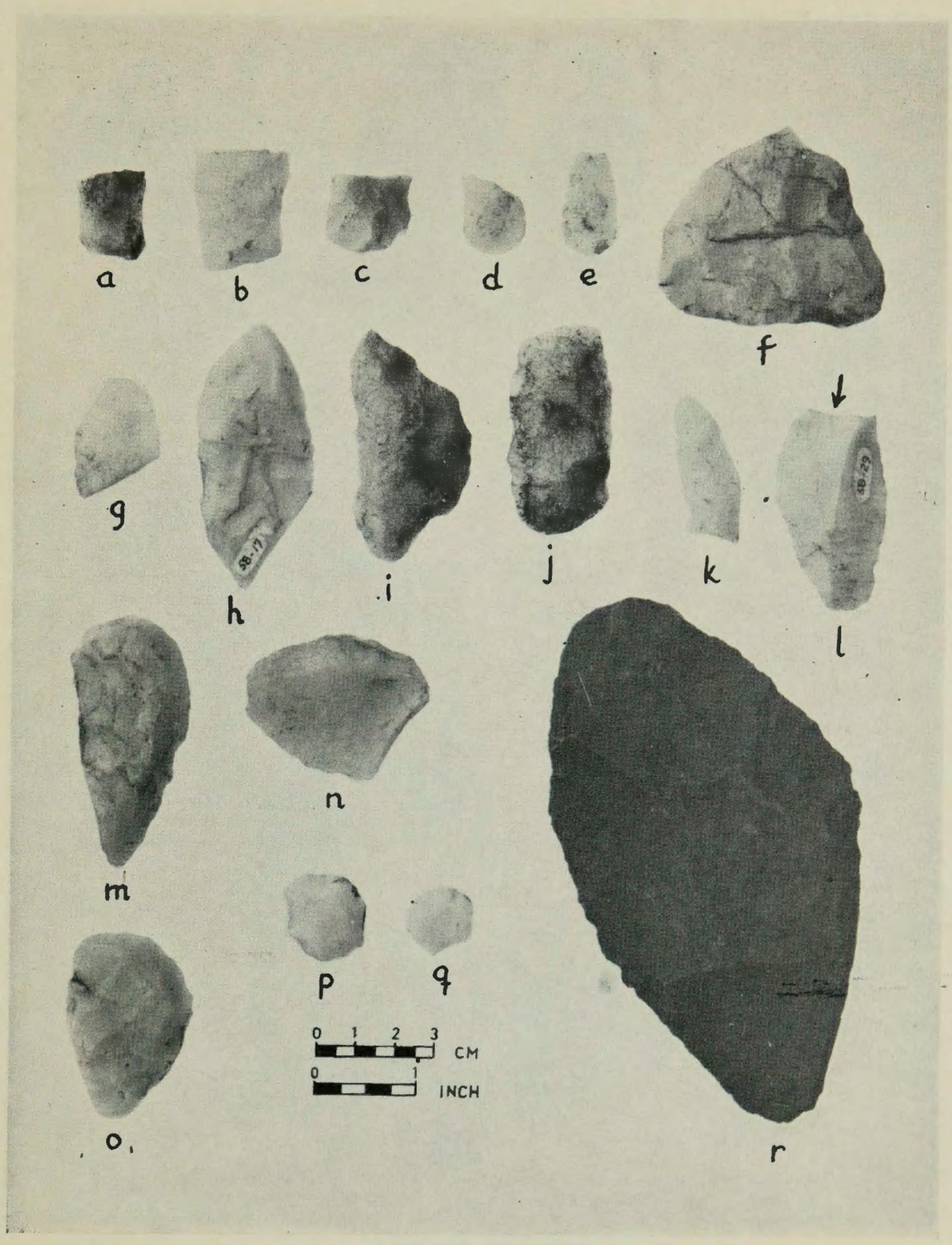


Plate 1. Artifacts.

a–c	Contracted stem points (p. 27)	BL-8, House 1
d,e	Small isosceles points (p. 27)	" "
f	Semilunar bifaced knife (p. 27)	" "
g,h	Double-pointed side blades (p. 27)	" "
i	Winged semilunar knife (p. 27)	" "
j	Adze blade (p. 27)	" "
k	Crooked end-knife (p. 27)	" "
l	Graver (p. 27)	" "
m,n	Amorphous scrapers (p. 28)	" "
o	Pear-shaped side blade (p. 28)	BL-11
p,q	Thumbnail scrapers (p. 28)	BL-12
r	Slate knife (ulu) (p. 28)	BL-8, Ring 5

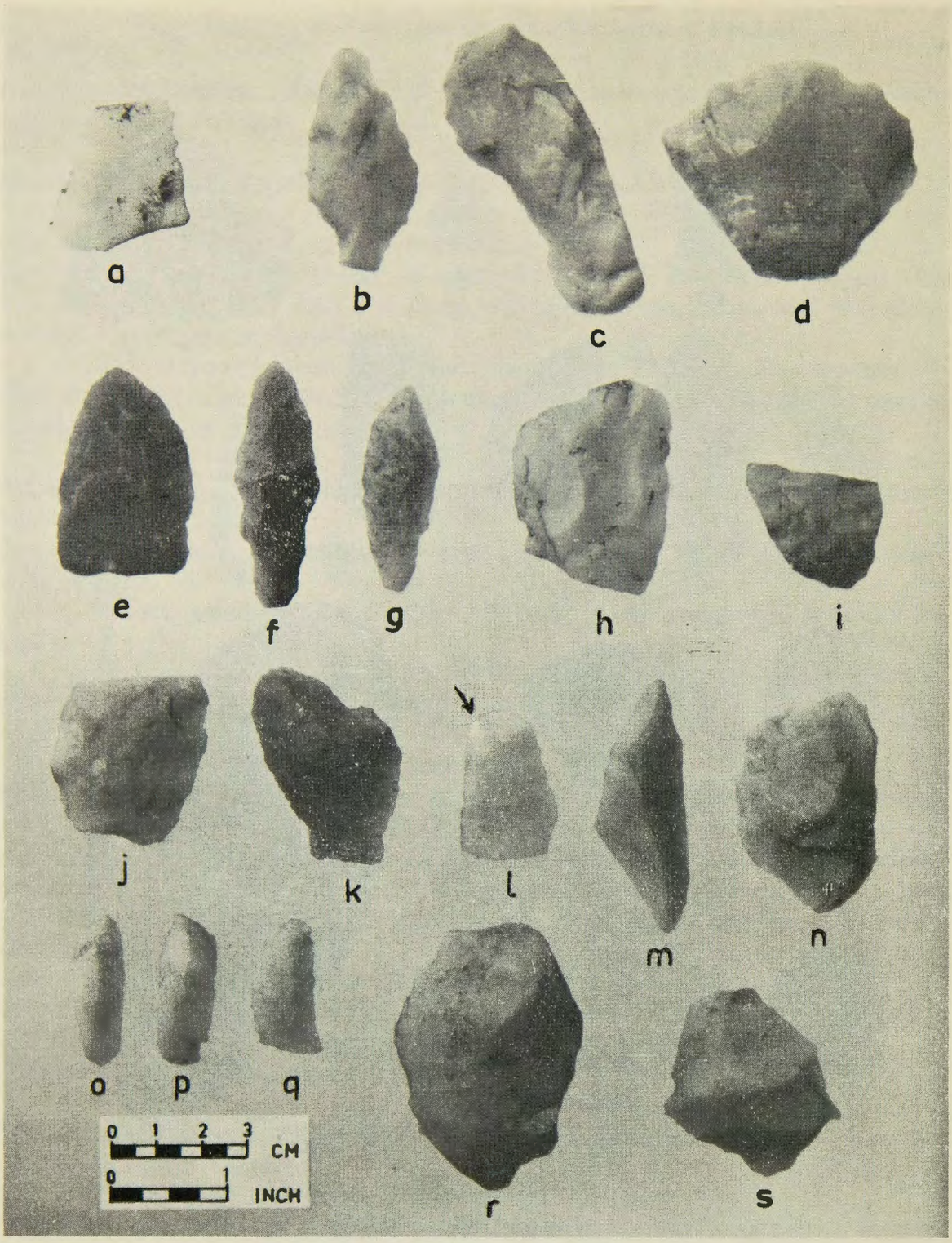


Plate 2. Artifacts.

a	Triangular point (p. 28)	BL-13
b	Lenticular point (p. 29)	BL-14
c	Concavo-convex scraper (p. 29)	"
d	Amorphous scraper (p. 29)	"
e,i	Asymmetric side blades (p. 29)	BL-16, House 1
f,g	Lenticular points (p. 29)	" "
h	Amorphous scraper (p. 29)	" "
j	Asymmetric side blade (p. 29)	BL-17
k	Offset end scraper (p. 30)	"
l	Graver, quasi-burin (p. 30)	"
m	Amorphous graver (p. 30)	"
n,s	Trim chips (p. 30)	"
o–q	Prismatic blades (p. 30)	"
r	Fluted core (p. 30)	"

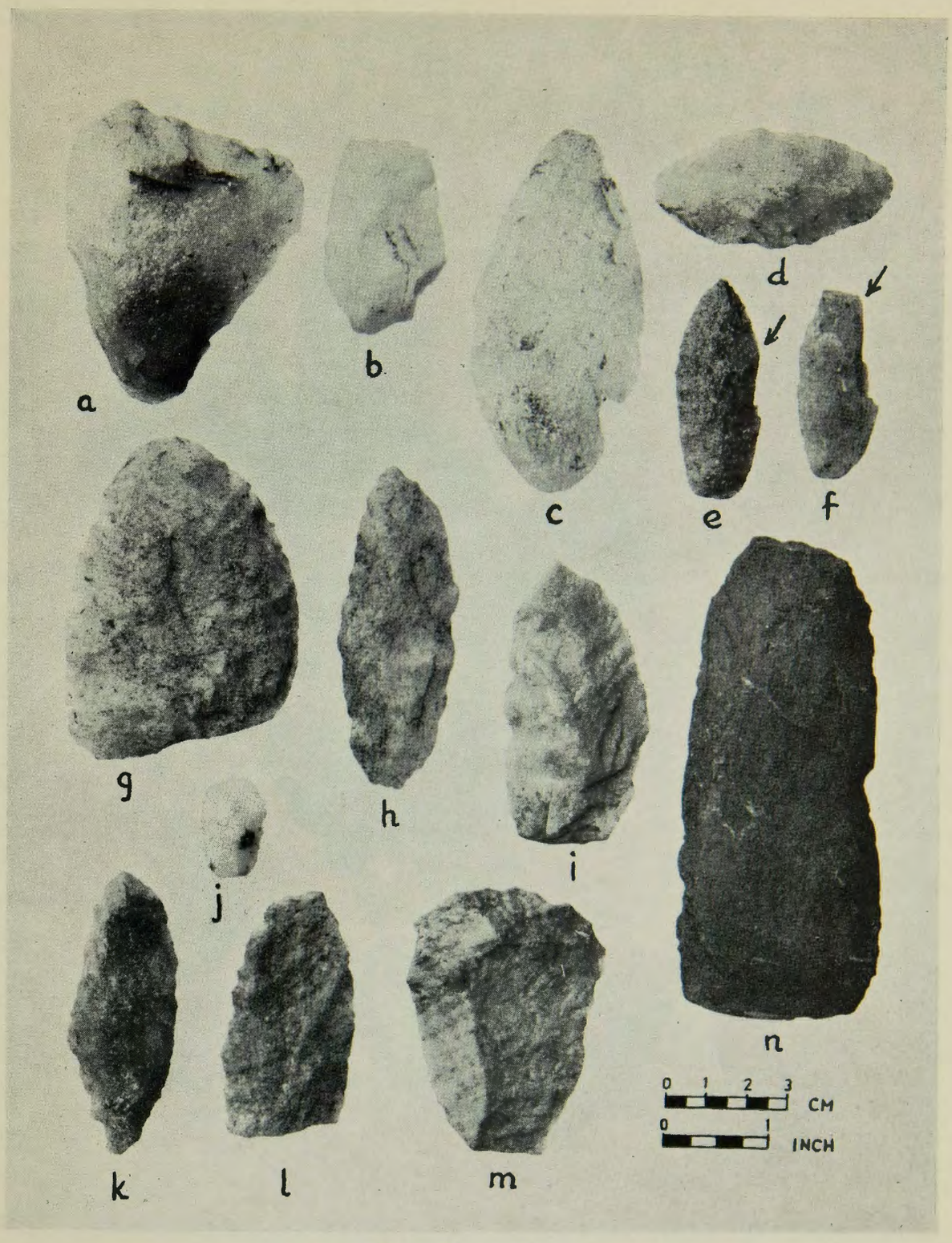


Plate 3. Artifacts.

a	Triangular scraper (p. 30)	SL-2A
b	Combination knife-scraper (p. 31)	"
c	Round-based knife (p. 31)	SL-2B
d	Willow-leaf side blade (p. 31)	"
e	Lanceolate point (p. 31)	"
f	Burin (p. 31)	"
g	Biface, thin, broad (p. 32)	SL-2C
h,i	Asymmetric side blades (p. 32)	"
j	Rectanguloid side blade (p. 32)	"
k–m	Scrapers (p. 32)	"
n	Adze (p. 32)	"

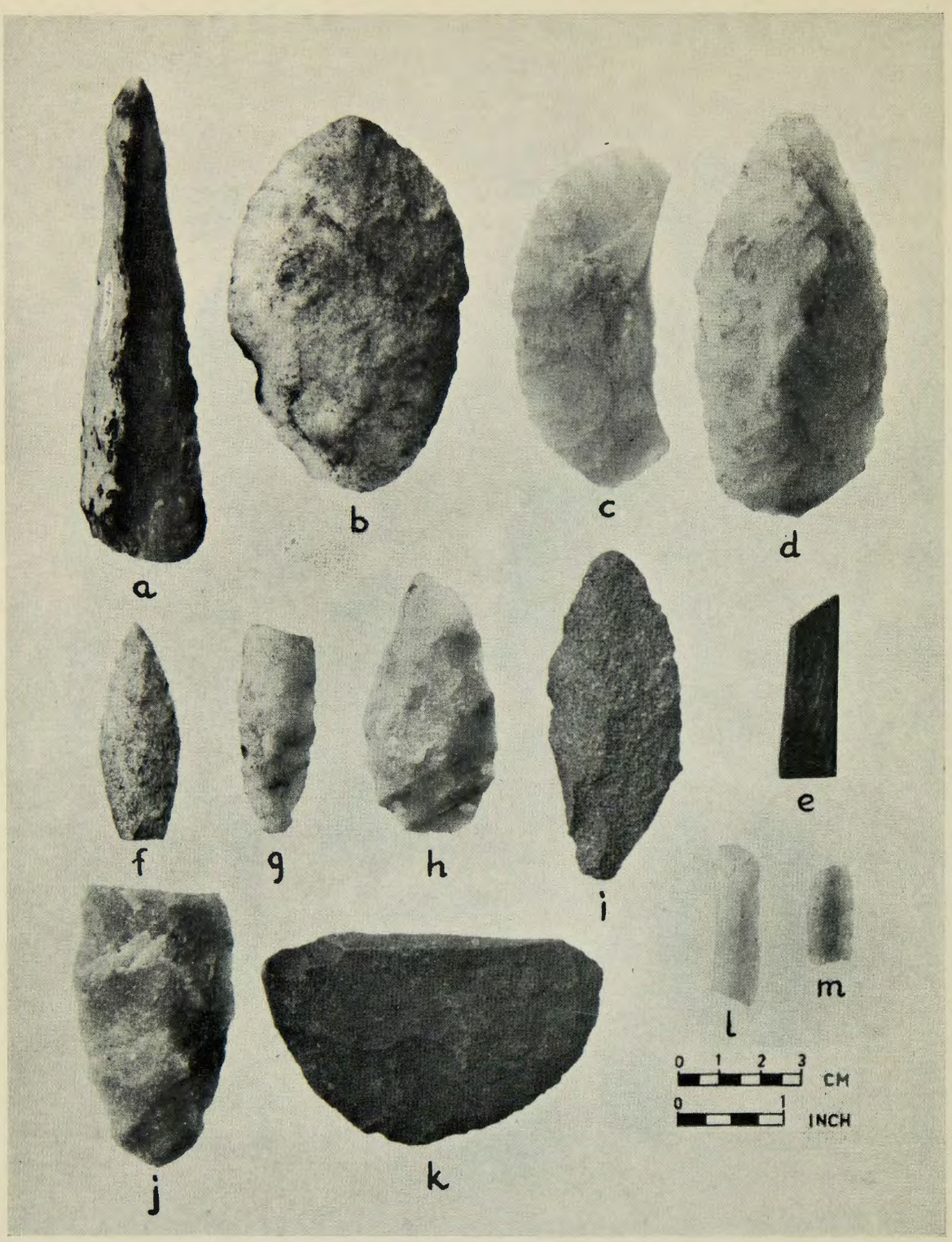


Plate 4. Artifacts.

a	Pick (p. 32)	SL-2D
b	Symmetric bifaced knife (p. 32)	SL-3
c	Symmetric bifaced knife (p. 33)	SL-4
d	Round-based knife (p. 33)	"
e	Hone (p. 33)	"
f	Lanceolate point (p. 33)	SL-5
g	Willow-leaf side blade (p. 33)	"
h–j	Round-based knives (p. 33)	"
k	Semilunar bifaced knife (p. 33)	"
l,m	Prismatic blades (p. 33)	"

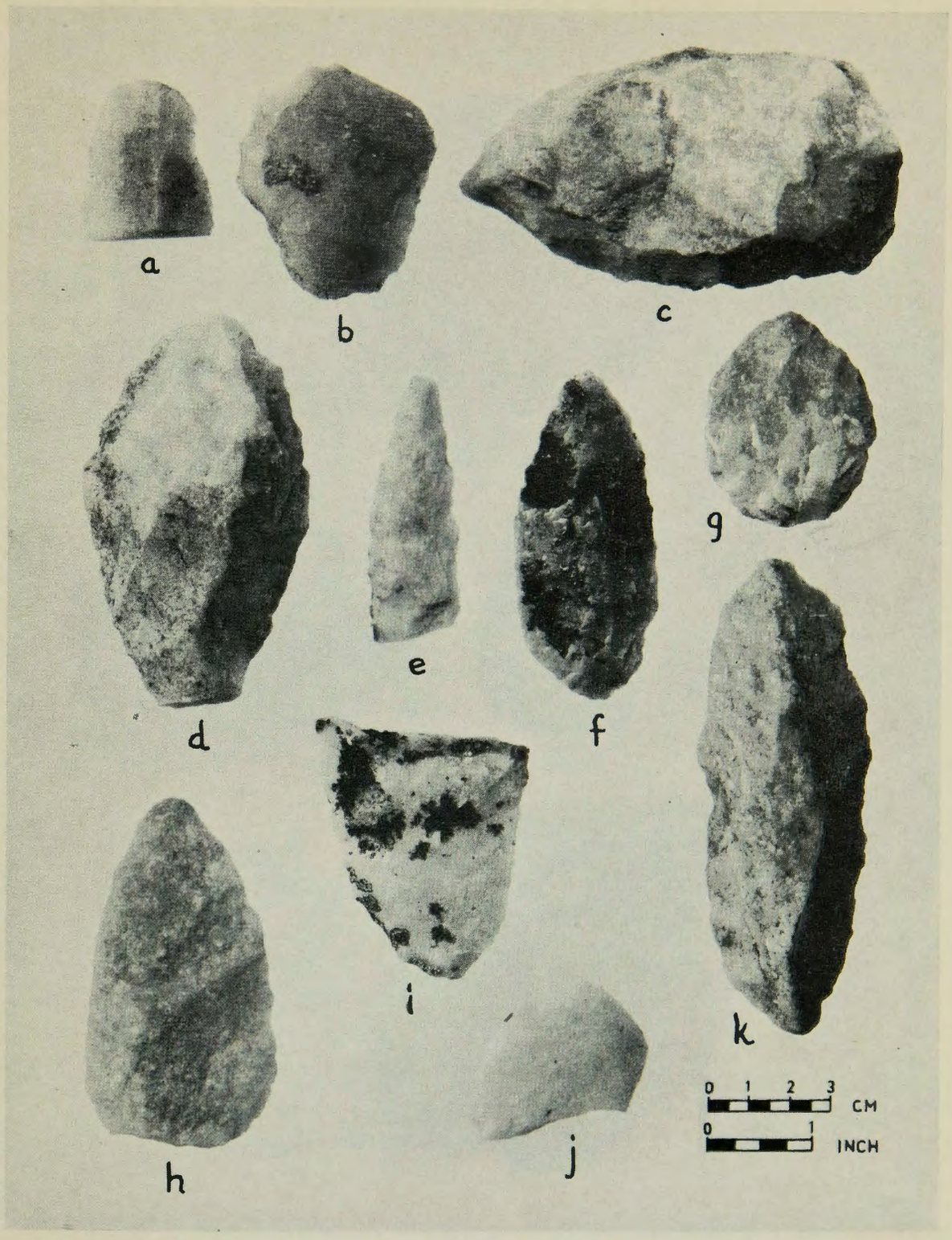


Plate 5. Artifacts.

a	Blade-end scraper (p. 33)	SL-5
b	Spall scraper (p. 33)	"
c	Turtleback scraper (p. 33)	"
d	Unfinished blank (p. 33)	"
e	Semilunar side blade (p. 34)	SL-6
f	Asymmetric side blade (p. 34)	"
g	Discoidal knife (p. 34)	"
h	Round-based knife (p. 34)	"
i	Large semilunar knife (p. 34)	"
j	Amorphous scraper (p. 34)	"
k	Turtleback scraper (p. 34)	"

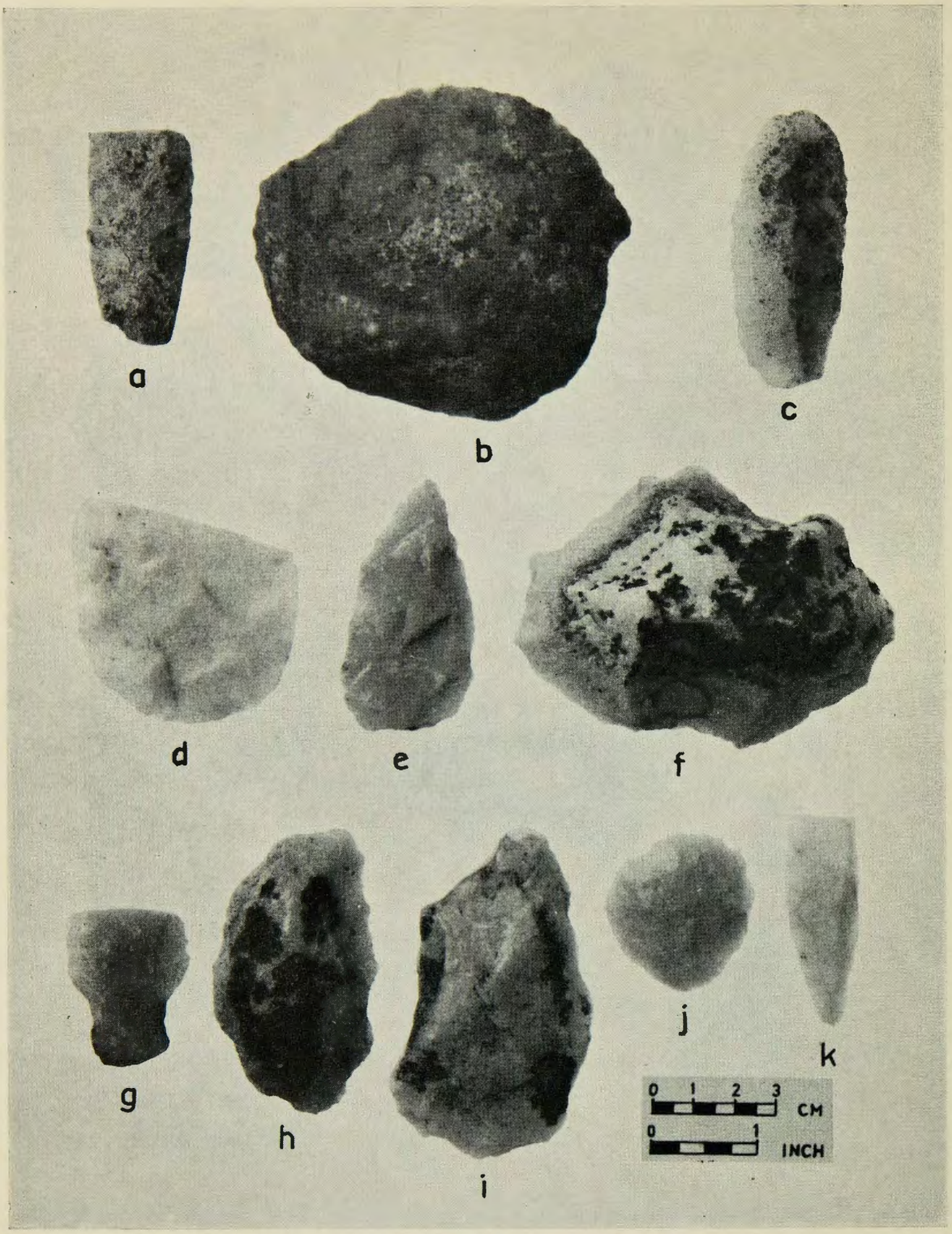


Plate 6. Artifacts.

a	Lanceolate point (p. 34)	SL-8
b	Spall scraper (p. 34)	"
c	Prismatic blade (p. 35)	AL-3
d	Discoidal knife (p. 35)	AL-4
e	Round-based bifaced knife (p. 35)	"
f	Tortoise core (p. 35)	"
g	Corner-removed point (p. 35)	AL-5
h	Asymmetric side blade (p. 35)	"
i	Round-based knife (p. 35)	"
j	Discoidal scraper (p. 35)	"
k	Blade-end scraper (p. 35)	"

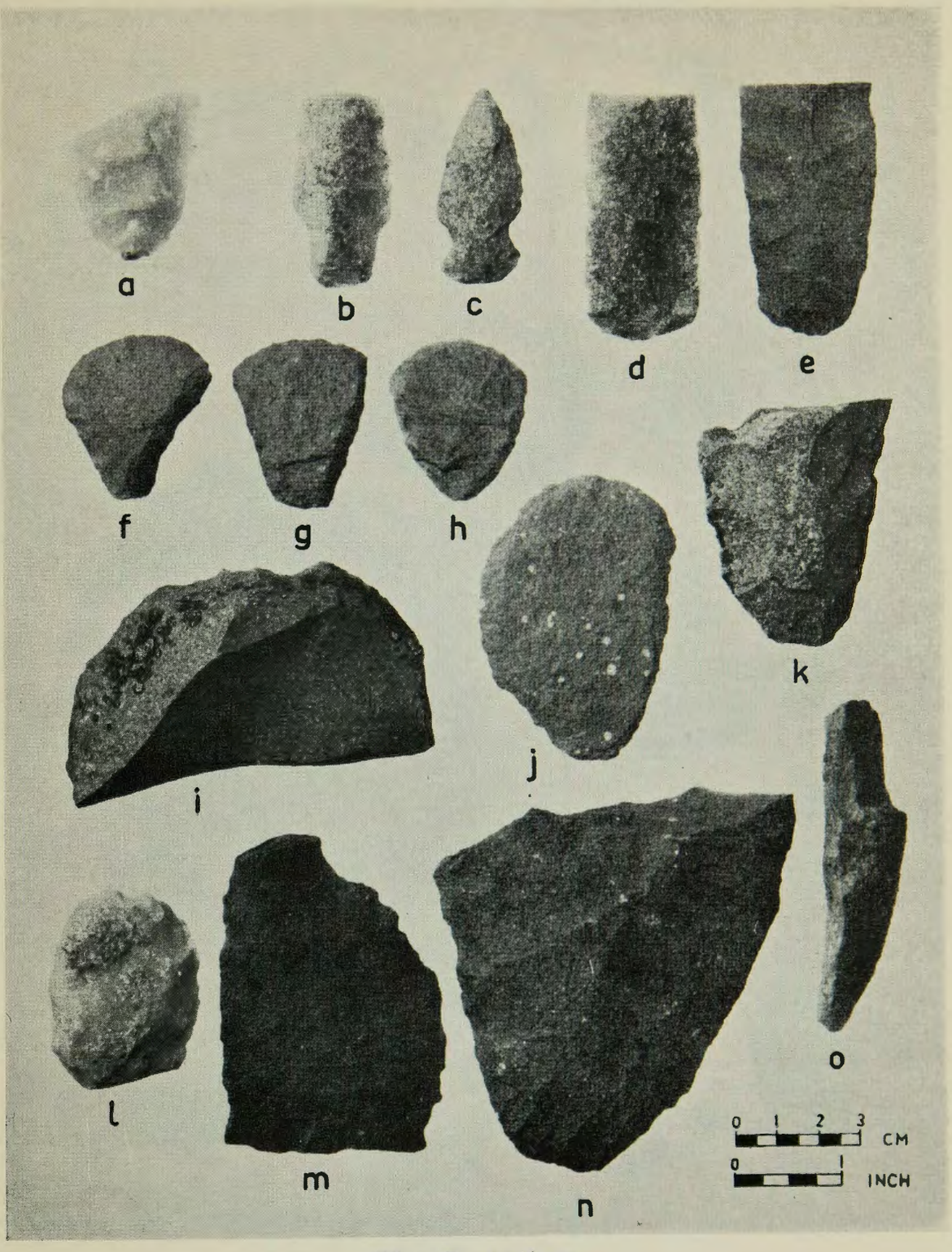


Plate 7. Artifacts.

a	Large semilunar knife (p. 35)	AL-6
b	Corner-removed point (p. 35)	AL-7
c	Side-notched point (p. 35)	"
d,e	Large lanceolate points (p. 35)	"
f	End scraper, concave stem (p. 36)	"
g	End scraper, tapered stem (p 36)	"
h	End scraper, convex stem (p. 36)	"
i,j	Amorphous scrapers (p. 36)	"
k	Asymmetric bifaced knife (p. 35)	"
l	Discoidal knife (p. 35)	"
m	Amorphous flake knife (p. 36)	"
n	Large semilunar bifaced knife (p. 35)	"
o	Prismatic blade (p. 36)	"

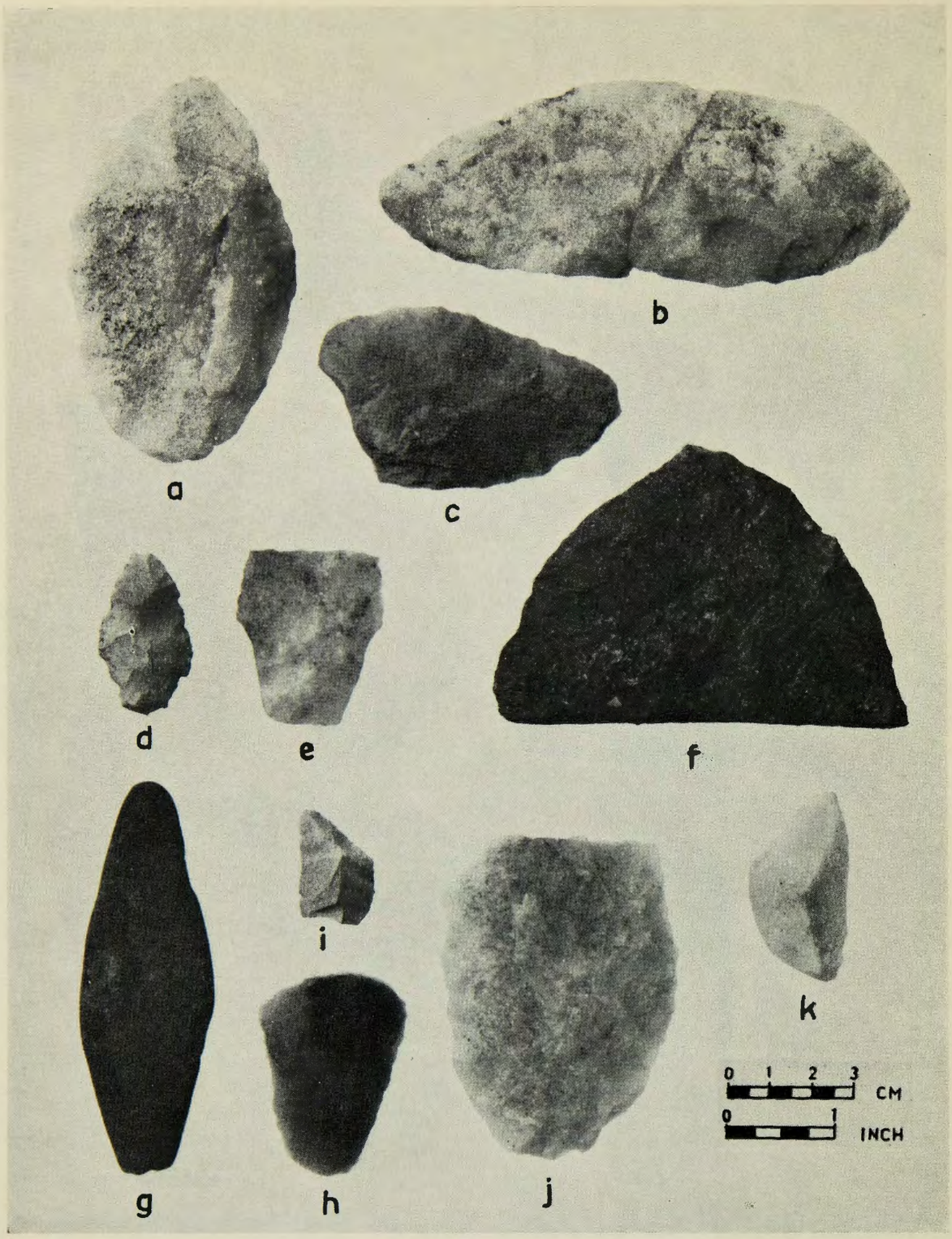


Plate 8. Artifacts.

a	Symmetric bifaced knife (p. 36)	AL-9
b,c	Semilunar bifaced knives (p. 36)	"
d	Leaf-shaped point (p. 36)	BvL-1
e	Tapered-stem point (p. 36)	"
f	Symmetric bifaced knife (p. 36)	"
g	Lenticular point (p. 36)	BvL-2
h	End scraper, tapered stem (p. 37)	"
i	Offset end scraper (p. 37)	"
j	Round-based bifaced knife (p. 37)	"
k	Graver (p. 37)	"

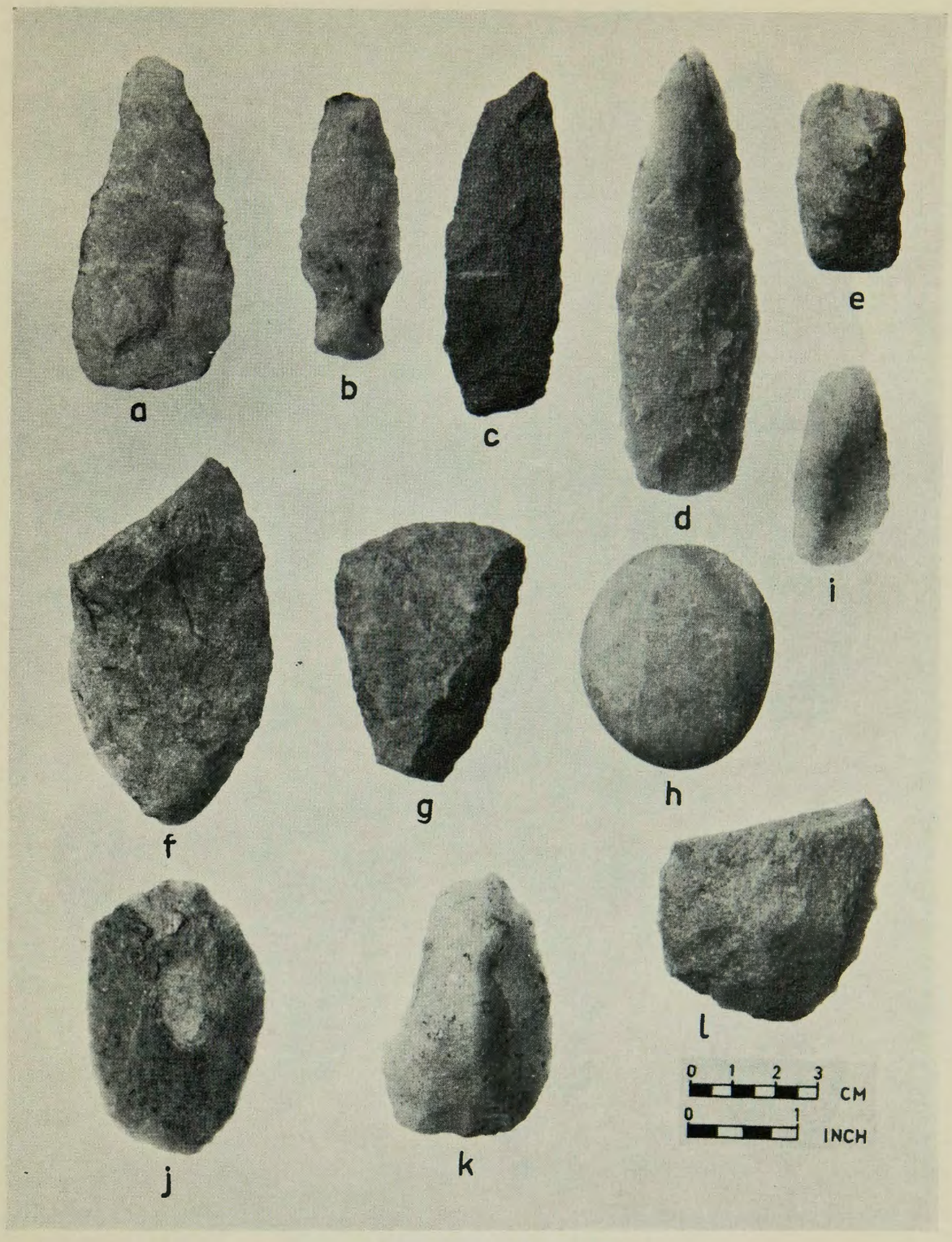


Plate 9. Artifacts.

a	Asymmetric side blade (p. 37)	BvL-3
b	Corner-removed point (p. 37)	BvL-4
c,d	Large lanceolate points (p. 37)	"
e	Adze blade (p. 37)	"
f	Symmetric bifaced knife (p. 37)	"
g	End scraper, tapered stem (p. 37)	"
h	Hammerstone (p. 37)	"
i	Blade side scraper (p. 37)	"
j	Amorphous knife (p. 37)	BvL-5
k,l	Round-based bifaced knives (p. 37)	BvL-6

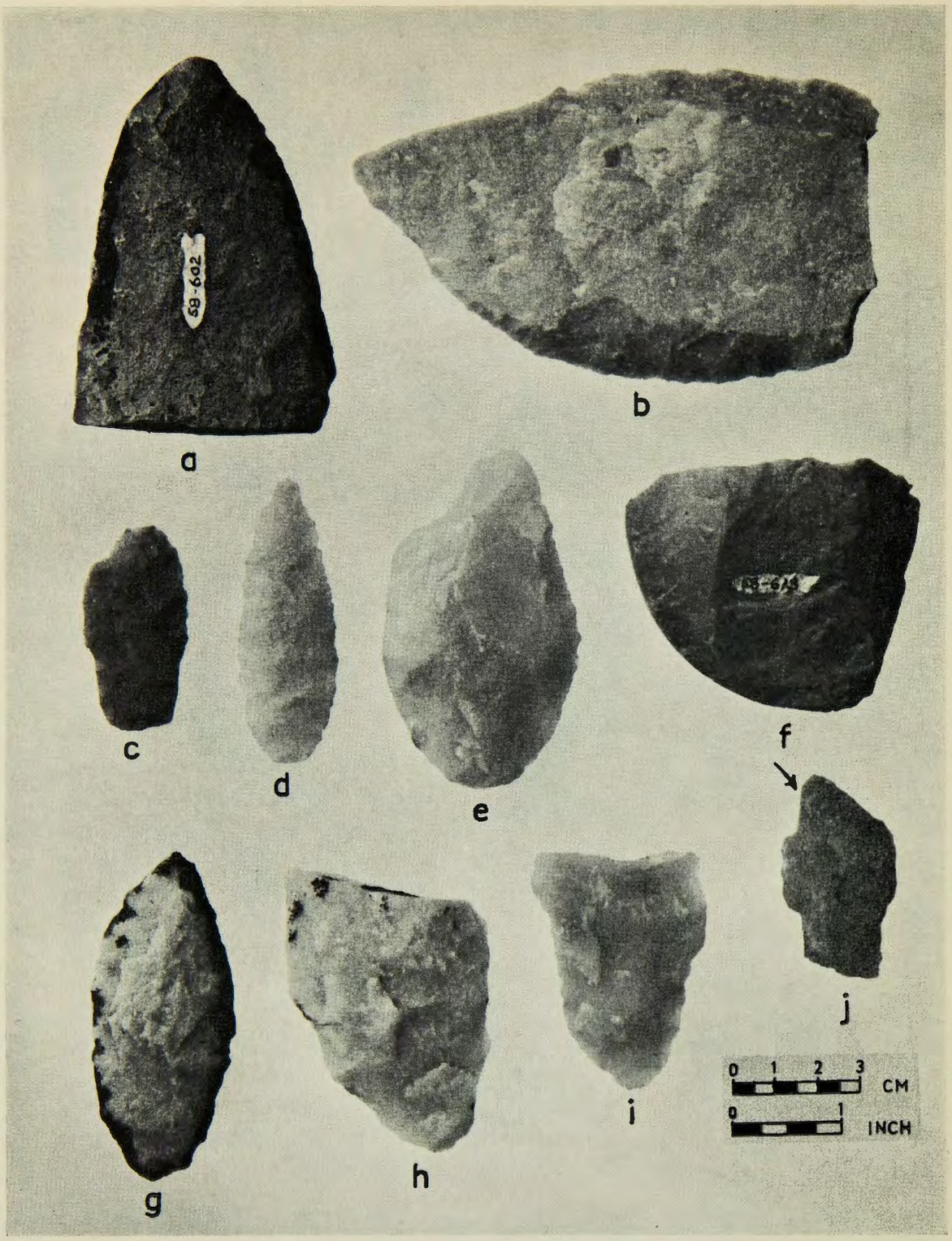


Plate 10. Artifacts.

a	Bifaced knife (p. 37)	BvL-7
b	Amorphous flake knife (p. 37)	"
c	Tapered-stem point (p. 38)	BvL-8
d	Willow-leaf side blade (p. 38)	"
e	Round-based bifaced knife (p. 38)	"
f	Wedge-shaped core (p. 38)	BvL-9
g	Asymmetric side blade (p. 38)	"
h	Semilunar bifaced knife (p. 38)	"
i	Stemmed bifaced knife (p. 38)	"
j	Burin (p. 38)	"

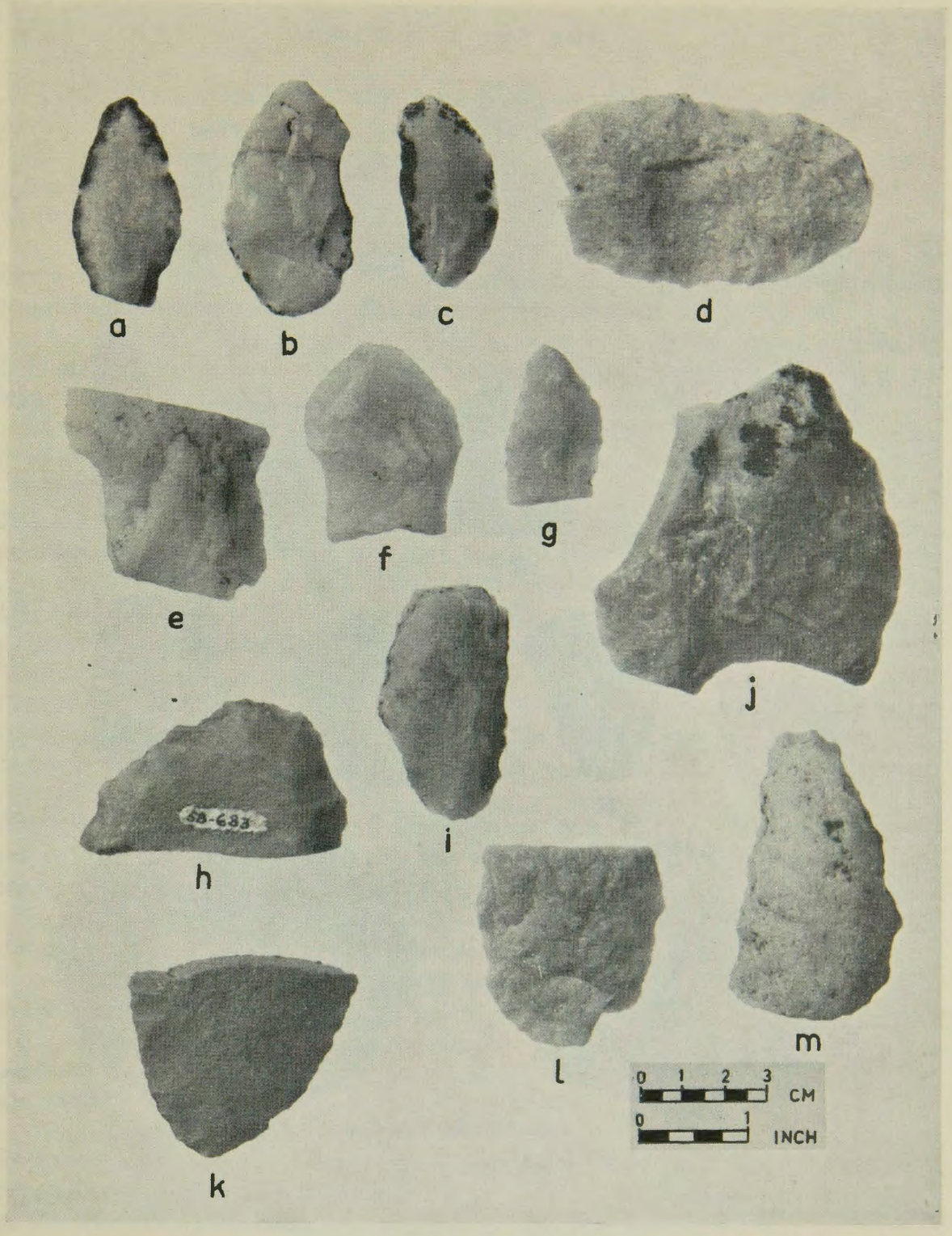


Plate 11. Artifacts.

a–c	Asymmetric side blades (p. 38)	BvL-12
d	Round-based bifaced knife (p. 39)	"
e	Stemmed knife (p. 39)	"
f	Spade-tip knife (p. 39)	"
g	Offset knife (p. 39)	"
h,i	Amorphous scrapers (p. 39)	"
j	Unidentifiable fragment (p. 39)	"
k	Bifaced knife (p. 39)	BvL-13
l	Round-based bifaced knife (p. 40)	GL (upper)
m	Amorphous scraper (p. 40)	" "

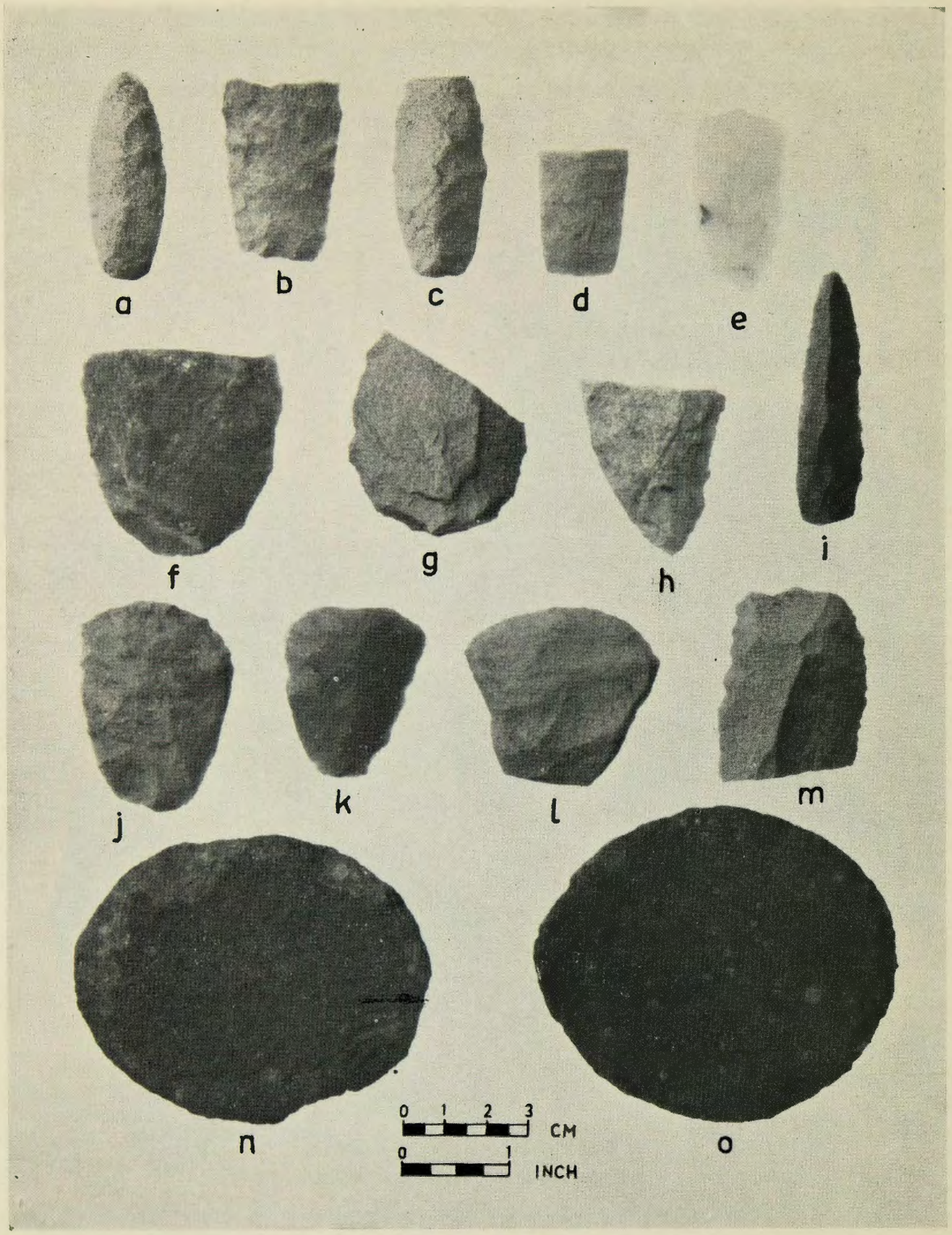


Plate 12. Artifacts.

a–d	Lanceolate points (p. 39)	GL (lower)
e	Willow-leaf side blade (p. 39)	” ”
f,g	Round-based bifaced knives (p. 39)	” ”
h	Semilunar bifaced knife (p. 39)	” ”
i	Prismatic blade (p. 39)	” ”
j–l	End scrapers, tapered stem (p. 39)	” ”
m	Blade side scraper (p. 39)	” ”
n,o	Spall scrapers (p. 39)	” ”

Biface, round-based leaf shape: 7 specimens of the rather common but highly variable type, as in Pl.11:d.

Stemmed knife: 1 specimen, Pl.11:e, is intentionally contracted to form a straight stem. It compares in size with the type in BvL-9, but not exactly in shape.

Spade-tip knife: 1 specimen, Pl.11:f, is unique in the collection. It has a somewhat heart-shaped head, the outer edges of which are bifacially retouched, but there is no sign of chipping on the neck.

Offset knife: 1 specimen, Pl.11:g, appears to be an angled end-knife. It is uncommon in having a greater thickness toward the tip. The stem is 6.4 mm. thick, but toward the tip it is 10.1 mm.

Unidentifiable fragments: 9 specimens, as in Pl.11:j.

Scrapers: Amorphous: 2 specimens; Pl.11:h,i.

BvL-13: (Pl.11:k) 1 specimen, Pl.11:k. This is a tip fragment of a carefully pressure-flaked bifaced knife, 8.5 mm. thick.

GL (lower): (Pl.12:a–o) 36 specimens: 13 points, 9 knives, 10 scrapers, 1 prismatic blade, 3 used flakes. All quartzite. (32 additional specimens in the Moffatt Collection.)

Points: Lanceolate: 13 specimens, as in Pl.12:a,b,c,d, all represent the same type described for SL-2B, SL-5, and SL-8. In addition, the Moffatt Collection contains 14 more specimens. (See Harp, 1959a, pp. 417–19, for a detailed description).

Knives: Side blade, willow-leaf: 2 specimens, as in Pl.12:e. This again is the same type noted for SL-5 and BvL-8. One edge is noticeably more dull than the other, which indicates that this type is indeed a side blade and not a point.

Biface, round-based: 4 specimens, as in Pl.12:f,g. These are similar to the common type found in a number of my sites, but all are fragmentary and it is thus impossible to identify them exactly. There is nothing comparable in the Moffatt Collection.

Biface, semilunar: 1 specimen, Pl.12:h, is a tip fragment with proportions that suggest this type, as noted for AL-9. Nothing comparable in the Moffatt Collection.

Unidentifiable knife types: 2 specimens.

Scrapers: End scraper, triangular: 3 specimens, Pl.12:j,k,l. In general, this type is very similar to variant b in AL-7. There are 3 additional specimens in the Moffatt Collection.

Blade side scraper: 1 specimen, Pl.12:m. No counterpart in the Moffatt Collection.

Spall scraper: 6 specimens, as in Pl.12:n,o. These are classic examples of the Tci-tho. Nothing comparable in the Moffatt Collection.

Prismatic blade: 1 specimen, Pl.12:i, is a blade with a triangular cross-section that has an exact counterpart in the Moffatt Collection. The latter, however, was originally described as a narrow type of point made on a prismatic blade (cf. Harp, 1959a, p. 419 and Fig. 3m). It had been carefully retouched over two of its three surfaces, whereas the specimen noted here shows no sign of such retouch. This specimen could possibly be interpreted as a drill point.

N.B. The following types occur in the Moffatt Collection and are thus a part of the inventory of this site, although they are not duplicated in my own collection (see Harp, 1959a, for descriptions).

Point, tapered stem: cf. BvL-1, BvL-8; Harp, 1959a, Fig. 3k.

Burins: cf. SL-2B and BvL-9.

Flake knife: Similar to the amorphous type noted for AL-7, BvL-2, and BvL-7.

Hone.

Prismatic blades.

GL (upper): (Pl.11:l,m) 8 specimens: 3 knives, 1 scraper, 2 blanks, 2 used flakes. All quartzite. (14 additional specimens in the Moffatt Collection.)
Knives: Biface, round-based leaf shape: 1 specimen, Pl.11:l. Also represented in the Moffatt Collection.

Side blades, asymmetric: 2 probable, fragmentary specimens; also probably in the Moffatt Collection.
Scraper: Amorphous: 1 specimen, Pl.11:m. This is an elongate pebble spall with crude percussion retouch along its edges. There are no scrapers in the Moffatt Collection.

N.B. In addition to the above, the Moffatt Collection includes one more probable type:

Point, corner-notched: cf. Harp, 1959a, Fig. 3y.

IV. Internal Correlations

The sites that I have just considered may be divided into two crude categories: habitation areas that were occupied for some period of time by a family or perhaps a small band of hunters, and lookout-workshop sites that had a more temporary nature. A third possible grouping might consist of several so-called "kill" sites, but in terms of artifact content these do not differ significantly from the lookout-workshop variety and hence can be included in that category. A few sites in both classes may have been used repeatedly, although there is no clear-cut evidence of this. It is not always simple to make a positive distinction between the two classes because some of the sites possessed the characteristics, and perhaps functions of both. However, approximately half of the total number discovered can be attributed to more or less lengthy occupation.

The occupation sites were most readily identified by the presence of tent rings or other dwelling remains. No essential pattern was discernible in their general distribution, other than constant association with a caribou crossing, and there was no noticeable regularity in their orientation or exposure. A few were situated directly at crossings, apparently in the path of approaching herds, while others were discovered at lateral distances up to several miles from a crossing. Such variation in location, with respect to present-day crossings, may be an indication that the fording places have shifted from time to time throughout the period of human occupation. The dwelling areas were also generally characterized by a relatively large inventory of implement types, including cutting and piercing tools, as well as scrapers, whereas they did not often contain heavy concentrations of scrap chips. The lack of middens serves

Site elev. above lake in ft.	*Baker L.*	*Schultz L.*	*Aberdeen L.*	*Beverly L.*	*Grant L.*
350				9	
300	*12*	5,6,7	1,3	8,10	(upper)
250	*11*	2 A,*B*,C,D			
200	*C.H.*	3		11	
150	*8,R 11* *8,H 1*		4,8		
100	13	*4,9*		12	
50	15,*17*	*1*,8			
40			*6,7*	*2,4*,13 *1,3,5*	
30					
20	*14,16*		*5,9*	6,7	
10	18				
0			*2*		(*lower*)
Approx. elev. of lake above s.l. in ft.	± 30	± 220	± 230	± 240	± 600

Fig. 11. Comparative site elevations. Italics indicate an occupation site; all other sites are lookout-workshops.

to point up the low numerical level of the population and its nomadic subsistence patterns.

The lookout-workshop sites, on the other hand, were all situated on high vantage points that commanded a splendid view of the country for miles around, particularly the approaches to water-crossings. Frequently they were on top of eskers or drumlins, and tent rings were seldom noted in their near vicinity. Presumably the chief function carried out at these stations was game-watching, although we would probably not have discovered them had it not been for the residue of their secondary function as workshops. Judging from the tremendous quantities of quartzite chips and artifacts littering the surface of some of them, the hunters put long hours of watching and waiting to good use. Such sites as these always contained a preponderance of scrap material and relatively few types of tools, most of which were in blank or semi-completed form. I do not believe that the sites were selected with any special regard for sources of raw material, because glacial till furnishes a plentiful supply of quartzite pebbles and boulders. The several specimens of chert and silicified slate were obviously imported from districts outside of this country.

In Fig. 11 the various site elevations are tabulated with reference to local lake levels. I have not been able to discern any consistent pattern between the

distribution of the sites and raised beach-lines because relatively old and young materials were found at both high and low elevations. However, several distinct groupings of site elevations do exist. The Baker Lake series, for example, is closest of all to sea level and forms a separate association which cannot readily be correlated in physiographic terms with the inland sites. The Schultz, Aberdeen, and Beverly lake sites constitute another such grouping, for they are stretched along the middle Thelon River in the interior plateau country where the lake levels now stand about 220–40 feet above sea level. As for Grant Lake and its two sites, they must be considered a third group. Grant Lake is approximately 600 feet above sea level, and because it lies almost 100 miles south of the middle Thelon lakes there is no immediate possibility of correlating postglacial physiographic phenomena in the two districts. Therefore, beyond these broad generalizations, the data on site elevations do not permit any primary deductions concerning the culture history of the area.

As for the archaeological collections obtained in these sites, the strong predominance of chipped stone artifacts may at first seem strange, for we can be quite certain that such a residue is only a minor fraction of the total culture that once existed at a given site. There must also have been artifacts of wood, bone, antler, skins, furs, and perhaps earthenware and soapstone, but except in the most recent sites, only a decade or so old, there was no trace whatsoever of such materials. Under the circumstances, we may conclude that earthenware and soapstone were not used in these nomadic cultures, and that organic materials have disintegrated. Although decomposition and physical weathering progress slowly in this country where temperatures and precipitation are consistently low, these processes are occasionally speeded up by small mammals who gnaw on bone and antler. Furthermore, discarded cultural debris remains unprotected on the naked sand and gravel surfaces, and there have been no large house structures to collapse with the passage of time and bury it.

These same facts may also account for the complete absence of charcoal in the sites, but fuel itself has no doubt always been scarce in the area, at least during the period encompassed by this study. I never observed driftwood on any of the old, high beach-lines in the district, and I judge that its appearance on the contemporary beaches of Beverly Lake is a quite recent phenomenon. Thus, I see little likelihood that large-sized wood was ever burned in the sites that we investigated. If, on the other hand, the chief fuels of the Caribou Eskimos, *Cassiope tetragona* and *Betula nana* (cf. Birket-Smith, 1929, Pt. 1, p. 88), were used by even earlier hunters in the area, I suspect that the charcoal and ash were in part dispersed by wind action.

Turning now to the cultural inter-relationships of the various sites, I think it will be useful to set up a series of hypotheses for the purpose of directing the analysis.

Proposition 1: The archaeology of the lower and middle Thelon country stems from not one, but several cultural phases.

It is unreasonable to suppose that the 46 sites described above represent as many discrete cultural phases, and it is unlikely that they are all components of a single phase. Hence, the first task of analysis is to determine, if possible, the significant inter-relationships among them. At first I attempted to do this

	BL-8 H 1	*BL-16 H 1*	*BL-17*	*BL-14*
Point, contracted stem	x	x		
Point, small isosceles	x			
End-knife, crooked	x			
Adze blade, chipped	x			
Knife, winged semilunar	x			
Point, lenticular		x		x
Scraper, concavo-convex				x
Graver	x		x	
Side blade, asymmetric	x	x	x	
Biface, semilunar	x			
Biface, round-based			x	
Scraper, offset end			x	
Scraper, thumbnail	x	x		
Prismatic blade, small	x	x	x	x
Scraper, amorphous	x	x	x	x
Core, fluted			x	
Core, tortoise		x	x	x
Hammerstone				x
Trim chips			x	
Total specimens	50	21	47	15
Site category	Oc	Oc	Oc	?
Dwelling remains	Rec	Rec	Rec	–
Local elevation (feet)	144	23	50	23

Fig. 12. Complex A (based on BL-8, House 1). In Figs. 12, 13, 14, and 15 the following abbreviations are used: Oc for Occupation; LW for Lookout-workshop; Rec for Rectangular; and Ro for Round.

with statistical methods (cf. Kroeber, 1940), but the results were utterly confusing due to the quantitative unevenness of the data from the various sites. Thus, I have retreated to somewhat less objective methods of comparison.

As primary criteria I have selected a few highly stylized types of implements, and the incidence of these has been linked with such other factors as techniques of workmanship, site characteristics, and the possible importance of differentials in site elevations above contemporary beach-lines. Also, one must include here the indefinable "feel" that the archaeologist develops after long study of his materials. It should be emphasized that I have labelled these potential clusters as "complexes" in order to avoid any connotation of relative dating. Later, when I come to analyse external relationships and possible lines of cultural diffusion into the eastern Barren Grounds, these hypothetical complexes may be corroborated or negated by other facts. It may be possible then to place them in sequential phases.

The following figures display the possible components of the complexes. Each of them is keyed to a site, to be known as the base-line, which is distinctive for several types of artifacts and for a larger than average inventory of specimens. For purposes of wider comparison I have listed all types in all sites, but I have arranged them in the left-hand column according to my own subjective estimate of their relative diagnostic value, that is, the type at the top of the list is the strongest diagnostically, while each one beneath grows progressively weaker. The relative degree of affinity among the sites is expressed by their horizontal placement: the relationship to the base-line site is strongest toward the left and weakest toward the right.

The first of the potential groupings, Complex A (Fig. 12), includes several of the sites around the western end of Baker Lake: BL-8, House 1; BL-14;

	GL (lower)	*SL 2B*	*SL 5*	*SL 8*	*SL 6*	*BvL 8*	*BvL 1*	*SL 2D*	*SL 2A*	*BvL 9*	*BvL 12*	*SL 7*
Point, lanceolate	x	x	x	x	x							
Point, tapered stem	x					x	x					
Burin	x	x								x		
Pick, triangular		x						x				
Side blade, willow-leaf	x	x	x		x	x						
Point, lanceolate, large			x									
Side blade, asymmetric					x					x	x	
Biface, semilunar	x		x		x				x	x	x	
Biface, round-based	x	x	x	x	x	x					x	x
Biface, discoidal		x			x							
Biface, symmetric, large							x					
Knife, incipient stem										x	x	
Scraper, blade-end			x									
Scraper, blade side	x											
Scraper, end, triangular	x	x							x			
Knife-scraper combination									x			
Knife, spade-tip											x	
Knife, offset											x	
Prismatic blade, triangular	x											
Scraper, spall	x		x	x								
Scraper, turtleback			x		x							
Point, small leaf							x					
Prismatic blade, small	x		x	x								
Hammerstone									x			
Knife, amorphous	x	x										
Scraper, amorphous		x	x		x				x		x	
Biface chopper or blank			x		x							
Core, wedge-shaped										x		
Total specimens	68	24	47	10	50	3	11	7	10	15	49	1
Site category	Oc	Oc	LW	LW	LW	LW	LW	LW	LW	LW	LW	LW
Dwelling remains	–	Rec	–	–	–	–	–	–	–	–	–	–
Local elevation (feet)	5	230	275	50	275	275	30	230	230	350	50	275

Fig. 13. Complex B (based on GL-lower and Moffatt Collection). For abbreviations see Fig. 12, p. 43.

BL-16, House 1; and BL-17. This association is by no means tight, but in addition to the sharing of several types there is a rather close resemblance in the technique and finish of the artifacts. Many are crude and semi-finished, but they are small in over-all size, and pressure flaking is a dominant feature. This clearly separates them from a majority of sites farther inland. One apparent discrepancy in this complex is the considerable difference in elevation which sets BL-8, House 1 apart from the other components, suggesting perhaps that it may have derived from an earlier occupation. It is difficult, however, to assess this variation on the basis of purely internal evidence.

It is possible that BL-13 should also be assigned to Complex A, but its small inventory makes this uncertain. The remaining portion of site BL-8, as well as Cemetery Hill and BL-12, are clearly not related to Complex A, and the status of BL-11 is indefinite (see, however, p. 51).

Among the interior sites the most outstanding cluster develops around GL (lower), which hence becomes the base-line for Complex B (Fig. 13). This group has a possible total of 12 components: GL (lower), SL-2B, SL-5, SL-8, SL-6, BvL-8, BvL-1, SL-2D, SL-2A, BvL-9, BvL-12, and SL-7. In particular, the first 7 of these are strongly linked together by one or both of

	AL 7	*BvL 4*	*AL 5*	*BvL 11*	*GL (upper)*	*AL 6*
Point, corner-removed	x	x	x			
Point, side-notched	x				x	
Adze blade, chipped		x				
Point, lanceolate, large	x	x		x		
Scraper, end, concave stem	x					
Scraper, end, convex stem	x					
Side blade, asymmetric			x		x	
Biface, semilunar	x					x
Biface, discoidal	x					
Biface, round-based			x		x	x
Biface, symmetric		x				
Scraper, discoidal			x			
Scraper, end, triangular	x	x				
Biface, asymmetric	x					
Scraper, blade-end			x			
Scraper, blade side		x				
Prismatic blade, large	x					
Knife, amorphous	x					x
Scraper, amorphous	x				x	
Core, tortoise			x			
Hammerstone		x				
Total specimens	48	29	29	3	22	10
Site category	Oc	Oc	Oc	LW	LW	Oc
Dwelling remains	–	–	–	–	–	–
Local elevation (feet)	30	30	30	200	270	30

Fig. 14. Complex C (based on AL-7). For abbreviations see Fig. 12, p. 43.

	SL 2C	*AL 9*	*BvL 2*	*SL 4*	*SL 3*	*BL-8 R 5*
Point, lenticular, slate			x			
Adze, chipped and ground	x					
Scraper, offset end			x			
Biface, thin asymmetric	x					
Side blade, rectanguloid	x					
Knife, asymmetric, slate						x
Biface, semilunar		x	x			
Side blade, asymmetric	x			x		
Biface, symmetric		x		x	x	
Biface, round-based			x	x		
Graver			x			
Scraper, end, triangular	x		x			
Scraper, blade side	x					
Prismatic blades, large	x					
Hone				x		
Scraper, turtleback		x				
Scraper, spall		x				
Biface, chopper or blank	x					
Scraper, amorphous	x	x			x	
Knife, amorphous			x			
Hammerstone		x				x
Core: tortoise		x				
Total specimens	32	27	17	7	4	2
Site category	LW	Oc	Oc	Oc	LW	Oc
Dwelling remains	–	–	Ro	Ro	–	Ro
Local elevation (feet)	230	25	30	100	175	160

Fig. 15. Complex D (based on SL-2C). For abbreviations see Fig. 12, p. 43.

the projectile point types which I consider to be the most effective criteria, i.e., a tapered-stem form and the lanceolate type which I earlier likened to an Agate Basin prototype (Harp, 1959a). The relationship of SL-2D, tenuous though it appears, is sound because of the rare triangular pick type which it shares with SL-2B, and also because of its proximity to the latter site. SL-7 is a weak candidate for this complex, yet I believe it properly belongs because it undoubtedly ties in with SL-6, which is a strong member. The case of SL-2A similarly rests largely on its nearness to SL-2B; BvL-9 is placed here because of its burin, together with several other traits; and BvL-12 is also a weak member because it shares only in the middle range. It will be noted that extreme variation in site elevation characterizes this complex, even among those components which otherwise seem most closely alike. This is presumably to be explained in part by the lack of physiographic correlation between the base-line site at Grant Lake and the middle Thelon area, and also by the different functions of the sites.

Complex C (Fig. 14) appears to be a fairly close-knit group of 6 sites: AL-7, as the base-line, together with BvL-4, AL-5, BvL-11, GL (upper), and AL-6. These are solidly related by two types of points. The most peripheral member, AL-6, has been assigned here largely because of its location close to AL-7.

Complex D (Fig. 15) is the least defined group in that it is not tied together by any strong or consistent diagnostic types. Nevertheless, a unifying theme appears in the use of silicified slate, chert, and the technique of grinding or polishing, and possibly also in the presence of circular tent rings. In subsequent discussion I shall contend that certain traces of a coastal tradition occur in this complex. The following sites are tentatively included: SL-2C, AL-9, BvL-2, SL-4, SL-3, and BL-8, Ring 5.

This, I believe, is as far as one can reasonably progress in relating these archaeological sites and materials solely on the basis of internal evidence, and, although I have postponed the question of chronology, the essential validity of my first proposition seems to be well supported. Outside of these four complexes, however, is a residue of 19 sites which are not clearly related to any complex. These are BL-11, BL-12, BL-13, BL-15, BL-18, Cemetery Hill, SL-1, SL-9, AL-1, AL-2, AL-3, AL-4, AL-8, BvL-3, BvL-5, BvL-6, BvL-7, BvL-10, and BvL-13. This does not indicate that these unrelated sites represent other cultural entities of a new or different nature, but only that the evidence is too slight to place them positively in one or another of the four groupings.

Proposition 2: There is a single fact which serves to unite all of these archaeological complexes, with the partial exception of Complex A at the western end of Baker Lake: the exploitation of the caribou.

I have already noted the historical continuity of human ecology on the Barren Grounds (1959b), but part of that statement must be repeated for the development of the present analysis. My approach to field investigation in the Thelon country was founded on the simple assumption that where the food supply is most abundant at any given time or place, there too will be concentrated the human beings who depend for their livelihood on this particular resource. Most recently, of course, the eastern interior Barren Grounds have

been the home country of the Caribou Eskimos, a group that was so-named and intensively studied by the Fifth Thule Expedition of 1921–24, and for these people the caribou provided the paramount food resource. Writing about them in his famous monograph, Birket-Smith said (1929, Pt. 1, p. 9): "To them the caribou occupies at least the same position as the seal and the walrus to their kinsmen [various coastal Eskimo groups], or as the bison of the past to the Plains Indians. The caribou is the pivot round which life turns. When it fails, the mechanism of culture comes to a stop . . ."

In linking the culture of the Caribou Eskimos with others from a more distant past, according to the terms of my proposition, other factors must be taken into account and at least one further assumption made. It can be stated with certainty that the major hunting grounds of the Caribou Eskimos were largely determined by the river systems of the region, the Dubawnt-Thelon system, the Kazan, and the Back. More particularly, in the area of my investigations, the Thelon and its middle chain of lakes constitute an important hydrographic barrier in the path of the eastern Barren Grounds caribou migrations, and each summer and fall, as the herds shift north and again southward, they must cross it at easily forded narrows. Thus, in this country there are fixed points which are predictable as good hunting grounds at certain times each year. Of the fifteen survey camps that we established on the river trip, eleven were located at or near such caribou crossings, and, in accord with expectation, each of these situations produced a quota of modern, recent, and prehistoric campsites. The obvious interpretation is that all of these camps were situated to intercept the mass movements of the caribou.

To clarify and support this contention, I believe we must assume that throughout the last several millennia of postglacial time there has been no radical morphological or climatic change, in this region, that could seriously have altered the biota. That is to say, this land has been a tundra environment since it was liberated from the Laurentide ice sheet, and thus the caribou may be proposed as the most likely fundamental food resource, not only for the historic occupants of the Barren Grounds, but also for their predecessors.

I do not maintain that caribou hunting was the sole, immutable subsistence pursuit of all primitive peoples on the Barren Grounds. Fish, for example, has probably always been a secondary food resource, but, even more important, the muskox has been stressed by some as a rival of the caribou in central arctic Canada. In fact, Steensby (1917) postulated that the palaeo-Eskimos of the central region were primarily muskox hunters, and that the movements of this game were responsible for the people's first migration into northeast Greenland. There is not much evidence in support of this view, however, and that only from northeast Greenland where Knuth found muskox bones in middens of the Independence Culture at Kap Holbæk, Danmarks Fjord (Knuth, 1956, p. 565).

The most exact appraisal of the role of the muskox in any Eskimo culture derives from Maxwell's recent research at Lake Hazen, Ellesmere Island. This appears to have been a small culture area that was peripheral to Hall Land and Washington Land in northwestern Greenland, and it was visited by various hunting parties of Dorset and Thule people between A.D. 1000 and the middle of the fifteenth century. Maxwell found muskox bones in all the middens he

investigated (1960, p. 7), and he concluded that ". . . from the earliest times the muskoxen and caribou, in about equal numbers, have supplied the most meat, hides, and material for tools." (1960, p. 73).

Aside from this information, very little is known about the ancient distribution of the muskox, but from all indications it never at any time compared with the caribou in terms of numbers. For example, according to Clarke's careful estimate (1940, p. 79), there were only about 1,200 animals on the entire mainland of Canada in 1937, twenty years after they had been placed under total protection by the Canadian government. Elsewhere in the same report (1940, p. 81) Clarke states: "The animals were never at any time or in any place continuously abundant." For the Lake Hazen area, Maxwell quotes Greely's estimate that the local herd of muskoxen numbered about 200 in 1881 (1960, p. 8). This was the total, it may be noted, at the end of a period of 400 years during which there had been no human occupation of the Lake Hazen area (Maxwell, 1960, p. 88). Such figures show that the muskox is not a prolific animal. The sparseness of this game throughout the Barren Grounds, when compared with total caribou herds on the sometime order of 3–4,000,000 head (cf. Clarke, 1940, pp. 101–3), strongly suggests that it could never have been a mainstay for any hunting culture in that region.

Although I am unable to appraise its true value as evidence in support of my proposition, one other note by Clarke deserves quotation in full (1940, p. 81): "The writer had an idea that he might make a collection of birds' nests containing some of the wool that is draped so abundantly on the bushes wherever musk-oxen are found. Actually birds used ptarmigan feathers and caribou hair, even though there was wool hanging from the very bushes in which the nests were located. Nest building by birds is an inherited behaviour, constant and fixed in its main features, established by processes of evolution, and changed only by similar processes. Therefore, apparently ptarmigan and caribou have occurred side by side with tree sparrow and redpoll constantly and long enough to enter into the development of nest-building behaviour, but not so the musk-ox."

Therefore, given the evidence of the site locations, and in the absence of contravening facts, I believe we may extend the importance of the caribou backward in time to encompass the entire period of man's habitation on the Barren Grounds in the postglacial era.

Proposition 3: The archaeological sites that I have described, specifically those in Complexes B, C, and D, constitute a cross-section of the past culture sequence that probably includes all component phases.

I am aware that such a proposition can never be advanced with finality, because it will be forever impracticable to comb the vast reaches of the Barren Grounds in search of all the prehistoric sites that may be located there. I cannot even be completely certain that we discovered all of the sites within the area of this study. However, our exploration of the major caribou crossings was thorough, and, in addition, we made occasional spot checks along the mid-shores of the lakes. Moreover, the wide spread of our finds, both at high and low elevations and across almost one hundred miles of the middle Thelon River, when weighed together with their external relationships (to be discussed in the following section), suggests that our sample of the area is adequate.

Postglacial physiographic changes in this country have a bearing on the above problem, for the present-day land surfaces there are among the youngest on the continent, i.e., in terms of their recovery from the final stages of Pleistocene glaciation in Keewatin. Recent research has shown that this area was subject not only to direct ice action, but also to submergence by proglacial lakes and finally to marine transgression. The Keewatin ice divide, which marked the final stage of the Laurentide ice sheet, lay athwart the western end of Baker Lake and blocked off the natural drainage of the Thelon River towards Hudson Bay (Lee, 1955). Bird has estimated that the resultant proglacial lake exceeded 30,000 square miles in extent (1954, p. 459). As this ice divide melted and reopened the interior drainage to Hudson Bay, the depressed land was invaded by the seas to a height which now stands about 360 feet above modern sea level in the middle Thelon basin (Bird, 1951, p. 22). Finally, through subsequent isostatic adjustment, the land rose once more until it achieved its contemporary elevation, and there are many observations which indicate continued uplifting today.

In view of such major physiographic alterations of the central Keewatin landscape, we can assume that man's first occupation of the area, at least as evidenced by our finds, must have been relatively recent. It is obvious, of course, that any earlier occupation would have had to be of interglacial age, which is highly improbable, and in any case all traces of it would necessarily have been obliterated by the events noted above.

After deglaciation and subsequent marine submergence of this land (cf. Bird, 1954, Fig. 1), the prime factor in the newly developing environment must have been the re-entry of the flora. Not until this had become sufficiently well established could the caribou herds have followed. Furthermore, I would conjecture that the caribou shift into this country could not have achieved its contemporary or recent distribution until the drainage patterns had become stabilized essentially as they are today, with enough entrenchment to make the narrows navigable. This last set of events is believed to have transpired rather rapidly (Bird, 1951, p. 23): the numerous beach ridges below the 360-foot level, and the lack of wave-cut cliffs and benches, indicate that the water-level dropped steadily. Hence, I believe we may postulate that the local physiography had approximately its modern character at the time when the caribou entered the area in large numbers.

Next on the scene would have come the human predators, and if, as I have suggested, they were fundamentally caribou hunters, their major occupation sites would naturally tend to cluster at those very places where physiographic factors concentrated their food supply. Thus, the various narrows along the middle Thelon may be described as primary control points in man's adaptation to a considerable portion of the central Keewatin barrens, both in recent and prehistoric times.

V. External Relationships

Complex A: It is evident that this complex of sites around the western end of Baker Lake could have been oriented either toward coastal or interior hunting. Baker Lake is frequented by the white whale, the spotted seal, and

the fiord seal (Birket-Smith, 1933, p. 85), and we also know that caribou, at least in former times, moved in great numbers around the western end of the lake and across the Thelon River. This end of Baker Lake, however, is almost two hundred miles, up through Chesterfield Inlet, from the shores of Hudson Bay, and I think it can reasonably be inferred that sea mammal hunting in this area was marginal both in practice and results. The caribou, on the other hand, would have afforded an easily exploited food supply during early summer, and perhaps to a lesser extent in the fall, and I would take them to have been the *raison d'être* of these particular sites. Nevertheless, as far as the culture of Complex A is concerned, its affinities were essentially maritime, in that they can be linked primarily with early Eskimo horizons in the eastern Arctic.

Immediately apparent is the fact that the sites of this group do not have any connection with Dorset Eskimo culture, but examination shows that a number of significant parallels exist with the pre-Dorset cultural phases in the Igloolik area of northern Hudson Bay. I have had an opportunity to study Jørgen Meldgaard's extensive materials from this complex of sites and to discuss with him the problems of possible relationship. Meldgaard links all Igloolik occupations on raised beach-lines that are higher than 23 metres above present sea level to the palaeo-Eskimo Sarqaq culture of west Greenland, but as he has not selected an inclusive phase name for them I shall continue to designate them here as pre-Dorset. In the remarks that follow I can only refer to our discussions and to his materials without further documentation, for the Igloolik collections are as yet unpublished. Wherever possible for more explicit clarification I shall direct attention to relevant pre-Dorset (Sarqaq) materials that have been published from various Greenland sites.

First of all, in a general sense, there are certain marked differences between the chipped stone artifacts from the Igloolik sites and those from Baker Lake Complex A. At Igloolik chipped stone specimens are but a minor component of the total known cultural residue and they are heavily outweighted by the great numbers of bone, ivory, and antler artifacts. Next, the pre-Dorset stone work at Igloolik was virtually all done in chert, and because there were apparently no large nodules of that material available, all of the stone artifacts there are small. A few specimens were made of a very fine-grained quartz, almost crystalline in texture, but none from the coarser grades of quartzite that are found at Baker Lake. Such wide variations in quality and size of raw materials have clearly tempered the finished products at both places and, consequently, comparisons of their significant types cannot always be exact. Nevertheless, despite the difficulty of standardization of types made from these diverse materials, there are positive parallels.

The contracted stem points of Complex A are found at Igloolik in the "Rob Site" house, on the 48-metre level of "Parry Hill", and the small isoscelene point is found in all pre-Dorset levels in that area. There is some variation in the base of this type, ranging from convex to concave, but between the Rev. Rousselière's collection and my own from BL-8, House 1, both extremes are represented. At Igloolik and in west Greenland Sarqaq the concave base seems to predominate (cf. Larsen and Meldgaard, 1958, Pl.4:10–14), but the convex variant does appear also at Igloolik. The crooked end-knife of BL-8, House 1 has counterparts on the 35- to 47-metre levels at Igloolik, but the

similarity is not exact. The rough, crudely flaked lenticular points of BL-16, House 1 and BL-17 are also repeated in west Greenland Sarqaq, although the workmanship on the latter specimens is more often finer (Larsen and Meldgaard, 1958, Pl.2:20; also Mathiassen, 1958, Fig. 6:2,7). Additional base fragments of this type, more delicately fashioned, are part of the Rousselière collection from BL-8, House 1 and also from my BL-13. One other type is represented in Rousselière's material but not in mine: that is the asymmetric tanged blade as shown in Larsen and Meldgaard, 1958, Pl.4:1,2. The Baker Lake specimens are tip fragments which conform closely to the whole artifacts from west Greenland, and the same type is repeated on all pre-Dorset levels at Igloolik. One further Baker Lake type, the offset end, or oblique scraper (cf. my Pl.2:k) is found at Igloolik on the 47- to 48-metre levels.

In my earlier discussion of Complex A there were no definite associations for BL-11 and BL-13, but it is clear that they, too, properly belong in this complex. Of BL-11 it can be said that the tent ring with its internal alignment of stones and probable central hearth is quite reminiscent of the Igloolik pre-Dorset houses above the 23-metre level, and the pear-shaped side blade found there is duplicated in west Greenland Sarqaq (Larsen and Meldgaard, 1958, Pl.4:5). As for BL-13, its triangular point is known from the 47-metre level at Igloolik, and its tapered stem point, as noted above, is found both at Igloolik and in west Greenland Sarqaq.

The total effect of these concurrences is rather impressive, although it is obvious that the full inventories of the two complexes, Igloolik pre-Dorset and Baker Lake, by no means match. Perhaps the most important gap between the two is the absence of burins in the Baker Lake group, whereas this trait is a dominant feature of the central arctic pre-Dorset cultures and also in Sarqaq of west Greenland. It seems probable that this difference can be explained as a function of the raw materials used in the Baker Lake sites. We have the slightest suggestion of quasi-burins there, or, as they should more rightfully be called, gravers, but these are not an important type. Given the vagaries of coarse-grained quartzite and its unpredictable cleavages, we can presume that burin-making would have been most difficult at sites where that was the chief raw material. Perhaps I should also register the possibility that the working of bone and antler was not as important an industry at Baker Lake as it was in the Igloolik complex.

The considerable variation in the elevations of the Complex A sites above the present level of Baker Lake strongly suggests that they encompassed a rather wide time span. The lowest of them, BL-14 and BL-16, are no doubt the youngest and can be related to a period when local physiographic conditions were approaching those of today. At the higher levels, BL-8, House 1 at 144 feet, and BL-11 at an estimated 250 feet above the lake are less positively associated with beaches that were contemporaneous with their occupations, although I have described their semblance of great age.

One method of appraising this indication of time depth would be in terms of isostatic uplift of the land, but unfortunately the rate of upwarping there is not known. Meldgaard's calculations for Igloolik show a variable rate of uplift with an intermediate period of relative crustal stability during the latest pre-Dorset and earliest Dorset stages (Meldgaard, 1960). His average rate of uplift for the area would be about 3 feet per century, but there is no reason for

assuming that the same figure can be applied to Baker Lake and its environs. Used experimentally, this average gives ages of 8,000 years old for BL-11, 4,600 years for BL-8, House 1, 3,100 years for BL-13, and 600 years for BL-14 and BL-16, determinations which are far too early in the upper range and far too late in the lower. We must assume, therefore, that postglacial upwarping at Baker Lake did not occur at an average rate of 3 feet per century, and probably also that the upper sites of Complex A were not contemporaneous with active beach-lines at their respective elevations.

There remains the possibility of equating the Baker Lake sites with the Igloolik sequence in cultural terms, but this, too, can only be an approximation. Nothing at Baker Lake represents the pure transference *in toto* of any given culture horizon at Igloolik, for the inventory of Complex A includes types that are found in all pre-Dorset levels there in a period of time between approximately 2000 and 400 B.C. (cf. Rainey and Ralph, 1959, p. 372). However, there is a tendency for the particular traits I have discussed to cluster in the middle to slightly later pre-Dorset stages at Igloolik, and because of this it can conservatively be suggested that the pre-Dorset Eskimo phase at Baker Lake began about 1000 B.C.

The duration of this phase at Baker Lake remains unknown, and that problem is complicated by the associated dwelling types. BL-8, House 1 has been described as essentially rectangular, but clearly it could have had rounded corners and thus fit some of the pre-Dorset house plans known in the pre-Dorset stages at Igloolik. On the other hand, BL-16, House 1 is unequivocally rectangular. As it also represents the latest aspect of Complex A, being only 23 feet above Baker Lake, we might conjecture that it shows Dorset influence, for Meldgaard definitely links this form with the Dorset occupations at Alarnerk (1955, p. 174). However, the Alarnerk houses sometimes have platforms on three sides and several interior open hearths, features which did not occur in BL-16, House 1. If true Dorset influence could be demonstrated in Complex A, it would carry the period of occupation down to perhaps 700 B.C., but the sole evidence of one rectangular plan is insufficient for this.

Complex B: The affinities of Complex B are to be found in the interior, through a chain of sites that stretches from the High Plains area in the northern United States up into the present boreal forest country of central Canada, through the Yukon and Northwest Territories (District of Mackenzie), and down to the arctic coast. The relationships are not equally strong throughout this vast region, but they suggest membership in a basic hunting tradition that seems to have been adaptable, with variations, to the ecology of plains, taiga (used in the sense that I prefer, i.e., transitional forest zone), and tundra. These sites are listed below.

1. *Agate Basin, Wyoming* (Roberts, 1943; Wormington, 1957, p. 141 and Fig. 46): In connection with my study of the Moffatt Collection it was Douglas Byers and Frederick Johnson who called my attention to the similarity between the lanceolate points from Grant Lake and Agate Basin. Since my first examination of that possibility (Harp, 1959a, pp. 420–1) I have found no evidence that leads me to think otherwise. The lanceolate type which is the prime diagnostic of Complex B is unquestionably the same as *some* of the points found in the Agate Basin site. The parallelism includes general size range,

outline form, thickness, type of flaking, and presence and extent of basal grinding.

In view of the terminological controversy about the use of "Agate Basin" as a proper type name (Krieger, 1958), it is probably advisable to follow Griffin's suggestion (in press) and link the Complex B lanceolate points with the general Plano point tradition. At any rate, I shall henceforth refer to these Complex B specimens as the Keewatin lanceolate type.

Besides their similarity to this Agate Basin type, the Keewatin lanceolate points also approach the Milnesand type in certain characteristics (cf. Sellards, 1955, Figs. 98, 99). Several of them have a decided median ridge on one face, and the bases of these specimens have been bevelled by longitudinal flaking. However, they differ slightly in outline and also in amount of basal grinding, which in the Keewatin type extends on an average for one-third of the length of the point. It is unfortunate that broader comparisons of large inventories cannot be made either with the Agate Basin or the Milnesand sites, for, aside from the fact that in the Plains area emphasis has often been placed almost totally on the incidence and typology of projectile points, many of the sites discovered there have not yielded any other associated types of artifacts.

2. *Artillery Lake, N.W.T.* (MacNeish, 1951): There is a possibility that the Keewatin lanceolate point is duplicated here, although I do not regard it as strong. One fragmentary specimen (MacNeish, 1951, Pl.7, lower right) may be this type, but there is no mention of its having been basally ground. It could as easily be a willow-leaf side blade of the same type described for Complex B. The other points illustrated differ considerably with their concave bases, thick cross-section, and lack of basal grinding. Further types from Artillery Lake which appear to duplicate Complex B are: round-based, leaf-shaped bifaces; discoidal knives; plano-convex end scrapers; amorphous flake scrapers; and crude choppers or blanks. Tentatively, Artillery Lake has been dated as no older than 4–7,000 years ago, for it is assumed that this area would have been submerged by glacial ice sheets at an earlier date.

The above two sites seem to be the only ones that are similar to Complex B in terms of the Keewatin lanceolate point. However, one probable "Agate Basin" site, on which I have no information, has been reported near Moose Jaw, Saskatchewan (Wormington, 1957, p. 141).

3. *Taltheilei Complex, N.W.T.* (MacNeish, 1951): The tapered stem point of Complex B appears to be perfectly duplicated in two sites of this complex, and other resemblances may be seen in semilunar bifaces and round-based, leaf-shaped bifaces. It should be noted that the Taltheilei grouping is based to an important degree on the tapered stem type, and there is apparently no other form of point in the inventory. However, in the area of Complex B this same type occurs together with the Keewatin lanceolate type in at least one site, and there is no stratigraphic evidence there which suggests that these types derived from two distinct occupations. More widespread origins for the tapered stem type are still obscure, but I am struck by its resemblance to the Scottsbluff type (cf. Wormington, 1957, Fig. 70). Because of its location on a high beach-line at the east end of Great Slave Lake, Taltheilei is thought to date somewhere in the period between 4–7,000 and 10–12,000 years ago.

The next two sites, or phases, are even less certainly related to Thelon Complex B, yet they must be mentioned for what they are worth.

4. *New Mountain Phase, Y.T.* (MacNeish, 1959a): MacNeish speaks of Agate Basin-like spear points in this complex and also illustrates a specimen (p. 49 and Pl.3:1), but I do not believe the resemblance is sufficient to warrant a positive association. Otherwise, the artifact assemblage of this phase includes burins; round-based, leaf-shaped bifaces; flat-topped end scrapers; spall scrapers of the Tci-tho variety; and prismatic blades. Despite these crude likenesses, however, the New Mountain inventory, which is strongly characterized by several types of burins and a well-developed microblade industry, seems far removed from Thelon Complex B.

5. *Buckland Hills Phase, Y.T.* (MacNeish, 1959a): Again we find cited here the incidence of Agate Basin-like points. One is illustrated (Pl.5:1), but the specimen is not described and the photograph shows only the slightest degree of likeness to that type. The tapered stem point in the Thelon Complex B also faintly resembles types which are called "New Mountain stemmed" and "arctic lanceolate" (cf. MacNeish, 1959a, Pl.5:2,4), but the size of these specimens falls well below the known range of the tapered stem point in Complex B. Other elements of Complex B which may be noted in Buckland Hills are: burins; asymmetric side blades; discoidal bifaces; plano-convex end scrapers; and amorphous flake scrapers. However, the remainder of the Buckland Hills inventory departs so widely from that of Complex B that the possibility of relationship seems very remote indeed.

As far as I can determine, the above comprise the only possible linkages that can be established at present, at least as they are hinged to the point types which I consider to be of primary importance. There are, of course, other resemblances, but they have less diagnostic value. For example, one may take such sites or phases as several of those found at Engigstciak (MacNeish, 1959a), Dismal-1 and -2, and Kamut Lake (Harp, 1958), the complexes at Great Bear Lake (MacNeish, 1955), the Pointed Mountain series (MacNeish, 1954), and the Brohm site (MacNeish, 1952), and find in nearly all of them such types as round-based bifaces, discoidal knives, various forms of snub-nosed end scrapers, and amorphous flake scrapers. In some of these sites additional traits will be found to check with the inventory of Thelon Complex B, i.e., an occasional semilunar knife, blade-end scrapers, biface choppers or blanks, and spall scrapers. In every case, however, the relationship is generalized and non-specific.

In fact, the elements mentioned above have such a very wide distribution that I think we must regard them as basic to the technology of all prehistoric cultural adaptations in the interior northern regions of the New World. I have in mind here the concept of the "basic kit", as it has been used by Byers (1959, p. 242). It is most difficult, of course, to make this concept explicit in archaeological terms, yet I think the possibility of its existence must be recognized. With the grafting of specialized traits or trait complexes on to this base, for example microblade technology or lanceolate points, the culture might be shifted to meet changed ecological or environmental conditions. In the northern interior plains region this base complex is frequently found in association with Plainview or Angostura lanceolate points, and the cultural economy was, as far as we can tell, attuned primarily to subsistence on herds of grazing animals that ranged the plains or tundra. Probably, too, such a technological adjustment was perfectly at home in intermediate transitional forest areas.

Toward the eastern margins of this same north-central region, extending into the treeless barrens of the District of Keewatin, the basic kit seems to have carried a distinctive graft of a slightly different type of lanceolate projectile point which I have designated the Keewatin lanceolate, and which can be linked with the Plano tradition. Furthermore, as no substantial trace of the Keewatin lanceolate type has been found in other directions, I believe it can reasonably be suggested that we have evidence here of a trait diffusion from the High Plains of the northern United States deep into the central Barren Grounds, almost as far as the shores of Chesterfield Inlet and Hudson Bay. It can also be inferred that this resulted not from a year-around occupation of the barrens, but rather from a series of summer sorties into that country.

The relationship just postulated is not at all impossible from the standpoint of chronology, even though we are dealing with sites that have not been absolutely dated. As for the Thelon Complex B, we have one observation which establishes at least a lower limit for human occupation there. Several years ago it was suggested that the final expansion of glaciation in the Chesterfield Inlet area had occurred perhaps as late as 4,000 years ago (Flint, 1956, p. 281; also Taylor, 1956). Consequently, the postglacial events that I discussed briefly in the last section would necessarily have been most recent.

Still later evidence (Craig, 1959) now indicates that flooding of the Thelon Basin by proglacial lakes, and subsequent marine transgression, must have occurred before 5,500 years ago. This is a C-14 date (sample L-428) which derives from organic materials found in the silt layers of a pingo located about seventy-five miles west-southwest of BvL-12. The organic material, consisting of shells and a pollen assemblage, indicates a warmer climate than now, and the date obtained coincides well with the known age of the postglacial Thermal Maximum, or Altithermal, which centred somewhere around 5,000 years ago (Antevs, 1953). Moreover, the situation of the pingo, only 35 feet above the present flood plain of the Thelon, shows that the structure would indubitably have been altered, if not obliterated, by the lacustrine flooding and marine submergence that are known to have followed the last recession of the ice sheet in the area. Therefore, we can assume that the physiography of this country had achieved approximately its contemporary character at least as early as 3000 B.C., and that the area became available to caribou-hunting cultures sometime afterward.

Such a date accords sufficiently well with the closing phases of the Folsom-Yuma continuum of the High Plains farther south, estimated to have lasted from about 9000 to 4000 B.C. (Willey and Phillips, 1955, p. 731). Unfortunately, no positive help in this regard is to be had from the Agate Basin site, assuming that it furnished a prototype for the Keewatin lanceolate points. The artifact assemblage found there clearly belongs to the parallel-flaked point tradition of the Plains, and suggestions of geological antiquity in the site tend to confirm this. However, there has apparently been some confusion concerning the identity of the bison bones associated with the site (cf. Roberts, 1943 and Wormington, 1957, p. 141); they may be either modern *Bison bison*, or an extinct form. In view of this, I can only repeat my former suggestion (1959a, p. 421) that the Agate Basin site may represent an occupation that occurred during the early stages of the Altithermal period, before spreading desiccation of the Plains induced the migration of game animals, as well as the early men who hunted them, toward cooler and moister climes (cf. Quimby, 1954).

Some years ago Clark Wissler (1920, p. 138), in his review of Steensby's monograph on the origin of Eskimo culture, suggested that the art of caribou hunting might ". . . be explained by a detached group of bison hunters moving out toward the Barren Grounds, where they found caribou and developed a new culture." I doubt very much that this can be a valid explanation of the first caribou hunting in the New World, yet it is most interesting to see Wissler's explanatory mechanism borne out by our archaeological facts, meagre though they are. In this instance there seems to have been a trait diffusion that originated in the high plains, in association with bison hunting, and ended in the marginal area of central Keewatin as a key element of a caribou hunting complex. I interpret this not necessarily as a direct movement of Plains Archaic, or Plano, hunters into the tundra, but possibly as a blending of certain elements of their technology and subsistence patterns with those of more northerly early Archaic stage cultures that were oriented already toward life in the taiga and a subarctic environment. In some such fashion we must explain the fusion of traits, among them the burin and the Keewatin lanceolate point, that characterizes Complex B in the Thelon country.

Complex C: If Complex B is typified by some association with the early Archaic stage of New World culture, Complex C appears to be an inland tradition of the later Archaic stage. It also has affinities with a number of sites that stretch from Alaska at least as far as southeast Manitoba.

1. *Lockhart Complex, N.W.T.* (MacNeish, 1951): This assemblage is geographically closest to the middle Thelon country, about three hundred miles southwest of it, and it is also closest in terms of artifact typology. It has corner-removed and side-notched types of points, and there seems to be a clear repetition of the straight-sided, convex-based lanceolate form (1951, Pl.4). Other close similarities are to be seen in pear-shaped end scrapers with convex sides, round-based bifaced knives, end scrapers with straight sides and triangular form, large prismatic blades, and amorphous flake scrapers. MacNeish estimates that the Lockhart Complex may be dated between 1,000 and 4,000 years ago (1951, p. 33).

2. *Southern District of Keewatin, N.W.T.* (Harp, 1959a): A scattering of sites along the Dubawnt River, discovered by the Moffatt party in 1955, also furnishes ample evidence of relationship with Thelon Complex C. There is no extensive inventory from any one place, but combined collections made at Selwyn, Boyd, and Barlow lakes contain side-notched and corner-removed points, as well as various forms of biface knives, including round-based, semilunar, and ovate (cf. 1959a, Fig. 2). These sites are not dated, but they are situated in what is today transitional forest zone on the southern edges of the tundra, and they were unquestionably oriented to caribou hunting. Geographically speaking, they lead downstream on the Dubawnt, directly into the centre of Thelon Complex C.

3. *Southeast Manitoba* (MacNeish, 1958): MacNeish has noted a vague resemblance between materials from the Lockhart Complex and the Larter Focus, near Winnipeg (1951, p. 38), and I would tentatively expand this statement to include Complex C. The similarities cover corner-removed and side-notched points, pear-shaped end scrapers, asymmetric side blades, biface knives of semilunar, discoidal, and round-based form, blade-end scrapers, amorphous

flake scrapers, and small pebble hammerstones. However, it is important to note that side-notched points are a minor trait at Larter, and the dominant point there, a concave-based type, is entirely lacking in Thelon Complex C. MacNeish equates the Larter Focus with a number of Great Plains bison-hunting sites and dates it from 2,500–3,500 years ago (1951, p. 57). In addition to these parallels with Larter, several of the same Complex C traits can be seen in the pottery-making cultures of the Anderson and Nutimik Foci, also in southeastern Manitoba. These cultures succeeded the Larter Focus, and they are dated in the period from 500 B.C. to A.D. 1000 (MacNeish, 1958, pp. 59–63).

4. *Spence River Complex, N.W.T.* (MacNeish, 1954): This has been established as the latest archaeological phase in the Simpson–Liard area, and it is held to be probably representative of late prehistoric or early historic Athapascan culture (1954, p. 250). In a more recent publication (1959b, p. 20) MacNeish has linked it with what he calls the Denetasiro tradition, post-dating A.D. 1000. Several specific trait resemblances appear to link Complex C with Spence River: corner-removed and side-notched projectile points, end scrapers with one concave side, round-based bifaces, end scrapers with parallel and tapering sides, and amorphous flake scrapers.

5. *Kamut Lake and Dismal Lake-1, N.W.T.* (Harp, 1958); *N.T. Docks, N.W.T.* (MacNeish, 1955): Here in the northwestern corner of the Barren Grounds triangle are two other complexes which show a partial correlation with Thelon Complex C. They include side-notched points, of which those from Kamut Lake are more nearly like the Complex C specimens than any others I know (cf. Harp, 1958, Fig. 7:5). There are also a few corner-removed forms, large biface tools, including discoidal and round-based knives, several variations of pear-shaped end scrapers, amorphous flake scrapers and knives, and an occasional blade-end scraper. However, there are decisive differences which tend to dispel the importance of the similarities. For example, N.T. Docks and Kamut Lake both have microblades and burins, and Dismal-1 has lanceolate points that resemble the Angostura type. These complexes, then, appear to have been influenced by the Arctic Small-Tool tradition (Irving, 1957, p. 47), and possibly also early Lithic stage Plains culture, whereas nothing of that sort is apparent in Complex C.

6. *Southern slopes of the Alaska Range.* Even farther afield, two other reported assemblages bear some resemblances to Complex C. Material found by Irving in two sites on the Tyone River is in a category similar to that mentioned above, for it seems to be a blend of boreal forest culture and the Arctic Small-Tool tradition (Irving, 1957, p. 47); hence, it cannot be compared closely with Complex C. However, the Denali Highway collections made by Skarland and Keim show more consistent parallels. These include side-notched points, comparable forms of biface blades and end scrapers, and probably also a straight-sided, convex-based lanceolate blade (1958, Pl.2:19). The Denali sites are attributed to nomadic caribou hunters, and their age has been estimated to be ". . . at least 2,000, perhaps more than 4,000 years old." (1958, p. 81).

This widespread evidence suggests that Thelon Complex C represents a movement into the central Barren Grounds of a caribou hunting culture that was in some ways distinct and separate from Complex B. As in the case of Complex B, it appears to have had basic affinities with a series of northern

culture complexes that were adapted to bison hunting on the Canadian prairies, caribou hunting on the tundra, and which probably could succeed equally well in intermediate zones of taiga. Judging from the ages of its immediate antecedents lying to the west and south, as far as they can be recognized at present, Complex C appeared in the Thelon country at a later time than Complex B.

Complex D: As noted before, this grouping of sites lacks the relatively sharp definition that characterizes the other complexes in the Thelon area. There is no strong core of culture traits that unites it, but rather a series of anomalies that suggests its separation from the others. The problem of its identity, whether single or diverse, can only be approached through analysis of the several peculiar elements which seem quite unrelated to the other complexes.

First of all, there is the BL-8 site (excluding House 1) with its massive, circular foundation structures. These have many counterparts in various sites in northern Hudson Bay, as for example at Naujan in Repulse Bay (Mathiassen, 1927, Pt. 1, Fig. 22 and pp. 101–2) where Mathiassen linked them with the Thule Eskimo culture; also see Holtved (1944, Fig. 60) for a similar heavy stone ring at Thule, Greenland. At Naujan Mathiassen made a distinction between the "strong" Thule tent rings, which are found at higher levels, and lighter stone rings which generally occur at lower levels and were believed to have derived from post-Thule Eskimo cultures. Also associated with the Thule ruins at Naujan is an unusually large, open type of ring surrounded by heavy stones, that was presumably used as an open-air enclosure for festival occasions (Mathiassen, 1927, Pt. 2, p. 156). At BL-8 we find that Ring 11 is clearly the same type of structure.

Although I did not include the Cemetery Hill and SL-9 sites in Complex D because they are not represented by a sufficient number of artifacts, it is evident that they, too, can be linked with central Thule culture on the basis of their heavy stone rings. In this connection, we must note that the old Thule settlements examined by Mathiassen were customarily situated on old beach-lines that ranged from 12–20 metres above present sea level, a fact that was useful in determining their age (Mathiassen, 1927, Pt. 1, pp. 8–10). However, in the Baker Lake and Schultz Lake area the high elevations of the above three sites cannot be attributed to crustal upwarping, for it is obvious that much older sites exist there at lower levels. Therefore, we must also presume that BL-8, Rings 2–13, Cemetery Hill, and SL-9 were fall or winter settlements built on certain hill tops where a plentiful supply of rock existed, and where the relatively rich cultural accoutrements of the people, including their kayaks, could easily be hauled up by dog sledges. Conversely, it is quite possible that some of the light stone tent rings that we observed on lower beach levels along the lakes were summer camps of the Thule people, although for lack of artifacts this cannot be proved.

In fact, the absence of artifacts in BL-8, Rings 2–13, Cemetery Hill, and SL-9 leaves the case of Thule relationship resting almost entirely on architectural resemblances. The red slate ulu and hammerstone from BL-8, Ring 5, and the stone scraper from Cemetery Hill are very poor aids in this matter, for they would be predictable in a number of arctic cultures, including Thule. The use of slate was fairly common among the latter people, especially for

the women's knives, but I have not observed any exactly similar ulu blades in known Thule materials (cf., however, Mathiassen, 1927, Pt. 1, Pl.19:13, Pl.50:8, and p. 60; other comparable specimens are known from Alaska, as in Mason, 1891, Pl.58:3, and in Greenland, as in Solberg, 1907, Fig. 48). Exact comparison is somewhat difficult because the specimen from BL-8, Ring 5 is unquestionably only partially finished.

The evidence of Thule culture in Baker Lake and the lower Thelon area is supplemented by a few other more isolated trait resemblances in the middle Thelon sites of Complex D. Most of them, in fact, come from a single site, SL-2C. The chipped and ground adze blade, of the type that is lashed directly to a shaft without an intermediate head, is known in the central Thule culture (Mathiassen, 1927, Pt. 1, Pl.48:2; also cf. Pl.20:13 and p. 55), as are the rectangular side blade (1927, Pl.19:10), and the asymmetric side blade for a knife (1927, Pl.19:2,3 and p. 53). The latter type was also found in SL-4 together with a fragment of a hone that is closely comparable to Thule specimens (1927, Pl.47:10–13 and p. 169). The red slate blade or point from BvL-2 appears at Naujan, but the forms are not closely similar (1927, p. 32). However, Mathiassen illustrates a chipped slate point of the same apparent type from Port Harrison, on the east coast of Hudson Bay (1927, Pl.77:6 and p. 289). Finally, a variety of symmetrical bifaced knife is known from Kuk, Southampton Island (1927, Pl.70:3).

This leaves one anomalous occurrence that is most odd, i.e., the offset, or oblique end scraper of BvL-2 (cf. my Pl.8:i and p. 37). As a type, and also because of the chert from which it is made, it was obviously imported into the country, and the only parallels that I know of are in the pre-Dorset levels above 23 metres in Meldgaard's Igloolik site. It is interesting to note that all known specimens of this type are slanted upward from right to left.

In the case of BvL-2 there is still one other factor in the problem of identity. If the tantalizing mixture of Thule and pre-Dorset traits found there affords no clear view of the derivation of this site, the *nangissat* does furnish additional clues.

Porsild (1920) was first to analyse the possible functions and origin of the *nangissat* and other types of artificial stone alignments on the Disko Bugt coast in west Greenland. He found that they existed there in relative profusion near Eskimo settlements and summer campsites, and he was able to determine that they were somehow connected with those sites and not with the Norse occupation of Greenland. In a general sense, the Eskimos played variations of a hopscotch-like game across these alignments, sometimes with handicap loads. Since the time of Porsild's study we have learned, of course, that the Disko Bugt area was occupied by three different Eskimo cultural phases before the day of the modern Greenlander, namely, Sarqaq, Dorset, and Inugsuk, which derived from Thule culture (cf. Mathiassen, 1958, p. 49). Theoretically, then, the *nangissat* could have originated in any one of these phases.

Collins' report of *nangissat* on St. Lawrence Island in Bering Strait (1937, pp. 26, 354–5) was next to appear, and his was the first observation of this trait outside of Greenland. He found at least four of the alignments on the Gambell plateau, and suggested that there were doubtless others on the island. It was not possible for him to identitfy these *nangissat* positively with Old Bering

Sea, Punuk, or modern Eskimo phases there, but he believed that they might have been connected with the Thule culture (1937, p. 356).

Wintemberg (1939, pp. 86–7) then reported a row of *nangissat* on Keppel Island, off Port Saunders on the west coast of Newfoundland, and he attributed it to the adjacent Dorset Eskimo site. I investigated this same site in 1949 but, despite its limited area, I was unable to locate the alignment, a fact which I thought might be explained by 20 years of ice-shove action in Hawke Bay having caused its destruction or burial (Harp, 1951, p. 215). The island *nangissat* in the Beverly–Aberdeen lake narrows is the only one known in the central regions.

Porsild learned in Greenland that modern or recent Eskimos did not use the hopping stones for games or contests, but could recall their former use (Porsild, 1920, p. 300). Similarly, on St. Lawrence Island, Collins was told by Eskimo informants that their ancestors had made and used the alignments (1937, p. 26). Such evidence obviously suggests the not too distant past, in each case, and I believe Collins was correct in attributing the *nangissat* to Thule culture. It seems likely to me that in Greenland the modern-day Eskimos might well remember the customary games and contests of their medieval ancestors, the Inugsuk, who, in their turn, had probably received such traits from their forebears, the Thule people. The earlier Dorset occupation in the Disko Bugt area would have been too far back in the legendary past, for we know that almost 1,000 years passed between the time of the last Dorset inhabitants there and the arrival of the Thule people (cf. Mathiassen, 1958, p. 49).

As for Newfoundland, although there is subsidiary evidence of Dorset culture from the Keppel Island site, we must also note that Wintemberg observed there about six ". . . low circular piles of rough rocks, about 6 feet in diameter . . ." which he thought were probably house ruins (1939, p. 86). This type of ruin has no positive association with Dorset culture, but it does suggest the heavy stone tent rings which are characteristic of Thule culture in the central regions and in Greenland. Hence, its presence in western Newfoundland casts at least a doubt on the purity of the Dorset occupation there. It may well be an indication of Thule influence in the Newfoundland Dorset phase for which we as yet do not have further evidence. Most recently, a possible *nangissat* has been reported from Ellesmere Island, in a site that appears to have been marginal between Inugsuk and Thule cultures in northwestern Greenland (Maxwell, 1960, p. 75). No details are available.

In the light of these observations, I think we may confidently suggest that the *nangissat* were associated with the Thule culture. Furthermore, as additional scattered traits point to a penetration of Thule people into the middle Thelon country, I think we may properly link the *nangissat* to their occupation there.

Complex D, therefore, although lacking clear definition, contains a positive component of Thule culture. It can be assumed that its bearers entered the middle Thelon country via Chesterfield Inlet and Baker Lake for two purposes, the fall caribou hunt, and to collect driftwood for sledge parts, kayak frames, etc. This phase can tentatively be dated from A.D. 1200–1400. The aberrant pre-Dorset type of scraper found in BvL-2 cannot be explained in this context.

VI. Further Interpretations

It is evident from the foregoing sections that at least four distinct archaeological complexes, representing several different cultural traditions, can be detected in the middle and lower Thelon country. Some further elaboration of the facts is necessary now in order to reconstruct the occupation sequence in the area and to examine the possibility that prehistoric cultural diffusion may have occurred there. As before, it seems a useful device to direct the discussion through a series of hypotheses.

Proposition 1: The archaeological complexes of this area can be associated with three different cultural traditions. If we also include the recent inhabitants of the Central Barren Grounds, the Caribou Eskimos, a fourth separate tradition may be added.

In this case I have in mind the concept tradition as it was broadly defined by Haury *et al.* (1956, p. 39): "A tradition is a socially transmitted cultural form which persists in time." In the present context, "cultural form" will mean primarily cultural-ecological orientation; also, the several traditions to be mentioned were probably widely variant both in length of continuity and in regional spread. I shall not attempt any methodical description of these traditions, because I wish mainly to emphasize the fact that certain diverse cultural influences converged on the central Barren Grounds. Furthermore, the present status of arctic "tradition analysis" is controversial, and any consideration of it here would be tangential to the main theme.

Interior Hunting Tradition: Despite the fact that each exhibits a few specialized traits and thus may be identified as a discrete unit, I believe that both Complex B and Complex C derived essentially from a common background. As indicated in the last section, this appears to me to have been a generalized cultural adaptation to the migratory hunting of herd animals in the northern prairies and southerly portions of the tundra. We must assume that the bearers of such a tradition stood somewhere in the ancestral line of historical northern Indians.

In north-central Canada the centre of this tradition probably was in the transitional forest zone, or taiga, where wood for fuel and artifacts allowed a greater potential development of the material aspects of life and made the subarctic winter more tenable. The spear and the lance were probably the chief killing weapons used, and there seems to have been emphasis on various methods of collective hunting, such as by surround, channelled drives, and by ambush at water crossings. The archaeological evidence indicates that this tradition occurred on the Barren Grounds as a result of seasonal sorties in response to the movements of caribou herds during summer and fall. After making such visitations the hunters must have retreated southward or westward to the fringes of the forest, for, if we may extrapolate from ethnographic fact, prehistoric subarctic Indian cultures were no better equipped to winter on the barrens than were their later counterparts. As Birket-Smith has written (1929, Pt. 1, p. 9), ". . . up to the present time this culture [i.e., Caribou Eskimo] is the only one that has made these regions habitable, regions where even the Indian caribou hunters are as helpless as children when the winter cold approaches."

Because of the chronological pattern observed in their probable ancestral backgrounds, and also by virtue of the several superficial differences in their material culture, it can be suggested that Complexes B and C represent two separate phases of this generalized tradition.

Prehistoric Eskimo Tradition: In Complex A there is positive evidence of pre-Dorset Eskimo occupation around the western end of Baker Lake. The major affinities of this point to the several stages of the central arctic Sarqaq culture, and somewhat less directly to manifestations of the same tradition in west Greenland. The extent to which this culture may have penetrated still farther inland is difficult to determine, but at Baker Lake it existed in a context which strongly suggests seasonal caribou hunting. This is quite in accord with the dual inland-coastal nature of most Eskimo groups, past and present, for we know that a majority of them shifted easily and frequently from the ecology of coastal hunting to that of the interior, and back again. Although the outlines of this central arctic pre-Dorset culture are just now emerging, I believe that it may properly be referred to as a major early Eskimo tradition.

Protohistoric Eskimo Tradition: Complex D sites furnished limited data, but their relationship with Thule Eskimo culture seems unmistakable. The sites of this complex were found not only around Baker Lake but also in the deeper interior, and again we may infer with confidence that seasonal caribou hunting was one major reason for their presence there. There is no need to speak further of Thule Eskimo culture here: its importance as a widespread Eskimo tradition, predominantly maritime in character, and the cultural heritage that it bequeathed to recent Eskimo groups in the eastern and western Arctic, are well known.

Historic Eskimo Tradition: Here I refer to the recent Caribou Eskimo groups of the central Barren Grounds who have been extensively described and analysed by Birket-Smith in several most important monographs. The problem of their origins and cultural development will be discussed presently, but, at least as they have been known during the historic past, they clearly stand somewhat apart from virtually all other Eskimo groups because of their almost total dependence on interior hunting. Probably their closest recent counterparts are to be found in the Brooks Range country of Alaska, although in that area there was an interdependence between coastal and inland peoples that was apparently unknown in the central Arctic (cf. Spencer, 1959, pp. 441–2).

Some of the Caribou Eskimos were acquainted with sea mammal hunting on the Hudson Bay littoral, but Birket-Smith has stressed their dominant adaptation to life in the interior barrens. As he states the case (1929, Pt. 1, p. 125), ". . . there are three facts which cannot be reiterated too often: (1) that not even half, probably only about one-fourth, of them are engaged in this hunting at all [i.e., sea mammals], viz. the Harvaqtôrmiut, the coast group of the Pâdlimiut, and two or three families of the Qaernermiut; (2) that even among these, disregarding the Qaernermiut, the hunting only takes place during about two months of the year, June and July; and (3), that it is limited to the walrus and the seal (and of these practically only the bearded seal and the fjord seal), but never comprises either large or small whales." Hence, on the basis of this uncommon specialization of interior hunting, it seems justifiable, to speak of a Caribou Eskimo tradition, assuming that it had some continuity in time and definite geographic scope.

Proposition 2: Because of their association with these different traditions and the considerable time depth inherent in the total occupation sequence the archaeological complexes may properly be characterized as cultural phases and placed in the following historical order.

Phase 1: Earliest occupation of the central Barren Grounds.

Represented by Complex B materials which indicate trait diffusion from early Archaic stage cultures to the south. Believed to have derived primarily from Indian-type cultures of an interior hunting tradition. Beginning some time after 3000 B.C., discontinuous and sporadic in nature, and possibly co-existent or merging with Phase 3 in later stages.

Phase 2: Pre-Dorset Eskimo culture.

Represented by Complex A materials. Derived from the prehistoric, pre-Dorset Eskimo tradition of the central Arctic. Confined chiefly to the western end of Baker Lake, with possibly some penetration farther inland. Oriented to seasonal caribou hunting, but essentially possessing a dual subsistence economy which was also adaptable to life at the coast. Estimated to have first entered the country around 1000 B.C. and believed to have occupied it sporadically, possibly as late as the beginning of the Christian era.

Phase 3: Archaic stage Indian hunters.

Represented by Complex C materials. Derived from the same basic interior tradition as Phase 1, and possibly largely evolved from it and other cultural expressions contemporaneous with this phase. Also a seasonal occupation of the Thelon country, estimated to have occurred sporadically during the first millennium A.D. and possibly later.

Phase 4: Thule Eskimo culture.

Represented by Complex D materials and several additional dwelling sites. A direct transplant of Thule culture probably resulting both from caribou hunting and wood gathering in the middle Thelon lakes district. Mainly a seasonal expression of the dual Eskimo economy. Can be approximately dated from A.D. 1200–1400.

Phase 5: Caribou Eskimo culture.

Represented by materials that are recent or, at most, protohistoric. The culture of the historic Caribou Eskimos has been thoroughly documented by Birket-Smith, and presently I shall discuss its archaeological dimensions, as far as they are now known.

Proposition 3: From the standpoint of human occupation in prehistoric and historic times, the central Barren Grounds has always been a marginal area and not the centre of any significant, indigenous cultural developments.

Because of delayed postglacial events we have seen that this area has not been available to man for much more than the last 5,000 years, and as of 3000 B.C. we have ample evidence that the culture history of the surrounding regions, both arctic and subarctic, was fully under way. Therefore, as shown in Section V, peripheral areas to the north, west, and south were the primary sources of the prehistoric culture phases that we discovered in the Thelon country.

Although the archaeological evidence points to relatively great time depth in man's occupation of this area, this is the result of several distinct phases

which, with some possible overlap, existed at different periods. The archaeological complexes derived from these phases do not afford any sign of prolonged or static occupation, nor is there any indication of cultural evolution there, beyond several examples of trait diffusion. Moreover, following the analyses of Section IV and elsewhere, it is reasonable to infer that, with the partial exception of the historic Caribou Eskimos, these occupations were seasonal in character and oriented entirely to the cyclical summer movements of the caribou herds.

These may seem like re-statements of the obvious, but such emphasis is relevant because this proposition raises two major, interrelated questions: did Caribou Eskimo culture originate, or otherwise evolve, in this area? and what possible sets of relationships might there have been among the several cultures that occupied the central Barren Grounds at different times in the past?

Proposition 4: Caribou Eskimo culture has relatively slight archaeological depth, and there is no clear indication that it existed earlier than the Thule phase in the central Barren Grounds.

We need not review the historical development of the theory of Eskimo origins, for Collins (1954) and Birket-Smith (1959), among others, have given thorough summary treatments of the subject. However, it is interesting to recall that several authorities, including Boas, Murdoch, Steensby, Birket-Smith, and Jenness, at one time or another assigned to the central arctic regions a prominent role in the evolution of the Eskimo people and their culture. Much of this older theoretical structure has been negated during the last thirty-five years of intensified archaeological research, and we now know that Eskimos are fundamentally linked to early developments in the Bering Strait region and adjoining portions of the Old World. In Kroeber's words (1939, p. 25), "Alaska then would be the point of origin – in the sense of point of crystallization – of Eskimo as contrasted with non-Eskimo culture as a whole . . ."

Most closely related to our problems here are specific suggestions that the Barren Grounds was the area of origin for two Eskimo groups who in recent times shifted out to the sea coast: the Copper Eskimos of Coronation Gulf, and the Caribou Eskimos of Chesterfield Inlet and Hudson Bay. Birket-Smith has given us the most up-to-date and carefully phrased treatment of this concept (1959, pp. 176–208), and his proposed developmental sequence for Eskimo culture includes the following stages:

a. Proto-Eskimos: basically inland hunters and fishermen who represented a northern aspect of man's ancient adaptation to the land and its game resources. These, he suggests, ". . . lived as an inland people near the timber-line from Alaska to Hudson Bay" (1959, p. 201).

b. Palaeo-Eskimos: the first truly Eskimo-like adaptation to the sea and sea mammal hunting, with the retention of the older inland hunting practices as one phase of a seasonal, dual economy. In this stage he places such prehistoric Eskimo cultures as Sarqaq, central arctic pre-Dorset, Dorset, and Ipiutak.

c. Neo-Eskimos: With this stage came further refinements in the adaptation to the sea, primarily the development of whale hunting skills. The Thule culture of the central Arctic, its forebears in the western Arctic, and

its derivatives in both east and west, are the diagnostic representatives of this stage.

d. Eschato-Eskimos: Recent groups, such as the Copper Eskimos and the Caribou Eskimos, who, as descendants of the original proto-Eskimos of the interior, advanced outward to the sea coasts and began to take up a life of sea mammal hunting.

I do not wish to argue the merits of this general scheme, but only those of the Proto-Eskimo and Eschato-Eskimo stages, for which my data are relevant. First of all, given our current knowledge of arctic archaeology, I do not believe that we can accept a Proto-Eskimo stage as Birket-Smith has postulated it for the New World. I readily admit that such a cultural adaptation to the forest fringe and adjoining areas of prairie and tundra probably has been repeated many times and perhaps in several areas in man's long history; in fact, I have depended on the same concept in my discussion of an interior hunting tradition and Phases 1 and 3 of the Thelon occupation sequence. I agree, also, that such an adaptation was no doubt characteristic of the most remote Old World forebears of the Eskimos. However, as far as I am aware there is no single bit of evidence that supports it as a discrete stage of Eskimo culture history in the New World. On the other hand, the archaeological evidence reviewed here shows that the interior hunting tradition has undoubted Indian origins.

According to our present understanding of Eskimo development, the earliest known phases of their culture, from northern Alaska to Greenland, were influenced to an important degree by the Cape Denbigh Flint Complex (Giddings, 1949, 1951; Collins, 1954, p. 54). This is not to state that the Denbigh Flint Complex has been identified as Eskimo, although I think that it could be so called, but a number of students have maintained that it was a probable parent of the microblade tradition that extends eastward through the arctic zone (cf., among others, Collins, 1956; Harp, 1958; Larsen and Meldgaard, 1958; Taylor, W. E., 1959). The small-tool assemblages that result from this tradition have a widespread distribution among what are generally considered to be ancient Eskimo horizons. I am aware that positive identification of these manifestations with Eskimo culture rests on somewhat controversial ground, yet they all have to some degree the crucial connection with arctic sea mammal hunting which I believe makes the use of the name Eskimo legitimate. (Birket-Smith, 1959, pp. 177–9, has discussed the niceties of this problem.) However, the main point to be made here is that these prehistoric sites, complexes, or phases, all characterized as Eskimo, are partial expressions of a dual coastal-interior subsistence economy, now oriented toward the sea, now toward caribou hunting in the back country. Except in some few areas of the Arctic Archipelago where caribou have never been available, this dual adaptation was most certainly a basic aspect of Eskimo life.

There is considerable evidence of recent and former Eskimo hunting in the interior (cf., for example, Jenness, 1922; Birket-Smith, 1929; Giddings, 1952; Irving, 1953; Harp, 1958; Spencer, 1959), and we also know that some Eskimo groups approached the tree-line toward the eastern and western extremes of the Barren Grounds triangle to gather wood (Hanbury, 1904; Stefansson, 1914). However, these movements were, so to speak, always within easy striking distance of the coast, and contact with that zone and its people was never

irrevocably cut off. Some of the modern Caribou Eskimo groups may be an exception to this statement, yet they apparently had continuing indirect association with the coast through Chesterfield Inlet.

Thus, I contend that the Eskimo practice of such a dual economy has always been confined to a relatively narrow zone of tundra stretching along the arctic coast, and that there has never been in the New World a Proto-Eskimo stage which was totally interior-directed and which shifted eastward along the tree-line. From this argument it follows that the Eschato-Eskimos, characterized as Proto-Eskimos who left their original interior environment and advanced to the sea, did not exist. Also, from this point of view the Caribou Eskimos are bereft of Proto-Eskimo ancestry. But if they did not in fact derive from such a stage, whence did they come, and who were their forebears? A partial answer to these questions is to be found in the archaeological aspect of their culture.

The immediate and most striking impression one gets on looking into most camps of the modern Caribou Eskimos is that here is a poorly developed material culture that barely exceeds the dictates of mere subsistence. Artifacts seem to include only the most necessary items that are transportable from one camp to another, and when a campsite is abandoned there is virtually nothing left behind except completely exhausted scrap and a pile of rusting cans. This does not mean that the people are less careless about lost or misplaced possessions, nor cleaner or more orderly than other Eskimos; they simply do not have a surplus of goods to forget. As in all groups, one sees here the occasional entrepreneurial character who has amassed wealth, but he is the exception to the rule. Some of this apparent poverty can no doubt be attributed to the haphazard acculturation they have undergone, but, of course, it stems chiefly from basic patterns that are requisite to a traditionally nomadic society.

The older campsites preserve this same impression of scarcity, and ethnological specimens are few and far between. We obtained a total of 12 from two of the largest concentrations of recent Caribou Eskimo tent rings. Five came from the vicinity of BvL-3 where close to 25 tent circles and 6 recent graves were observed (p. 22): a badly deteriorated ladle of muskox horn, an iron-bladed ulu with crown-type wooden handle, a bone fish lure, and two wooden drum beaters. Seven other specimens were collected near AL-7, these were a tip fragment of a spruce bow, a section of platform matting made of dwarf birch twigs bound together with sinew, a bone ring from a ring-pin toss game, a wooden snow scraper, a lozenge-shaped wooden button for a woman's dress, a wooden snow knife haft containing a fragment of broken iron blade, and a caribou antler moss digger. Further description of these artifacts would add nothing to the excellent account Birket-Smith has given of Caribou Eskimo material culture. The important point is that no directly antecedant base could be identified for this recent or protohistoric Caribou Eskimo horizon, for in the above sites which yielded ethnological specimens there was no positive, or stratigraphic, association with chipped stone technology.

There are, however, other varieties of trait linkage which seem to bear on this problem:

a) Six sites, BL-12, Cemetery Hill, SL-1, AL-2, AL-6, and AL-8, had direct associations of quartzite chips and a few chipped artifacts with recent-looking

tent rings, although, as I have observed, they give us no consistent picture of cultural identity.

b) Eight other sites, BL-18, AL-3, AL-9, BvL-2, BvL-3, BvL-5, BvL-13, and GL (upper), also had recent tent rings, but in their case traces of stone technology were merely adjacent to the rings and less clearly related to them.

When we examine the suggested phase relationships of the above sites a faint pattern emerges. Four of them, BL-12, Cemetery Hill, AL-9, and BvL-2, belong to the protohistoric Thule phase, while two others, AL-6 and GL (upper), have been linked with the Archaic Indian phase.

We cannot draw firm conclusions from evidence such as this which is partially negative and probably incomplete, but certain inferences should be permissible. We seem to be dealing here with a cultural phase which apparently had very little depth in time; we may presume that chipped stone technology was only a minor component of its total material inventory; and there are hints of relationship with the Thule phase, and at least a possibility of contact with, or diffusion from, the Archaic Indian phase. Furthermore, I think it may be suggested that some of the other sites I tentatively attributed to the Thule phase, particularly several which did not contain heavy stone tent rings, could well have derived from Caribou Eskimo occupation.

Such probationary approaches are supported, I believe, by other types of evidence. For example, the Caribou Eskimos have been identified with the Inupik division of Eskimo language (Swadesh, 1951; Birket-Smith, 1959, p. 202) which includes all the dialects from Bering Strait to Greenland. Further, as Collins states (1954, p. 34), "The explanation of the remarkable uniformity of the Eskimo language from north Alaska to Greenland is probably to be found in the movements of the Thule Eskimos, the basis for the uniformity having been established when the Thule people first moved eastward from Alaska to Greenland, and further strengthened by a later movement or movements in the opposite direction." Birket-Smith agrees with this interpretation, saying (1959, p. 201), "We may take it for granted that the Neo-Eskimos, including the bearers of the Thule Culture, spoke not only Eskimo but more particularly an Inupik dialect". In linguistic terms alone, therefore, the Caribou Eskimos can only be identified with Thule culture.

From a broader ethnographic point of view, we may also note that the Caribou Eskimos are firmly linked together with the Copper, Netsilik, and Iglulik bands in a distinctive Central Eskimo grouping which stands clearly apart from other Eskimos because of its strong inland stamp (Birket-Smith, 1945, p. 274) and extreme specialization of winter activities (Collins 1954, p. 127). The Caribou Eskimos have the maximum interior-orientation to be seen in this group, but their recent culture ". . . also includes a rich inheritance from the Thule period" (Birket-Smith, 1959, p. 196).

Birket-Smith accounts for this situation by suggesting that the Central Eskimos represent the Eschato-Eskimo people, originally derived from the interior Proto-Eskimo stage, who shifted out to the coast, and ". . . simply took over from their predecessors on the coast all elements necessary to their maritime way of living" (1959, p. 196). He considers the Caribou Eskimos to be the last remnants of the Proto-Eskimos who remained in the interior while a majority of the Central Eskimo bands became more or less adapted to the sea. He also concludes that the Caribou Eskimos must be very old because

80 per cent of their total culture traits are held in common by all Eskimo groups (1959, p. 197).

In my opinion, the story must be interpreted in another way, and I believe that this fresh combination of evidence supports Mathiassen's earlier contention (1930) that the Caribou Eskimos were descended from the Thule people. If we assume that the Barren Grounds occupation sequence developed essentially as I have traced it, at least in the central Thelon region, then we see no evidence of Caribou Eskimo ancestry in the interior. On the other hand, it seems most probable that the culture of these people was a resurgence of the inland aspect of the age-old and almost universal dual economy of the Eskimos, in this case stemming from the central arctic Thule culture.

Birket-Smith was probably correct in suggesting that when late crustal upwarping occurred in the central regions, thus causing shoal seas and restricted whaling grounds, the Thule culture, which depended in large measure on the hunting of such animals, must have been weakened and forced to move out to more profitable sections of the coast (1959, p. 196). In such a period of change and stress, it would seem entirely natural to me that some of the people, already adapted as they were to seasonal caribou hunting, should turn for increased sustenance to the rich and proven food resources of the Barren Grounds herds. To the extent that they emphasized anew the interior aspect of their economy and showed increased dependence on their inland hunting skills, they would gradually, I think, have sloughed off coastal hunting practices that were no longer functional or rewarding. The five hundred years, or twenty-five human generations, from then to now were surely sufficient for both cultural regression and the new intensification of interior hunting that have been observed in some of the latter-day Caribou Eskimo bands. When we correlate the data available from archaeology, ethnography, and linguistics, I see no other reasonable interpretation.

Proposition 5: The archaeology of the Thelon country tentatively suggests that some prehistoric contact occurred between coastal and inland peoples and that selected trait diffusion resulted.

Viewing the several prehistoric cultural phases in broad perspective, we see that Indian occupation of the central Barren Grounds on a seasonal basis persisted sporadically from their very first entry, perhaps as early as the second millennium B.C., down to the recent past. This continuum would include Phase 1, merging with or into Phase 3, and, I suggest, their ultimate descendants, the Etthen-eldeli band, or Caribou Eaters, of the present Chipewyan. The latter, at least as early as the time of Mackenzie, thought of the Barren Grounds as their native country (Birket-Smith, 1930, p. 14).

The Eskimo occupations, on the other hand, were more markedly discontinuous: a pre-Dorset phase in the first millennium B.C., followed, after an apparent gap of 1,000 years or more, by a second phase, the Thule, which began around A.D. 1200 and continued down to the present through the medium of its derivative, the Caribou Eskimos. In these terms, it would appear that some potential for contact and diffusion existed first between the pre-Dorset Eskimo phase and the Indians of Phases 1 and 3, and again later from the Thule phase to the present day.

There is good historic evidence of contact and diffusion between recent Indians and Eskimos in this area, as Birket-Smith has shown (1929, Pt. 2, pp.

32–41). A number of traits in late Caribou Eskimo culture, among them the monitor pipe, conical tent, and snowshoes, are directly traceable to the Indians. Particularly, these seem to have been received from the Cree when that tribe occupied more country west of Hudson Bay, and there has been continuing diffusion from the Chipewyan during the past two hundred years, after that tribe expanded across the southern barrens to Churchill in the second half of the 18th century. But what of the earlier node of potential contact between coastal and interior groups in the first millennium B.C.?

This is a crucial question, because a number of students have suggested that significant diffusion might have occurred between coast and interior in the area west of Hudson Bay. Specifically, this has been stressed with reference to Dorset Eskimo culture (Taylor, W. E., 1959, p. 41; also cf. Meldgaard, 1960, p. 75, who remarks that Dorset culture "smells of forest"). The present investigation, however, did not discover any traces of Dorset culture in the Thelon country, and hence it may be presumed that Dorset did not penetrate to the western end of Baker Lake, about two hundred miles inland from the coast of Hudson Bay.

Taylor has also suggested (1959, p. 41) that the Indian cultures east of Great Slave Lake, particularly the Lockhart River Complex, may have contributed certain traits, including side-notched points, to the Dorset inventory. Therefore, it is important to recall that materials related to the Lockhart Complex comprise Thelon Phase 3, and this is in a geographical position which makes potential contact with Dorset at least feasible. However, with no evidence of Dorset at hand, we cannot believe that these two traditions could have met there.

On the other hand, perhaps the pre-Dorset Phase 2 could have served as an intermediary agent of diffusion between them, for there are at least two sets of trait resemblances which point to the possibility of contact between pre-Dorset Phase 2 and the Interior Hunting Phases 1 and 3. First, there is the pick-like tool found in SL-2D (my Pl.4:a and p. 32) which has a close counterpart in Knuth's palaeo-Eskimo collections from Pearyland (Danish National Museum No. L1-6517). And second, there are the small chipped adze blades in BL-8, House 1, and BvL-4 which appear to represent a single type (cf. my Pl.1:j and p. 27 with Pl.9:e and p. 37). Both of the above forms are sufficiently rare, I think, to warrant emphasis of this apparent association. The curious fact is, however, that the chipped stone pick links pre-Dorset with what I have considered to be the earliest of the Indian phases, whereas the adze blades suggest a tie between pre-Dorset and the later Indian phase. If one were to hold these affinities as valid evidence of diffusion, the necessary effect would be to foreshorten the time span allotted here to the two phases of Indian occupation. That might be a realistic development. I would also suggest that, if these two trait diffusions did in fact occur, the elements were received from pre-Dorset Eskimo culture and incorporated into the Indian cultures.

In sum, this evidence does not weigh heavily on the scales, and we can only say that it presents a possibility. Although I have a subjective impression that some real diffusion did occur in central Keewatin at that early time level, the two examples cited above constitute the only data that support it. At the same time, we cannot yet rule out Taylor's suggestion that Archaic Indian cultures may have contributed something to the Dorset Eskimos through

contact in this region: there is still Chesterfield Inlet and the coast of Hudson Bay lying almost two hundred miles east of Baker Lake. These areas are still archaeologically unknown, and the evidence from the deeper interior suggests that Dorset culture was more closely associated with the sea coast. As for other more generalized likenesses between early inland and coastal cultures of the North American arctic and subarctic zones, it appears to me that we must look back to the far northwest, and even beyond to the Old World, for the ultimate circumpolar culture base that was founded on man's early adaptations to life in cold climes.

VII. Summary

The archaeological survey reported on in this study was carried out in central District of Keewatin, Northwest Territories, during July and August of 1958, in an area extending from the western end of Baker Lake up the Thelon River for a distance of about 150 miles. Forty-two sites were discovered, four others, previously known, were worked in, and 734 specimens were collected, virtually all of them made of chipped quartzite.

The sites included habitation areas, a number of which had stone tent rings or other house foundations, and look-out workshop areas. The former were situated at various elevations ranging from recent lake beaches up across a series of old raised beach-lines, whereas the latter were generally associated with high ridges and hill tops. All of the sites were clustered in the vicinity of the several narrows that constrict the chain of lakes in the middle Thelon.

Analysis of the data shows that four prehistoric archaeological complexes are represented in the area and that these can be related to three different cultural traditions: early Indian hunters based in the taiga, prehistoric Eskimos, and protohistoric Eskimos. The historic Caribou Eskimos who inhabited the country most recently may be considered a fourth modern tradition.

The following major conclusions derive from the analysis:

1. The central Barren Grounds have always been a marginal area and never the centre of any significant cultural development.
2. The Thelon area was not inhabited until some time after 3000 B.C.
3. There have been five cultural phases in the occupation sequence:
   a. Early Indian hunters exhibiting limited trait diffusion from Archaic Stage bison-hunting cultures on the High Plains.
   b. Pre-Dorset Eskimos from the central arctic region.
   c. Later Archaic stage Indian hunters from the interior.
   d. Eskimos of the Thule culture.
   e. Recent Caribou Eskimos.
4. All of these occupations were sporadic and based primarily on the summer hunting of caribou, except some bands of Caribou Eskimos who dwelt in the country the year around.
5. The Caribou Eskimos are the descendants of Thule people.
6. In addition to historically documented cultural diffusion among recent Indians and Eskimos in the area, there is slight evidence of contact and diffusion between the Indian phases and Eskimos of the pre-Dorset phase.

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АВТОРЕФЕРАТ

Данные археологические исследования были произведены в центральной части Кеватина, Северо-Западные Территории, в течение июля и августа 1958 года. Исследованный участок простирается от западного конца озера Бэкер вверх по течению реки Телон на протяжении приблизительно 150 миль. Были обнаружены 42 стоянки, 4 ранее известных были тоже исследованы, и было собрано 734 образца.

Поселения включали жилища с кольцеобразными каменными основаниями для палаток или же фундаментами иного типа, а также наблюдательные пункты и мастерские. Первые были расположены на различных уровнях, начиная от современных берегов озера, вверх по сериям поднятых древных берегов, в то время как последние были приурочены к высоким кряжам или вершинам холмов. Все поселения были сконцентрированы возле нескольких узких частей реки, которая расширяясь образует ряд озер в среднем течении реки Телон.

На основании анализа полевых данных можно сделать следующие выводы:

1. Центральная часть Баррен Граундс всегда была краевой зоной и никогда не была центром развития какой-либо значительной культуры.

2. Область реки Телон не была обитаема вплоть до некоторого периода после 3000 лет до нашего эры.

3. В порядке заселения существовали 5 культурных периодов:

а. Ранние Индейцы-охотники с некоторыми чертами влияния архаической стадии культуры Охотников на бизонов с Плато-Прерий.

б. Пре-дорсетские Эскимосы из центральных арктических районов.

в. Индейцы-охотники поздне-архаического периода из внутренных участков страны.

г. Эскимосы культуры Туле.

д. Современные Карибу-Эскимосы.

4. Все стоянки были спорадическими, основанными главным образом на летней охоте на карибу, за исключением нескольких групп Карибу - Эскимосов, остававшихся в этой местности круглый год.

5. Карибу-Эскимосы являются потомками народа Туле.

6. Помимо исторически документированной культурной диффузии между современными индейцами и эскимосами этой области, есть некоторые признаки контакта и диффузии между индейскими фазами и эскимосами Пре-дорсетской фазы.

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