Introduction

The relatively small sample of artifacts (N=99) from the Belcarra Park I component represents 8% of the prehistoric assemblage. The component is dominated by lithic tools (92%), consisting of chipped stone (58%), ground stone (29%) and pecked and ground stone (13%). The paucity of bone and antler artifacts (N=8) is considered in part due to differential preservation.

Chipped Stone Artifacts

A total of 14 chipped stone points were recovered from Belcarra Park I deposits. Thirteen specimens are complete, and one is fragmentary but can still be classified. Twelve of the points are manufactured from basalt, two from green quartzite. For descriptive purposes the points have been classified in the following three categories: (1) Leaf-shaped points, (2) Stemmed points, and (3) Contracting stem points. Measurements enclosed in parentheses refer to incomplete dimensions.

Leaf-shaped Points

All six points in this category are complete. Two are manufactured from a fine grained basalt, three from a local granular basalt and one is manufactured from a green quartzite material. All exhibit convex edge form, with considerable variation in symmetry (Fig. 9a,b). All are biconvex in cross-section. Quality of flaking ranges from crude to excellent. Metric attributes for leaf-shaped points are summarized in Table III.

Table III Chipped Stone points, (leaf-shaped), Belcarra Park I

Attribute	Range	Mean	S.D.	Number
length	30.5–64.8 mm	48.25	24.94	6
width	16.8–28.8 mm	18.42	12.21	6
thickness	6.6–11.8 mm	8.50	5.28	6
weight	2.4–16.1 g	7.52	10.37	6

Contracting-stem Points

Five points, all complete and all manufactured from various grades of basalt, comprise this group (Table IV).

Table IV Chipped Stone Points (contracting stem), Belcarra Park I

Attribute	Range	Mean	S.D.	Number
length	49.2–83.8 mm	61.66	27.59	5
width	17.2–35.9 mm	23.8	15.39	5
thickness	6.7–10.7 mm	8.22	3.25	5
weight	5.7–25.1 g	11.98	16.03	5

Edge form ranges from straight to slightly convex, and three exhibit asymmetrically sloping shoulders. All are biconvex in cross-section.

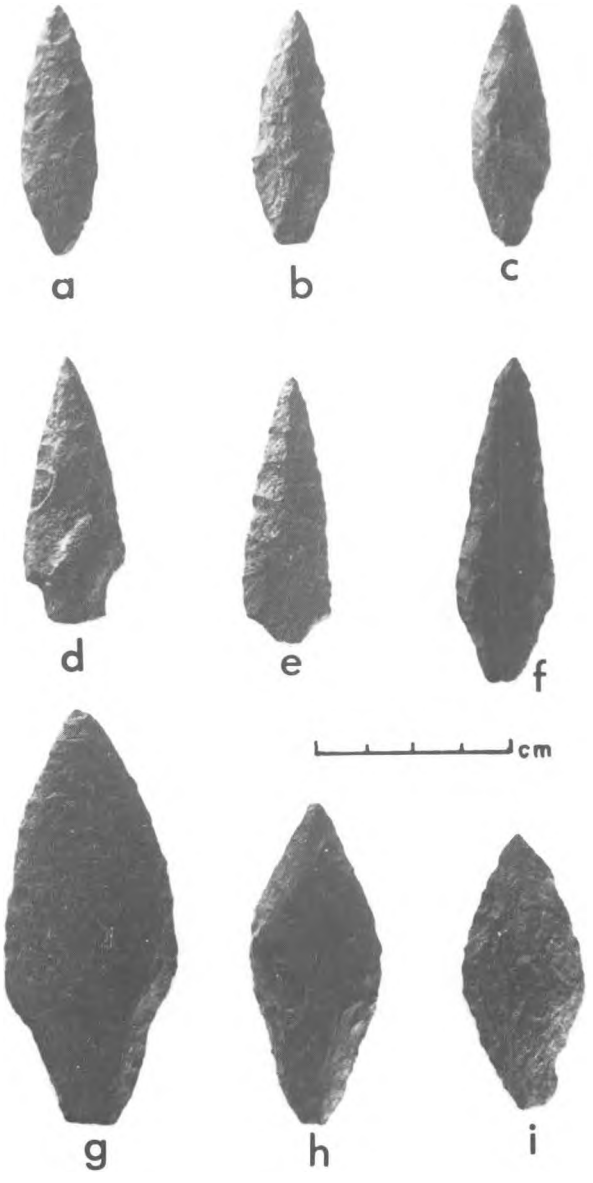

Fig. 9. Chipped stone points, Belcarra Park I. *a,b* leaf-shaped chipped stone points; *c,d* stemmed chipped stone points; *e–j* contracting-stem chipped stone points.

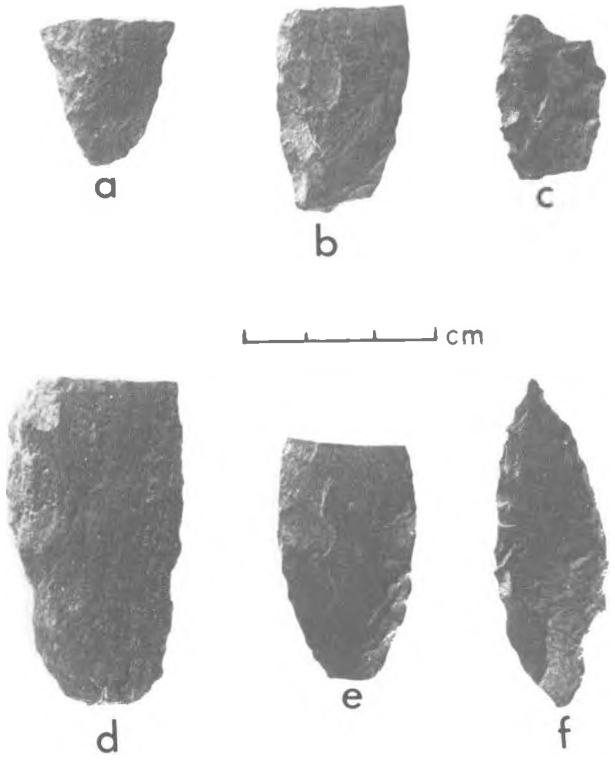

Fig. 10. Chipped stone bifaces, Belcarra Park I.

Stemmed Points

Three stemmed points (Table V) were excavated. Two of the points are complete (Fig. 9c,d) and one is a fragment. All three points are manufactured from local basalt. Shoulder form is asymmetrical and stems are straight rather than contracting. Edge form ranges from straight to excurvate, and all are bi-convex in cross-section.

Table V Chipped Stone Points (Stemmed), Belcarra Park I

Attribute	Range	Mean	S.D.	Number
length	32.5–54.5 mm	43.5	–	2
width	19.4–21.2 mm	20.1	–	3
thickness	6.0–9.1 mm	7.53	–	3
weight	4.8–8.8 g	6.8	–	2

Chipped Stone Bifaces

Eight artifacts are reported in this class, one is complete, seven are fragmentary (Fig. 10). Materials utilized include basalt (4), green quartzite (2), chalcedony (1) and slate (1). The Belcarra Park I bifaces probably served as cutting and scraping implements. Some, though, may be fragments of leaf-shaped projectile points.

Core Tools

Three core tools, two of basalt and one of unidentified stone material were recovered (Fig. 11). All three have had a number of flakes removed and very little cortex remains on any of the tools. The flakes have been struck at such a steep angle that no cutting edge has been produced. It is assumed that these nearly exhausted cores were utilized solely for the production of flakes.

Split-cobble Tools

The term is utilized by Mitchell to designate "a range of crude cutting and chopping implements, all of which show

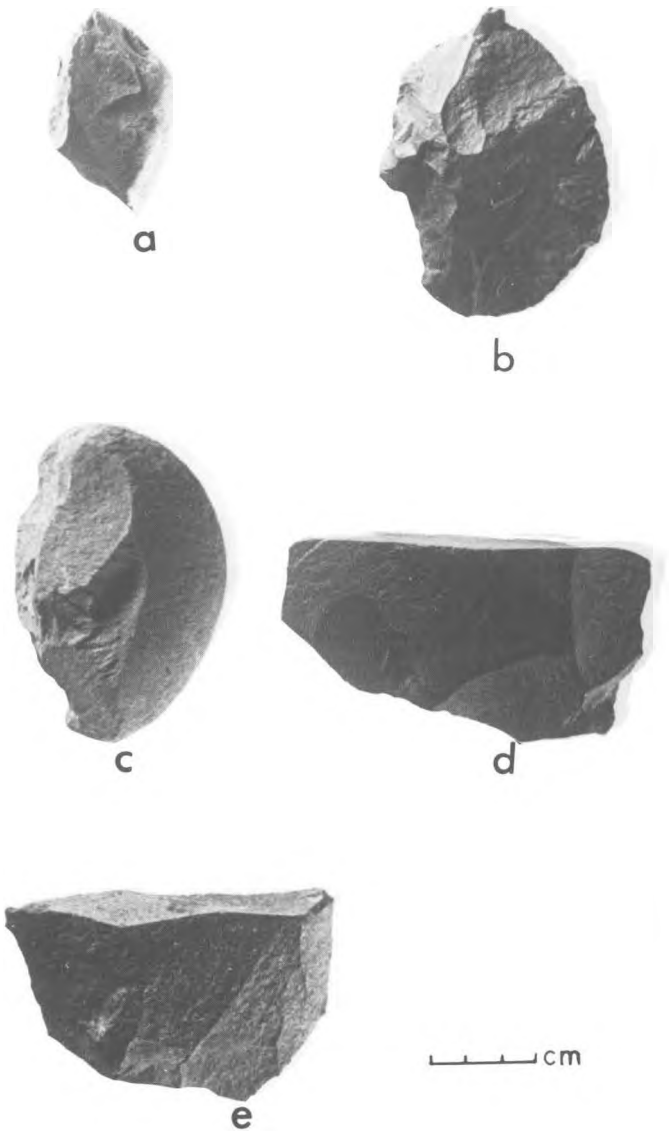

Fig. 11. Cobble core and split cobble tools, Belcarra Park I. *a–c* cobble core tools; *d–e* split cobble tools.

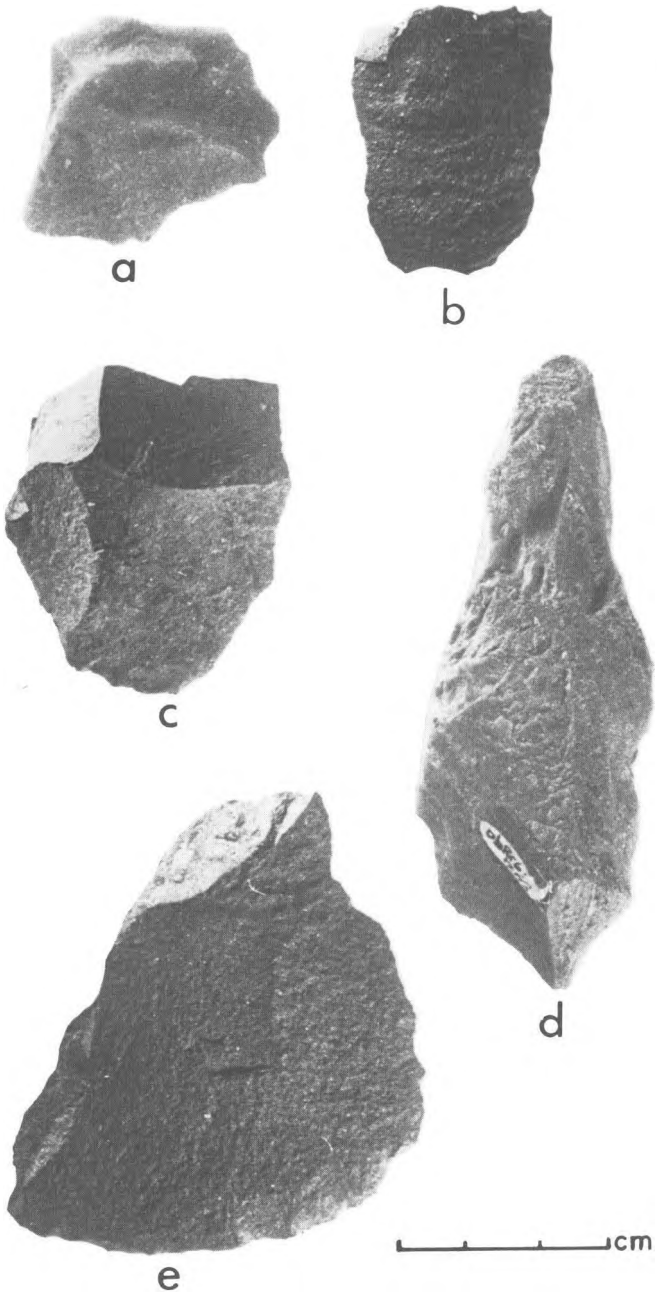

Fig. 12. Utilized and retouched flakes, Belcarra Park I. *a,d* utilized flakes (green quartzite); *b,c,e* unifacially retouched flakes.

coarse retouch on their cutting edges" (Mitchell 1971a:104). Three such implements although smaller for the most part than the Montague Harbour I specimens, are recorded for the Belcarra Park I component. All three of these tools are manufactured from basaltic material; two from a local, granular basalt and one from a more vitreous basalt. All exhibit rough retouch along the working edge, producing a sinuous cutting edge (Fig. 11).

Unifacially Retouched Flakes

Three irregularly shaped flakes of local basalt show signs of use and secondary retouch. In all three cases the retouch is both minimal (restricted to a section of one edge) and unifacial (Fig. 12).

Utilized Flakes

Nineteen flakes are irregularly shaped and exhibit signs of use, usually small striations or polish. Secondary retouch is absent. The most common material was local basalt (10). Green quartzite (6) and slate (3) flakes were also utilized (Fig. 12).

Miscellaneous Chipped Stone

Two implements are assigned to this category. A thin, bifacially flaked piece of slate (knife?) exhibits no secondary retouch or other modifications. It is roughly rectangular in outline, has a tapering cross-section and measures 97.5 x 53.0 x 11.0 mm. A thin schist tool roughly square in outline and rectangular in outline is from the Belcarra Park I component. This implement (knife?) measures 84.0 x 75.5 x 10.0 mm.

Ground Stone Artifacts

Ground Slate Points

Ground slate points from the Belcarra Park I component (16) were classified on the basis of presence or absence of stems.

Stemless Points

Fourteen ground slate points were grouped as stemless; six are complete, eight are fragmentary (6 distal tips, 2 proximal base fragments). Quantitative data are summarized in Table VI. All points are leaf shaped in outline with the exception of two unfinished points (Fig. 13d,m) which are triangular in outline. The points are hexagonal in cross-section resulting from three well defined facets being abraded on each face. Edges are convex with the maximum width occurring at the midline. The edges then taper gently to either a convex or straight base. An exception is Figure 13d which measures 110 x 31 x 6 mm. This point is triangular in outline, and has slightly asymmetrical straight edges. The maximum width occurs at the base rather than the midline. This point is very similar in size and outline to one illustrated by Borden (1962:13, Plate 3-c). Eight points have their basal portions intact. Six of these show a pronounced basal thinning on both faces of the points. Four of the eight show definite grinding facets on each edge near the base. These facets extend from the base along the edges for variable lengths (approx. 20–30 mm) giving a dulled edge. Mattson (1971:72) has reported two ground slate

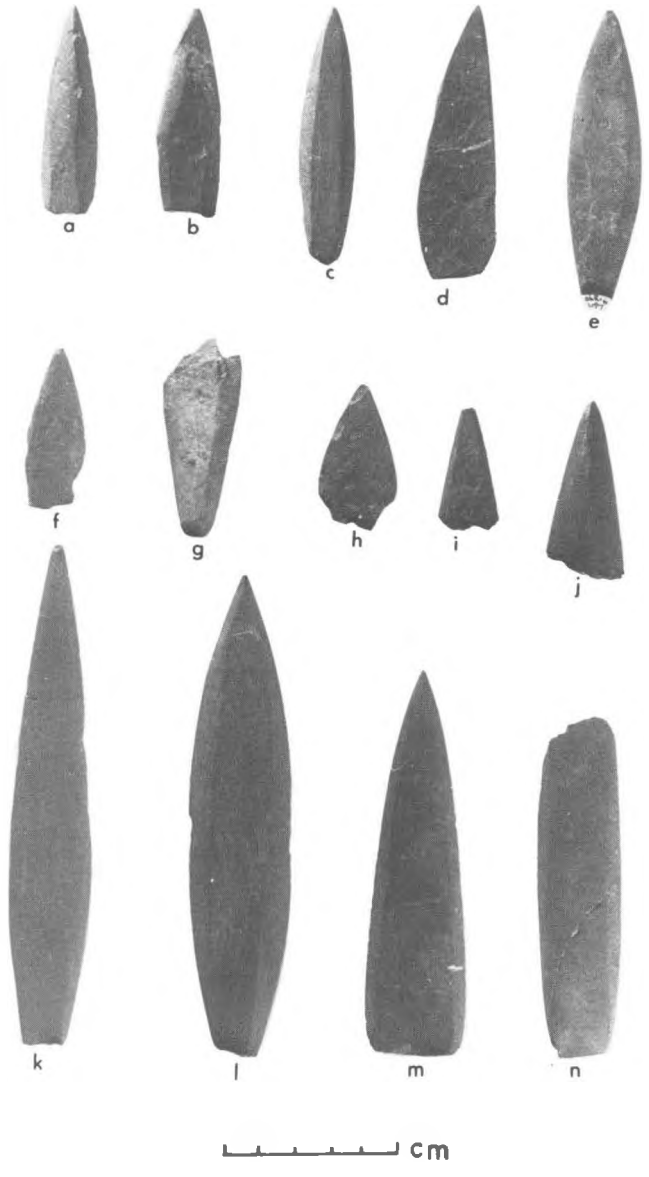

Fig. 13. Ground slate points, Belcarra Park I. *a–e, K–n* stemless ground slate points; *g,h* stemmed ground slate points.

points from his Skagit Delta I component with blunted lateral edges near their bases. This artifact type has been considered a diagnostic trait of early component sites in the Lower Fraser and Gulf Island regions.

Table VI Ground Slate Points (stemless), Belcarra Park I

Attribute	Range	Mean	S.D.	Number
length	74.4–163.0 mm	115.6	–	7
width	16.8– 30.2 mm	23.4	–	11
thickness	4.9– 7.1 mm	5.0	–	13
weight	10.08–44.83 g	23.57	–	6

Stemmed Ground Slate Points

Two stemmed ground slate points are reported from component I; both points are small and fragmentary. The points are poorly finished and do not exhibit the quality of workmanship seen in most of the stemless ground slate points.

Figure 13h shows a small point measuring (41.0) x 23.2 x 4.0 mm. The edges have been ground at the right angles to the faces of this point, giving it a rectangular cross-section. The edges are straight to slightly convex with sloping shoulders. A bevelled stem measuring 13.2 mm wide tapers to a broken base. The other stemmed point (Fig. 13g) measures (46.5) x 18.8 x 3.1 mm. This point exhibits convex edge form with markedly asymmetrical sloping shoulders, which taper to a broken base. Grinding facets (3) on each face give this point a hexagonal cross-section.

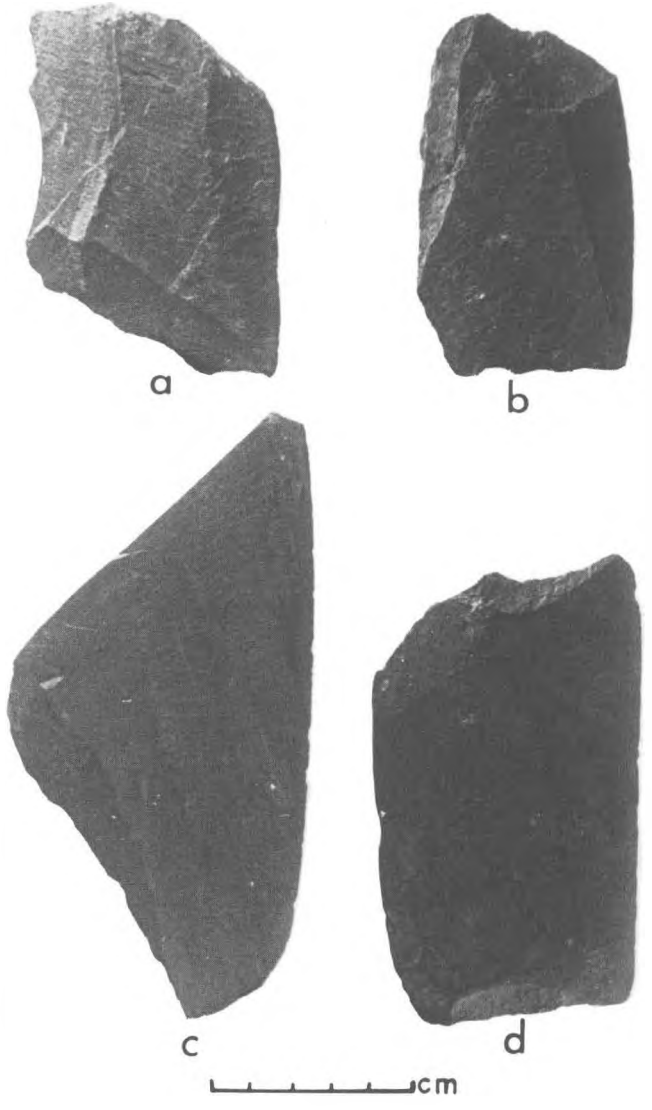

Fig. 14. Ground slate knives, Belcarra Park I.

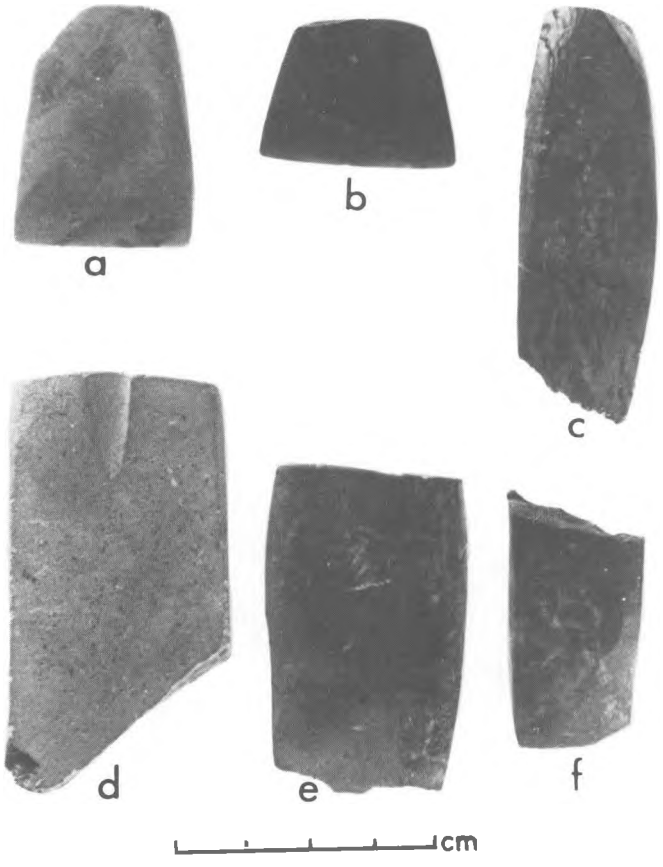

Fig. 15. Adze blades, Belcarra Park I.

Ground Slate Knives

Four knives of ground slate (Fig. 14, Table VII) are from the earliest component at the Belcarra Park site. These implements are manufactured from large slate flakes which have been preformed by bifacial percussion flaking. They were then bifacially abraded which produced a thin sharp cutting edge approximately one millimetre in thickness. The cutting edges are straight to slightly convex. The cross-sections taper from thick edges (maximum 18.8 mm) to thin cutting edges. This style of ground slate knife has been reported from a number of sites in the Lower Fraser area, and the Skagit delta.

Table VII Ground Slate Knives, Belcarra Park I

Attribute	Range	Mean	S.D.	Number
length	88.2–152.9 mm	111.27	–	4
width (max.)	55.0– 68.5	66.07	–	4
thickness (max.)	10.4– 18.8 mm	13.02	–	4
thickness (at cutting edge)	1.0– 1.4 mm	1.22	–	4
weight	59.5–132.0 g	93.6	–	4

This style of ground slate knife has been reported from a number of sites in the Lower Fraser area, and the Skagit delta.

Adze Blades

Six adze blades manufactured from jadeite were located (Fig. 15, Table VIII). All are small in size and show careful finish. Outlines are rectangular as are cross-sections. Four of the adze blades have their cutting edges (bits) intact. Bits have been bifacially ground with an emphasis on one face, producing a somewhat asymmetrical cutting edge. The edges of the bit are all slightly convex in form. Two of the adze blades have their maximum width at the bit. Three of the bits show a wear pattern in which small unifacial flakes have been removed from the side of the less bevelled edge. The same wear pattern has been observed in two celts from the Montague Harbour I component. Mitchell feels this pattern shows evidence for "adzing or some other single-direction chopping or chiselling activity" (Mitchell 1971a:113).

Table VIII Adze Blades, Belcarra Park I

Attribute	Range	Mean	S.D.	Number
length	23.8–64.4 mm	43.85	14.70	4
width	21.6–31.7 mm	26.98	4.45	5
thickness	5.1–18.4 mm	13.42	8.24	4
weight	6.28–40.87 g	26.42	14.99	4

Miscellaneous Ground Stone

A single piece of ground slate was too fragmentary to permit classification. The single specimen is thin (9.0 mm), has been bifacially ground and tapers toward edges which have been broken. The cross-section is biconvex.

Pecked and Ground Stone Artifacts

Shapes Abrasive Stones

Five abrasive stones were recovered from the Belcarra Park I component. This ubiquitous class of artifact has been variously described in the literature as abrader, whetstone or hone. They are not particularly diagnostic of any phase, yet they remain as a vitally important part of the Northwest Coast tool kit. Clearly, they were used for abrading, grinding and polishing of bone, stone and shell implements. Being made of various grades of sandstone they break easily. The majority of abrasive stones excavated were fragmentary, thus making classification difficult. Thus far, the most detailed typology is that of Mitchell(1971a) who classifies abrasive stones from the Montague Harbour midden as either shaped (round, tapering, bar and miscellaneous) or irregular.

All five Belcarra Park I abrasive stones show evidence

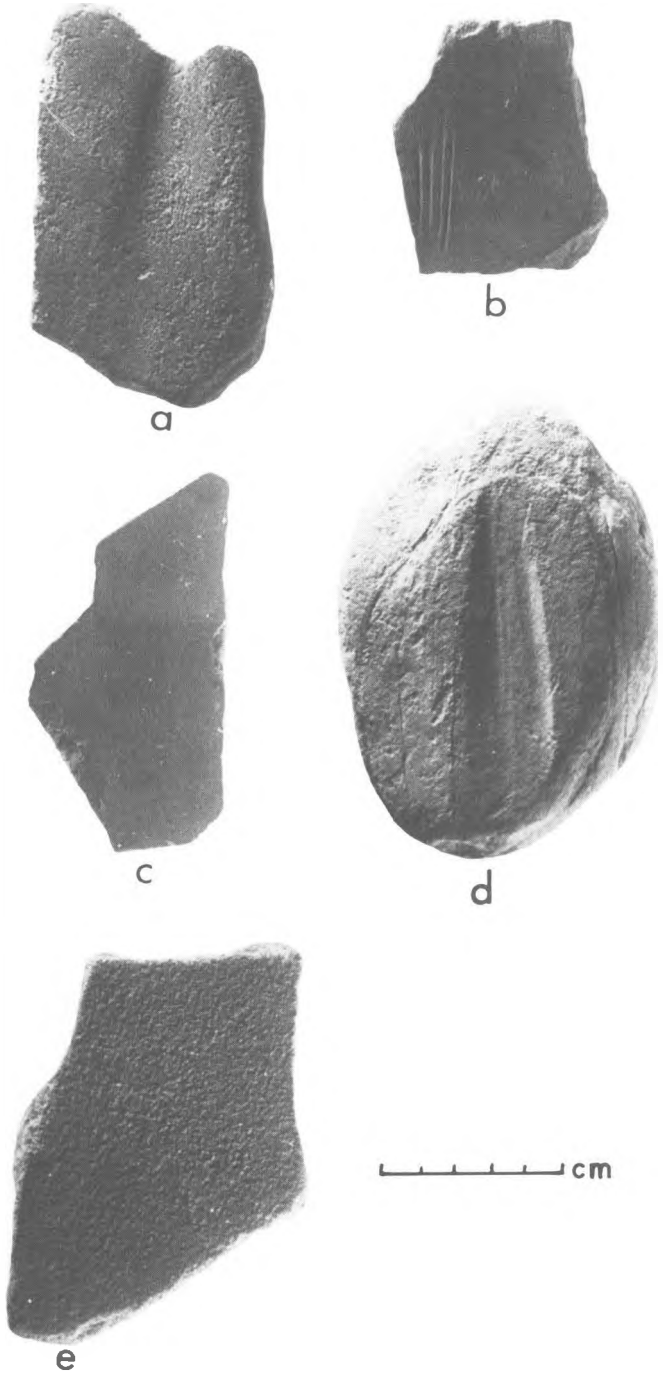

Fig. 16 Abrasive stones, Belcarra Park I.

of definite shaping. Figure 16b is a medial fragment and may be a fragment of a larger shaped abrasive stone. All five abrasive stones are of sandstone and range in texture from fine to coarse. All are rectangular in cross-section, while in outline they range from rectangular to hexagonal. The large abrasive stone measures 143 x 103 x 26 mm while the smallest is 53 x 43 x 18 mm. Three show evidence of being utilized bifacially, one had been utilized unifacially only, while the last one was a medial fragment (longitudinally broken) and utilization could not be determined. As well, one artifact, (Fig. 16e) showed extensive abrading on two edges.

Hammerstones

Hammerstones as defined by Mitchell are "naturally oval beach or river cobbles showing signs of use for pounding or pecking" (Mitchell 1971a:119). Wear use patterns are reflected by battered and/or pitted areas on one or more ends or sides of the implement. Six hammerstones (Fig. 17, Table IX) all complete, were excavated in the Belcarra Park I component. Three specimens exhibit pitting at one end while the other three show pitting at both ends. Hammerstones are a common artifact type and are widely reported from virtually all components in the Lower Fraser and Gulf of Georgia regions.

Table IX Hammerstones, Belcarra Park I

Attribute	Range	Mean	S.D.	Number
length	97.2–136.0 mm	115.0	–	6
width	61.0– 93.5 mm	79.0	–	6
thickness	43.8– 59.0 mm	53.0	–	6
weight	443.5–659.7 g	554.7	–	6

Miscellaneous Pecked and Ground Stone

A rather unusual pecked and ground stone implement was excavated. The tool measures (121.1) x 98.3 x 24.9 mm and is manufactured from schist (?). The object is triangular in cross-section and tapers from a thick (24.9 mm) edge to a thin (2.7 mm), ground working edge. The thin edge (unlike knife forms) has not been honed and polished to a fine cutting edge, but is convex and blunt.

Bone and Antler Artifacts

Five bone artifacts are from the first component. Four are manufactured from land mammal bone, while a single item is of bird bone. All the implements are fragmentary.

Barbed Bone Point

A medial fragment of a barbed bone point (Fig.18b) measuring (36)x 13.9 x 4.5 mm was recovered. Two barbs are present, they are low and isolated. The distance between the barbs is 8.0 mm. The barbs were formed by a simple sawing action on either side of the implement. The artifact is elliptical in cross-section.

Metatarsal Awl

One land mammal (deer?) metatarsal bone is from the Belcarra Park I deposits (Fig. 18c). The tool has been split

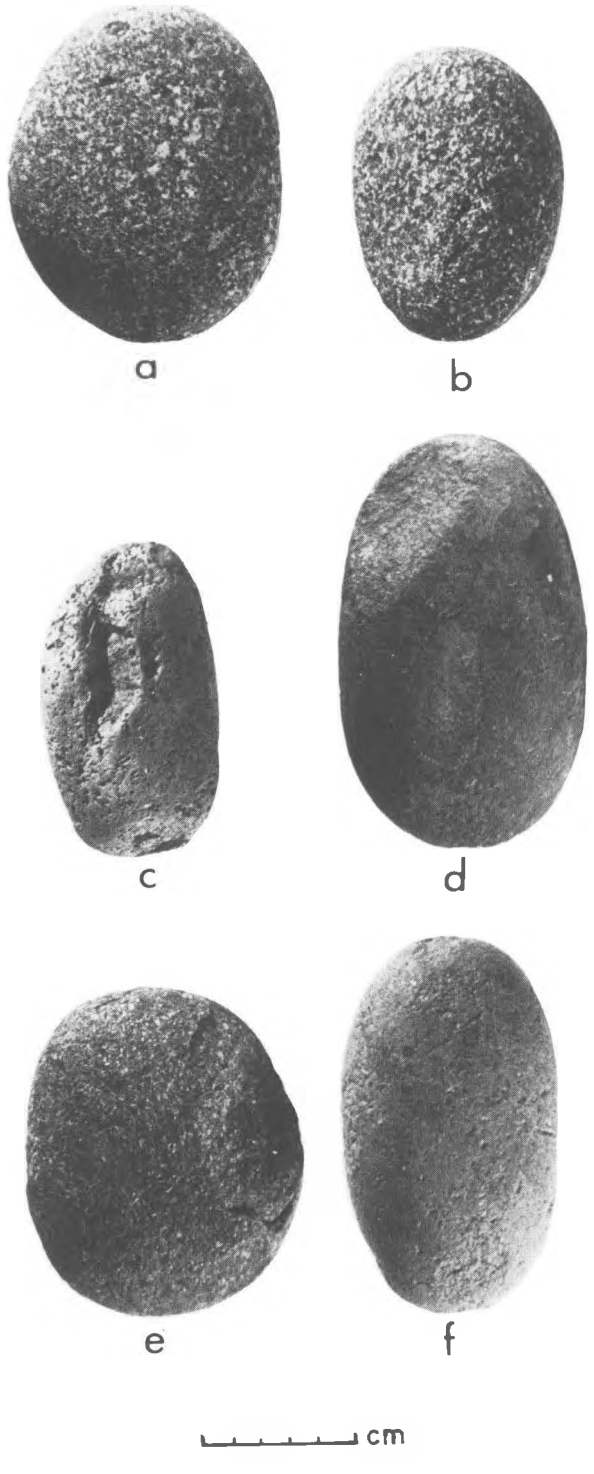

Fig. 17. Hammerstones, Belcarra Park I.

longitudinally and a transverse facet has been ground at the distal (broken) end. Ten metatarsal awls which have been split and ground to a point are reported by Mattson (1971: 103) for the Skagit delta; although phase designation for these implements is unclear.

Bone Chisels or Wedges

Two specimens, both fragmentary, fall into this category. A highly polished wedge tip (Fig. 18e) has a smooth well rounded bit which has been unifacially ground. This gives the tip its markedly asymmetrical form. Another fragment (Fig. 18a), like the previous one, has a highly polished wear pattern. Considerable care has been taken in the manufacture of this implement which measures (36.2) x 11.8 x 6.3 mm. This chisel-like tool has been manufactured on a land mammal long bone and exhibits straight sides and a biconvex cross-section. The bit is straight and has been asymmetrically, bifacially ground.

Miscellaneous Worked Bone Fragment

A bird bone fragment measuring (51.5) x 6.4 x 5.2 mm was located in the Belcarra Park I component. The fragment shows no obvious manufacturing marks but it appears to have been highly polished from use. It may have functioned as a bird bone whistle, awl or possibly a drinking tube. Bird bone whistles have been recorded from sites with early components in the Lower Fraser and Gulf of Georgia regions.

Composite Antler Toggling Harpoon Valve

A broken toggling harpoon valve (56.6) x 19.3 x 14.8 mm was recovered (Fig. 18f). The rounded lateral spur and basal socket portion is all that remains of this artifact, but the complete implement must have been at least 114.0 mm in total length. Composite toggling harpoon valves (and antler foreshafts) have been recovered from a number of sites in the coastal area of southwestern British Columbia. Three types of toggling harpoons have been recognized from the Locarno Beach phase; a small, one-piece toggle head, a one-piece toggle head which has a slot for a cutting blade and a composite toggle head, again slotted for a cutting blade (Borden 1970:97). The first two types were not found in the Belcarra Site.

Antler Wedge

One fire-hardened antler tine wedge was recovered from Belcarra Park I deposits (Fig. 18d). This wedge measuring 101.1 x 27.0 x 18.1 mm has been sawn longitudinally and snapped. Carving marks showing where the tine was cut from the beam are still in evidence. There is no evidence of battering on the poll, however. The wedge is curved following the natural shape of the tine. The bit is convex in form.

Miscellaneous Worked Antler

A poorly preserved antler fragment measuring (29.2) x (11.8) x (6.2) mm was recovered. The artifact was so

Fig. 18. Artifacts of bone and antler, Belcarra Park I. *a* chisel (bone); *b* barbed fixed point (bone); *c* metatarsal awl (deer?); *d,e* wedges (antler); *f* composite toggling harpoon valve (antler).

badly deteriorated that most attributes could not be ascertained.

Burials

A single burial was encountered in the lowermost portion of Zone B deposits, (Belcarra Park I component) in Excavation Units 9 and 10 (Fig. 19–20). It lay on its left side, was oriented to the southwest and appeared to be in a flexed position although this was difficult to ascertain as the burial was badly fragmented, scattered and poorly preserved. Fragments of the proximal portion of both the right and left femur and fragments of ribs and the left ulna were burnt. Four cranial fragments and a fragment of the right half of the mandible remained. The complete deterioration of the pelvic region made identification of sex impossible. A single adze blade (Fig. 15d) was located in close proximity to the burial and may be associated.

Cultural Reconstruction

The small sample size of the Belcarra Park I component allows few generalizations in terms of cultural reconstruction. Clearly though, a specialized manufacturing technology based upon bifacial stone chipping, the pecking and grinding of stone and the grinding of bone, antler and presumably wood was in operation. Stone was worked by chipping, pecking, grinding, incising and sawing. Granular rock was shaped by pecking. Direct percussion techniques are in evidence in cobble tools, split-cobble tools and in the preforming of ground slate knives. Fine pressure flaking was observed on chipped stone points and bifaces of granular basalt, green quartzite and on relatively rare vitreous basalt items. Slate and nephrite tools were formed primarily by abrasion although adze blades were first sawn to shape and then finished by abrasion.

There was no evidence of stone drilling or carving from the Belcarra Park I component although other Locarno Beach components, especially ones that contain Gulf Island complex artifacts reflect the existence of well developed drilling techniques.

Bone tools were generally sectioned by splitting, incising or sawing and snapping and then finished by abrading. A similar technology was applied to antler tools, although evidence for adzing was also observed. No shell artifacts were located but other Locarno Beach components have yielded shell adze blades and chisels.

Judging by the size of the chipped stone and ground stone projectile points, spears and lances appear to have been in use. Large ground and faceted bone points have also been recovered from the Locarno Beach components at the Whalen Farm and Locarno Beach sites. It is highly probable that darts and throwing boards were being utilized; a single anthropomorphic atlatl hook made from an antler tine has been recovered by Borden (1970:98).

Ground slate knives and split-cobble tools probably functioned as butchering tools and the abundance of fire-broken rock suggests that stone boiling and steaming were important activities. Well made adze blades, chisels and wedges attest to a highly developed woodworking technology.

Fishing equipment is poorly represented in the Belcarra

Fig. 19. Burial no. 1, excavation units 9 and 10, Belcarra Park I.

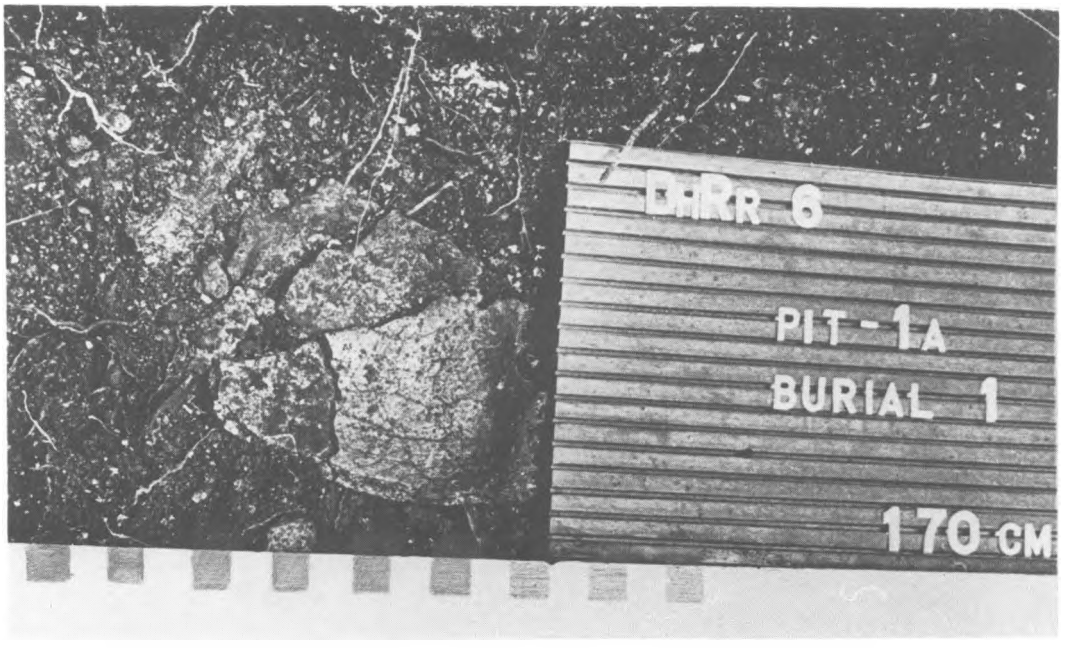

Fig. 20. Burial no. 1, excavation units 9 and 10, Belcarra Park I.

Park I component, although the single barbed bone point may have functioned as a fish spear. Other components have also yielded grooved and notched stones suitable for net or fishline sinkers, fish gorges and bone bipoints and single pointed bone artifacts which may have functioned as parts of leister spears or composite fish hooks. Mitchell (1971a:150) considers the composite toggling harpoon from Montague Harbour I as being too light for the taking of large sea mammals but suggests that small sea mammals or porpoises may have been taken. A spur fragment of a large toggling harpoon valve was recovered (Fig. 18f). A well developed toggling harpoon technology appears to have been in existence as many valves and antler foreshafts have been recovered from other Locarno Beach components.

Personal ornaments were not recovered from Belcarra Park I although other Locarno Beach components have labrets, earspools and Gulf Island complex artifacts which may have been ornamental. No direct evidence of structures was obtained from this component. Borden (1970:99) has suggested that large plank houses were not in existence during Locarno Beach times, as heavy woodworking implements were absent.

Flexed burials appear to be characteristic of Locarno Beach components. Burial cairns have also been reported from the Montague Harbour I component (Mitchell 1971a: 147) and one individual from this component was burned. As in the Belcarra burial it did not appear to be an intentional cremation.