

Preliminary Report on the Archaeology of the Queen Charlotte Islands: 1969 Field Season

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INTRODUCTION

The Queen Charlotte Islands off the northern coast of British Columbia are separated from the mainland by the 45 to 110 mile wide shallow and treacherous waters of Hecate Strait. The islands were historically the home of the Haida Indians. Living in large, densely populated, coastal villages, the Haidas are known for their complex social organization, skill in tracking and war, and their achievements in material culture, particularly sculptural and graphic art. The economy of the Haida was closely tied to the salmon and the marine resources of shellfish and halibut (Dawson 1880). The Haida language may be distantly related to that of the Tlingit of Southeastern Alaska and to Athabascan of interior Alaska. No recent glotto-chronological studies have been undertaken on the time depth of separation of these languages, but pioneering work by Swadesh (1951) suggested a greater than 5,000 year divergence between Haida and Athabascan.

In 1967 I was a member of the National Museum of Canada field party directed by G. F. MacDonald which test excavated a shell midden west of Queen Charlotte City near the mouth of the Honna River. Two C-14 dates were obtained from samples near the bottom of the deposit: 3040 ± 100 B.P. and $3,300 \pm 100$ B.P. The artifacts recovered were all of either bone or pecked and ground stone and are generally similar to artifacts from much the same time period in the Prince Rupert harbour area (MacDonald 1969). Forty sites were discovered by this survey. Previous archaeological work in the islands had produced nothing earlier than late Haida artifacts (Duff and Kew 1957: 37-74). The following report describes excavations and survey under my direction between May 18 and September 5, 1969 for the University of Calgary.

During the summer of 1969 the 70 miles of road between Masset and Queen Charlotte City were re-examined and resulted in the discovery of

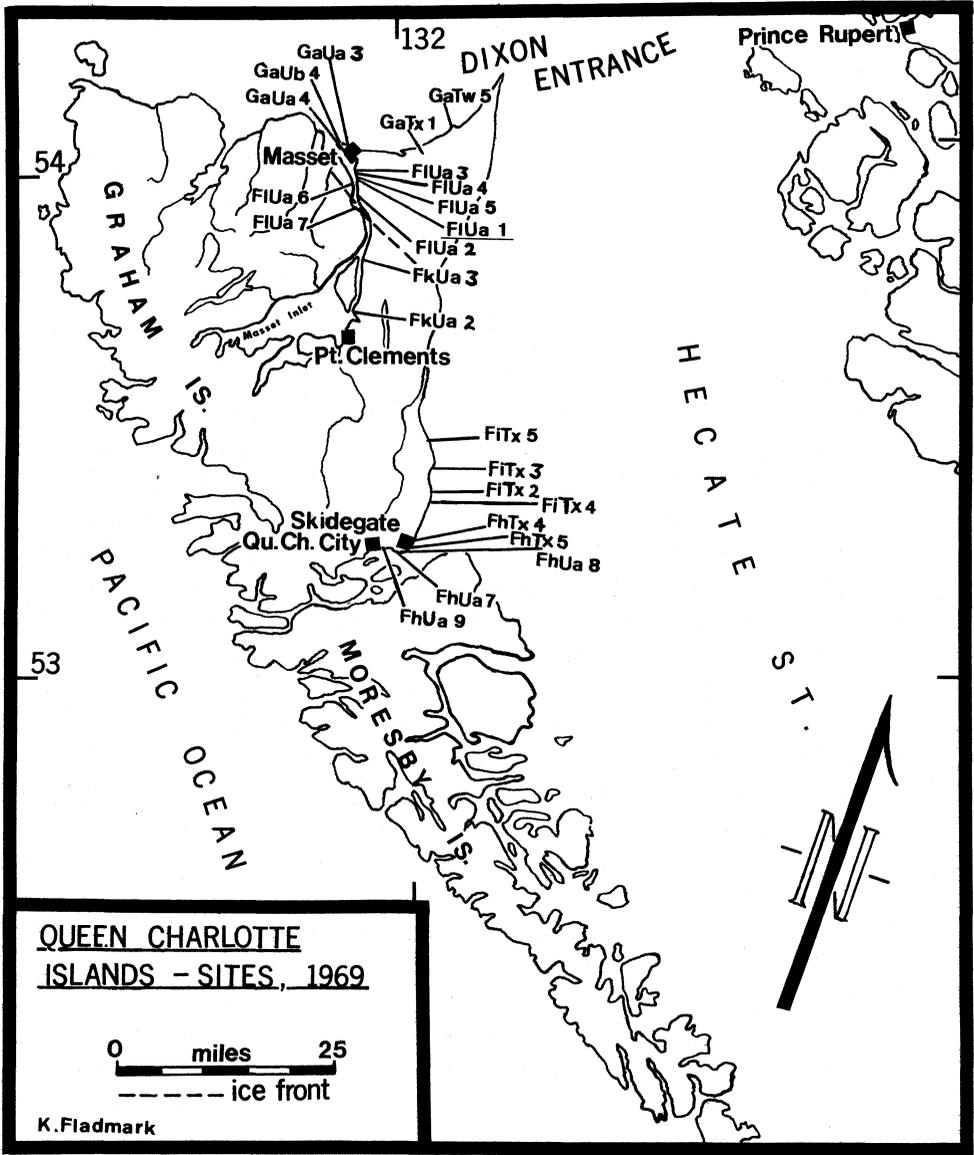


FIG. 3. Archaeological Sites in the Queen Charlotte Islands.

22 additional sites. These were surface collected, examined for surficial features, and in some cases topographically mapped and test excavated. Our principal efforts were directed at FIUa 1 located in 1967.

FIUA 1 — SKOGLUND'S LANDING

The Skoglund's Landing site is located 3.6 miles south of Masset on the east shore of Masset Sound, Graham Island (53 degrees, 57'N., 132 deg. 7'W.). The site area lies east of the road between Masset and Port Clements, opposite a log dump and barge wharf locally called Skoglund's Landing. Cultural remains were found over an area of 160 x 60 meters. The ground surface in this region ranges from between 14 and 17 meters above mean high tide and was originally heavily timbered. Construction activity had resulted in the clearing of standing timber and the removal of vast quantities of fill. Those areas undisturbed by earth removal operations still maintain the stumps of the original spruce timber up to nearly 3 meters in diameter, while most of the disturbed portions are covered by a dense growth of alder. The original ground surface of the site probably sloped gently from a high point 900 meters southeast of the site, 122 meters above sea level, levelling out past the northern end of the site to an average elevation of 7-8 meters.

Excavations at the site totalled 17½ 2 x 2 meter pits, accomplished with a crew of one paid member and 2-3 volunteers. Pits were orientated to bisect the main cultural deposit in a north-south line and, for ease of description, can be divided into four excavation areas termed A, B, C and D, respectively (See Figure 4).

Stratigraphy

The cultural and geological strata of the site can be divided into four principal units. From highest to lowest these will be designated I, II, III, and IV (See Figure 4).

Zone I: This unit suffered the most extensively from recent construction activity and was encountered to its full depth only in excavation area B and in the walls of the nearby gravel pit. The principal structural components consist of varying grades of sand and silt arranged in finely stratified bands or laminae. Although the general trend of the strata is to dip gently from south to north the pattern is frequently interrupted by marked convolutions taking the form of loops, faults and dykes. The total depth of zone I averages about 2.5 meters and this in turn is capped by up to 1 meter of litter-mat. The base of zone I is usually marked by a

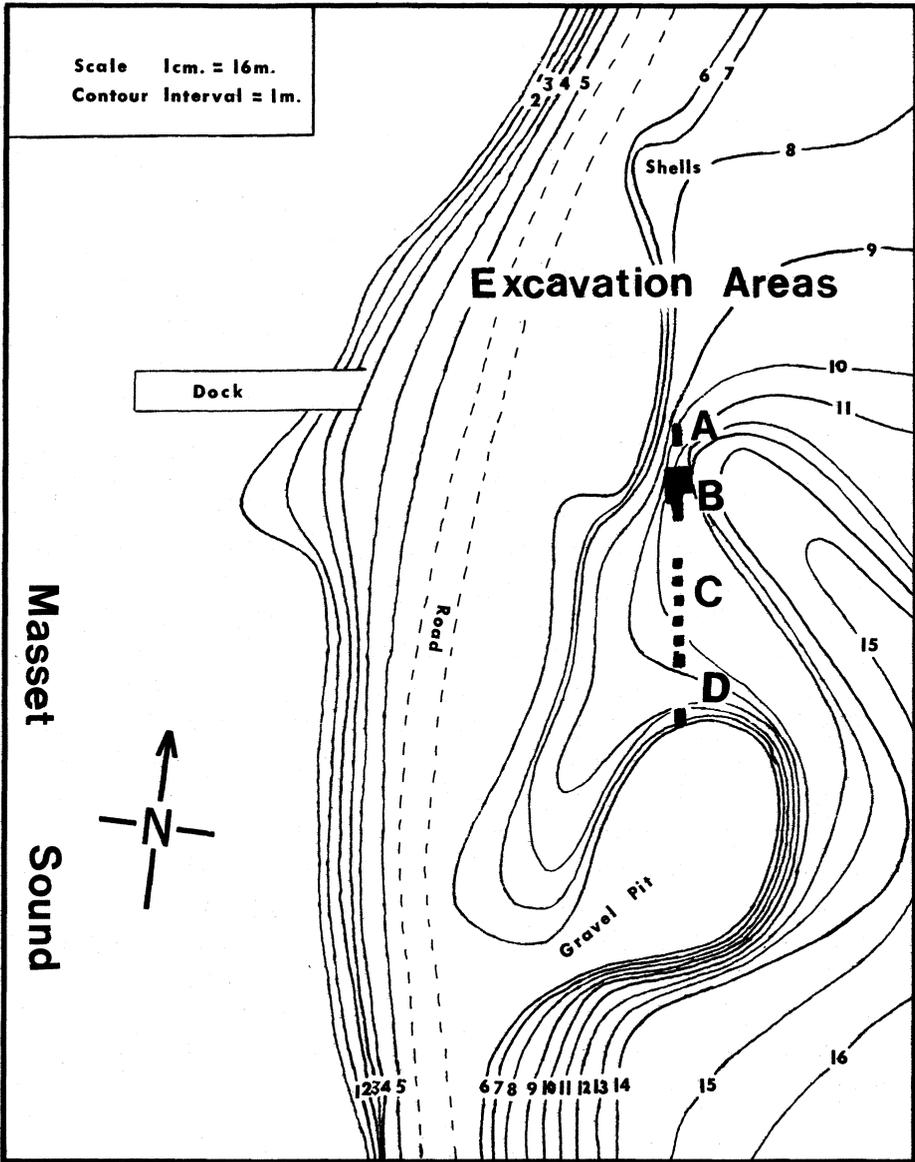


FIG. 4. Skoglund's Landing.

heavily contorted layer of dark silt or muck mixed with quantities of wood fragments, cones and more delicate vegetal materials. Two species of tree have so far been identified by Dr. L. V. Hills: *Tsuga heterophylla* (western hemlock) and *Picea sitchensis* (sitka spruce). Both are common to the present coastal strip and have been important members of the Charlottes biome since 8,000 B.P. (Heusser 1960).

Zone I: is totally devoid of cultural remains and is probably caused by slope-wash from the higher point of land to the southeast (L. V. Hills, N. Rutter, O. Hughes, pers. comm.). The phenomena of movements of large blocks of unconsolidated sediment with little loss of internal stratigraphy is attested to in areas of moderate slope, but relatively heavy rainfall. A similar problem has been encountered in some of the supposedly early sites of the California coast, where a deeply buried cultural component has been found to be covered by slumped material from nearby sea-cliffs (Meighan 1965: 718).

Zone II: Zone II is the principal cultural level of the site and directly underlies the dark silt or muck stratum of zone I. The main structural component of zone II consists of a moist, dark brown, heavily organic and acidic, sandy soil mixed with quantities of pebbles. It was encountered with little variation in excavation areas B, C, and D. Although stratigraphic continuity can be traced into excavation area A, there the cultural zone contains far larger percentages of sand and small pebbles. This zone does not exhibit as marked convolutions as the upper unit, and maintains its stratigraphic continuity throughout the excavated portions of the site, except where broken by recent disturbance. The interface between zones II and III is marked in excavation areas B, C, and D by a 1 cm. thick, sheet-like, ferric oxide deposition, notable for its rock-hard consistency. Zone II averaged about 15 cm. in thickness and mainly derives from the organic horizon of a buried soil profile (Hills, Rutter and Hughes, pers. comm.).

Zone III: This zone consists of two sub-units. The upper level is composed of an average depth of about 80 cm. of yellow, iron-stained, magnetite bearing sand, containing in its top 20-25 cm. evidence of leaching associated with the above mentioned soil development. This interdigitates with underlying strata of medium coarse, iron-stained, rounded gravel. This portion is exposed to its maximum depth only in one wall of the gravel pit where it achieves a total thickness of about 5 meters. Four stone-ringed hearth features were uncovered in the magnetite sand level and artifacts were found within it and the gravel strata.

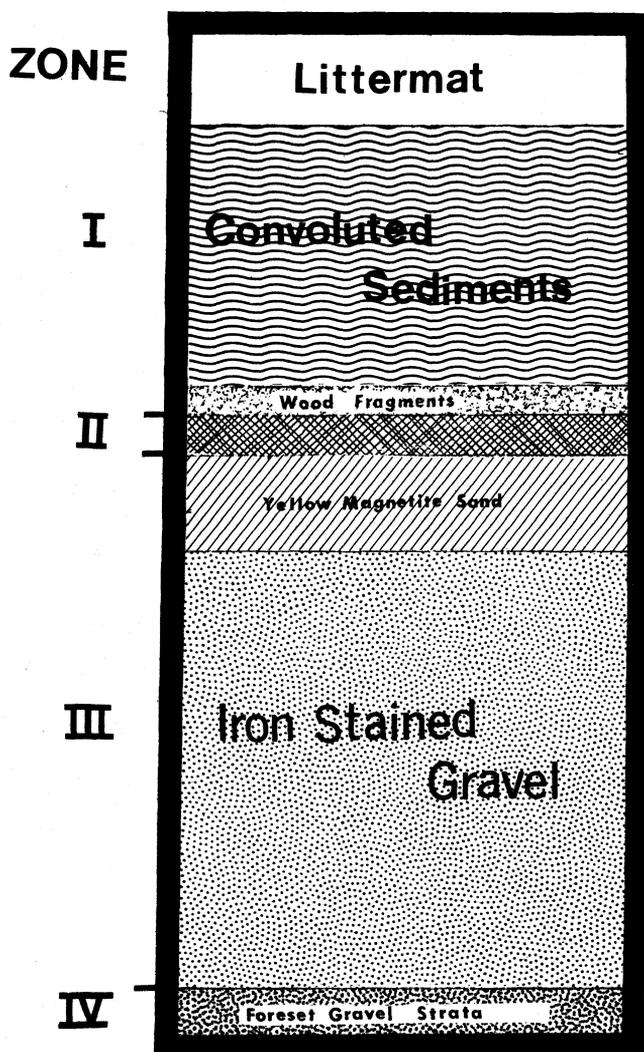


FIG. 5. Ideal Stratigraphic Section at FIUa 1.

Only 1½ excavation units penetrated into the basal gravels, and these went no deeper than about 30 cm.

Zone III, according to Hills, Rutter and Hughes, resulted from the reworking of a previous glacial outwash deposit by the water of the ca. 8,000 B.P. raised beach level. The same zone had previously been identified by Hugh Nasmith, one of the two modern Pleistocene geologists to have worked on the islands, as a primary glacial outwash deposit. Considering the lack of cut and fill features in the strata, the relatively good sorting, and the open-work nature of the sand and gravel lenses, the raised beach hypothesis would seem, at the moment, most plausible.

Zone IV: Exposed in a small section of one wall of the gravel pit is the top one meter of a geological unit underlying zone III. This consists of coarse gravels similar in size to those in the superior zone, but somewhat less well sorted and arranged in steeply dipping foreset beds, inclining sharply downwards from south to north. No cultural remains have so far turned up in this zone, although it must be noted that it enjoys the least exposure of any of the major stratigraphic units. It has been suggested that zone IV represents a portion of the original outwash deposit from which the beach strata were eroded.

Artifacts — Zone II

A total of 1,197 artifacts and flakes were catalogued from FIUa 1. Of these 30 were surface finds and hence out of context, and 20 were recovered from zone III. Of the remaining 1,147 artifacts and flakes, excavated from zone II, 714 are considered to be detritus, or the waste products of artifact manufacture. The other 433 pieces are classified as artifacts and are divisible into a number of types. Future work may require revision of these types.

1. *Unifacially Retouched Flakes:*

The largest single category of artifacts from the Skoglund's Landing site consists of flakes, of varying forms, unifacially retouched on one or more edges. This group, which includes 210 artifacts, or 49.1% of the total zone II assemblage, can be subdivided on the basis of shape and extent of the retouched edge, resulting in the isolation of the following nine distinctive sub-types:

(a) *Semi-Lunar:*

This group includes 44 artifacts characterized by a symmetrically curving retouched edge (Fig. 6a). Ranging in size from 10.5 x 8 cm. to

2.0 x 1.5 cm., they are manufactured entirely on flakes of non-vitreous basalt, the main sources of which are in the Masset Inlet area.

Almost invariably, the retouched edge occurs on the *thinnest* portion of the flake, a feature which generally distinguishes these artifacts from the typical end-scrapers found in the interior of British Columbia and elsewhere, and which otherwise compare rather closely with this category of retouched flakes. While some of the artifacts included in the semi-lunar sub-type are small with fairly sharply curving edges, others have a more flattened edge and are rather large. Some of these specimens resemble in shape the "ulus" or semi-lunar fish-knives used historically by the Indians of the Northwest Coast and the Eskimo; the fact that these artifacts are unifacially retouched does not necessarily preclude their effectiveness as cutting tools. An interesting feature of many of the specimens, which may have significance to a functional interpretation as knives, is the frequent occurrence of either large areas of cortical surface, or wide, flat flake scars along the top (opposite to retouched edge), which serve to blunt or back their portion of the artifact, possibly to facilitate a hand grip.

(b) *Asymmetric Convex:*

Included in this grouping are 37 artifacts exhibiting a sharply curved cutting edge, with one arm of the angle through the curve markedly longer than the other (Fig. 6b). These specimens range in size from 6.8 x 4.3 cm. to 2 x 1.5 cm. and are manufactured entirely on basalt flakes. Like the semilunar forms this group carries the retouching on the thinnest edges of the flake, away from the bulb of percussion and also exhibit the same backing features.

(c) *Straight Edge:*

This category includes 34 basalt and chert flakes with straight to slightly concave unifacially retouched edges mounted in varying positions relative to the long axis of the flake. Size range is between 7.5 x 7.0 cm. to 1.75 x 1.5 cm. and as with the other forms the retouched edge is always on the thinnest portion of the flake (Fig. 6c).

(d) *End-Struck:*

An interesting class of artifacts is represented by 27 basalt and chalcidony flakes which have had longitudinal spalls struck off along one or two edges. The resulting naturally concave fracture scar creates a strong, sharp edge, parallel to the long axis of the flake. At least 11 of these

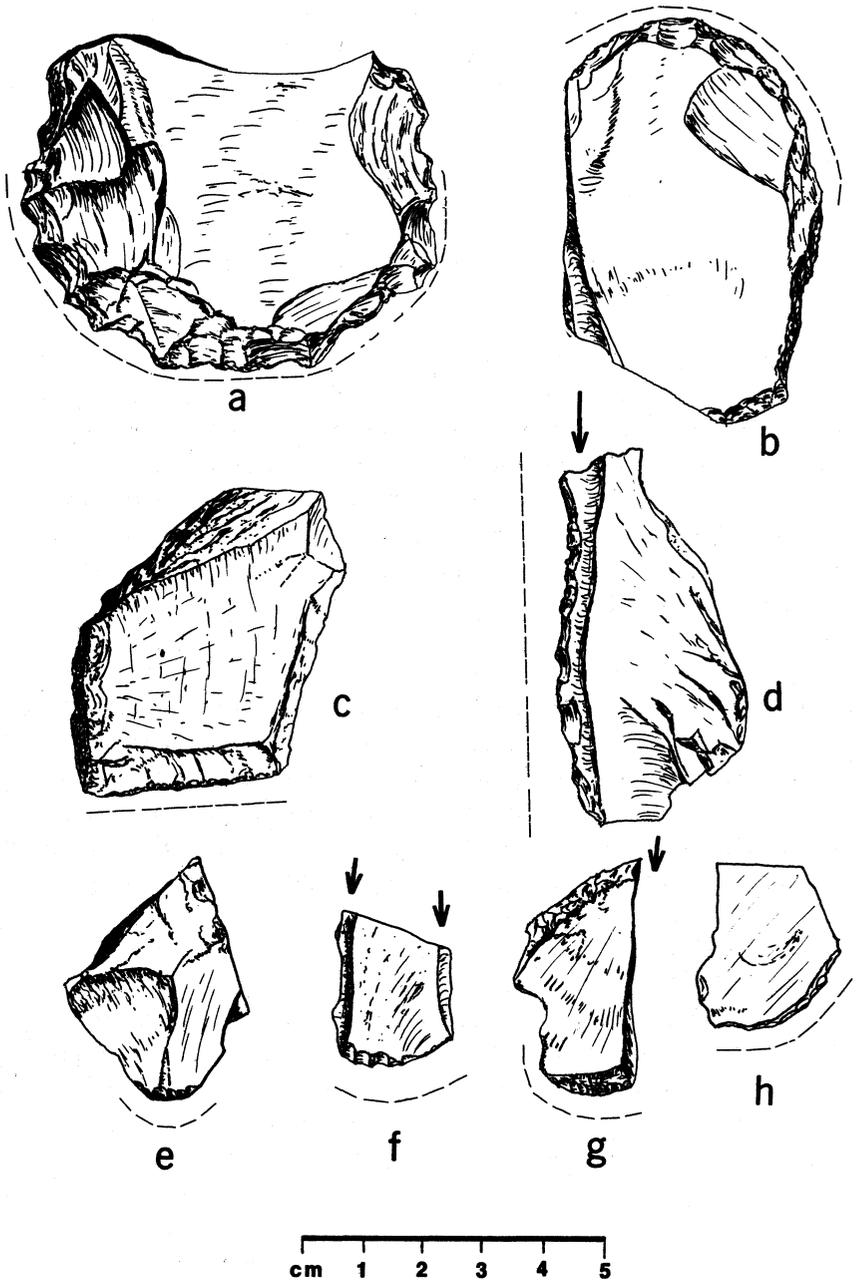


FIG. 6. Types of Retouched Flakes—FIUa 1. *a*, semi-lunar. *b*, asymmetric convex. *c*, straight. *d*, end-struck. *e*, nosed. *f*, Bi-segmented. *g*, uni-segmented. *h*, vertical convex.

artifacts exhibit obvious secondary flaking along this edge with the small flake scars, in some cases carrying inwards from the face of the flake on to the longitudinal scar (Fig. 6d), and in other instances orientated from the longitudinal scar on to the face of the tool flake.

No apparent purpose would seem to be served by the deliberate re-touching of the longitudinal flake scar and it is suggested that the secondary flaking results from heavy usage of that edge, in a scraping or scouring fashion.

The similarity of the process used to produce the initial end-struck spall to that involved in the manufacture of burins is apparent; in one specimen there is even evidence of two hing-fractured re-sharpening flakes which failed to carry the length of the artifact. In no cases do these artifacts seem to be the result of bi-polar, or piece esquille technique. A paper presented at the recent Northwest Anthropology Conference offered a functional interpretation of Donnelly burins from Alaska as scrapers (Mauger 1969). It may be that at FIUa 1 we also have evidence of a burin-technology used to produce scraping tools. At least five elongated, triangular in cross-section, spalls exhibiting battering on only one end, are probably the bi-product of the manufacture of end-struck retouched flakes (Fig. 7f).

(e) *Nosed:*

This sub-group includes 25 basalt flakes each carrying a short, sharply curving, unifacially retouched edge on one extremity (Fig. 6e). These forms grade into more sharply pointed, or rostrate, types which will be described below under the heading of flake graters. It would seem likely that the nosed retouched flakes functioned in a grooving or gouging fashion. They range in size between 7.0 x 5.5 cm. and 2.0 x 1.5 cm.

(f) *Bi-Segmented:*

Twenty-one unifacially retouched basalt flakes are included in this category. Each carries a relatively short convex edge which has been truncated, or segmented, by longitudinal fractures (Fig. 6f). These fractures seem to be deliberate in most cases, although in some instances they may be the result of the multiple fracture of a retouched flake of the semi-lunar type. Blows have either been struck longitudinally, in the manner of the end-struck flakes, or a lateral impact has resulted in the snapping of the original flake into segments. These artifacts range in size from 7.0 x 4.0 cm. to 2.0 x 1.0 cm., and once again, the retouched edge is produced on the thinnest edge of the flake.

(g) *Uni-Segmented*:

The 13 basalt flakes in this category possess areas of secondary flaking which merge into the unretouched flake edge at one end and are truncated by a longitudinal fracture at the other end. The result is a worked edge mounted asymmetrically on a flake whose opposite edge is thick and blunted by the longitudinal scar. Such a device allows the unhindered application of finger pressure against the back of the artifact, improving its efficiency in a carving or cutting function. These range in size between 4.0 x 3.5 and 2.0 x 1.5 cm. (Fig. 6g).

(h) *Vertical Convex*:

Six basalt, chert and chalcedony flakes have been retouched in a unique manner, requiring their segregation as a discrete sub-group. These artifacts have been worked by a series of steep, short, hinge-fractured flakes along their thickest margin to produce a gently convex edge, angled nearly perpendicularly to the plane of the flake. One of the intersections between edge and face also exhibits marked tertiary crushing, apparently from heavy use. The purpose of this specialized flaking technique is obscure, although the artifacts would probably function effectively as scrapers. They range in size between 5.1 x 3.8 and 2.8 x 1.5 cm. (Fig. 6h).

(i) *Lateral Edged*:

Although only three artifacts form this sub-group, they possess characteristics which make it impossible to include them within any of the other sub-groupings. The lateral edged type carries a slightly curving retouched edge along one of the long sides of a basalt tool flake, whose natural shape produces a projecting "tang". In one case the tang is partially shaped by secondary chipping (Fig. 7a). These range in size between 6.0 x 3.7 and 3.5 x 2.0 cm.

2. *Pieces Esquille and Spalls*:

Many of the flakes from FIUa 1 exhibit signs of having been produced, or altered, by a process of bi-polar percussion. In a report on the Debert paleo-Indian site, G. F. MacDonald (1968: 85-6) describes pieces esquille in the following way:

... in form generally rectangular and exhibit bipolar flaking from paired crushed and battered surfaces. Primary flakes driven from both faces by direct hard percussion exhibit extreme concentric ripples emanating from

the point of percussion. On the edge opposite the primary platform, multiple short flakes are driven back on both faces, the results of force reflected by a hard anvil.

Twenty-four complete specimens from FIUa 1 conform to the above description. Unlike most of the artifact types, only 6 of these are made of basalt, the rest being manufactured of fine cryptocrystalline chalcedony or chert (Fig. 7d).

Seventy-eight piece esquille spalls (the elongated spalls resulting from bi-polar percussion) were also recovered from the excavation. Several of these approach the form and dimensions of microblades, a fact previously noted by MacDonald (1968) who termed these "pseudo-microblades".

3. *Gravers:*

Included within this category are 53 basalt, chert and chalcedony flakes (12.3% of the total assemblage) exhibiting "points" or tips suitable for use as engraving or incising tools. These can be sub-divided into two groups, on the basis of the manner in which the graving tip has been produced. Several examined under low power (8x) magnification show signs of wear polish, or use retouch, on the graving tip.

(a) *Geometric Gravers:*

These artifacts are produced on basalt or chalcedony flakes, broken to produce sharp, chisel-like tips at the intersection of two fracture surfaces, or one fracture scar and a natural edge. The term "flake geometric" has been previously coined for similar sharp-edged flakes, characterized by a geometric shape, which by experimentation had been found to function well in the sectioning and incising of antler (Bonnichson 1968). The geometric gravers from FIUa 1 have been manufactured, by striking a large flake in the middle of one face so as to produce a number of sharp-edged fragments, or by end-struck longitudinal blows directed along one or two edges of a flake, the intersection of which produces a sharp chisel-like tip, somewhat similar to a dihedral burin. Thirty-one specimens of the geometric type were recovered from zone II of FIUa 1, ranging in size between 4.5 x 2.0 and 2.0 x 1.2 cm. (Fig. 7b).

(b) *Flake Gravers:*

Twenty-two basalt, chalcedony and chert artifacts are included in this sub-group. They are characterized by a sharp point produced by the

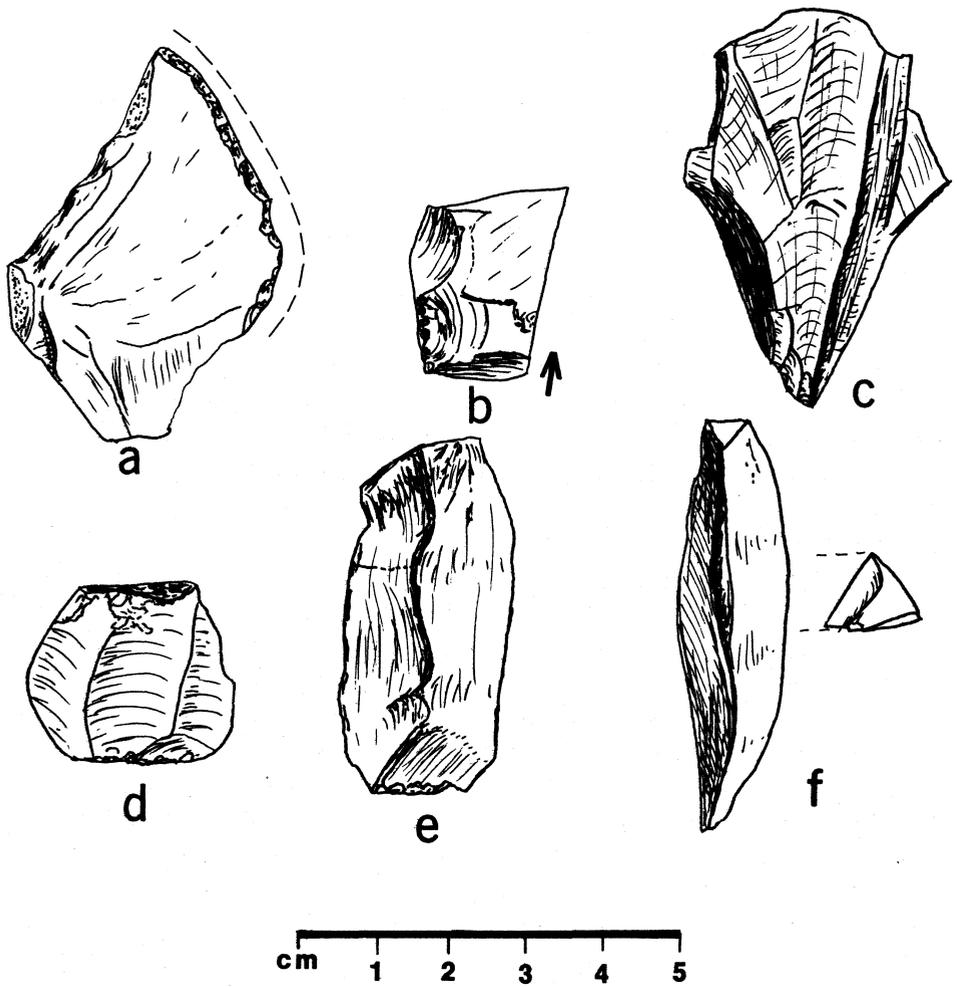


FIG. 7. Artifacts from FIUa 1.

natural shape of a tool flake. The points are then either deliberately re-touched, or secondary flakes are driven off by heavy usage of the tip. These range in size between 5.3 x 4.0 and 2.5 x 1.2 cm. (Fig. 7c).

4. *Battered Pebbles:*

Thirty-one whole and fragmentary basalt pebbles show signs of having been subjected to heavy percussion or battering, resulting in the removal of sections of the cortical surface, and often in the total fragmentation of the pebble. In some cases a steep, step-fractured edge has been produced, in others the battering appears random. The flakes formed by this process could be assumed to be generally angular and irregular, but in some cases are flat, thin and discoid in shape. Some evidence of bipolar percussion is also visible on certain specimens. Two suggestions are offered as to the function of the battered pebbles:

a. Basalt pebbles were used as hammerstones, resulting not in the typically pitted surfaces of granitic or metamorphic hammerstones, but in random conchoidal chipping and/or,

b. Basalt pebbles were utilized as cores from which irregular tool flakes were produced by indiscriminant pounding. This explanation may help to understand the relatively small number of obvious cores from the assemblage, in relation to the quantity of detrital flakes and artifacts.

5. *Bifaces:*

Although no flaked projectile points or pointed bifacial knives were recovered from FIUa 1, 14 basalt artifacts qualify as bifaces. Five of these are flakes exhibiting bifacial retouch to some degree. Three of which are thin and relatively finely worked and may have functioned as knives. The rest of the bifaces are thick and heavy and of irregular shape, invariably carrying more flaking on one face than the other. The bifaces range in size from 7.0 x 5.0 x 2.0 to 3.0 x 2.0 x 0.5 cm.

6. *Pebble Choppers:*

Six unifacially retouched pebble tools were found in zone II. Formed from naturally rounded igneous and metamorphic stones, they carry a straight or slightly curving edge produced by the removal of 6 or more percussion struck flakes. One of these specimens, of an argillaceous rock, has flake scars considerably subdued by either chemical weathering or water action.

7. *Pecked and Ground Stone:*

Four artifacts of pecked and ground stone, other than hammerstones, were found in zone II. They form .9% of the total assemblage.

(a) *Ground Slate Projectile Point:*

One complete ground slate projectile point was found in excavation area C, in a region heavily disturbed by previous earth removal operations. The point is 10.6 cm. long, 2.2 cm. wide and attains a maximum thickness of .7 cm. A flattened diamond shape in cross-section, the outline form is approximately foliate, although an appearance of incipient stemming is produced by heavy vertical grinding of both edges for slightly less than half its total length. One face in this region has been thinned by grinding across the central rib. It is assumed that this portion of the artifact was thinned and blunted to facilitate hafting, as the extreme proximal end is truncated by a grinding facet perpendicular to the plane of the face. The other end of the point is wide and leaf-like, coming to a fine tip with sharp lateral edges.

(b) *Notched Stone:*

A small fragment of grey schist has one edge cut by eight shallow notches. Both surfaces of the piece are slightly abraded and one face has a portion of a circular or ovate grooved incision, broken by the fracture surface which forms the un-notched edge. This artifact was located in excavation area B, in an undisturbed pit. Its maximum dimensions are 5.3 x 1.4 x 1.0 cm.

(c) *"Adze Blades":*

Two pieces of pecked stone may be fragments of adze blades. One retains only the poll end, is cylindrical to oval in cross-section, and measures 6.6 cm. long (incomplete), 2.7 cm. wide and 2.0 cm. thick. Formed of a fine-grained igneous rock, the broken end is marked by two conchoidal fractures. The surface is rough and pitted and retains some cortical remnants. No evidence of grinding is visible.

The other artifact, of a similar material, may be the bit end of small blunt adze blade or chisel. Measuring 3.7 (incomplete) x 3.1 x 1.8 cm. and oval in cross-section, the piece tapers slowly from both faces, coming to a blunt rounded edge. One face exhibits slight polish, otherwise the artifact appears to have been manufactured largely by pecking with another stone.

These pieces do not parallel the form of the splitting or planing adze blades noted by Drucker (1943) for the northern province of the Northwest Coast. An adze of the type described above would function very poorly as a blade for wood-working and in its present form would only result in the battering and bruising of the wood. The piece exhibits no signs of weathering such as might have caused the deterioration of an originally sharp edge. It is entirely possible that these artifacts may not have functioned as wood-working tools, but in the lack of better designations they have been assigned to what is their closest formal class parallel.

8. *Cores and Tool Flakes:*

Much of the detritus from FIUa 1 consists of large, thick and irregular flakes or fragments of basalt, with occasional examples of other cryptocrystalline materials. Many of these could have resulted from the haphazard fragmentation of the basalt pebbles described earlier. However a number of other flakes are thin and regular in form, usually rectangular, but sometimes possessing a pointed outline. These will be described in this paper as tool flakes, and it is suggested that they may have been derived from specialized cores.

Five artifacts may have been used as cores for the production of tool flakes. Three are thick and plano-convex in cross-section, with the flat surface usually formed by cortical remnants which have served as the striking platform for the removal of a number of flakes. Another specimen is large (12.3 x 13.0 x 4.0 cm.), of soft vesicular basalt, uniaxially retouched by large percussion flakes to an approximately discoid form. A single large flake scar runs diagonally across the back of the specimen and the accompanying flake was excavated near the core. This had been removed by a blow directed against the uniaxially retouched edge of the core, resulting in a large flake retaining a remnant of a faceted striking platform.

One basalt object may have been used specifically for the production of large, elongated, parallel-sided flakes. A flat lateral flake scar provides a striking platform from which three flakes have been produced down the longitudinal axis of the core. The piece is approximately rectangular in outline. The distal end has been retouched to create a flat base. Its maximum dimensions are 5.2 x 3.1 x 1.8 cm. and the dimensions of two of the flake scars are 4.5 x 1.7 cm. and 5.2 x 3.0 cm. At least one of these scars may have resulted from the production of a macroblade similar to the one definite specimen from the site (Fig. 7e). This blade is of basalt and has dimensions of 4.6 x 2.2 x 0.9 cm. The

thickest portion occurs only at the striking platform remnant which is faceted by a number of small diagonal flake scars. The blade has been retouched on its distal edge to produce a straight-edged "end-of-blade" scraper.

Features — Zone II

Large concentrations of charred and fire-cracked rocks occurred near the base of zone II. For the most part these took the form of horizontal scatterings, with little obvious patterning within the limits of the excavated areas. In excavation areas B and D the rocks were cemented together by the ferric-oxide deposit marking the contact between zones II and III. Underneath the ferric-oxide deposit the rock concentrations continued into the sand of zone III to depths of up to 50 cm. Four well defined, circular, rock-ringed hearth features were excavated in this level in area B.

Although the interface between the dark organic soil of zone II and the yellow sand of zone III was usually well defined, no definite post holes or molds were detected penetrating into the subordinate stratum, and no cultural features other than the hearths were found.

Faunal Remains — Zone II

A small shell deposit is eroding from the road cut face near the northern limit of the site. Associated with the shells are numbers of fire-cracked rocks and occasional well preserved bird and small mammal bones. This deposit is within the present soil profile which merges with the buried soil represented by zone II, between excavation areas A and B. No artifacts of any kind have so far been found with the shell deposit and virtually no flaked stone material has been surface collected north of excavation area A. Considering the relatively great frequency of artifacts and flakes from the excavated portions of zone II, it is the opinion of this writer that the shell deposit is the result of a later occupational component of FIUa 1, than that represented by zone II.

Two small pockets of fragmented clam shells were also noted in the original road cut face south of the above mentioned midden. One pocket was located in the face of excavation area A and the other in area B. In total quantity both of these did not exceed 10 ounces and did not continue into the face of the road cut more than 40 cm. Unlike those from the main shell deposit, these shell fragments were considerably weathered and chalky in consistency. The one bone from all excavations at FIUa 1 was located in association with the shell deposit in area A. It

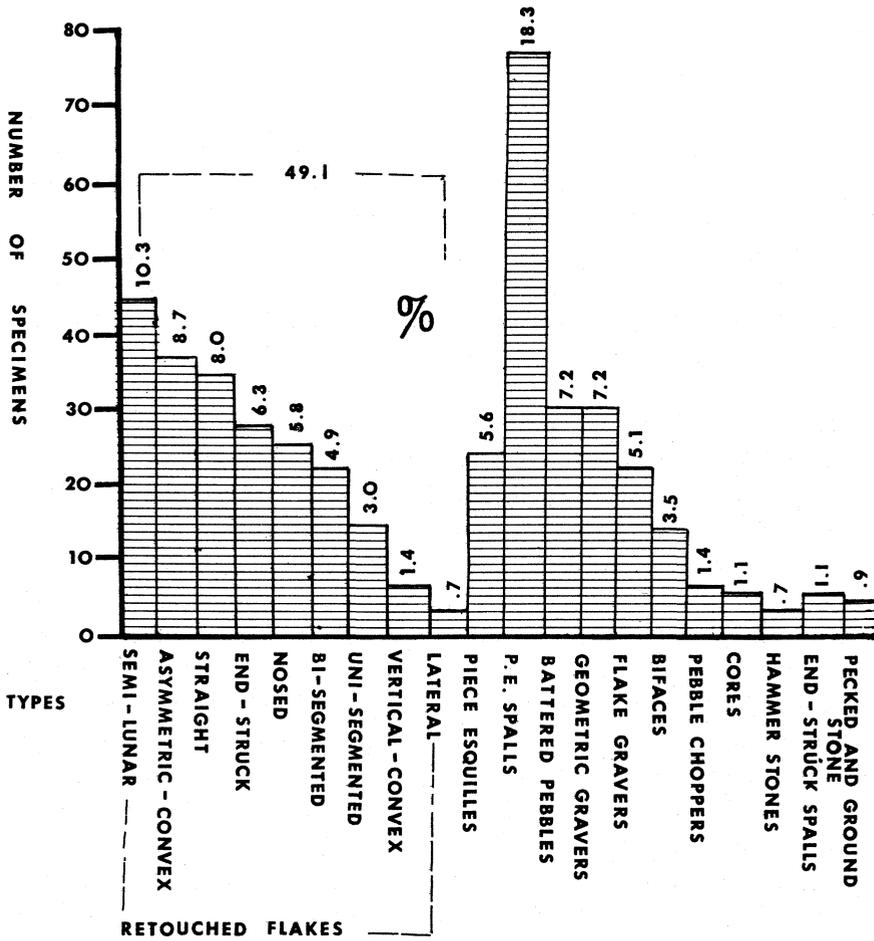


FIG. 8. Relative Frequency of Artifact Types — FIUa 1 (Zone II).

has been tentatively identified as the metacarpal of a small sea mammal. One small fragment of marine shell was also found in a lower stratum of zone I, in excavation area B.

Radiocarbon Dates

Two C-14 age estimates have been received for zone II. A sample of wood charcoal from the base of zone II in area B gave a date of 1145 ± 80 years B.P. (Geochron: GX-1628). This date is inconsistent with the artifact assemblage in that it is far too young. One possibility is that the charcoal which produced this date may have come in with the slope wash which covered zone II. A second date of 4165 ± 130 years B.P. (Geochron: GX-1696) was associated with a hearth intrusive from zone II into zone III. Although still slightly more recent than expected, I consider this date reliable and probably indicative of the age of the main zone II occupation.

Artifacts — Zone III

Zone III is composed of two interdigitating stratigraphic sub-units; an upper level of iron-stained, magnetite bearing sand, and a subordinate sub-unit of iron-stained gravel. Throughout the greater part of the field season it was assumed that excavations penetrating further than 60 cm. into the sand had carried through the total depth of cultural deposit on the site. As a result only two pits, in areas C and D respectively, reached the top of the basal gravel. The excavation in area C produced 6 artifacts and 6 flakes from the undisturbed basal portion of the sand and the uppermost gravel stratum. One artifact was recovered from the highest gravel stratum in excavation area D, and 5 artifacts were located embedded in the basal gravel of the gravel pit, immediately south of the excavation areas.

The artifacts from excavation area C consist of one retouched basalt flake of the asymmetric convex variety, two nosed basalt flakes, and one straight-edged, retouched basalt flake. Three pebble cortical spalls attest to the manufacture of pebble tools in this level. Another cortical spall of a hard green argillaceous material has a deliberately ground edge on its ventral surface. The grinding occurs within only 3 mm. of the edge and the rest of the artifact exhibits the normal characteristics of a percussion struck cortical spall. Its dimensions are $5.5 \times 2.1 \times 0.9$ cm. and was found, *in situ*, in the highest gravel lens of zone III. One basalt piece-essuille spall was also found in this zone, as well as two irregular detrital flakes.

A total of five artifacts were found embedded in the face of the gravel pit at depths between 2.5 and 7 meters below the surface in the gravel strata. One is a large pebble chopper utilizing a natural protuberance to produce a slightly pointed unifacial edge, found 3 meters below the surface. Another pebble chopper, more flattened in cross-section with a convex edge, was located in the same area, 2.5 meters below the surface. Like the majority of artifacts from the gravels, this piece has been heavily water tumbled. Embedded in the southeast wall of the gravel pit were three artifacts, including a large pointed basalt flake, a smaller basalt cortical spall, and a small straight edged retouched basalt flake. Three other artifacts were surface collected on the floor of the gravel pit and it is likely that they also derived from zone III. These include two pebble choppers and one core-like piece, fashioned on a pebble. All are water tumbled. No cultural features were located in zone III with the exception of those hearths intrusive from zone II.

Faunal Remains — Zone III

Only one piece of organic material has been recovered from the sands and gravels. This is a small weathered and partially mineralized fragment of a light-yellow fibrous material exhibiting a lamellar structure. It was tentatively identified by Dr. Grayson Meade as a piece of fossil ivory. The size of the object (4.0 x 1.5 x 0.5 cm.) prohibits any more detailed identification at the moment.

DISCUSSION

The economic base of the zone II inhabitants is difficult to begin to reconstruct. Over 50% of the total assemblage consists of implements best suited for the processing of natural food products — knives, scrapers, choppers, etc. The rest of the assemblage seems to be best suited for the manufacture of artifacts of organic materials — graters, piece esquilles. Few organic materials are preserved due to the high acid content of the soil and it is likely that a large spectrum of wood, bone and antler artifacts are missing. Since the site occurred close to the beach, and there seems to be a total lack of weapons suited for the taking of land game (projectile points, etc.) it would seem likely that marine or foreshore resources were being utilized. The large size of the campsite would argue against mere seasonal use, although this possibility must be borne in mind.

Taken as a whole the artifact assemblage from zone II has no close

parallels in the literature published to date on the archaeology of the Northwest Coast. Some of the individual artifact types have been reported from other areas. Retouched flakes as a general class occur in varying frequencies in most sites on the coast and in the interior, but it is only rarely that they would form 50% of the total assemblage. The distinct formal differences between the types of retouched flakes represented at FIUa 1, and many of their common features, such as retouch occurring only on the thinnest edge of the flake and the prevalence of "backing" are all features, which in the published literature, seem unique to the Skoglund's Landing site. The use of a burin-blow technology for both the production and alteration of scraping edges, as well as for the manufacture of graters, would also seem without parallels in the literature (true burins occur in the Milliken phase of the Fraser Canyon sequence, *ca.* 7,500-6,000 B.C., Borden, 1968 a: 13). Pieces esquille have just begun to be recognized in North American assemblages, where they were first described in the collection from the Debert paleo-Indian site in Nova Scotia. They also occur in components of the Marpole phase on the southern coast of British Columbia (Borden, pers. comm.). Gravers of any type have few parallels on the coast. Heavy, crude bifaces occur in many sites on the coast and interior and vary considerably in age. Pebble choppers occur in Prince Rupert throughout the whole 5,000 year sequence. On the southern coast they seem somewhat more restricted to the early components, such as the Pasika phase near Yale (*ca.* 10,500 - 9,000 B.C., Borden, 1965). In the Prince Rupert sites they are probably the most common type of chipped stone artifact, while at FIUa 1 they form only 1.4% of the zone II assemblage.

In most coastal sites pecked and ground stone artifacts are relatively common and the tools used to produce these artifacts — abraders and hammerstones — proliferate. At the Skoglund's Landing site pecked and ground stone artifacts make up less than 1% of the zone II assemblage, hammerstones only .7% (not counting the battered basalt pebbles), and no abrasive stones were found in the excavated areas (one was surface collected).

The excavations at FIUa 1 bisected the known limits of the cultural deposit with no obvious changes in the frequencies of certain artifact types over others in any area. It would seem unlikely that the present cultural zone, even surrounded as it is by disturbed areas, represents the peripheral or specialized region of a larger site, in which as a whole, an abundance of more "normal" coastal artifacts would have brought the total assemblage to closer congruency with other known prehistoric

coastal cultures. This possibility is effectively negated by the near total absence of most of the *non-perishable* artifacts associated with coastal assemblages excavated up until now. These include: flaked stone projectile points and knives; "thumbnail" end-scrapers; chipped drills; microblades and cores; pecked and ground stone mauls, bowls, clubs, net-sinkers, bark-shredders, adze-blades (2 fragments of possible adze-blades); beads; labrets; stone pendants; abrasive stones, etc., etc. Almost assuredly if zone II were only the inland periphery of a previously extant shell-midden, enough of these artifacts would have found their way off the midden to make their presence unequivocally known. Likewise, the absence of several of the dominant types of artifacts from FIUa 1 in other coastal assemblages, combines with the previous data to strongly indicate that the zone II component cannot be considered closely related to any of the components in the Prince Rupert harbour sequence, and probably not to any other component so far excavated near tidal waters of the Northwest Coast.

Two theories are offered to explain the disparity between FIUa 1 (also other Queen Charlotte assemblages, described later) and previously excavated mainland components:

A. The insular environment may have acted to retard culture change on the Queen Charlotte Islands, bringing it out of sequence with the mainland stream and prolonging archaic cultural traits, or:

B. The Queen Charlotte Islands were culturally in step with the mainland and the excavated component from FIUa 1, as well as some of the surface assemblages, cannot be related to mainland components because they are *earlier* than any of the sites so far excavated on the northern Northwest Coast.

There are arguments in favour of either of these possibilities and the final judgement as to which is correct must await future field work on the islands, and elsewhere. However two significant factors lend considerable support to the latter theory. The first is the 3400 B.P. date on the assemblage from the Honna River site, which, as mentioned earlier, would appear to be generally in line with assemblages from the Prince Rupert sequence at the same time period, and the area-co-tradition as proposed by MacDonald (1969). Secondly, and perhaps more importantly, is the geological context of the components at FIUa 1. The zone II component rests directly on and in the top of the raised beach deposit.

Only one radiocarbon date is so far associated with the Pleistocene of the Queen Charlottes. It was obtained from the bottom of a section

of limnic peat from Langara Island and gave a reading of $10,850 \pm 800$ B.P. (Broeker and Kulp 1957). Heusser who submitted the sample considered that it dated the retreat of ice from the vicinity and inferred a date of 10,000 B.P. to date the base of two pollen profiles near Masset at an altitude of 24 feet above present sea level (Heusser 1960). The existence of a 10,000 year unbroken chain of plant succession at this elevation is in conflict with data presented by Suderland-Brown (1968) who finds evidence for an uplift of the islands by 15 to 25 feet shortly after 8,000 years ago. As such a maximum age for the zone II assemblage at FIUa 1 contemporary with the beginning of the uplift is not impossible.

SITE SURVEY

Twenty-two archaeological sites were located and superficially examined in 1969. Eight of these are shell-middens, five have shell deposits as well as non-shell levels associated with lithic assemblages, and ten sites show little or no evidence of shell; instead cultural material consists of lithic assemblages in dark soil, or sand and gravel. These last sites are invariably associated with raised beach terraces, with artifacts sometimes occurring as much as 300 feet above present sea level. Three of these localities produced significant surface collections and will be described below.

FiTx 3 — Lawn Point

This site is located 15 miles north of Skidegate Mission, on the east coast of Graham Island, (53 degrees, 25', 45"N., 131 deg., 55'W.). Artifacts were found eroding from the face of a road cut through a promontory of a raised beach terrace. Cultural remains occur in a matrix of fine gravel and sand deposited by the raised beach, covered by up to two meters of successive colluvial flows from the flank of the promontory. Artifacts include pebble choppers, detrital flakes and one microblade core.

The core is wedge-shaped in cross-section and has an ovate striking platform. Made of basalt, it carries the scars of seven blades struck from the narrowest end of the platform which consists of the naturally rough cortical surface, unmodified in any way. In general this core fits the characteristics of a Plateau Microblade Tradition core as defined by Sanger (1968b) and shows little similarity to cores from the southern coast.

Exact stratigraphic placement of the microblade industry at FiTx 3 must await excavation. If the core were originally from the sands and gravels of the raised beach level, it could be expected to date around 8,000 B.P. FiTx 2.

This site is located 5 miles north of Skidegate Mission on the east coast of Graham Island between Chinkundl Creek and Dead Tree Point. (53 deg., 20'N., 131 deg., 56', 40"W.). Cultural remains are spread in and around the wire fence enclosure of a Department of Transport radio-navigation beacon on the west side of the road. Prior to the construction of the beacon the area was occupied by a farm and surficial disturbance is considerable. Traces of a shell deposit are apparent within the wire fence compound. An assemblage of 73 lithic artifacts was collected from the area immediately north of the compound and extending inland to the maximum extent of exposed ground, about 100 meters from the beach.

The only complete chipped projectile point so far known from the Queen Charlotte Islands was found at the extreme northwest end of the exposure, at a maximum distance from the water, by Mr. Jack Millar, an amateur collector from Port Clements. This is a lanceolate point, finely flaked of dark green chert, with a concave base and faintly indented stem. On the basis of general formal characteristics it would seem to fit within the range of points of the plano tradition, most closely matching points of Scottsbluff or Eden type. A basal fragment of a leaf-shaped chipped projectile point also occurred at the same site as well as a fragment of a chipped and ground slate point and a small flanged labret of a soft, dark-green, stone. Other artifacts include pebble choppers, large pebble cortical spalls and one abrasive stone. The maximum elevation of the untimbered portion of the site is estimated to be 20-25 feet, and the artifacts were found associated with a matrix of coarse dark sand.

FhUa 7 — Skidegate Landing

FhUa 7 is situated just west of the Department of Transport wharf at Skidegate Landing, in the small bay between Haida Point and Image Point, on the north shore of Skidegate Inlet, (53 deg., 15'N., 132 deg., 0', 30"W.). The site was exposed by land clearing operations associated with the widening of the road between Queen Charlotte City and Skidegate Mission. A collection of over 800 lithic specimens was assembled in and around the new road-bed on a terrace-like feature estimated to be about 15 meters above present sea level, from a matrix of dark soil

and bedrock fragments. A portion of the area had apparently been overlaid by a shell midden about 70 cm. in depth, but no chipped stone artifacts were found in this deposit.

Artifacts include 30 unifacial pebble choppers, 9 of which have a markedly pointed cutting edge; 11 unifacial choppers based on split pebbles; 24 retouched pebble cortical spalls; 32 pieces esquille; 6 microblade cores and 4 microblade core fragments; 13 microblades and fragments; 13 triangular in cross-section, end-struck spalls, 3 of which have retouched edges; 2 macroblade cores and 6 macroblades; 23 retouched flakes; 12 abrasive stones; as well as quantities of piece esquille spalls and specialized tool flakes. *No* bifaces or ground slate implements were found.

The strong evidence for a prepared core and blade industry at this site distinguishes it markedly from FIUa 1. Considerable formal variation seems to be exhibited in the six microblade cores from FhUa 7. Three are based upon tabular, elongated, basalt flakes which have been truncated by blows struck at right angles to one face. This has served as the striking platform for microblades which have been removed from one thin edge of the core. Another core of a light grey igneous material has had blades removed from alternate sides, at opposite ends. As a result the core is lenticular, or boat-shaped, in horizontal cross-section, while its vertical section is wedge-shaped. The fifth core is based upon a thick fragment of argillaceous material retaining a cortical remnant which has been used in unaltered form as the striking platform for five microblades. This piece is oval in horizontal cross-section, wedge-shaped in vertical cross-section, and resembles rather closely the core from FiTx 3. The last core is based upon a thick flake of argillaceous material which has been heavily retouched to control its shape and thickness. The result is a piece which is sub-ovate in horizontal cross-section and approximately rectangular in vertical cross-section. Only two blades carry from a slightly sloping platform produced by a wide, horizontally struck, flake scar. The metric attributes of these cores are listed in Table 1, following a format established by Sanger (1968*b*).

CONCLUSIONS

Few definite conclusions would be justified at the present stage of research but the following general statements can be made:

1. The Queen Charlotte Islands possess stronger and more frequent

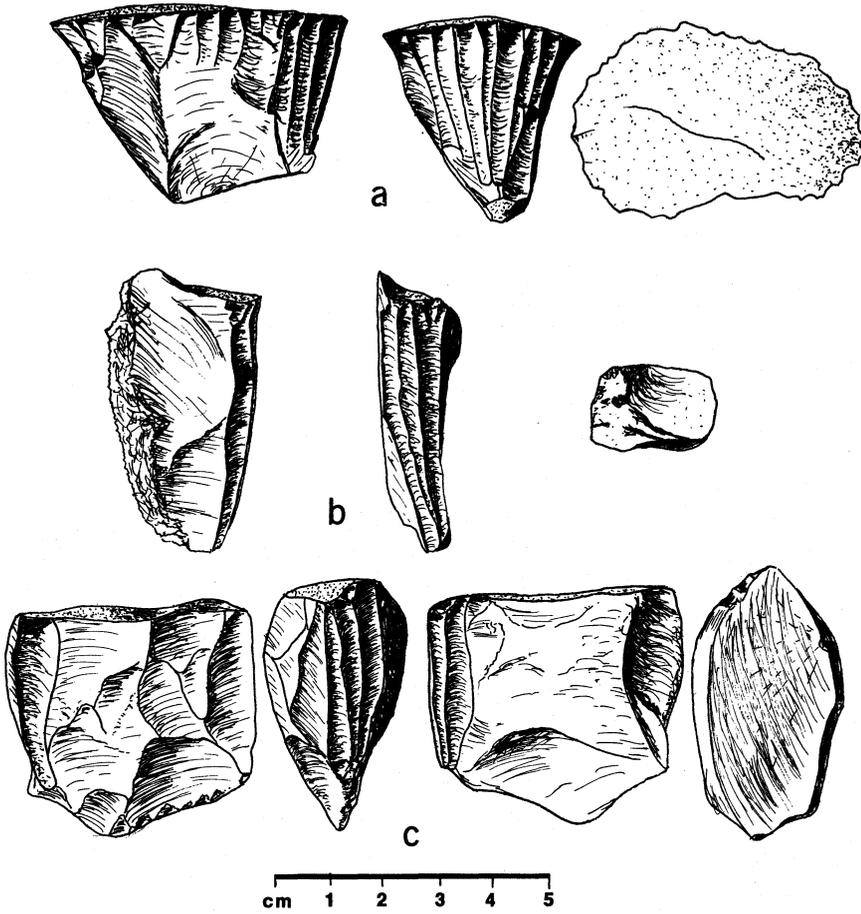


FIG. 9. Microblade Cores. *a*, FiTx 3. — lateral, frontal and dorsal views. *b*, FhUa 7. — lateral, frontal and dorsal views. *c*, FhUa 7. — lateral, frontal, right lateral, and dorsal views.

evidences of chipped stone industries than previously known for the northern Northwest Coast.

2. The variation in styles of lithic technologies as represented by the assemblages from FIUa 1, FiTx 2, FiTx 3 and FhUa 7 indicate a considerable temporal span and/or considerable variation in cultural influences received by the prehistoric inhabitants of the Queen Charlotte Islands.

TABLE I
Dimensions of Microblade Cores from the Queen Charlotte Islands.

<i>Specimen Number</i>	<i>Striking Platform Length (mm)</i>	<i>Striking Platform Width (mm)</i>	<i>Core Height (mm)</i>	<i>Core Edge Angle</i>	<i>No. of Flutes</i>	<i>Flute W. Range (mm)</i>
FiTx 3:1	55	35	34	80 deg.	7	2-5
FhUa 7:53	48	32	29	90 deg.	5	3-5
FhUa 7:585	41	20	43	90 deg.	7	2-8
FhUa 7:636	23	13	50	90 deg.	3	4-5
FhUa 7:161	13	11	54	90 deg.	2	4-5
FhUa 7:630	23	13	36	90 deg.	2	4-7
FhUa 7:375	27	14	33	90 deg.	3	3-7

3. The geological contexts of several of these sites, particularly zone III of FIUa 1, suggest that the islands were already occupied by 8,000 B.P.

4. Unless isolation has produced cultural retardation, the lack of similar lithic technologies in the Prince Rupert sequence would suggest that the Queen Charlotte assemblages may be older than the 5,000 year long mainland sequence.

An interesting possibility is presented by the presence of cultural remains on the islands at least 8,000 years old, and the geological indications of ice free areas in the northeast end of Graham Island. During, or just after a glacial maximum, decreased sea level, may have exposed the floor of Hecate Strait and opened a migration route via an exposed shelf along the eastern end of Dixon Entrance to the Alaskan Islands, and perhaps as far north as the Bering Strait region. Certainly a 250' drop in sea level would connect the Charlottes to the off-shore islands and mainland. This possibility was first suggested by Heusser (1960) to explain the presence of the Dawson caribou on the islands.

The answer to this question and others arising from last season's field work will be sought in future excavations. Archaeological remains recovered so far, indicate that the Queen Charlotte Islands may be in a special position relative to the prehistory of the whole Northwest Coast, and it would seem critical to an eventual regional synthesis that field work continue in this area.

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