

BELCARRA PARK II

Introduction

In comparison with the previously described component, the Belcarra Park II assemblage is large (N=1,170) and dominates the site. The Belcarra Park II artifacts comprise 92% of the prehistoric assemblage. The bone and antler industries comprise the majority of the collection (58.7%) while the chipped stone (19.2%), ground stone (11.6%) and pecked and ground stone (10.5%) industries form 41.3% of the Belcarra Park II assemblage. The bone industry is especially dominant (46.3% of Belcarra Park II assemblage) in this component with the class of unbarbed bone points alone comprising almost half of the bone industry (242 of 545 artifacts).

Chipped Stone Artifacts

Chipped Stone Points

In all, 116 chipped stone projectile points either complete or fragmentary were excavated in the Belcarra Park II component. Fifteen are too fragmented for classification and are grouped as chipped point fragments. Complete points are grouped into the following categories: leaf-shaped points, triangular points, stemmed points, triangular side-notched points, and triangular corner-notched points. Basalt (ranging from granular to vitreous) was the dominant material selected (109) for projectile point manufacture. Slate (1), chert (1), green quartzite (2) and chalcedony (1) are also represented.

Stemmed Points

Sixteen projectile points (14 complete, 2 fragmentary) are classified as stemmed points (Fig. 21). The preferred raw material is basalt with 14 specimens manufactured from this material. One point has been manufactured from chert and one from slate. All points are bifacially flaked although on three the flaking is primarily on one face with minimal secondary retouch only along the edges of the

Table X Chipped Stone Points (stemmed) Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|------------|--------------|-------|------|--------|
| length | 25.0–53.0 mm | 37.7 | 9.81 | 14 |
| width | 12.0–24.0 mm | 16.73 | 3.27 | 16 |
| thickness | 3.0– 7.0 mm | 4.66 | 1.19 | 16 |
| neck width | 5.0–10.0 mm | 7.93 | 1.57 | 16 |
| weight | 0.8– 7.4 g | 2.62 | 1.88 | 14 |

other face. Edges are straight to convex while stems are short (mean 6.5 mm), narrow and straight to slightly expanding. Table X summarizes the quantitative attributes of stemmed points. Small stemmed projectile points are widely reported from Gulf of Georgia sites with late components.

Leaf-shaped Points

Five leaf-shaped points, all manufactured from basalt were recorded as being from Belcarra Park II (Fig. 22f–k, Table XI). Edges are straight to slightly convex, bases are convex; all are biconvex in cross-section. Maximum width occurs in the lower one-third of the artifact. These points are bifacially flaked with secondary retouch along the edges. All points have been thinned toward the base. Workmanship varies from crude to excellent.

Table XI Chipped Stone Points (leaf-shaped), Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 27.0–51.9 mm | 39.5 | 8.5 | 4 |
| width | 4.0–20.0 mm | 15.6 | 5.95 | 5 |
| thickness | 4.0– 8.0 mm | 6.0 | 1.67 | 5 |
| weight | 4.9– 5.0 | 4.95 | .05 | 2 |

Triangular Points

These points (12 in number) are small and all are manufactured from basalt (Fig. 22a–e, Table XII). Base form is generally straight although two exhibit convex bases (one is asymmetrical) and one has a concave base. All are bifacially flaked and have bases which are thinned. Some exhibit shallow, well-controlled flaking technique while others manufactured on thick flakes show steep, crude flaking.

Table XII Chipped Stone Points (triangular) Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|-------|------|--------|
| length | 26.0–51.0 mm | 35.5 | 6.98 | 10 |
| width | 18.0–24.0 mm | 20.62 | 1.93 | 10 |
| thickness | 4.0– 8.0 mm | 6.0 | 1.33 | 11 |
| weight | 1.5– 5.8 g | 3.66 | 1.95 | 7 |

Triangular Side-notched Points

This is the largest category of chipped stone projectile points from the Belcarra Park site (Table XIII). The 55 points represent 48% of all chipped stone projectile points from the Belcarra Park II component. Once more basalt is

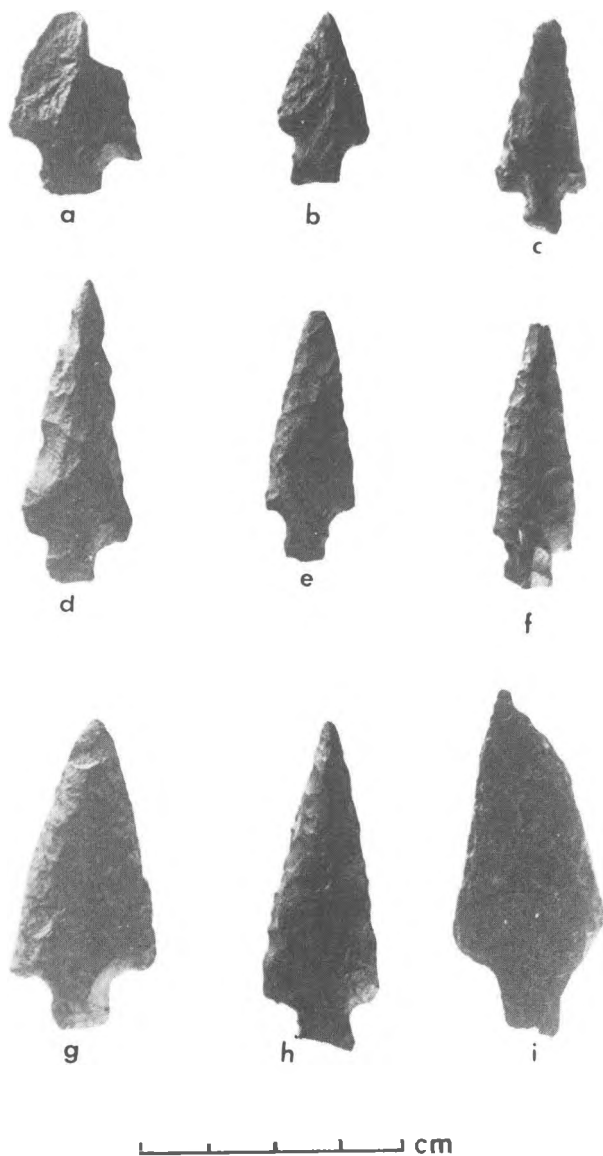


Fig. 21. Chipped stone points (stemmed), Belcarra Park II.

the preferred material; 36 points are manufactured from granular basalt while 16 have been manufactured from a more vitreous grade of basalt. One point (Fig. 23n) is made of chalcedony while two are of a green quartzite material.

These are small points (mean length 30.8 mm) with triangular outlines and narrow (under 4.0 mm) side notches. Edges are straight although one anomalous specimen (Fig. 23aa) exhibits incurvate (concave), serrated edges. Stems are expanding and the maximum width of the artifact is at the base. Bases range from straight (23), to convex (13), to concave (6). Base form could not be ascertained for 13 of the artifacts. These points have been bifacially flaked and thinned towards the bases. Workmanship is good, often

with skillfully controlled retouched edges. Small, side-notched points have been reported, but not in abundance, in the late components in the Lower Fraser area.

Table XIII Chipped Stone Points (side-notched) Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|------------|--------------|------|------|--------|
| length | 18.0–61.0 mm | 30.8 | 9.07 | 33 |
| width | 10.0–20.0 mm | 15.5 | 2.32 | 52 |
| thickness | 3.9– 7.0 mm | 4.4 | .95 | 51 |
| neck width | 5.0–12.0 mm | 8.5 | 1.72 | 50 |
| weight | 0.6– 5.8 g | 1.7 | 1.05 | 33 |

Triangular Corner-notched Points

Thirteen chipped stone points have been classified in this category. Twelve are manufactured from black basalt and one is of green quartzite. They are small (under 30 mm in length) and triangular in outline with straight or slightly convex edges (Fig. 24, Table XIV). All are characterized by being barbed although one is best described as being shouldered. Base form where observable is either straight or convex.

Table XIV Chipped Stone Points (corner-notched) Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|------------|--------------|------|------|--------|
| length | 28.0–34.0 mm | 30.9 | 2.29 | 7 |
| width | 15.0–20.0 mm | 17.4 | 1.36 | 10 |
| thickness | 3.0– 4.0 mm | 3.7 | .46 | 10 |
| neck width | 6.0–12.0 mm | 8.3 | 1.62 | 10 |
| weight | .9– 2.1 g | 1.59 | .41 | 7 |

Fragmentary Chipped Stone Points

These 15 basalt specimens are tip fragments. Lacking the basal aspect they are impossible to classify. Several appear to have straight or slightly convex edges and are triangular in outline. They may fit into any of the previously three described classifications.

Chipped Slate Knives

Six chipped slate knives were recovered from the Belcarra Park II component (Fig. 25, Table XV). These are roughly rectangular in outline with straight to excurvate edges. Manufactured from large flakes, they all exhibit broad percussion flake scars which have produced rough, sinuous cutting edges. These tools are bifacially flaked and show no secondary flaking.

Table XV Chipped Slate Knives, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 64.0–82.0 mm | 75.6 | — | 6 |
| width | 45.0–78.0 mm | 62.0 | — | 6 |
| thickness | .8–18.0 mm | 11.3 | — | 6 |
| weight | 31.6–119.5 g | 56.4 | — | 6 |

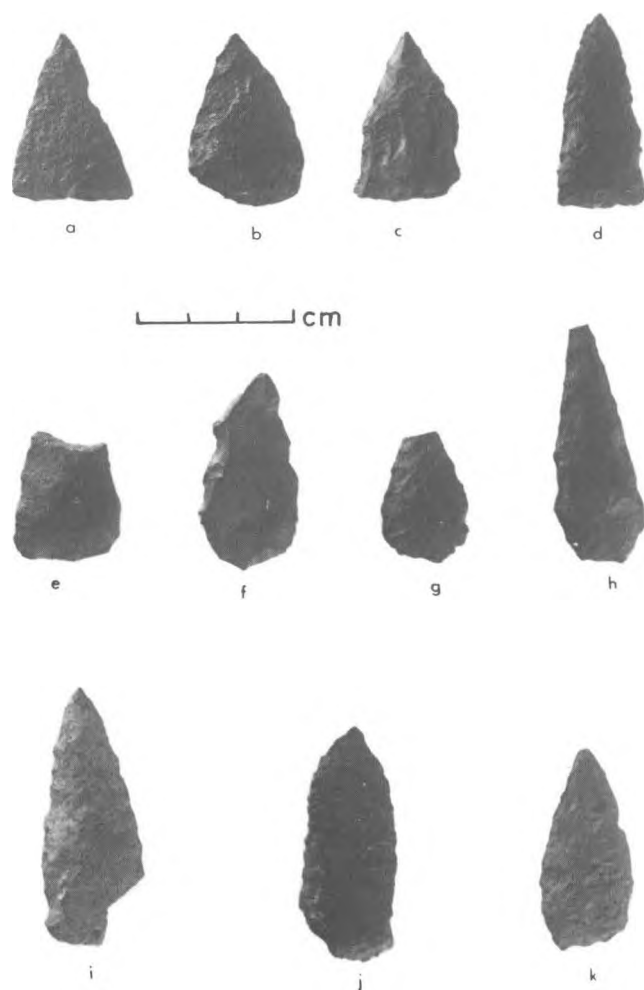


Fig. 22. Chipped stone points (triangular, leaf-shaped), Belcarra Park II. *a-e* triangular chipped stone points; *f-k* leaf-shaped chipped stone points.

Chipped Stone Bifaces

Twenty-four artifacts from the second component have been classified as chipped stone bifaces (Fig. 26, Table XVI). Nine are complete while 15 are incomplete (10 tip fragments, 2 medial fragments, 3 basal fragments). These implements exhibit a wide range in shape, size and material. Leaf-shaped bifaces were the most common; however there was only one each of the rectangular, triangular and bipoint configuration. Materials utilized include granular basalt (11), vitreous basalt (6), green quartzite (3), chalcidony (1), chert (1), petrified wood (1) and an unknown material (1). A unique artifact in this category is a bilaterally notched biface (Fig. 26a). Triangular in outline, it is manufactured on a broad curved flake of basalt and measures 60.0 x 31.0 x 8.1 mm. The notches are deep and have grinding facets on the upper edges of the notches. This implement shares many of the attributes of the hafted

scraper category defined by Sanger as "carefully flaked, thin discoids with narrow side notches" (Sanger 1966:10).

Chipped stone bifaces reflect what is considered to be a deliberate attempt on the part of the tool manufacturer to achieve a preconceived form. Some of the smaller tip fragments may be fragments of projectile points. In the literature this class of artifact is often given the inferred function of knife (hafted or non-hafted), spear point or dart point. Table XVI summarizes the metric data for chipped stone bifaces.

Table XVI Chipped Stone Bifaces, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 33.0–75.0 mm | 59.0 | — | 9 |
| width | 19.0–59.0 mm | 30.7 | — | 17 |
| thickness | 6.0–18.0 mm | 9.1 | — | 23 |
| weight | 4.7–49.8 g | 20.3 | — | 9 |

Chipped Stone Unifaces

Six implements from Belcarra Park II are classified in the uniface category (Fig. 27g, Table XVII). Three are of granular basalt, two are of vitreous basalt, while one is manufactured from green quartzite. Cross-sections are plano convex (5) while one is biconvex. Outlines are extremely irregular. Flakes are struck predominantly from one face, as is the secondary flaking.

Table XVII Chipped Stone Unifaces, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 38.0–66.0 mm | 51.6 | — | 6 |
| width | 23.0–46.0 mm | 38.0 | — | 6 |
| thickness | 7.0–17.0 mm | 12.6 | — | 6 |
| weight | 16.5–53.5 g | 30.7 | — | 6 |

Cobble Core Tool

One complete cobble core tool was excavated in Belcarra Park II deposits (Fig. 27j). The implement measures 114 mm x 93 mm x 47 mm and weighs 488.0 g. A number of broad flakes have been struck (5 from one face, 7 from the other) producing a sinuous cutting edge on this heavily water-rolled tool. The material is unknown.

Cores

Eight cores were recovered (Fig. 27h,i). Materials selected include vitreous basalt (5), granular basalt (2) and green quartzite (1). A series of irregular flakes have been removed from each artifact. Striking platforms where observable were manufactured as a result of the removal of a single broad flake. Judging by the steep edges produced by the removal of flakes there is little doubt that these implements were utilized as cores rather than choppers or scrapers.

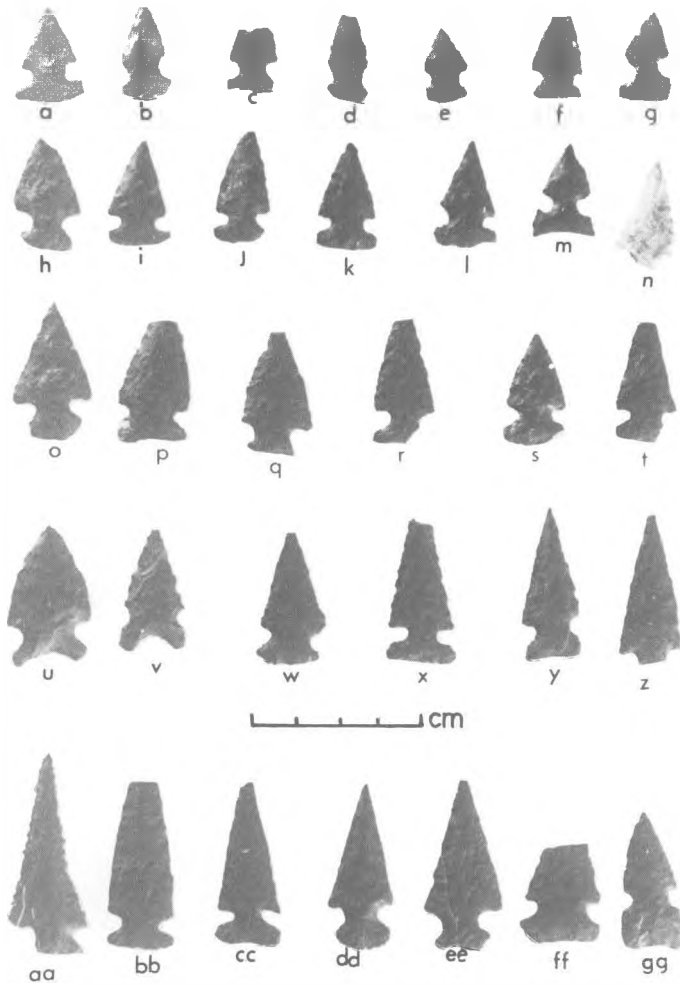


Fig. 23. Chipped stone points (side-notched), Belcarra Park II.

Graver

A single graver made of vitreous basalt was excavated from the late component (Fig. 27a). The finely made tool measures 55 mm x 24 mm x 10 mm and weighs 11.4 g. The well defined graver spur is unilaterally retouched and the opposite face of the spur tip exhibits wear polish. The implement is very similar in dimension and form to Sanger's Group 2 gravers from the Lochnore-Nesikep locality (Sanger 1970:83-84). Gravers are thought to be tools which were utilized for cutting and sectioning hard to work material such as bone and antler. To my knowledge no gravers have been reported from sites in the Lower Fraser or Gulf of Georgia regions.

Drills

Two artifacts, both fragmented, both of vitreous basalt and both bifacially flaked have been classified as drills (Fig. 27b,c). One artifact (Fig. 27b), is lenticular in cross-section, while Figure 27c is plano-convex in cross-section

and resembles the T butt drills described by Stryd (1972:200). Drills are also reported by Sanger (1970:84) for the Lochnore-Nesikep locality. Drills, like gravers are not common in Lower Fraser sites although Crowe-Swords (1974) lists four drills from the Carruthers site.

Bifacially Retouched Flakes

Nineteen flakes were excavated which exhibit retouch. Eight of the flakes are irregular forms which show secondary retouch on both faces and on one or more edges. There is considerable variation in the quality of flaking, ranging from poor to excellent. Materials selected include granular basalt (4), vitreous basalt (1), chalcedony (1), green quartzite (1) plus one flake of unknown material.

Unifacially Retouched Flakes

Eleven flakes of amorphous form but exhibiting unifacial retouch were recovered. Retouch along one edge only ranges from marginal to extensive. Materials include granular basalt (3), vitreous basalt (7), chalcedony (1) and green quartzite (1). McMurdo (1974:45) reports 50 unifacially modified flakes from the Helen Point site.

Utilized Flakes

Utilized (or use-retouched) flakes are defined as triangular shaped flakes which exhibit small scars or polish which can be attributed to use and do not exhibit purposeful retouch. Thirty-four such flakes were recovered from Belcarra Park II deposits. Materials include granular basalt (13), vitreous basalt (10), green quartzite (7), pitchstone (3) and chert (1).

Ground Stone Artifacts

Triangular Ground Slate Points

Forty-three triangular slate points (10 complete, 33 fragments) were excavated in Belcarra Park II deposits (Fig. 28, Table XVIII). These points share the following non-metric attributes. All points are triangular in outline and have straight to slightly convex edges. Base form is variable and ranges from straight (often asymmetrical) to slightly convex to concave. One artifact (Fig. 28o) exhibits a well defined basal notch. Edges are bifacially bevelled resulting in a lenticular cross-section. A number of specimens exhibit a number of grinding facets on both faces of the implement. Most reach their maximum thickness one-third of the distance from the proximal end and then taper gradually to a thinned base. Quantitative data are given in Table XVIII. Triangular ground slate points according to Barnett (1955:101) are arming points for composite toggling harpoons. These points are common in coastal sites in southwestern British Columbia which contain post-Marpole components, and are often considered characteristic of such components.

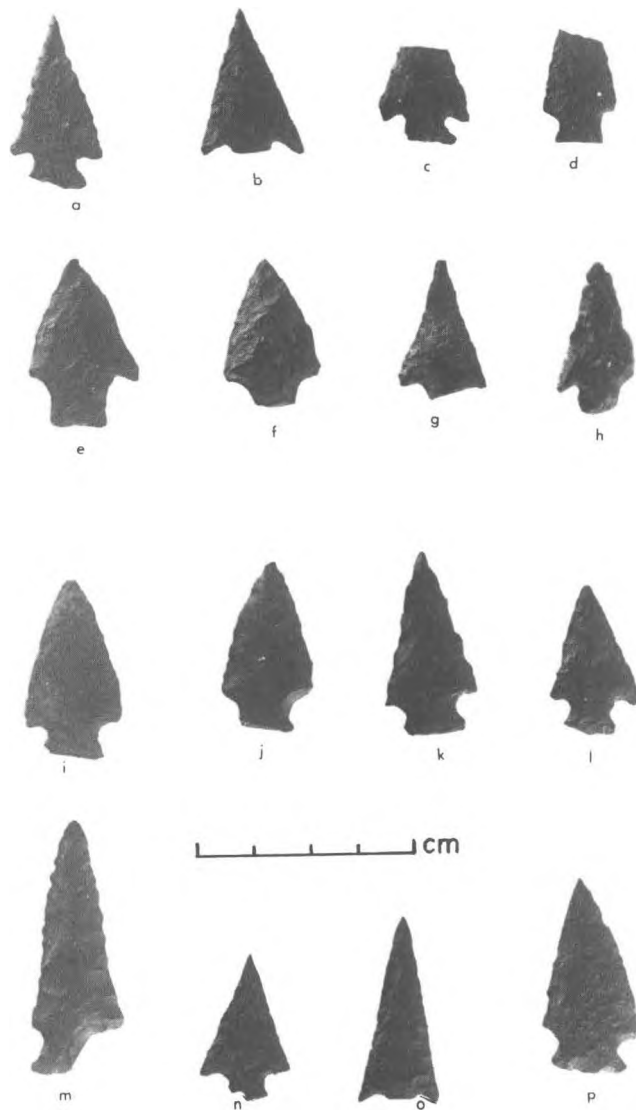


Fig. 24. Chipped stone points (corner-notched), Belcarra Park II.

Table XVIII Triangular Ground Slate Points, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|-------|--------|
| length | 27.0–89.0 mm | 53.0 | 16.18 | 17 |
| width | 12.1–27.0 mm | 20.9 | 4.33 | 26 |
| thickness | 1.5– 5.0 mm | 2.7 | .91 | 37 |
| weight | .92– 3.2 g | 2.3 | 1.21 | 6 |

Triangular Ground Slate Points (Side-notched)

Eight small triangular ground slate points manufactured from various grades of slate were excavated in Belcarra Park II deposits (Fig. 29, Table XIX). They differ from the

previous category in that these points exhibit small side-notches. They are also much smaller (under 36.0 mm in length) and lighter (mean .72 g), plus they do not share the attribute of basal thinning. All points are triangular in outline and have straight sides although one specimen (unfinished) has convex sides and a single side-notch. Edges have been bevelled bifacially which has resulted in a sharp edge and a lenticular cross-section. Base form is straight, although some are slightly convex. Side-notched ground slate points are not commonly reported for Gulf of Georgia sites. One is illustrated by Carlson (1970:121) from the San Juan component at the Helen Point site. It appears to be similar in size and form to the Belcarra Park points. Crow-Swords (1974: Fig. 19a–d) excavated ten ground slate side-notched points at the Carruthers site.

Table XIX Triangular Ground-slate Points (side-notched)
Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|------------|--------------|------|------|--------|
| length | 21.0–36.0 mm | 29.0 | 5.62 | 5 |
| width | 13.0–17.0 mm | 14.4 | 1.25 | 6 |
| thickness | 1.5– 2.5 mm | 1.94 | .30 | 8 |
| neck width | 7.0– 9.0 mm | 7.81 | .66 | 8 |
| weight | .56– .87 g | .72 | — | 2 |

Ground Slate Knives

A considerable number of ground slate knife fragments were excavated. Eight of the fragments are large enough to discuss some of their shared attributes although no complete knives were found (Fig. 30). All of these tools have been manufactured from thin slabs of slate of various grades. Initial modification consisted of coarse abrasion followed by fine honing, producing an implement with a mean thickness of four millimetres. Edges are bifacially ground in a symmetrical fashion producing a strong, sharp and often polished cutting edge. Indications are that these tools were rectangular to plano-convex in outline. Sixty-one smaller ground slate fragments were also recorded. The possibility that these smaller fragments may actually represent portions of other tool classes (e.g. ground slate points) has been considered. However, two factors mitigate against this possibility. Firstly, a number of the fragments exhibit portions of a well-defined bevelled cutting edge and, secondly, the attribute of thickness is identical (mean 4 mm) to the eight larger ground slate knives. A number of these smaller fragments could easily be pieces of the same tool. This class of artifact is well represented in late component sites in the Lower Fraser and Gulf of Georgia regions and is often considered a characteristic trait of these components.

Adze Blades

Five complete adze blades (celts) and ten fragments

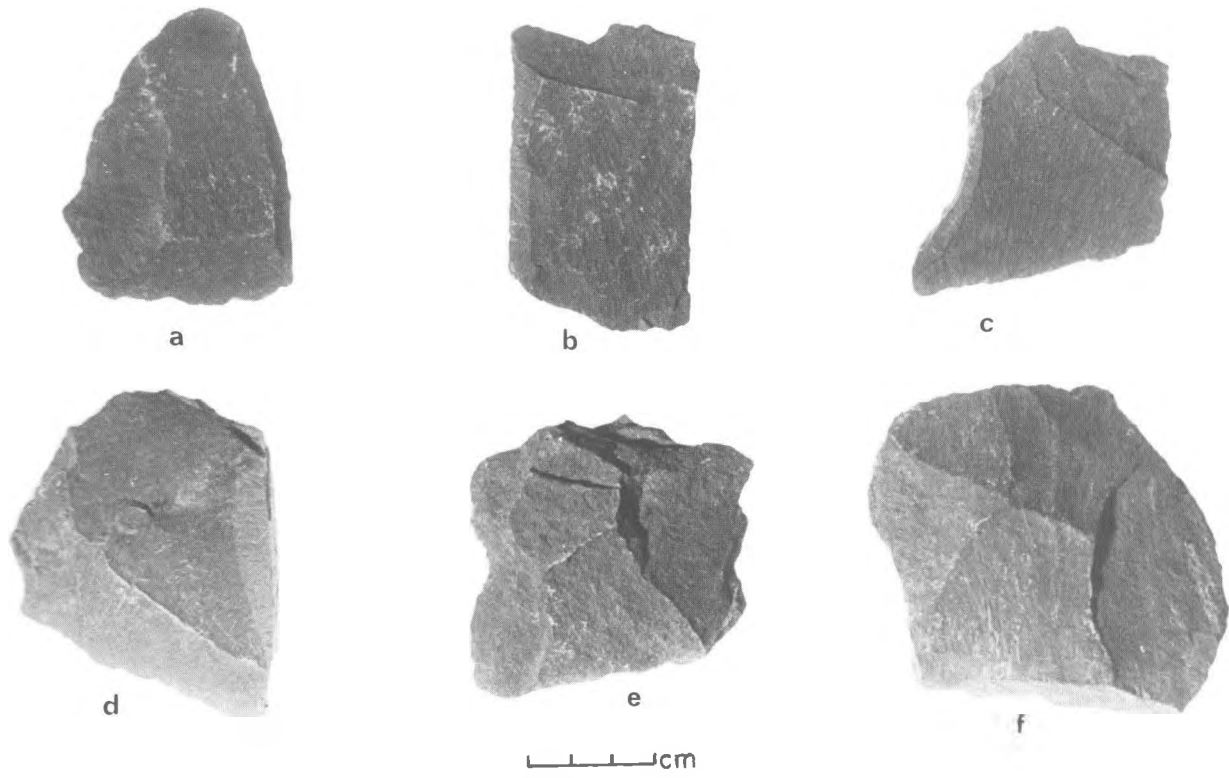


Fig. 25. Chipped slate knives, Belcarra Park II.

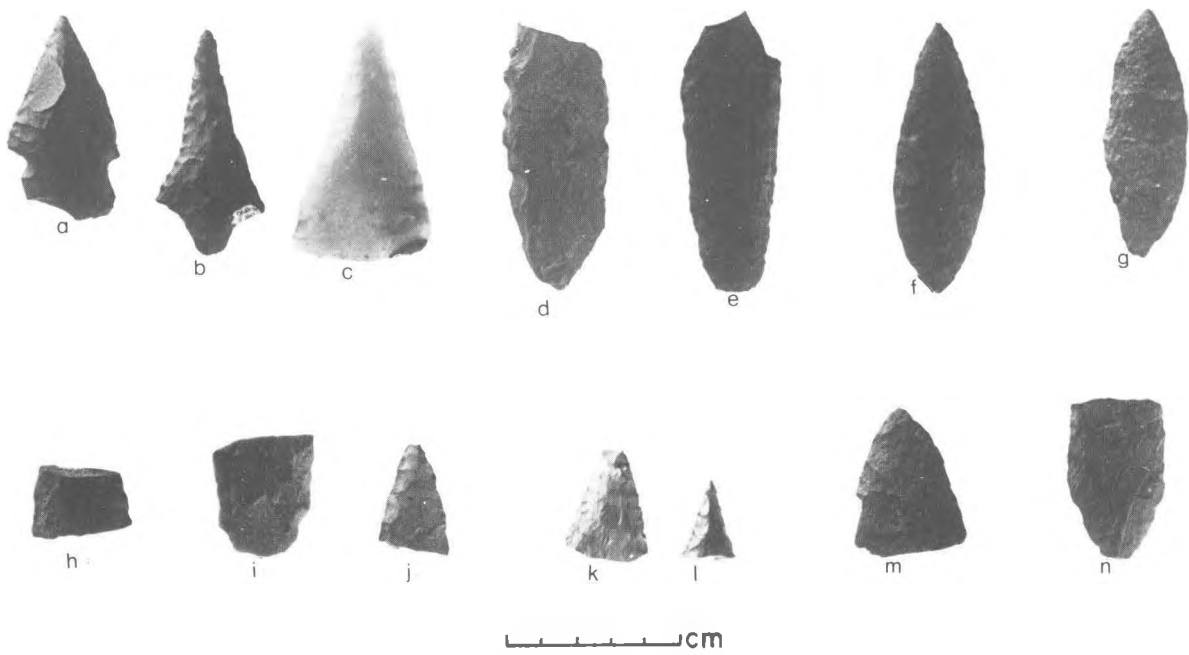


Fig. 26. Chipped stone bifaces, Belcarra Park II.

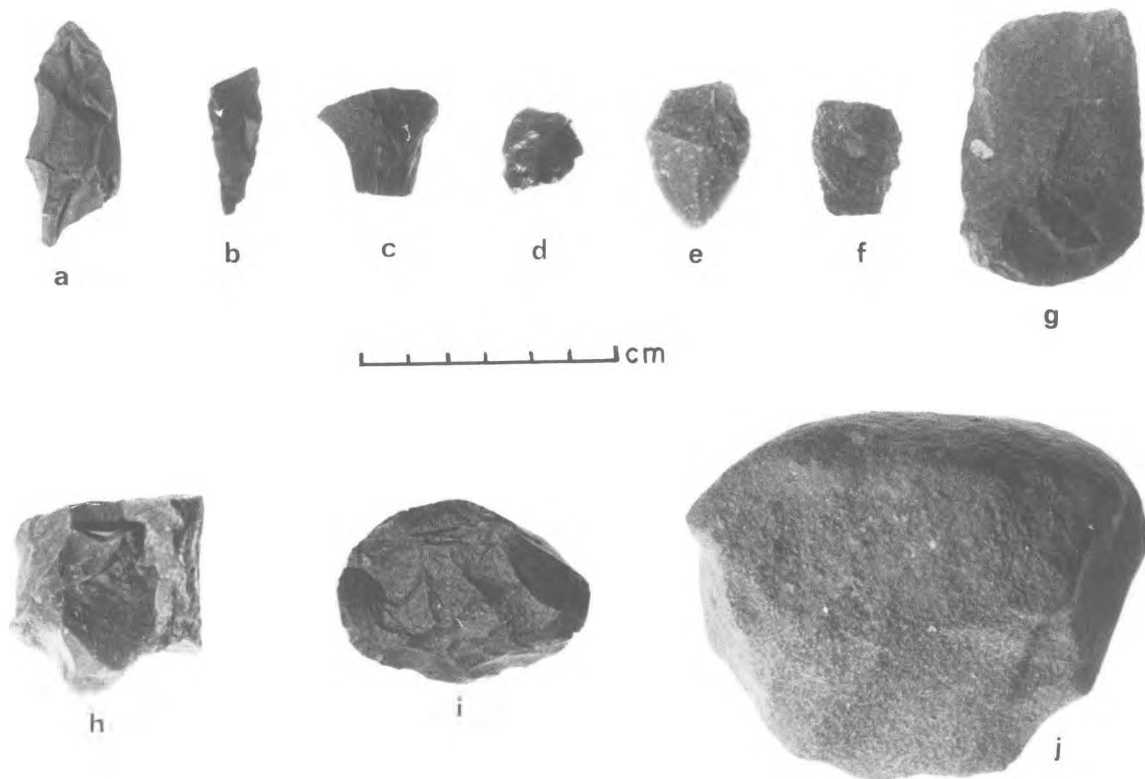


Fig. 27. Miscellaneous chipped stone, Belcarra Park II. *a* graver; *b, c* drills; *d ?; e ?; f ?*; *g* chipped stone uniface; *h, i* cores; *j* cobble core tool.

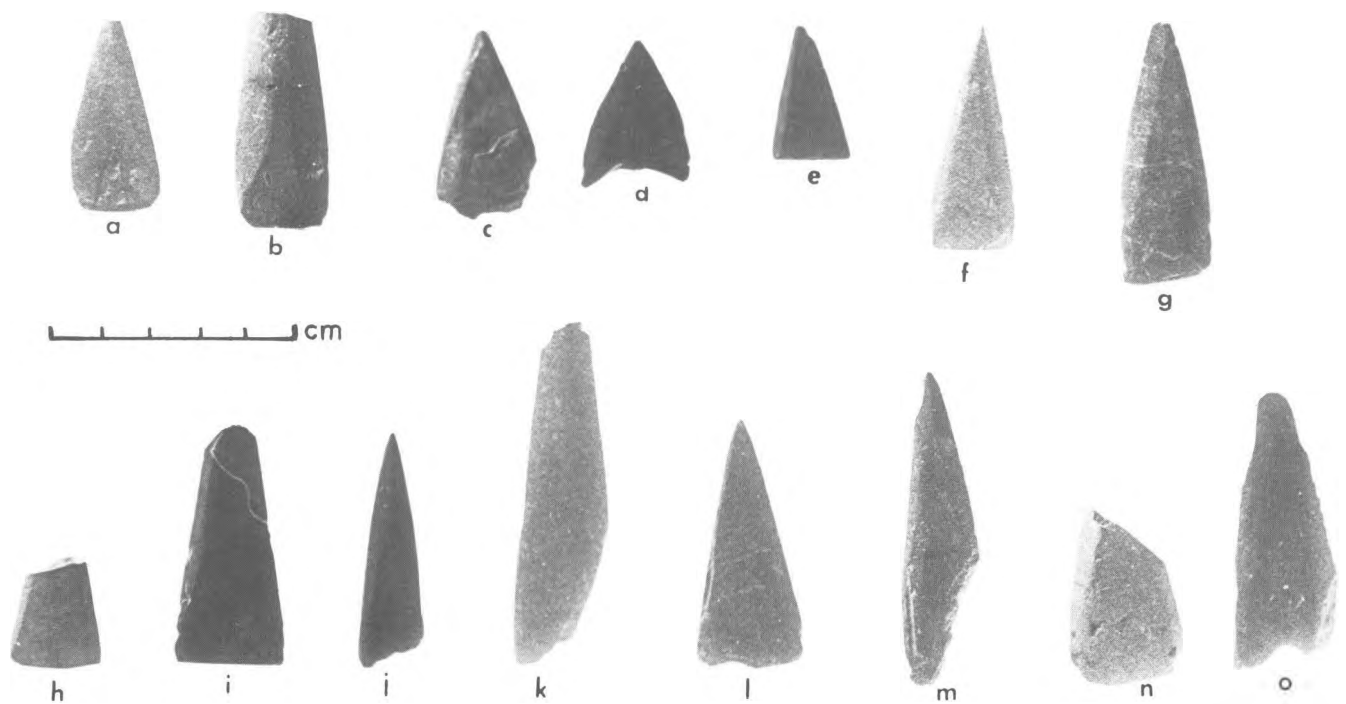


Fig. 28. Triangular ground slate points, Belcarra Park II.

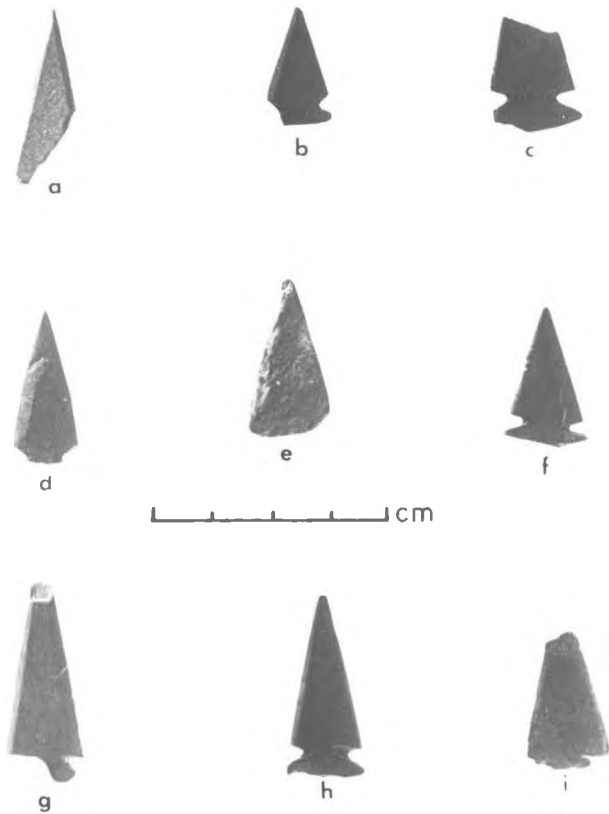


Fig. 29. Triangular ground slate points (side-notched), Belcarra Park II.

were found (Fig. 31, Table XX). Five of the fragments are relatively large pieces (three poll fragments, two bit fragments), which could be classified. Five of the ten fragments were small shattered pieces. Those which could be analyzed had their maximum width at the bit, the sides then gently taper to convex polls. All bits were bevelled (asymmetrically) on both faces. Of those with bits intact (7), three have small chips removed from the bit edge, similar to the Belcarra Park I specimens. Three of the eight which have polls intact show signs of extensive battering. While most of the specimens are highly polished, six of the adze blades still exhibit saw facets on a single side. Figure 31j shows clearly the manufacturing technique of sawing and snapping. Saw cuts have been made from the dorsal (5.5 mm) and ventral (7.0 mm) faces leaving a central area (5.0 mm) which was then snapped. Small, well-made celts or adze blades are commonly reported in coastal sites with post-Marpole components. The Belcarra Park II specimens are similar

Table XX Adze Blades, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|-------|-------|--------|
| length | 33.5–63.2 mm | 44.54 | 10.40 | 5 |
| width | 17.9–31.5 mm | 26.38 | 4.13 | 10 |
| thickness | 6.9–15.2 mm | 12.36 | 5.55 | 9 |
| weight | 7.63–51.49 g | 24.03 | 16.00 | 5 |

in size and form to ones (Type III) illustrated from the Carruthers site (Crowe-Swords 1974:Fig 25).

Ground Slate Object

A finely made ground slate object measuring 14.2 x 10.0 x 2.1 mm and weighing 0.6 g was located in the second component. The outline is that of a rounded triangle with a rectangular cross-section. The implement is well finished and exhibits highly polished surfaces. Two holes have been biconically drilled; the hole nearest the proximal end is the smallest (2.2 mm diameter) while the other hole measures 3.5 mm in diameter. Three small incisions (1.0 mm) are noted on one face only. A single incision has been inscribed at the proximal end while two (3.5 mm apart) have been inscribed at the distal end.

Pecked and Ground Stone Artifacts

Hand Mauls

Two hand mauls manufactured from fine grained igneous rock (greenstone?) were excavated from the late component (Fig. 32). Neither artifact is complete; both are distal (poll) fragments, and both are of the nipple topped type. Figure 32a is the larger of the two, and is broken at the point where the shaft joins the flanged striking head. The tool is cylindrical in cross-section. Thickness at the flared poll measures 45.0 mm while the shaft tapers from 38.5 mm to 56.0 mm in thickness. Two flakes have been removed from the poll indicating that light battering has taken place. Figure 32b is a much smaller poll fragment which measures 96.0 mm from the poll to where the tool had broken. Evidence of battering was observed at both the proximal and distal ends. The poll aspect (with 11 flakes removed) was extensively battered. Both hand mauls were finely finished and exhibit polished surfaces. These mauls with their cylindrical cross-sections, flanged striking heads and nipple tops correspond to the Type 1 B1 classification of Drucker (1943, Fig. 13d). Hand mauls of this style are widely reported from middens with late components in southwestern British Columbia.

Hammerstones

Hammerstones can be described as unmodified cobbles which generally show battering and/or pitting at one or more sides or ends of the implements. Four such tools (three complete) are from the Belcarra Park II component (Fig. 33, Table XXI). The largest of these tools (Fig. 33c) shows pitting at one end and a large flake removed from the circumference. The other three exhibit pitting at both ends. One (Fig. 33d) is heavily battered on the circumference as well. Hammerstones are widely reported for all

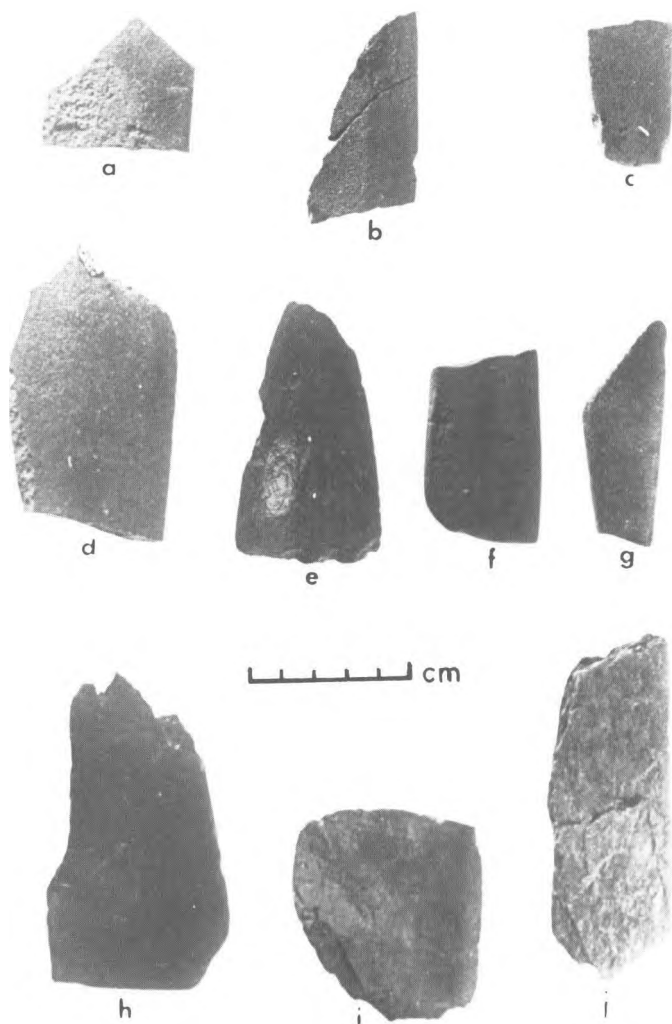


Fig. 30. Ground slate knives and sandstone abrasive saws, Belcarra Park II.

components in southwestern British Columbia.

Table XXI Hammerstones, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|----------------|-------|------|--------|
| length | 103.0–128.8 mm | 119.1 | — | 3 |
| width | 54.0–77.8 mm | 68.5 | — | 3 |
| thickness | 30.0–68.5 mm | 49.6 | — | 4 |
| weight | 432.5–610.0 g | 535.7 | — | 3 |

Notched Sinkers

A large flattened cobble (Fig. 34b) manufactured from an abrasive material was excavated in the Belcarra Park II component. The tool is oval in cross-section, measures 154.0 mm x 109.0 mm x 38.0 mm, and weighs 688.8 g. A well defined notch measuring 39.0 mm in length has been pecked into the edge.

Perforated Stone Preform

A single, small sandstone implement had been carefully

pecked to a circular shape (Fig. 34a). The tool, plano-convex in cross-section measures 77.5 x 71.0 x 29.0 mm and weighs 230.8 g. No signs of abrasion were noted which might have suggested a grinding function for this tool. A small depression had been pecked into the central areas of each face of the implement which suggests that the tool was intended to be a perforated stone.

Saws

Twelve tools (all fragments) were classified as saws (Fig. 30). All twelve were manufactured from sandstone which grades from coarse to fine grit. Outlines vary from rectangular to trapezoidal while cross-sections are either triangular, plano-convex or biconvex. All of the tools taper to a well defined bifacially bevelled working edge. Nine have symmetrically bevelled edges while three have markedly asymmetrical edges. Working edges and both faces exhibit extensive wear patterns.

Abrasive Slab

A large abrasive tool of coarse sandstone measuring 223 x 146 x 190 mm and weighing 478.8 g is from Belcarra Park II deposits. The tool, while broken, has been definitely shaped. Its function as an abrader is clear as evidenced by the signs of abrasion on both faces. Mitchell has suggested the term abrasive slab rather than abrader stone "...in the belief that they [abrader slabs] are too heavy for comfortable use in the hand." (Mitchell 1971a:125).

Shaped Abrasive Stones

Abrasive stones have been differentiated by determining whether or not purposeful shaping has taken place during the manufacturing process. Fifty-four (10 complete, 44 fragments) tools were defined as shaped abrasive stones and they share the attribute of being carefully manufactured and shaped (Fig. 35, Table XXII). Various grades of sandstone were utilized and four were manufactured from siltstone. Outlines of the ten complete artifacts range from oval (5), elliptical (2), to rectangular (3). Cross-sections are either biconcave (3), plano-concave (3) or rectangular (4). All ten exhibit abrasion marks on both faces although in six of these one face predominates in being heavily abraded. Two of the tools (Fig. 35a,c) exhibit a series of parallel grooves, one unifacially, the other bifacially. As mentioned, 44 shaped abrasive stone fragments were also recovered. They share the attribute of having one edge (or a portion

Table XXII Shaped Abrasive Stones, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|---------------|-------|------|--------|
| length | 58.0–159.0 mm | 109.0 | — | 10 |
| width | 53.0–131.0 mm | 78.5 | — | 10 |
| thickness | 18.0–49.0 mm | 23.9 | — | 10 |
| weight | 60.0–628.3 g | 476.8 | — | 10 |

of one edge) definitely shaped. Where observable cross-sections were as follows: bi-concave (11), plano-concave (12), rectangular (13), biconvex (1), concave-convex (1) and plano-convex (1).

Unshaped Abrasive Stones

Some 43 pieces of sandstone or siltstone were classified as unshaped abrasive stones as they show no evidence of purposeful shaping (Fig. 36). Bifacial abrading was observed in 24 of the fragments, unifacial abrading in seven. Twelve could not be determined as they were split longitudinally.

Abrader stones, be they shaped, unshaped, large or small are widely reported from all components in southwestern British Columbia and it is not unusual for this artifact class to be the largest class in an assemblage. While they may not be diagnostic of any one component, their wide distribution and large numbers reflect the importance of this ubiquitous tool whose function was the grinding and abrading of stone, bone and antler implements.

Pipes

Five fragments of finely finished stone pipes manufactured from steatite (4) and argillite (1) were recovered (Fig. 37). They are all bowl fragments which indicate they are pieces of straight, cylindrical pipes with flaring, expanding bowls (trumpet pipes) rather than elbow pipes. The bowl fragments are all very thin (thickness 2.0–4.0 mm) and are highly polished. One bowl fragment (Fig. 37b) exhibits a series of three parallel incisions around the circumference of the bowl.

Bone Artifacts

Barbed Bone Points

Thirty-one barbed points, of which two are complete were recovered. The 29 fragments are as follows: tip fragments (7), medial fragments (11), base fragments (11). These points which were probably fixed, exhibit considerable range in size and form (Table XXIII), and are unilaterally barbed (Fig. 38), with one exception which is bilaterally barbed. The 12 specimens which could be classified as to base shape were either conical (7) or pointed (5). Barb arrangement ranges from low, enclosed, dense barbs (7), and low, enclosed, isolated barbs (8), to low, extended, isolated barbs (3). As all the points are unilateral with low barbs, they correspond with Drucker's (1943:41) A1 category.

Table XXIII Barbed Bone Points, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|---------------|--------|-------|--------|
| length | 80.0–180.0 mm | 130.77 | 35.87 | 4 |
| width | 7.0– 19.0 mm | 11.24 | 3.82 | 7 |
| thickness | 3.8– 8.0 mm | 5.86 | 1.27 | 7 |
| weight | 6.39– 8.94 g | 7.83 | 1.07 | 3 |

Fifteen of the fixed bone points appear to correlate with A. McMurdo's Class II, Type I point which has the following attributes: square enclosed barbs, conical bases and long slender, straight profiles. McMurdo (1972:72) notes that these are most often associated with late Coast Salish components but have also been reported for both Marpole and Mayne phases.

The bilaterally barbed point is a small basal fragment which measures (36.0) x 6.5 x 3.5 mm. Along one edge are ten barbs which are low, straight, enclosed and dense. On the opposite edge is a single broken barb and posterior to this barb are a series of seven shallow serrations which may have served a hafting function.

Barbed Bone Harpoons

Three specimens, all basal fragments are from the second component at the Belcarra Park site. Figure 39d has a flat-

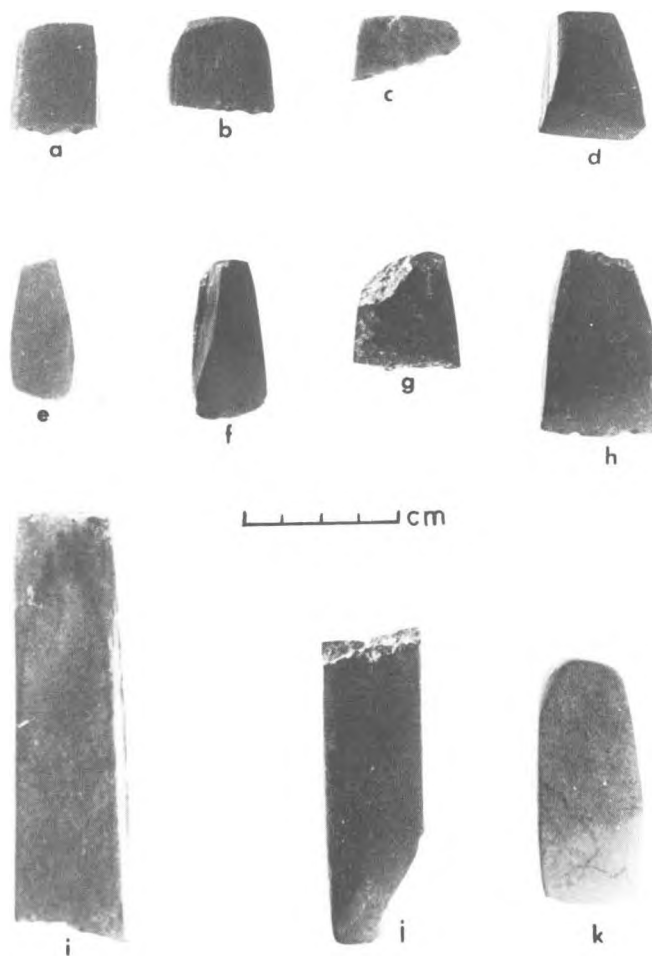


Fig. 31. Adze blades, Belcarra Park II.

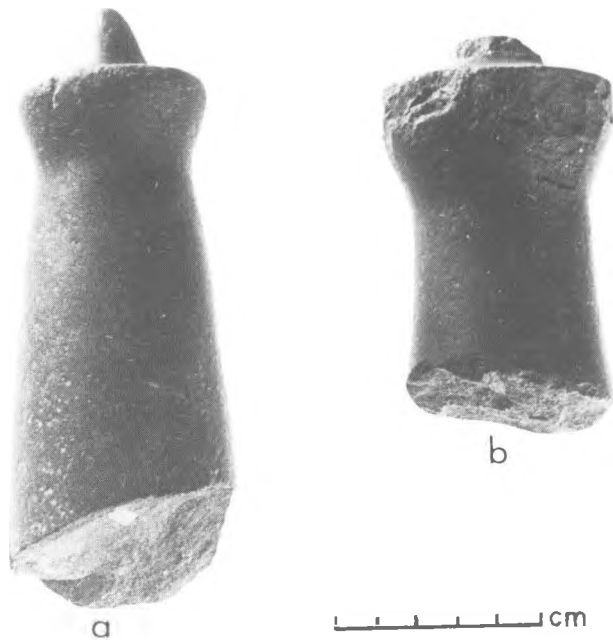


Fig. 32. Hand mauls, Belcarra Park II.

tened oval cross-section with a squared base. Barb arrangement is low and enclosed while barb shape is straight. Line attachment is by a unilateral reverse barb which is 28.0 mm from the posterior end of the implement. The barb measures 8.0 mm in length, 4.0 mm in depth and has been sawn into the shaft at a 30 degree angle. Figure 39e is similar to the preceding in that it also exhibits low, enclosed barbs and a squared base. Cross-section is plano-convex while barb shape could not be ascertained. This artifact also has the reverse barb form of line attachment. The barb is 18.0 mm from the posterior end of the implement and measures 9.0 mm in length, 4.0 mm in depth and has been sawn into the shaft at a 30 degree angle. Figure 39f exhibits a concave-convex cross-section, a conical base, and a unilateral shouldered line attachment. Barb arrangement or shape could not be determined.

According to McMurdo's (1972) typology of harpoons (based on barb arrangement and line attachment attributes) only Figure 39f can be classified. Because of their anomalous line attachment form, the other two artifacts do not fit into McMurdo's typology. Of the 121 harpoons from the Northwest Coast analyzed by McMurdo, none exhibited the reverse barb method of line attachment. A unilateral barbed harpoon with a reverse line notch was excavated at the nearby Caraholly site (DhRr17) by Struthers (1973, Fig. 6b).

Barbed Arrow/Harpoons

Two artifacts (Fig. 39b,c) from the Belcarra Park II

component share many of the attributes of unilaterally barbed harpoons reported from various components in southwestern British Columbia. Due to the fact that they both have the attribute of the line attachment they can be classified as harpoons. Yet, their size and weight set them apart from any classification used on the southwest coast of British Columbia. Both artifacts are complete, small and extremely well made. Artifact no. 1581 (Fig. 39b) measures 44 x 9 x 4 mm and weighs 1.17 g. The two unilateral barbs are low, enclosed and isolated and the barbs are straight. The base shape is conical while line attachment is by a unilateral line guard. Figure 39c, the larger of the two arrow/harpoons, measures 62 x 8 x 2 mm and weighs 1.47 g. The arrangement of the four barbs is low, enclosed and isolated with a straight barb shape. The base is thinned and the line attachment is by unilateral shoulder.

Wedge Based Points

There are numerous examples of this artifact type from south coast middens where they are generally interpreted as being arming points for composite toggling harpoon



Fig. 33. Hammerstones, Belcarra Park II.

heads (Carlson 1960:579). In one instance (Mitchell 1968: Fig. 7) a single point was located in association with two valves. McMillan and St. Claire (1975:48) also report two wedge based points located with their companion valves. The wedge based points (122) from the Belcarra Park II component exhibit little variation and are very uniform in size and shape (Fig. 40a-h). They are small points (mean length 37.84 mm) and extremely sturdy (155 complete, 7 fragmentary). The points are typically well finished being ground flat and worked on all faces. The tips are broad and well made and are often circular in cross-section. Invariably, the points reach their maximum width immediately behind the tip, then gently taper to a thinned (1.0 mm) well defined base. The posterior aspect of these points is usually either rectangular or biconvex in cross-section. Two wedge based points were found in association with composite toggling harpoon valves in Belcarra Park II deposits.

Table XXIV Wedge Based Points, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|-------|------|--------|
| length | 22.0-52.9 mm | 37.84 | 6.18 | 109 |
| width | 4.6-12.2 mm | 8.89 | 1.40 | 120 |
| thickness | 3.0- 6.9 mm | 4.75 | .78 | 120 |
| weight | .3- 2.3 g | 1.31 | .42 | 107 |

Medium Bone Points

In general form (well finished points with tapered bases) these points appear quite similar to the above described wedge based bone points. Upon close examination however, the two classes differ in a number of major attributes. For example in overall dimensions the medium bone points are invariably longer, wider, thicker and heavier and the ranges seldom overlap (Fig. 40 i-o). Like the wedge based points, they taper to a well-defined convex or squared base, but differ in that the base is much thicker (mean thickness 2.0 mm). The points have been finely finished by abrasion. Forty-one bone points, (37 complete, 4 fragments) have been classified as medium bone points.

Table XXV Medium Bone Points, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 43.0-76.0 mm | 55.0 | - | 39 |
| width | 7.0-11.5 mm | 8.5 | - | 41 |
| thickness | 3.0- 8.0 mm | 4.7 | - | 41 |
| weight | 1.2- 3.4 g | 2.1 | - | 37 |

Metric attributes are summarized in Table XXV. Their well-finished tapered base suggests a hafting function. Similar points have been classified as medium unbarbed points by McMillan and St. Claire (1975:48) who suggest that they functioned as barbs on composite fish hooks.



Fig. 34. Perforated stone preform (a); notched sinker (b); Belcarra Park II.

Shouldered Bone Point

This point is a finely finished bone point with asymmetrical shoulders (Fig. 40w). It measures (46.0) x 15.5 x 9.5 mm and weighs 2.1 g, was manufactured from dense land mammal bone, and exhibits a number of well-defined facet planes. Most abrading was performed uniaxially giving the tool a plano-convex cross-section medially, although the tip is circular in cross-section. From the

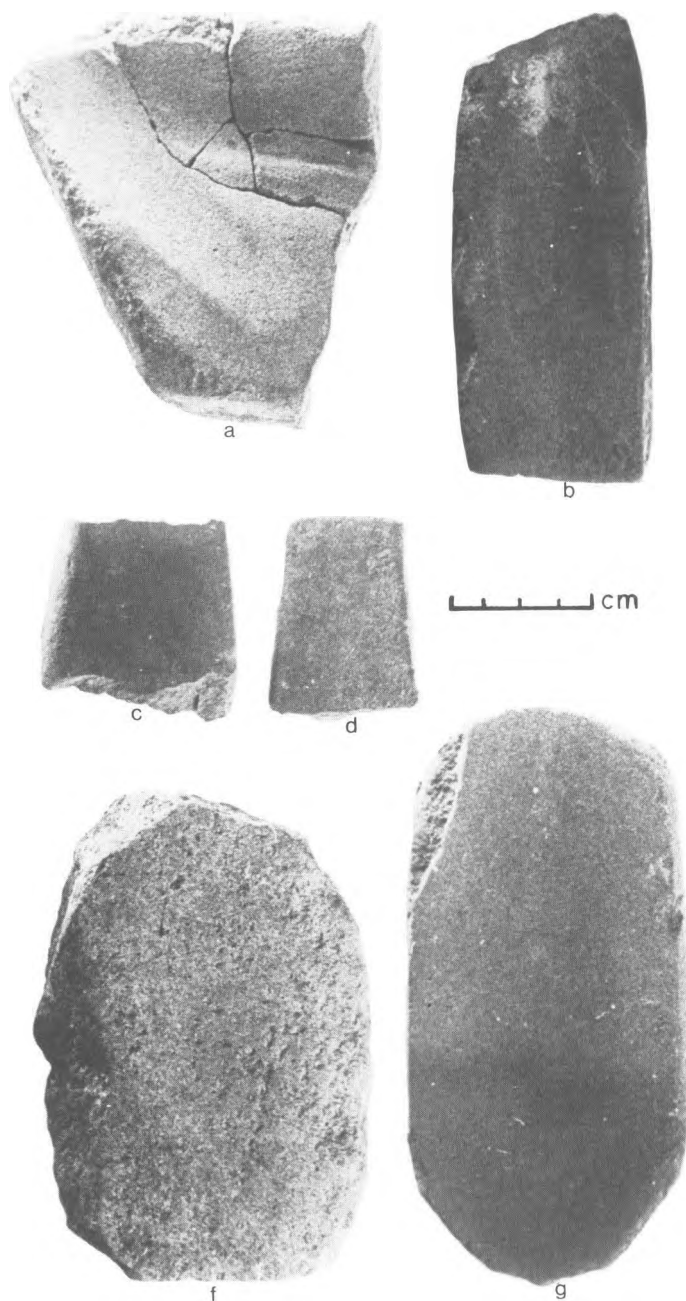


Fig. 35. Shaped abrasive stones, Belcarra Park II.

maximum width which occurs at the shoulders, the point tapers to an undefined broken butt.

Bone Bipoints

Nine implements made on land mammal splinters have been classified as bone bipoints (Fig. 40p–u). Eight correspond to Mitchell's (1971a:202) bone bipoint classification.

The ninth specimen corresponds to Mitchell's (1971a:202) fish gorge classification. The artifact measures (55.5) x 6.5 x 4.5 mm and tapers sharply to a constriction (4.0 mm wide) where it has been broken. The gorge, sub-rectangular in cross-section is well made and had been finely abraded on all faces (Fig. 40v). The other eight bipoints vary considerably in dimension and form. Four of the eight are minimally worked exhibiting abrasion only at the tips. The other four exhibit greater care and workmanship as all surfaces are abraded.

Similar implements have been reported ethnographically for the Gulf of Georgia Salish who used them for taking flounders (Barnett 1955, Fig. 27).

Table XXVI Bone Bipoints, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|---------------|------|------|--------|
| length | 43.0–102.0 mm | 60.3 | — | 8 |
| width | 5.0– 12.0 mm | 8.7 | — | 6 |
| thickness | 4.0– 7.0 mm | 5.3 | — | 8 |
| weight | 1.0– 4.0 g | 2.3 | — | 7 |

Ulna Awls

Fourteen tools manufactured from ulnae of land mammals were classified as ulna awls (Fig. 41f,g). Eleven are complete and three are fragments. In all cases the unmodified ulna have had their blades abraded which has produced a highly effective cutting or piercing instrument. Like split bone awls the tool maker has concentrated upon the distal portion of each implement and has produced either a pointed or a rounded tip. Like split bone awls, ulna awls are widely reported from sites with late components in the Lower Fraser and Gulf of Georgia areas.

Table XXVII Ulna Awls, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|---------------|-------|------|--------|
| length | 62.0–157.0 mm | 102.0 | — | 12 |
| width | 14.0– 62.0 mm | 29.2 | — | 14 |
| thickness | 8.0– 39.0 mm | 21.0 | — | 14 |
| weight | 3.5– 48.9 g | 13.3 | — | 11 |

Split Bone Awls

This type of artifact is very common in late prehistoric components in the Lower Fraser-Gulf of Georgia area and is widely reported. Twenty-four artifacts from the Belcarra Park II component have been classified as split bone awls (Fig. 41a,b). The tools which are manufactured from splinters of long bones of land mammals are simple and quickly made implements. The long bones were first longitudinally cut and snapped or more commonly simply broken or smashed. The larger fragments were then selected and the distal portions *only* were ground to a sharp tip providing a simple but efficient tool.

Table XXVIII Split Bone Awls, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|---------------|------|------|--------|
| length | 53.5–126.0 mm | 66.0 | — | 24 |
| width | 6.5– 17.0 mm | 11.3 | — | 24 |
| thickness | 3.0– 13.5 mm | 6.0 | — | 24 |
| weight | 1.8– 11.1 g | 4.3 | — | 24 |

Shouldered Awls

These nine specimens are manufactured on pieces of split land mammal bone, and all are fragments (Fig. 41c–e). Work has been concentrated at the distal end where a well-developed point (circular cross-section) has been formed. In all cases except one, a single shoulder is the norm. The points appear to have been roughly shaped then carefully abraded producing a well-defined thick point. Two of the points exhibit a high degree of wear polish on the tips.

Straight Awls

These well finished implements are manufactured from the long bones of land mammals. All have been carefully abraded to shape and exhibit a high degree of wear polish (Fig. 41h–k). Two are decorated with geometric designs and two have been sectioned longitudinally. Metric attributes of straight awls are contained in Table XXIX. Included in the straight awl classification is a single, well made awl from a deer metapodial (Fig. 41j).

Table XXIX Straight Awls, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|---------------|-------|------|--------|
| Length | 78.0–155.0 mm | 114.8 | — | 11 |
| width | 7.5– 21.0 mm | 11.2 | — | 13 |
| thickness | 4.0– 9.0 mm | 6.6 | — | 13 |
| weight | 3.4– 25.2 g | 11.3 | — | 11 |

Bird Bone Awls

A total of ten (4 complete, 6 fragments) bird bone awls was excavated from the second component at Belcarra Park (Fig. 42g–i). All are manufactured from the long bones of various bird species. The four complete specimens have the articulating epiphysis (proximal end) intact. Modification of these tools is confined to the distal end although three specimens exhibit a high degree of wear polish on their shafts. A sharp working tip at the distal end has been produced by abrading a single bevel at a sharp angle.

Table XXX Bird Bone Awls, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 56.0–89.5 mm | 74.0 | — | 4 |
| width | 2.5– 5.0 mm | 3.3 | — | 9 |
| thickness | 2.5– 4.0 mm | 2.9 | — | 9 |
| weight | 0.7– 1.3 g | 0.9 | — | 4 |

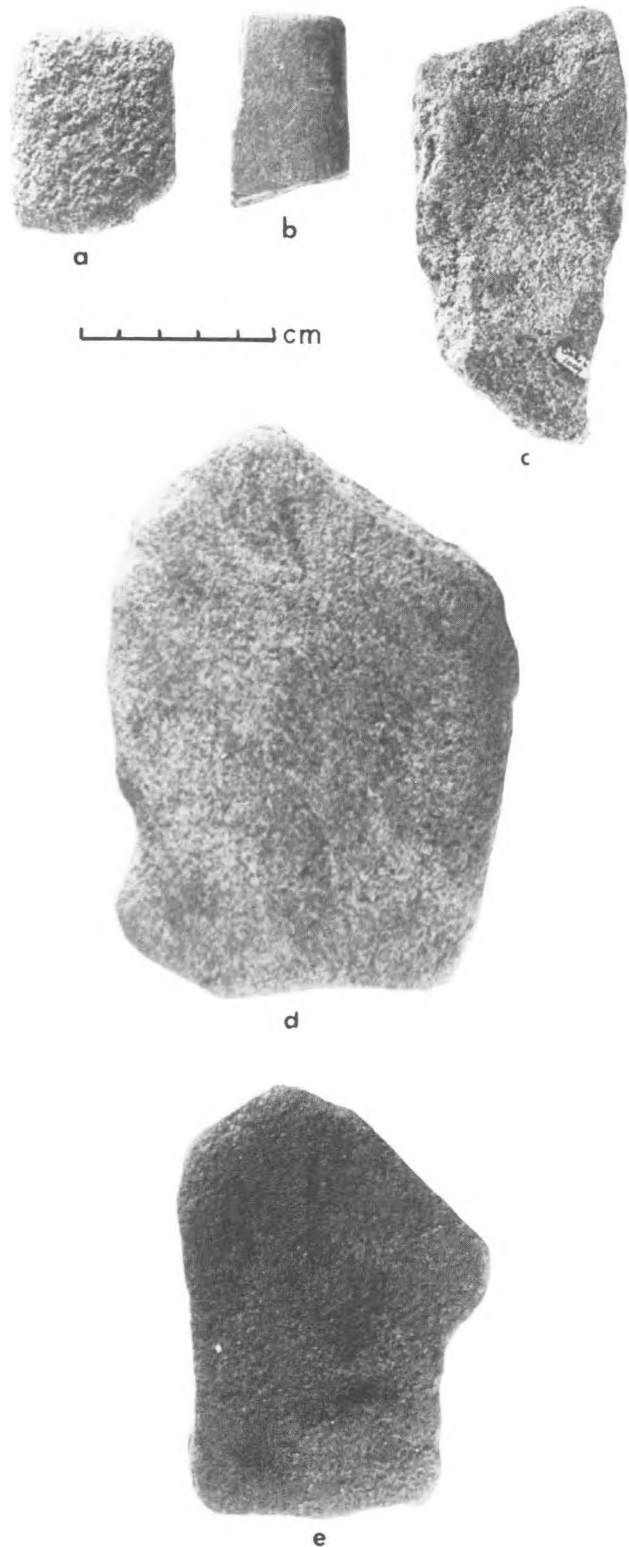


Fig. 36. Unshaped abrasive stones, Belcarra Park II.

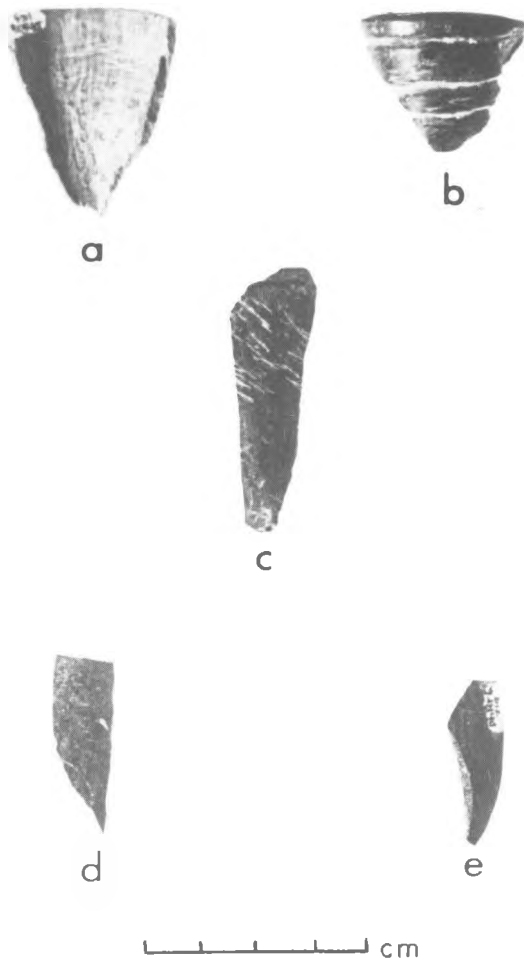


Fig. 37. Pipe fragments, Belcarra Park II.

Bird Bone Splinter Awls

These implements are similar to split bone awls manufactured from land mammal bone. For example the manufacturing process (i.e. distal tip abrasion of bone splinters) appears identical. There are, however, significant differences in both size and weight (Table XXXI). A total of nine (5 complete, 4 tip fragments) were recovered. They have all been manufactured from large long bone splinters of large bird species and are plano-convex in cross-section (Fig. 42d-f).

Table XXXI Bird Bone Splinter Awls, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 48.0-74.0 mm | 57.4 | — | 5 |
| width | 5.5- 9.0 mm | 7.2 | — | 5 |
| thickness | 2.0- 4.0 mm | 2.6 | — | 5 |
| weight | 0.9- 1.2 g | 1.0 | — | 5 |

Bird Bone Points

Three finely made points manufactured from bird bone splinters were from Belcarra Park II (Fig. 42a-c). Two are complete and measure 25 x 3 x 1 mm and 39 x 5 x 2 mm, respectively. The former weighs 0.1 g and the latter, 0.5 g. Both of these points have finely abraded tips and shafts and taper to well-defined squared wedge bases. The broken specimen which measures (22) x 3 x 1 mm differs from the other two in that the tip has been abraded on a number of planes producing a rounded shouldered tip similar to the bone drills also of the Belcarra Park II component.

Bird Bone Tube Beads

Three bird bone beads (2 complete, 1 fragment) are from the Belcarra Park II component (Fig. 42). The long bones of large bird species provided the raw material for the beads. Measurements for the two complete beads are 15 x 14 x 12 mm (Fig. 42k), and 12 x 9 x 7 mm (Fig. 42l). The latter weighs 0.5 g and the former 1.5 g. The manufacturing process involved cutting around the circumference to a depth of 0.5 mm then snapping to detach the head from the long bone. In one specimen, the rough edges of the snapped area have been smoothly abraded. Two of the three specimens show a high wear polish. Included in this classification are a number of broken bird long bones, which vary in circumference from 5.0 to 15.0 mm. They all have the attribute of having a cut end (as described above) and/or having parallel incisions around the circumference. Three specimens clearly show these parallel incisions (Fig. 42m,n). Thus, these are interpreted as bird bone tube beads, preform or blanks and not bird bone drinking tubes as is often suggested. Calvert (1970:61) reports three complete and several fragments of bird bone tube beads from the upper layers of the main deposit at the St. Mungo Cannery site.

Bird Bone Whistle

A broken bird bone from the Belcarra Park II component has been classified as a bird bone whistle. The broken implement measures (59.0) x 9.0 x 9.0 mm (Fig. 42j). Two holes have been sawn transversely into the tube to a depth of approximately 3 mm. The artifact is broken at both ends where the holes were sawn. Carlson (1970:121) has illustrated a single bird bone whistle from the San Juan phase at the Helen Point site.

Bone Chisels

Five implements (2 complete, 3 bit fragments) manufactured from land mammal long bones were recovered (Fig. 43i,j). The two complete specimens measure 129 x 26 x 9 mm and 58 x 18 x 8 mm respectively. The former weighs 22.2 g and the latter 4.9 g. All the implements are well finished and abraded on all faces. The bits have been ground to a spatulate rounded form. All bits with the

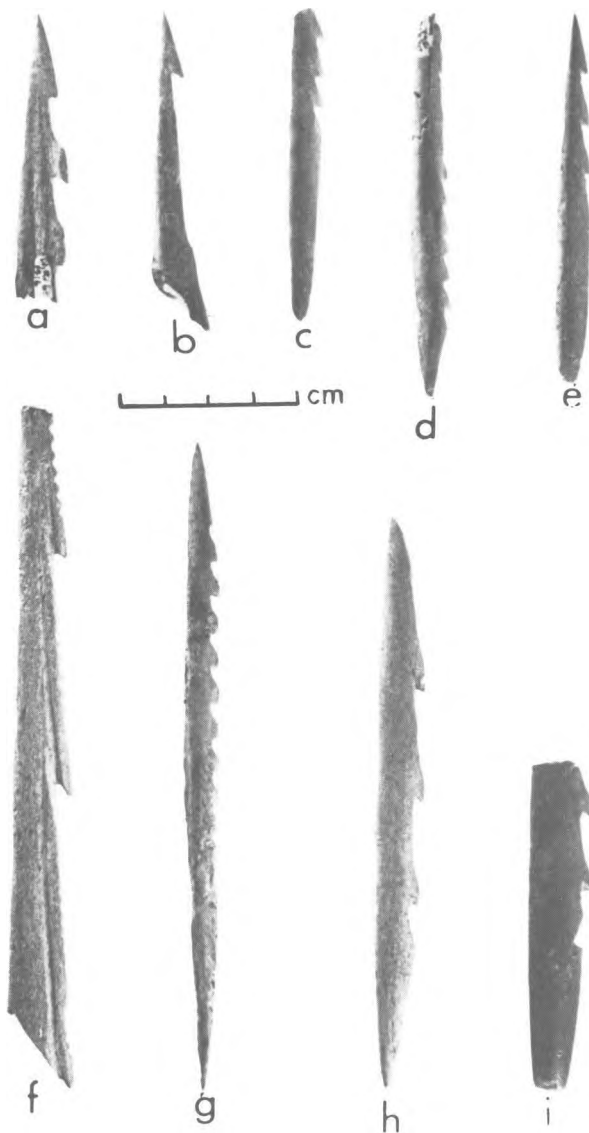


Fig. 38. Barbed bone points, Belcarra Park II.

exception of one are bifacially ground. A considerable amount of wear polish was observed on all five implements.

Bone Splinter Drills

Six artifacts from the Belcarra Park II component have been classified as bone drills. Only one (Fig. 43e) is complete and measures 100 x 13 x 7 mm and weighs 4 g. It is circular in cross-section and is made from the long bone of an unidentified bird species. Four of the six have been manufactured on splinters of land mammal bones. All of the specimens in this classification share the attribute of having a carefully worked distal tip which is circular in cross-section. In all cases the shafts taper sharply to the well-defined tip. Wear pattern on the circumference of the tip suggests a drilling function. Bone drills are not

widely reported for prehistoric components in the area. Mitchell (1971a:201) has described three bone splinter drills from the Montague Harbour III component.

Bone Needle

A finely crafted specimen manufactured from land mammal bone has been classified as a bone needle (Fig. 43g). The broken implement measures (56.0) x 10.5 x 3.0 mm and has been finely abraded on all surfaces. The shaft is symmetrical, has a flattened oval cross-section and exhibits use-wear polish. The implement is broken at its proximal end where the needle eye has been incised biconically. The eye measures 2.0 mm in width; its length could not be measured.

Bone Splinters with Worked Tips

This is a loosely defined category that includes all fragments of land mammal bone with worked tips. These carefully crafted implements (67 in number) show a great deal of wear polish. Cross-sections are variable, being either plano-convex, round or elliptical. Due to their fragmentary nature, original form and function could not be determined. Conceivably, they could have functioned as awls, fish gorges or other fish hooks, or as arming points for composite toggling harpoons (Fig. 43a-d).

Bone Blanket Pins

A series of finely finished bone points was excavated from the Belcarra Park II component. Twenty-four in number, all but one are fragmentary. These implements are characterized by the following attributes: (1) finely finished with high wear polish on all specimens, (2) round cross-sections and (3) uniformity in the dimension of thickness. These long tapering points had a mean of 5.1 mm in thickness. The variation in thickness ranged from 4.5 to 6.0 mm, a difference of only 1.5 mm. Three of the points which had proximal ends intact (Fig. 44) exhibited some form of decoration. Two (Fig. 44c,d) exhibited distinct whale fluke designs. Another medial fragment is characterized by an incised cross-hatched design.

Tooth Pendants

Four teeth which have been modified to allow suspension as a pendant were located in Belcarra Park II deposits (Fig. 45) and are described here.

Figure 45b shows a complete land mammal canine bearing a series of five narrow, parallel incisions cut into the proximal end by a sharp tool. In Figure 45c a calcined canine that has been cut and squared off by abrading the distal and proximal ends, is displayed. The hollow tooth may have functioned as a necklace. Figure 45d shows a large canine (bear?) that has been incised around its circumference at the proximal end. It is in a deteriorated

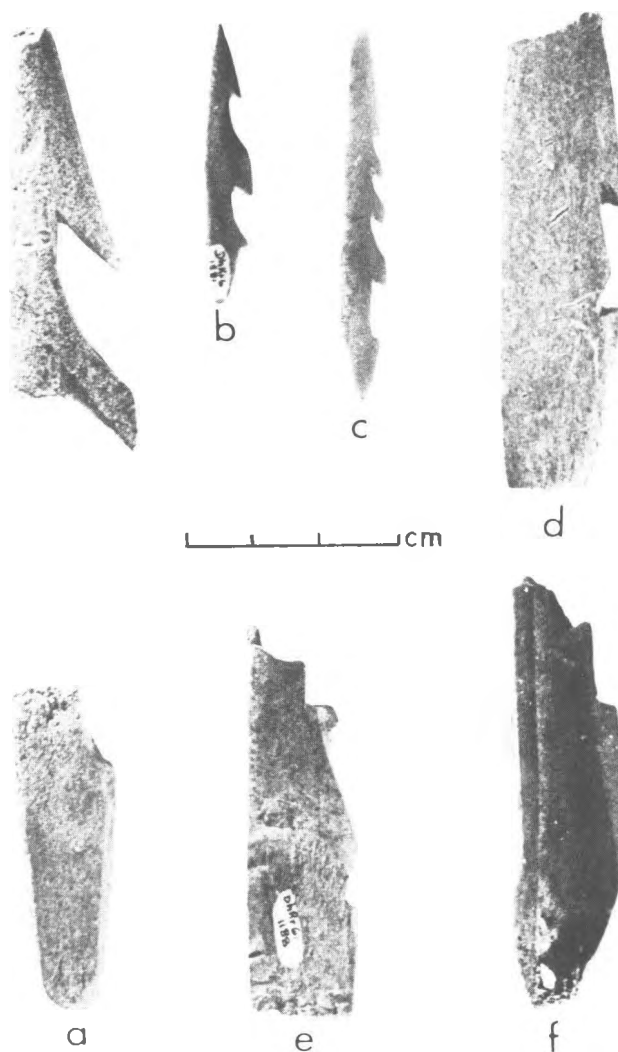


Fig. 39. Barbed harpoons, Belcarra Park II. *a* unilaterally barbed harpoon of antler; *b, c* unilaterally barbed arrow/harpoons of bone; *e-g* unilaterally barbed harpoons of bone.

condition. An incisor (Fig. 45e) has been cut and incised circumferentially to a depth of 1.0 mm at its proximal end. The pendant has a longitudinal break distally.

| | Length(mm) | Width(mm) | Thickness(mm) | Weight(g) |
|----------|------------|-----------|---------------|-----------|
| Fig. 45b | 36.0 | 9.0 | 5.5 | 1.9 |
| 45c | 26.0 | 9.0 | 7.0 | 1.3 |
| 45d | 35.5 | 10.0 | 8.0 | 2.3 |
| 45e | 28.0 | 9.0 | 4.5 | — |

Rodent Incisor Tools

From the Belcarra Park II component a total of 23 (8 complete, 15 fragmentary) rodent incisor tools were excavated (Fig. 45f-j). These teeth are generally regarded as

woodworking tools which had been set in hafts and utilized for delicate carving tasks. Ethnographically, Barnett (1955: 109) reports the use of such tools for engraving. Fifteen of the incisors have been split longitudinally then abraded laterally on the new face. A bevelled surface was then abraded at the distal working end producing a sharp cutting edge. Eight of the specimens had not been split longitudinally. In three cases the natural cutting edge of the tooth was utilized while five others had modified cutting edges. The tools are either rectangular (8) or plano-convex in cross-section. Metric attributes are summarized in Table XXXII.

Table XXXII Rodent Incisor Tools, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 34.0-61.0 mm | 48.4 | — | 8 |
| width | 5.0- 8.5 mm | 7.4 | — | 8 |
| thickness | 3.5- 6.0 mm | 4.7 | — | 8 |
| weight | 1.0- 2.4 g. | 2.3 | — | 8 |

Miscellaneous Decorated Bone Items

Three items manufactured from land mammal bone (rib-1, long bone-2) have been grouped together as they share the attribute of decoration as well as the material utilized. One specimen (Fig. 46b) appears to be a ring preform. It is sub-triangular in outline, is 7.0 mm thick and has been finely abraded and polished on all exterior surfaces. The interior marrow region remains unfinished. A fragment of a thin rib measures (33) x 11 x 2 mm (Fig. 46c). This implement (brow band?) is highly polished and has been uniaxially decorated with a series of rectangular and triangular motifs.

The third decorated item is made of dense land mammal bone and its function is unknown (Fig. 46a). It is triangular in outline and measures (92.0) x (30.0) x 6.5 mm. It is broken at both the distal and proximal ends and must have been at least 116.0 mm in length when complete. Two spurs (one broken) form the proximal end. One spur is convex at its proximal end. The tool is highly polished and is characterized by a series of parallel horizontal incisions which have been carved into the implement uniaxially.

Miscellaneous Worked Bone Fragments

A large number (117) of mammal bone fragments which are generally too small to ascribe to any other functional classification, were recovered from Belcarra Park II deposits. All primary modifications techniques (cutting, adzing, abrading, splitting, sawing, incising and polishing) are represented. Most specimens (103) exhibit abrading and/or incising. Nine show the distinctive marks of saw cuts. Most are obviously waste debitage discarded in the manufacturing process. Some may have been fragments of artifacts such as bone points, split bone awls or bone wedges.

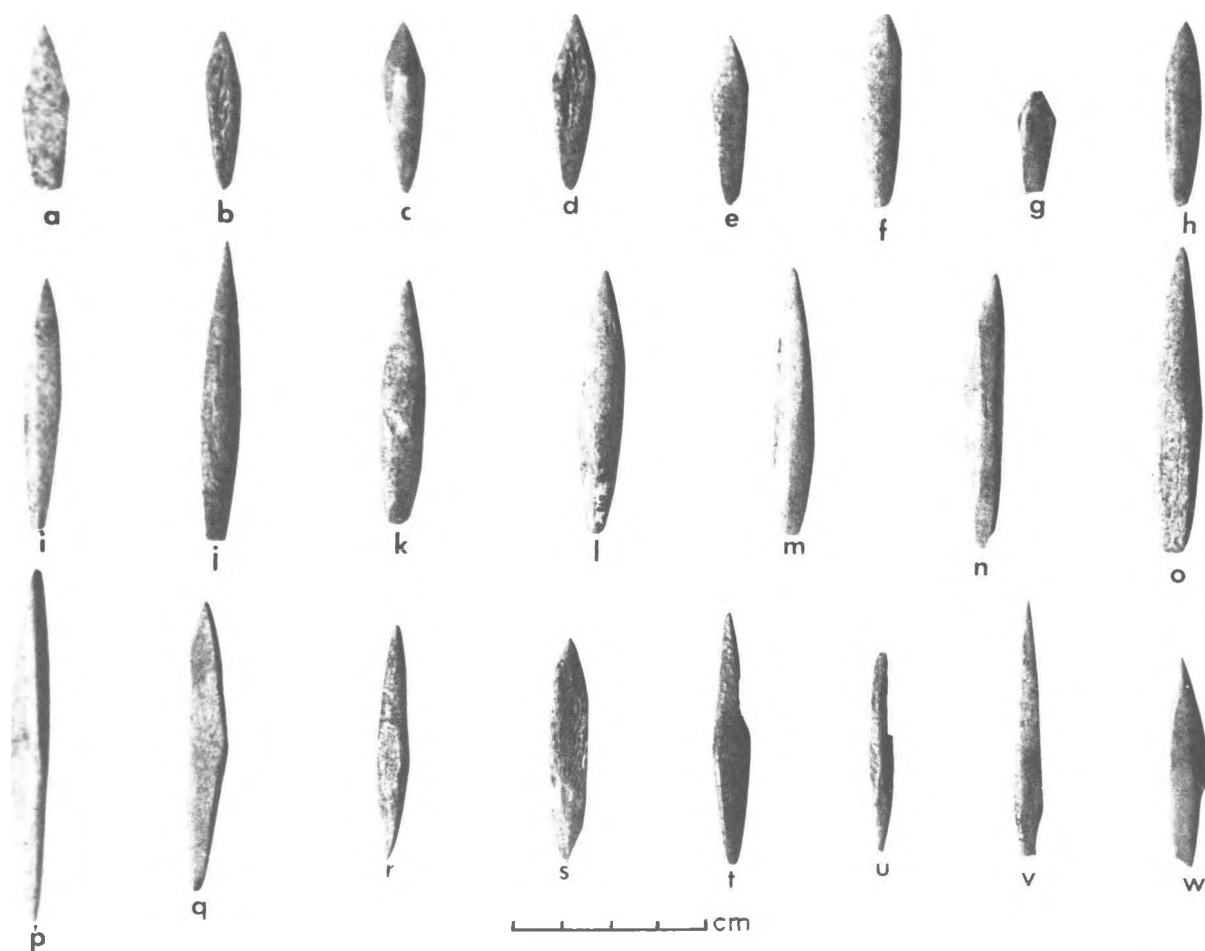


Fig. 40. Bone points, Belcarra Park II. *a-h* wedge-based points; *i-o* medium bone points; *p-u* bone bipoints; *v* fish gorge; *w* shouldered bone point.

Antler Artifacts

Barbed Antler Points

A total of 13 unilaterally barbed points (3 complete, 2 tip fragments, 6 basal fragments, 2 medial fragments) were excavated in the Belcarra Park II deposits. The quantitative attributes for the three complete points are:

| | Length(mm) | Width(mm) | Thickness(mm) | Weight(g) |
|----------------------------|------------|-----------|---------------|-----------|
| Artifact 540 (Fig. 47e) | 180.0 | 10.0 | 5.0 | 8.5 |
| Artifact 228 (Fig. 47d) | 139.0 | 8.0 | 5.0 | 6.6 |
| Artifact 671 | 61.0 | 11.0 | 4.0 | 2.3 |

Profiles for the 13 points are either straight (8) or curved (5), while base shape is either pointed (6) or conical (3). Eight of the artifacts can be classified as to barb shape and barb application. Barb shape ranges from straight (3) to squared (3) to convex (2). Three of the fixed antler points exhibit a series of parallel notches or incision all less than 1.0 mm in depth and all on the barbed edges.

Barbed Harpoon

A single harpoon consisting of the proximal and distal portions (with the medial portion missing) was recovered from the earliest levels of the Belcarra Park II component (Fig. 39a). The implement was manufactured from antler and was well finished. Barb arrangement is high, extended and isolated. One of the two intact unilateral barbs is squared while the other is straight. The base of the harpoon is conical and the line attachment is by a unilateral shoulder. Mitchell (1971a:175) has observed that considerable variation in attributes is a trait, characteristic of this artifact class. The Belcarra Park specimen is a case in point. The harpoon shares many attributes with the "classic" Marpole style harpoon. It differs markedly though in the attribute of line attachment in that it exhibits a unilateral shoulder (Fig. 39a), rather than the more characteristic lateral line guard or unilateral line hole.

Antler Wedges

Twenty tools which have been classified as wedges were recovered (Fig. 48c-g). These implements which played a major role in the Northwest Coast woodworking tool kit

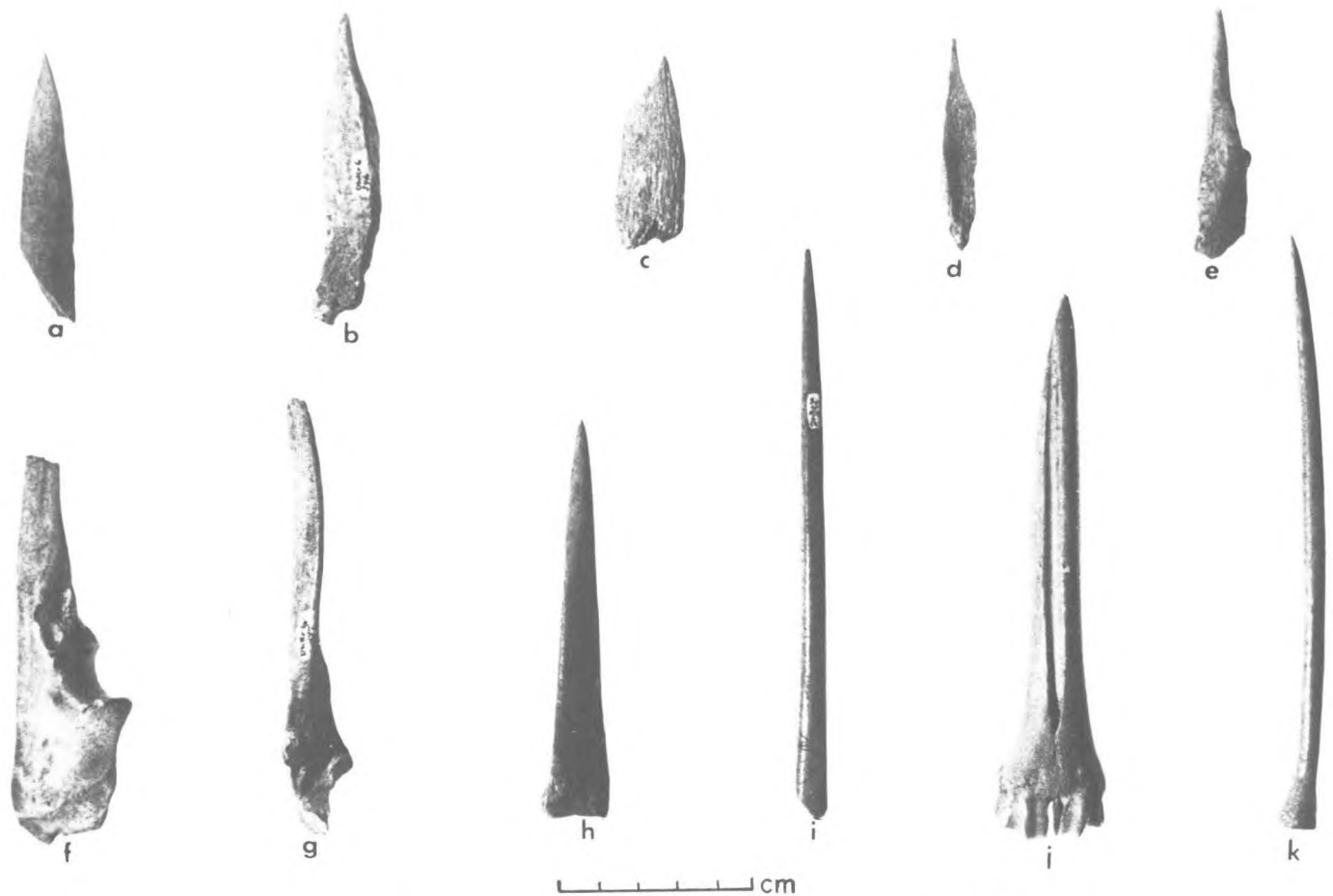


Fig. 41. Awls, Belcarra Park II. *a, b* split bone awls; *c-e* shouldered awls; *f-g* ulna awls; *h-k* straight awls.

were manufactured from either the beam or tine portion of the antler (invariably wapiti). Six of 20 are complete while the remainder consists of broken tips (12) or large fragments which had broken longitudinally (2).

The manufacture of these tools consisted of detaching (by cutting, adzing or sawing) the selected portion from the antlers. The artisan then simply ground the distal end (usually unifacially) which produced a highly efficient wedge-shaped tool for the splitting of cedar. Polls, when present, exhibited considerable battering. One anomolous wedge (Fig. 48d) had been sawn longitudinally along both

snapped and the distal portion bifacially ground providing a symmetrical bit. Cross-section of the wedges ranged from circular to plano-convex. Quantitative data for antler wedges are summarized in Table XXXIII.

Antler wedges are reported as common for all components in the Lower Fraser and Gulf of Georgia regions. A good example is the St. Mungo Cannery site where it is noted that . . . "Wapiti antler wedges of a variety of shapes and sizes are abundant through all levels. . . there is no pattern of increase in size or meaningful distribution of width, curve, or bit type" (Calvert 1970:63). Ethnographically, the use of elk antler wedges has been reported (Barnett 1955:108).

Table XXXIII Antler Wedges, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|---------------|------|------|--------|
| length | 49.0-158.0 mm | 98.7 | — | 6 |
| width | 31.0- 51.0 mm | 36.7 | — | 6 |
| thickness | 12.7- 33.5 mm | 23.1 | — | 6 |
| weight | 9.5- 58.6 g | 35.1 | — | 6 |

edges of a beam section to a depth of 7.0 mm until the soft, spongy tissue was encountered. The section was then

Antler Tine Tips

Seven antler tine tips (Fig. 48a,b) which did not function as wedges, were excavated in Belcarra Park II deposits. All of these tools have been detached from the main portion of the antlers by sawing, cutting or adzing the circumference proximally then snapping.

Table XXXIV Antler Tines, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 25.0–79.0 mm | 50.9 | — | 7 |
| width | 12.0–45.0 mm | 20.9 | — | 7 |
| thickness | 8.0–20.0 mm | 13.7 | — | 7 |
| weight | 1.4–16.6 g | 8.1 | — | 7 |

Antler Sleeve Hafts

Four sleeve hafts of wapiti antler represent this class of artifact (Fig. 49). The implements had initially been detached from large wapiti antler beams. The distal and proximal ends are squared either by adzing or abrading. The cortex of all four have been smoothly abraded as well. The soft inner matrix of the antler has been hollowed out by carving both shaft and bit sockets. Antler sleeve hafts are considered to be a distinctive trait of the Gulf of Georgia region (Smith 1907:437). They have been reported for the Gulf and San Juan Islands (Carlson 1960, Kidd 1969, Mitchell 1971a) but to the author's knowledge have not been reported for sites in the Lower Fraser drainage.

Table XXXV Antler Sleeve Hafts, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|-------|-------|--------|
| length | 46.6–74.1 mm | 69.32 | 13.79 | 4 |
| width | 44.0–65.1 mm | 55.06 | 8.64 | 3 |
| thickness | 30.1–33.8 mm | 31.97 | 2.62 | 3 |

Composite Toggling Harpoon Valves

A total of 93 composite toggling harpoon valves are from Belcarra Park II deposits (Fig. 50). Forty-one are complete valves and include eight matching pairs. All pairs were found *in situ* and within a few millimetres of each other. At least one pair was found complete with a bone arming point (Fig. 50k). By examining the preforms (Fig. 50g–j) and the completed valves, a reconstruction of the steps in manufacture can be obtained. The initial step in the manufacturing process consisted of blocking out the rough shape by carving or adzing. This is followed by coarse and fine abrasion, further refining the shape. The socket areas are then gouged out and the point bed (either channelled or flat) is prepared. The exterior surfaces are invariably smoothly finished and only 11 valves show definite evidence that lashing grooves were utilized. Four of the valves had flattened point beds (Fig. 50e,f) designed for using a flat ground slate point. The majority of the valves (71) though, had channelled point beds designed for round or wedge based bone points (Fig. 50a–d). Eighteen were spur fragment and point bed attributes could not be determined.

This class of artifact (Drucker 1941:39-Type II) is extensively reported from post-Marpole phase components in the southwestern coastal areas of British Columbia. Com-

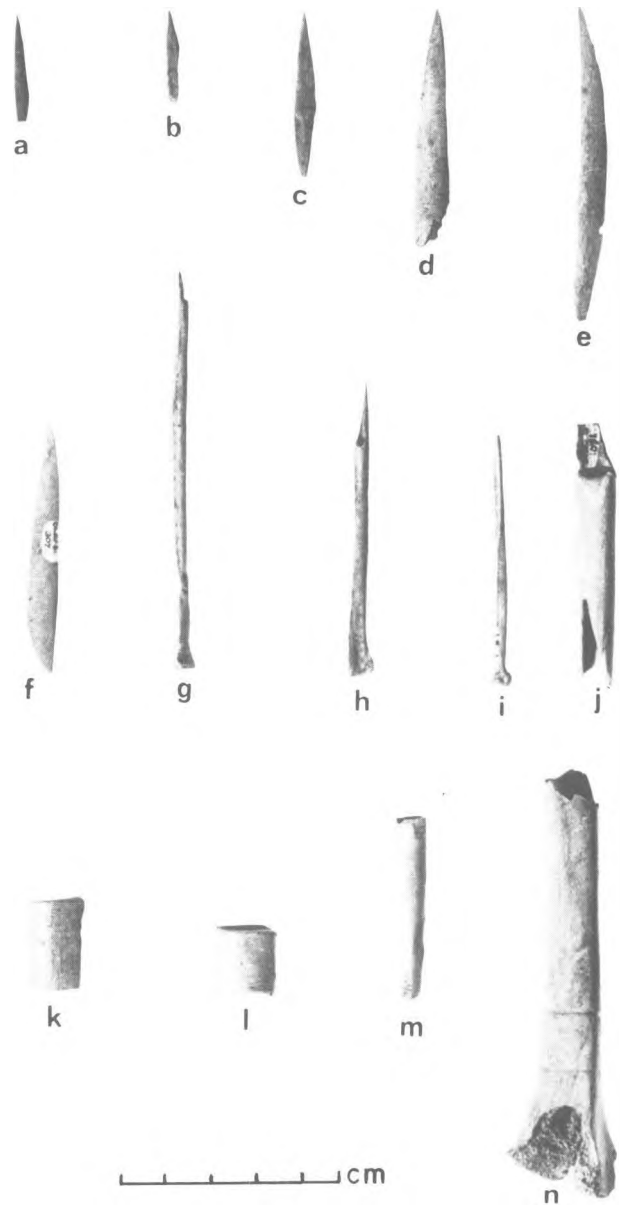


Fig. 42. Bird bone tools, Belcarra Park II. a–c bird bone points; d–f bird bone splinter awls; g–i bird bone awls; j bird bone whistle; k, l bird bone beads; m, n bird bone bead blanks.

posite toggling harpoons are reported ethnographically for the Gulf of Georgia Salish where they were used to take salmon, seal and sea lion (Barnett 1955:83,98,99).

Table XXXVI Composite Toggling Harpoon Valves, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|-------|------|--------|
| length | 27.2–73.2 mm | 45.44 | 9.96 | 51 |
| width | 3.5–13.2 mm | 9.65 | 1.57 | 85 |
| thickness | 3.5–10.9 mm | 5.77 | 1.32 | 84 |
| weight | .6– 3.2 g | 1.43 | .58 | 39 |



Fig. 43. Miscellaneous bone tools, Belcarra Park II. *a-d* bone splinters with worked tips; *e,f,h* bone drills; *g* bone needle; *i,j* bone chisels.

Antler Foreshafts

Three objects from Belcarra Park II deposits are tentatively classified as harpoon foreshafts (Fig. 51a-c). One is complete and all are circular in cross-section. They appear to be similar in shape to those described by Mitchell (1971a) and McMurdo (1974). Their size is somewhat smaller but then so are the Belcarra Park II toggling valves. It may be noted that when these specimens were compared with a number of the matching valves from the Belcarra Park assemblage, the foreshafts formed a good "fit" with the foreshaft sockets. Foreshaft measurements are: Figure 51a: (53.0) x 11.0 x 7.0 mm; Figure 51B: 60.0 x 9.0 x 8.0 mm; Figure 51c: (29.0) x 9.5 x 7.0 mm.

Worked Antler Preforms

Four well made antler specimens were located in Belcarra Park II deposits (Fig. 51e-g). Two are rectangular in outline and all are concave-convex in cross-section. These specimens have been manufactured from the beam portion of wapiti antler and are characterized by longitudinal

lateral sawing on each edge. Adze marks are clearly defined on the distal portion of one specimen, while the other three

Table XXXVII Worked Antler Preforms, Belcarra Park II

| Attribute | Range | Mean | S.D. | Number |
|-----------|--------------|------|------|--------|
| length | 52.0-85.0 mm | 73.7 | - | 4 |
| width | 17.0-20.5 mm | 18.3 | - | 4 |
| thickness | 8.0-10.0 mm | 9.1 | - | 4 |
| weight | 5.5-18.0 g | 9.8 | - | 4 |

have abraded distal ends. While the interior cell structure has somewhat disintegrated, clearly defined areas have been carved out at the distal ends of all four specimens, leading to the suspicion that a hafting function was involved.

Miscellaneous Worked Antler

Nine antler fragments which could not be otherwise classified were excavated in Belcarra Park II deposits. These specimens exhibit various types of working such as carving, adzing, sawing and abrading (Fig. 51d,h).

Historic Artifacts

Twenty-nine historic artifacts manufactured from metal, glass, shell, wood, clay and stone were recovered from the plow zone (upper 30 cm) of the Belcarra Park site. It is common to find historic debris, such as rusty nails, broken glass, china and gun shells in the disturbed upper portions of most Northwest Coast middens. Most of the historic items from the Belcarra site fall into this category. Six items, however, are noteworthy and deserve brief elaboration.

Clay Pipe Stem Fragment (Fig. 52g)

The pipe stem fragment is circular in cross-section and is 7.5 mm at its widest point (distal end) and tapers to 6.0 mm. A small portion of the bowl remains at the distal end. The bowl measures 2.0 mm in diameter. On the lateral side of the stem an inscription reads *McDougall Glas...* and on the opposite side an inscription...*RNS Cutty Pipe*. Clay pipes were manufactured by the McDougall Company of Glasgow, Scotland between 1888 and 1892 and also in 1896 (Wilson 1971).

Glass Button (Fig. 52b)

This complete artifact is round in outline, manufactured from a dense black glass and exhibits a bevelled star design on its dorsal surface. Measurements are 20 x 20 x 4 mm and it weighs 25 g. The button is rectangular in cross-section and has no eyes but was attached by a loop on the ventral side.

Clam Shell Button (Fig. 52c)

The button is manufactured from clam shell and is of European design with four eyes. Rectangular in cross-section it measures 16.0 x 16.0 x 1.5 mm and weighs 0.4 g.

Bone Knife Handle (Fig. 52f)

This tool, broken at its proximal end measures (57) x 22 x 3 mm and is plano-convex in cross-section. The implement appears to have been the handle portion of a metal bladed knife. It has been carved and carefully abraded to shape. A whale fluke design forms the distal portion and geometric designs are incised on the dorsal face. Two metal rivets which hafted the handle to the blade are still intact.

Flint Biface Fragment (Fig. 52d)

This bifacially worked piece of flint is biconvex in cross-section, and exhibits careful pressure flaking on both surfaces and a well-defined notch. The flake which has a blue/gray patination over all surfaces had been truncated to show fine grained homogenous brown flint. Because the pressure flaking is entirely patinated the implement is

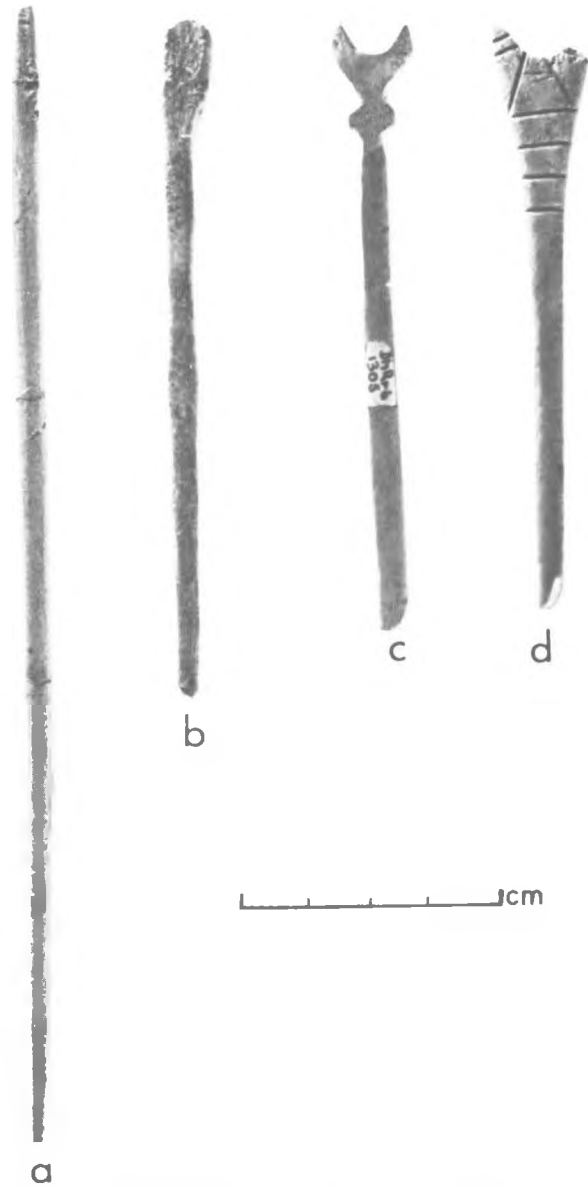


Fig. 44. Bone blanket pins, Belcarra Park II.

thought to have considerable antiquity. Also flint is not found in the New World. It was quite common, however, for European ships of the 18th and 19th century to use flint as ballast.

Wooden Implement (Fig. 52a)

This implement of unknown function measures 48 x 27 x 5 mm and weighs 15.6 g. It is in two pieces which screw together with wooden threads located on the interior of the proximal portion of the superior section and on the exterior of the distal portion of the inferior section. The inferior section also has a set of threads which are located on the interior of the distal portion which accept another part.



Fig. 45. Tooth artifacts, Belcarra Park II.

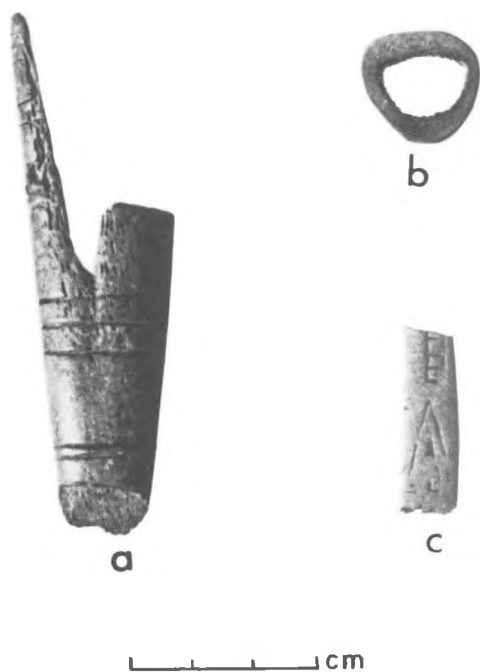


Fig. 46. Miscellaneous decorated bone items, Belcarra Park II.

Features

Twenty features were recorded during the 1971 field season. These consist of seven hearths and thirteen post moulds and all are associated with Belcarra Park II (Zone C) deposits. Hearths are typically concentrations of fire-cracked rocks with associated ash and charcoal (Fig. 53). Post moulds range from small (six are under 10 cm in diameter) to quite large (six are over 20 cm in diameter). The largest post mould was Feature 14 with a 30 cm diameter. The post moulds were widely dispersed and no pattern could be discerned. Noted and mapped were 60 amorphous, multi-coloured ash concentrations which were associated with Zone C deposits.

Post Moulds

Feature 1 — This feature was located on the west face of Excavation Unit 9. It extended from 40 cm below surface to a depth of 73 cm below surface. The diameter of the feature was 20 cm at the top and tapered to a diameter of 9 cm at the bottom. The matrix of the feature consisted of black soil from Zone C4. The feature truncated a stratum which consisted of black soil with a mixture of blue mussel and clam shell (C1).

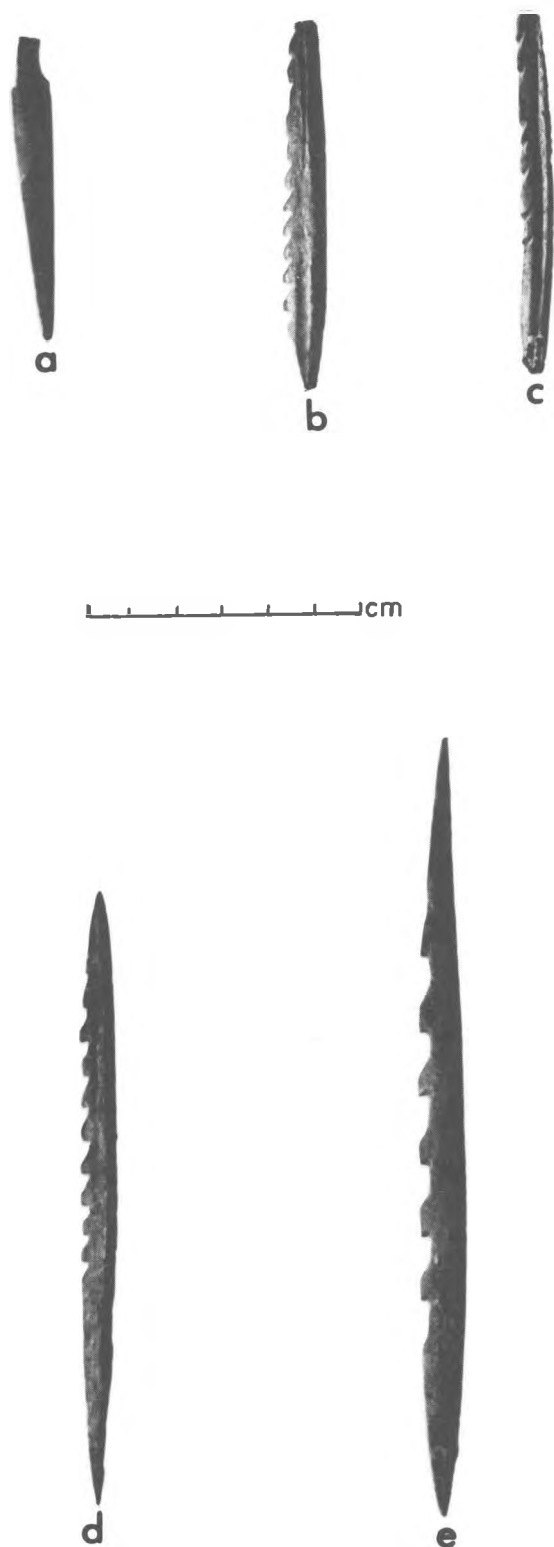


Fig. 47. Barbed antler points, Belcarra Park II.

Feature 2 – This small feature was excavated in the northwest corner of Excavation Unit 7. It was circular in cross-section with a diameter of 4 cm. The top of the post mould began at 40 cm below surface and continued to 70 cm below surface and cut through brown and yellow sand lenses. The post mould appeared to be decomposed wood, possibly red cedar.

Feature 3 – This circular post mould was observed in Excavation Unit 7 and had a diameter of 8 cm. The top of this feature began at 40 cm below surface and extended vertically to 90 cm below surface, and truncated yellow sand deposits.

Feature 4 – Excavated in Excavation Unit 6, this feature was circular in cross-section with a diameter of 3–4 cm. It extended vertically from 50 cm below surface to 70 cm below surface and cut through a white ash layer.

Feature 5 – This small post mould was also from Excavation Unit 6. The post mould was of a brown coloured matrix and extended vertically from 50 cm below surface to 90 cm below surface. This feature truncated a lense of white ash and brown soil and a strata of black soil mixed with clam and mussel (C1).

Feature 6 – This feature was circular in cross-section with a diameter of 6–7 cm. This large circular post mould (maximum diameter 25 cm) was located at 70 cm below surface in Excavation Unit 7. The post mould itself consisted of C4 strata (black humus layer) and was surrounded by an extensive yellow sand lens. The feature also cut through a stratum of black soil with fragmented clam and blue mussel shell (C1). The feature extended from 70 cm below surface to 105 cm below surface at which point its diameter had tapered to 12 cm.

Feature 8 – A circular post mould with a diameter of 16 cm was found in Excavation Unit 9. This feature extended vertically from 55 cm below surface to 90 cm below surface. The matrix of the feature consisted of black humus, (C4) which cut deeply into a thick layer of black soil mixed with clam and blue mussel shell.

Feature 11 – This post mould was from Excavation Unit 10 and measured 20 cm in diameter at 25 cm below surface. It extended to 50 cm below surface where it measured 10 cm in diameter. Like Feature 8, it consisted of black humus and was likely of historic origin. This feature cut deeply into a layer of whole clam and fragmented blue mussel shell.

Feature 12 – This feature was very similar to Feature 11 and was located 40 cm to the north of it. Maximum

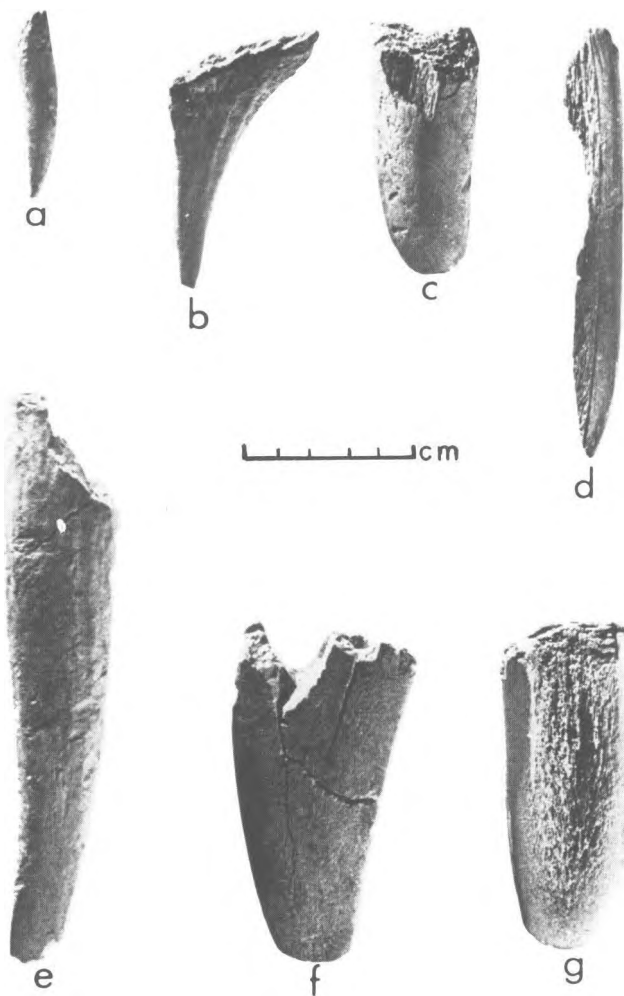


Fig. 48. Antler wedges and tine tips, Belcarra Park II. *a, b* antler tine tips; *c-g* antler wedges.

diameter measured 25 cm tapering to 4 cm. The feature extended from 25 cm below surface to 45 cm below surface.

Feature 13 – This feature was located in Excavation Unit 10, and is very similar to Features 11 and 12. Feature 13 consisted of Zone C4 material which truncated an area of burnt shell and ash and also a Zone C2 layer.

Feature 14 – This post mould located in Excavation Unit 2 had a maximum diameter of 30 cm and was the largest post mould excavated. The top of the feature was located at 55 cm below surface and it extended to a depth of 95 cm below surface where it measured 10 cm in diameter. Like many of the other post moulds this feature consisted of a C4 stratum and cut through a C1 stratum and a small ash lens.

Feature 15 – This feature also located in Excavation

Unit 2 was very similar to Feature 14 and was located at 48 cm to the north of it. Its maximum diameter was 20 cm at 55 cm below surface and it tapered to a diameter of 10 cm at 90 cm below surface.

Feature 16 – This was a small feature from Excavation Unit 2. It extended from 75 cm below surface to 100 cm below surface and was 10 cm in diameter. The feature was rectangular in outline and consisted of a Zone C4 matrix and cut through a Zone C1 layer.

Hearths

Seven features which consisted of clusters of fire-broken rock associated with charcoal, ash and burnt shell were recorded as hearths. All are from Belcarra Park II (Zone C) deposits.

Feature 7 – This feature consisted of a concentration of fire-broken rocks which were associated with ash. The feature was located in the southeast quadrant of Excavation Unit 7 at a depth of 110 cm below surface. The feature measured 50 cm north/south by 60 cm east/west and was 15 to 20 cm in depth. The matrix surrounding this feature consisted of black soil with large lenses of crushed blue mussel and clam shell.

Feature 9 – This circular formation of rocks was approximately 60 cm² and was located at 100 cm below surface in Excavation Unit 5. It was associated with an ash layer located at the base of the feature. The feature, 20 cm in depth, was located in a matrix of black soil mixed with fragmented blue mussel and clam shell as well as lenses of whole clam and cockle.

Feature 10 – This well defined hearth feature measured 66 cm north/south and 75 cm east/west (Fig. 53). The feature was located in Excavation Unit 2 at 30 cm below surface and was 25 cm thick. Characteristic of this feature were two layers of fire-broken rock which were interspersed with charcoal, ash, shell and burnt wood. The feature was surrounded for the most part by Zone C1 matrix and was also associated with a 60 cm² ash spread to the west of the hearth.

Features 17 and 18 – These two associated rock concentrations were observed in Excavation Unit 1 at a depth of 90 cm below surface. Feature 17 measured 44 cm east/west and was 14 cm thick. The surrounding matrix was a C4 stratum plus charcoal. Besides having ash within the feature, it was associated with a large ash spread. Feature 18 consisted of a cluster of fire-cracked rocks in the northwest corner of the excavation unit. This feature was surrounded by the ash spread mentioned above.

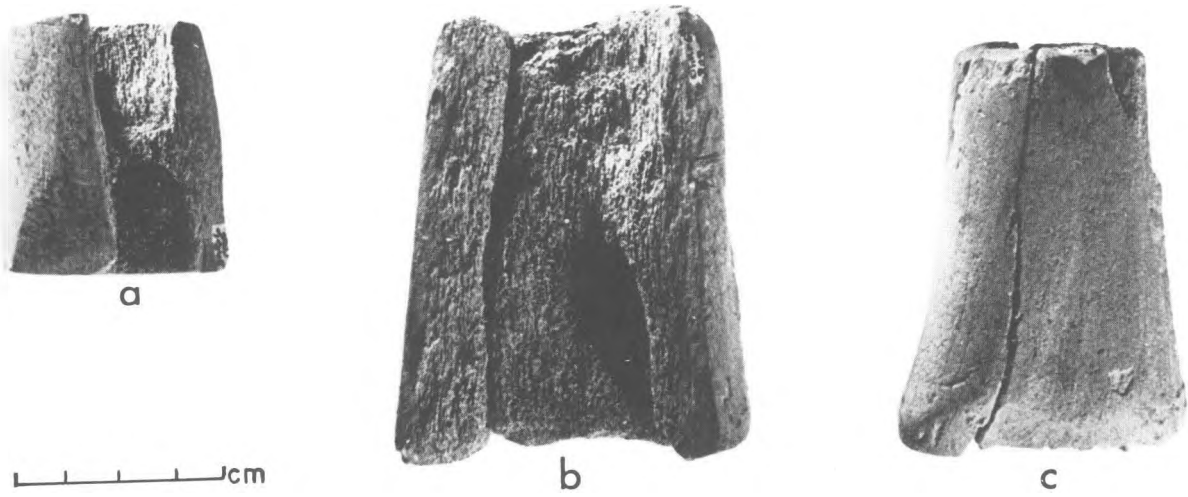


Fig. 49. Antler sleeve hafts, Belcarra Park II.

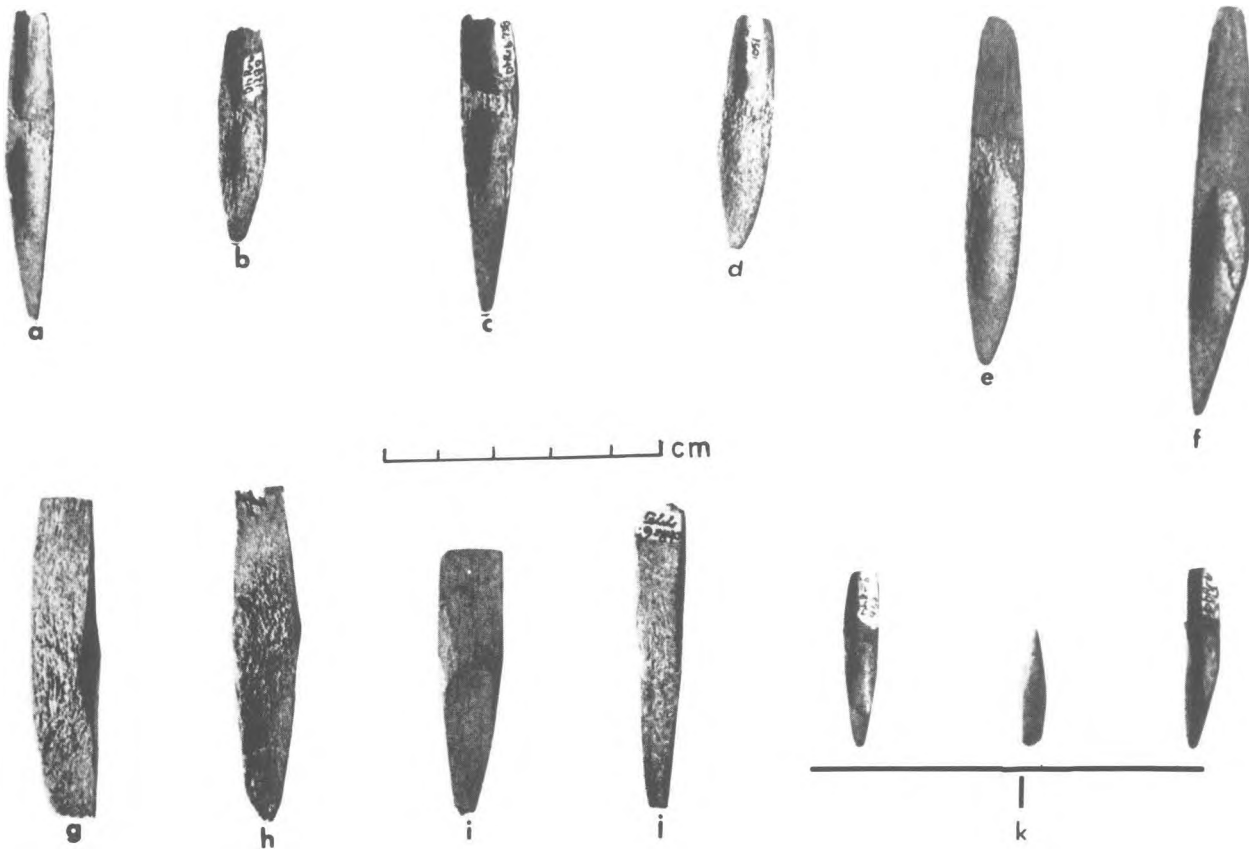


Fig. 50. Composite toggling harpoon valves, Belcarra Park II. *a-d* valves (channeled); *e, f* valves (slotted); *g-j* valves (preforms); *k* complete composite toggling harpoon.

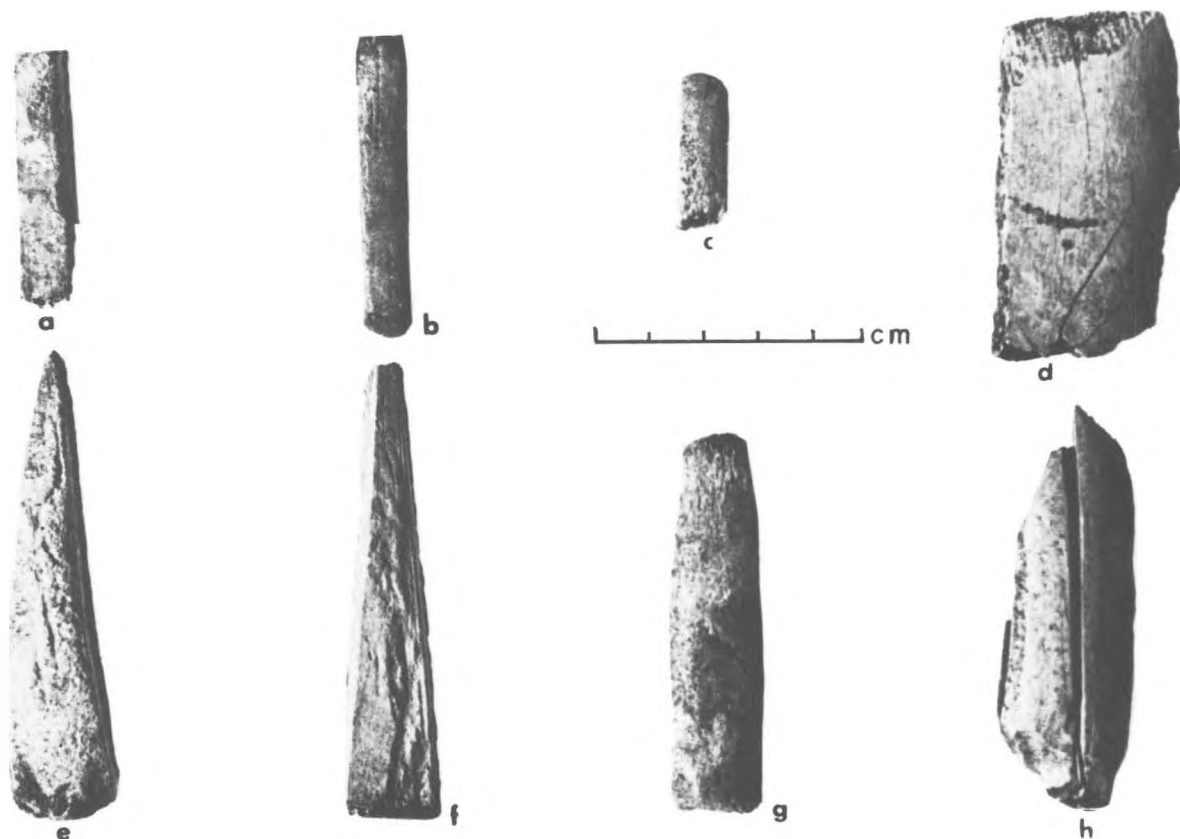


Fig. 51. Miscellaneous antler tools, Belcarra Park II. *a-c* harpoon foreshafts? *d,h* miscellaneous worked antler; *e-g* worked antler preforms.

Feature 19 – This hearth feature was observed in Excavation Unit 2 at a depth of 100 cm below surface. The feature measured 150 cm north/south by 100 cm east/west and was 20 cm deep. Fire-cracked rocks 10–20 cm in diameter, charcoal, decomposed wood and shell were observed within the feature, which was surrounded by C1 matrix as well as large lenses of whole and fragmented clam and cockle shell.

Feature 20 – This feature was confined to the southwest corner of Excavation Unit 1 at a depth of 110 cm below surface. Ash and charcoal were within the feature which was surrounded by a matrix of whole clam and fragmented blue mussel shell.

Cultural Reconstruction

An examination of the local ethnographies and the artifactual and non-artifactual materials recovered from the Belcarra Park II component, shows clearly that we are

dealing with a fishing, hunting and gathering culture. In this regard, the Belcarra Park II assemblage is equated with what we might expect would remain from the Coast Salish way of life as depicted by Barnett (1955), Duff (1952) and Suttles (1958, 1960b).

Similar to most other late prehistoric components in the area, shellfish remains are numerous in the Belcarra Park II component. The great reliance on shellfish resources provides the most striking difference between the two components at the Belcarra Park site. Shellfish remains occur as isolated lenses (Fig. 6) or as solid deep strata of highly fragmented shell (Fig. 8). Thick strata of whole and broken shells representing shell dump areas were also present in Excavation Units 4, 5 and 6. Hearths and amorphous ash concentrations generally included quantities of burnt shell. Shellfish species included those easily collected from rocks at low tide (bay mussel) as well as burrowing species such as butter clam and cockle. The use of the digging stick, a traditional method of shellfish collecting, is inferred.

A wide variety of land mammals (Table XLI) are repre-

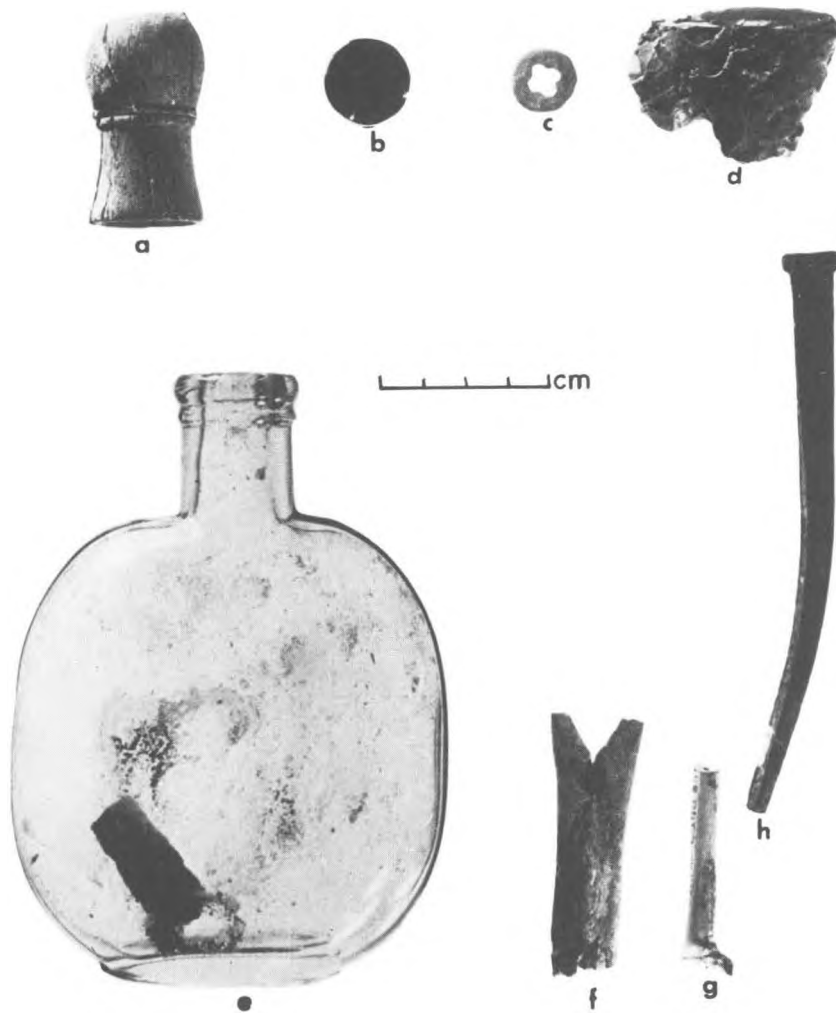


Fig. 52. Historic artifacts, Belcarra Park site. *a* wooden implement; *b* glass button; *c* clam shell button; *d* flint biface fragment; *e* glass bottle; *f* bone knife handle; *g* clay pipe stem fragment.

sented; the dominant species appear to be blacktail deer, domestic dog and elk. Fish species, while not analyzed, appear to be extremely abundant. Sea mammals are represented by northern fur seal, northern sea lion, harbour seal, and porpoise, but seem to have been of minor importance in the diet of Belcarra residents. Large numbers of bird bones are present and most of them are winter residents.

The wide variety of small chipped basalt projectile points and possibly the detachable arrow/harpoons, attest to the use of the bow and arrow during Belcarra Park II times. Barbed bone points too may have functioned as arrow points although they might also have been utilized as leisters or multi-pronged bird darts.

Toggling harpoon valves are small and were likely used for the taking of fish rather than sea mammals. Small toggling harpoons for salmon are noted in both the Whalen

II and Stselax phases (Borden 1970:109–110). The toggling harpoon valves from the Montague Harbour III component are also small and it was suggested that they functioned as fishing implements (Mitchell 1971a:220). A wide variety of bone objects which likely functioned as fishing implements (e.g. fish gorges, herring rakes, composite fish hooks, trolling hooks) further emphasizes the importance of fishing pursuits in this component.

The well made ground slate knives were used for the butchering of fish and possibly game. Ground shell knives have also been reported for the Montague Harbour III component (Mitchell 1971a:215). The large amounts of fire-broken rock suggests that stone boiling and steaming methods were in use as well as open fire cooking. The wide variety and number of awl type implements strongly suggests that coiled basketry was being utilized during Belcarra

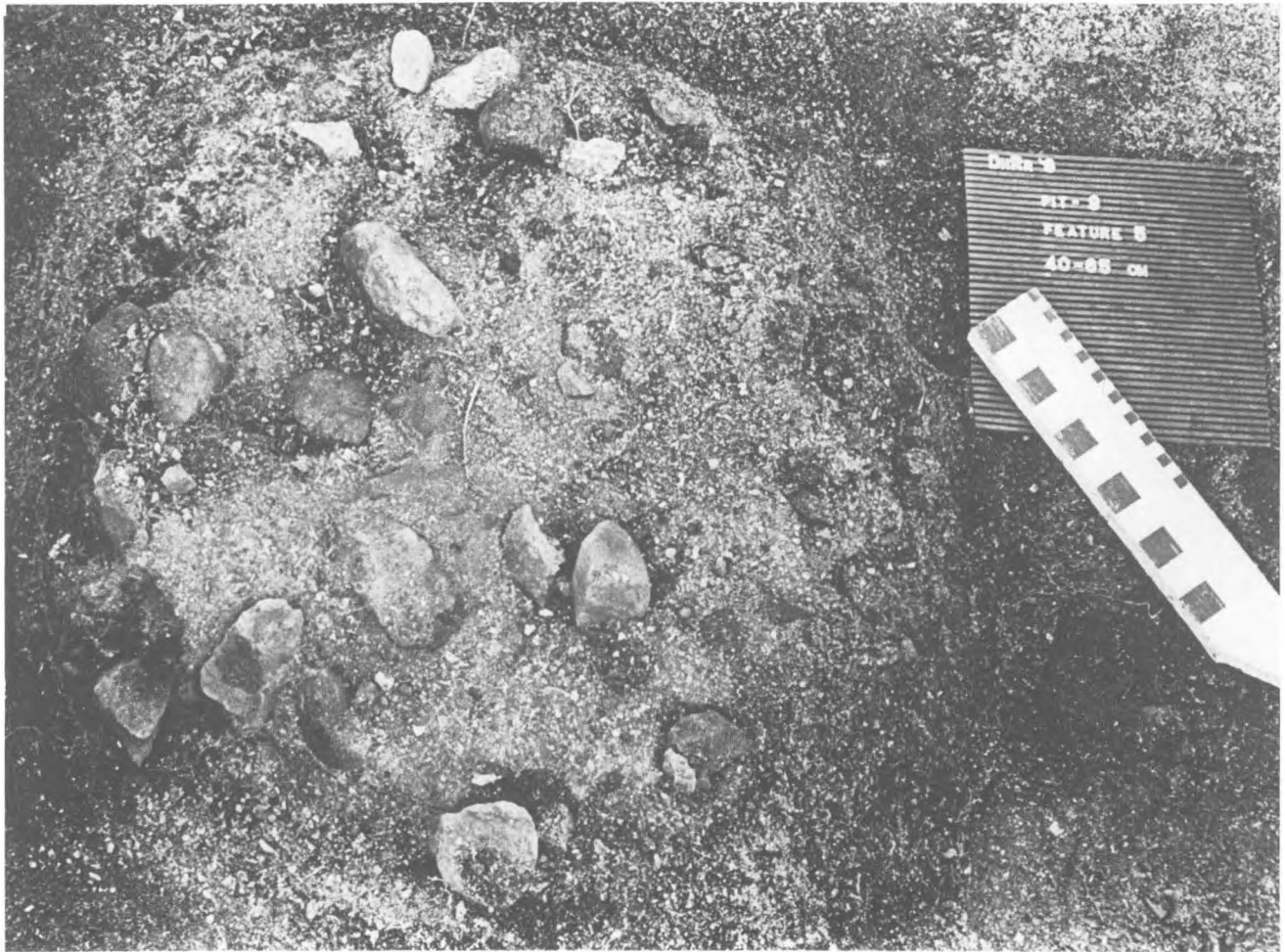


Fig. 53. Hearth (Feature 10), excavation unit 2, Belcarra Park II. (Formerly Feature 5, Pit 9).

Park II times.

Techniques of manufacture are essentially the same as in the earlier component. Stone tools were formed by chipping, pecking, grinding and sawing. Bone and antler tools were formed primarily by abrasion although sawing, drilling, graving, carving and adzing are also present. The dominant technique for toolmaking during Belcarra Park II times was clearly abrasion. Abraded tools show a wide range of finish from carefully crafted, often highly polished implements (adze blades, ground slate knives, hand mauls, barbed bone points, toggling harpoon valves, antler sleeve hafts, bone blanket pins), to implements that exhibit a minimal amount of abrasion that were clearly manufactured in an expedient manner, without embellishment, to complete the task at hand.

The complete range of woodworking tools is represented in the second component and includes hand mauls, hammer-

stones, antler wedges, bone chisels, adze blades, and antler sleeve hafts. Tools capable of performing fine carving tasks are represented by beaver and other rodent incisor tools.

A number of large post moulds (Features 1, 6, 11, 12, 13, 14) associated with the Belcarra Park II component may indicate the presence of large plank covered dwellings similar to those noted in the ethnographies.

A number of materials including jadeite, vitreous basalt, steatite, chalcedony and pitchstone, may have been received through trade. Jade and nephrite are generally obtained from sources on the Fraser River in the Yale vicinity, as is steatite. Vitreous basalt and chalcedony commonly occur in outwash gravels in many stream beds in the southern interior plateau of British Columbia. The flakes of pitchstone were from a source in the Garibaldi vicinity (E. Nelson 1976, personal communication). While artifacts of dentalium and sea mussel were not recorded at the Belcarra Park

site, these items are frequently recorded in late components in the region (e.g. Mitchell 1971a:221), suggesting trade with west coast groups.

Like other late components in the region, decorated items are rare. This, of course, is not surprising when one considers that perishable wood products such as boxes, baskets, paddles, house fronts, spoons, masks and many other items were the major medium for decoration. Decorated artifacts from the Belcarra Park II component include hand mauls, (Fig. 32), bone pins (Fig. 44), tooth pendants (Fig. 45) and miscellaneous bone objects (Fig. 46). No

burials were excavated in the Belcarra Park II component.

There is every reason to suggest that the regular pattern of seasonal movement as noted during the contact period and recorded in the ethnographies for the Coast Salish, was in effect during Belcarra Park II times. The preliminary faunal analysis for the Belcarra Park II component strongly suggests a late fall/winter occupation for the residents. From the amount of deposit attributed to the Belcarra Park II component, we are dealing with either a larger population, longer occupancy or more frequent annual visits than was indicated for Belcarra Park I.