CONCLUSIONS: THE BELCARRA PARK SITE AND LOCAL PREHISTORY

Chronological Considerations

The earliest dates for cultural manifestations in the region are from the St. Mungo Cannery and the Glenrose site on the lower Fraser River (Fig. 1). A series of seven dates ranging between 6200 and 1330 B.C. have been reported for the Glenrose site (Matson 1976). Boehm (1973) reports dates of 2360 B.C. ± 110(I–4053) and 2290 B.C. ± 105 (I–4688) from cultural deposits lying immediately over sterile clay and a date of 2020 B.C. ± 105 (I–4685) from a hearth about 90 cm above these clays, at the St. Mungo Cannery site.

The Mayne phase (3000–1000 B.C.) defined by Carlson (1970) is based upon excavations at the Helen Point site, and is supported by radiometric assays of 3470 B.C. ± 230 (GaK 4938), 2030 B.C. ± 130 (GaK 3201) and 2000 B.C. ± 260 (W.S.U. 1191). The phase is delineated by the following distinctive cultural traits (Carlson 1970:115):

- Flaked basalt points (leaf-shaped, diamond, stemmed and shouldered)
- Flaked basalt scrapers, knives and debitage
- Pebble choppers
- microblades and other artifacts of obsidian and quartz crystal
- Ground slate points and knives are present but rare
- Chipped slate points
- Bilaterally barbed harpoon heads of antler
- Unilaterally barbed harpoon heads of antler
- Antler wedges
- Sandstone abrading slabs and whetstones
- Labrets and other polished stone items
- Bone pendants and long, unbarbed points of bone
- Red ochre and extended burials
- Circular hearths and rock slab features

The Locarno Beach phase (Borden 1968b,1970; Mitchell 1971a) follows the Mayne phase and dates between 1200-200 B.C. The phase is widely acknowledged among researchers and is supported by nine radiocarbon dates from sites on the lower Fraser, the Gulf Islands and the southern tip of Vancouver Island. To date, eight Locarno Beach components (including Belcarra Park I) have been reported (Mitchell 1971a:60). Distinctive archaeological features for the Locarno Beach phase include:

- Large to medium sized chipped basalt points (contracting stem, stemmed, leaf-shaped)
- Microblades and cores
- Chipped slate or sandstone knives
- Cobble and split cobble tools
- A well-developed ground stone industry characterized by faceted ground slate points and thick ground slate knives
- Small, well-made adzes
- Gulf Island complex of artifacts, labrets
- Large faceted ground bone points and heavy wedges
- Toggling harpoons (one-piece or slotted) and antler foreshafts
- Mussel shell adzes and points

The Marpole phase (Borden 1968b,1970; Carlson 1960, 1970) or the Marpole culture type (Mitchell 1971a) dates from ca. 400 B.C. to 400 A.D. To date, twelve Marpole components have been identified in the Strait of Georgia region and are supported by twelve radiometric assays. The distinctive archaeological features for the Marpole phase include:

- "Medium" and "large" chipped basalt points (leaf-shaped, stemmed, unstemmed), and small asymmetrically triangular points of basalt
- Microblades
- Large ground slate points and thin ground slate knives
- Large and small adze blades
- Stone sculpture (decorated bowls, seated human figures, fish effigies, decorated pipe bowls) found at some sites.
- Perforated stones and decorated hand mauls
- Labrets and disc beads of shale or clamshell
- A varied bone industry (large needles, split bone awls)
- Unilaterally barbed harpoons of antler and unilaterally barbed fixed points of antler and sculpture of antler
- Ornaments of native copper
- Flexed midden burials, skull deformation and frequent inclusion of grave goods
- Large post moulds and house outlines

The last phase in the sequence is the Stselax phase (Borden 1970) or its variant the San Juan phase (Carlson 1960, 1970) and the Gulf of Georgia culture type (Mitchell 1971a). The phase dates from ca. A.D. 1250 to 1808. Components of the phase have been documented at 11 sites (Mitchell 1971a:51) in the region. To this total can be added components from the Belcarra Park site and the

Carruthers site (Crowe-Swords 1974). Five radiocarbon dates fall within the above-mentioned time period. The Gulf of Georgia components are often equated with the ethnographically known Coast Salish culture which has been described by Barnett (1939, 1955), Duff (1952), Jenness (1955), and Suttles (1951, 1958, 1960a, 1960b, 1963, 1968). Mitchell (1971a:48) summarizes:

> . . .cultural reconstruction is based primarily on ethnographic information as it is felt (although admittedly not demonstrated) Gulf of Georgia culture and Coast Salish culture are essentially the same.

Distinctive archaeological traits for the latest phase include:

- Small, triangular chipped stone points of basalt, with a reduction in the amount of stone chipping
- Triangular ground slate points with thinned bases
- Thin ground slate knives
- Well-made adze blades, flat-topped hand mauls
- A well-developed bone tool industry, specifically unilaterally barbed bone points, and a wide variety of awl types, and also a wide variety of single and double-pointed bone items
- Small composite toggling harpoon valves of antler either slotted or channelled to accept arming points
- Spindle whorls and decorated blanket pins
- Flexed midden burials, skull deformation
- Large post moulds and house outlines

Using the criterion of stratigraphy, the Belcarra Park I component is clearly older relative to the Belcarra Park II component (Fig. 6, 7, 8). The great difference in the presence of organic material between the two components is suggestive that the two components are divergent in age. Only a single C^{14} sample was collected from the Belcarra Park I component. This composite sample yielded a date of A.D. 240±90 (GaK 3903) and is considered to be too young.

In terms of the established regional chronology, the Belcarra Park I assemblage bears the most resemblance to previously described Locarno Beach components. In the chipped stone industry we are dealing with a sample of 30 items (deleting the categories of unifacially retouched flakes, utilized flakes and miscellaneous chipped stone). Sixteen "medium" chipped stone points account for 50% of this total. These classes (leaf-shaped, contracting stem, stemmed) are generally considered distinctive for Locarno Beach components (Borden 1970:101; Mitchell 1971a:47). The remainder of the chipped stone assemblage from Belcarra Park I while not especially characteristic, would not be out of place in a Locarno Beach assemblage.

Ignoring for a moment the single unclassifiable fragment of ground slate from Belcarra Park I, we are left with a total of 26 ground stone tools. The stemmed (7.7%) and stemless (53.8%) ground slate points, the thick ground slate knives (15.4%) and the small rectangular adze blades (23.1%) are all distinctive features of previously described Locarno Beach components(Borden 1968b, 1970; Mitchell 1971a).

Table XXXVIII Distribution of Artifact Classes by Component

Class	COMPONENT Belcarra Park I	Belcarra Park II	% of Assemblage	Artifact totals
Chipped Stone	53.5% (N=52)	19.2% (N=226)	21.9%	280
Ground Stone	26.7% (N=27)	11.6% (N=136)	12.8%	163
Pecked and Ground Stone	11.9% (N=12)	10.5% (N=123)	10.6%	135
Bone	5.0% (N=5)	46.3% (N=545)	43.1%	550
Antler	2.9% (N=3)	12.4% (N=146)	11.6%	149
TOTALS	100.0% (99)	100.0% (1170)	100.0%	1,269

None of the pecked and ground stone items (shaped abrasive stones, hammerstones) are considered to be characteristic of the component, although Borden (1970:96) lists abrasive stones as being abundant for the Locarno Beach phase.

Bone and antler items form only 7.9% of the Belcarra Park I assemblage; and this scarcity unfortunately severely limits both intra-site and inter-site comparisons. None of the six classifiable items however, would be out of place in a Locarno Beach assemblage. The barbed bone point, the well made chisel and the harpoon valve (Fig. 18b,a,f) bear strong resemblance in size and form to ones illustrated by Borden (1970: Fig. 30a,d,v).

Of the Belcarra Park I tools that could be classified, 49.5% are associated with subsistence activities while 45.5% reflect manufacturing activities. A total of 19.6% of the manufacturing items appear to have been primarily related to woodworking endeavours.

The description and analysis of the prehistoric Belcarra Park assemblage has revealed two discrete components. The earliest component, Belcarra Park I is dominated by a well-developed chipped stone and ground stone industry. While bone and antler items were few in number (due to preservation factors), it is suggested that the site inhabitants were highly skilled in the manufacture of bone and antler tools. Clearly, the basic Northwest Coast technological adaptations were fully operative during Belcarra Park I times.

The technology described, with some variations and stylistic changes, continues during Belcarra Park II times. The chipped stone industry decreases quite sharply in the Belcarra Park II component as does the ground stone

industry, (Table XXXVIII). A large increase in bone and antler tools is observed. Bone tools (especially awls and unbarbed points) are represented by a complex array of ground and/or polished whole or fragmentary tools. Six types of unbarbed bone points comprise 56.7% of the classifiable bone items from this component. Wedge based points (arming points for toggling harpoons) alone, form 50.2% of all bone points. Needless to say harpoon technology is well developed by this time. Small channelled valves which accept the wedge based points are dominant but larger slotted varieties are represented as well. Woodworking implements are represented by adzes, antler wedges, hand mauls, antler sleeve hafts and rodent incisor tools. Unilaterally barbed fixed points of antler and bone are present as are a wide variety of bone pins, tooth pendants, bird bone tube beads and antler tine tips. A single bone needle and a bird bone whistle are also from this component.

Two C^{14} samples date the Belcarra Park II component. The dates of 330 A.D. ± 90 (GaK 3905) and 880 A.D. ± 90 place the component in the poorly documented time period between the Marpole and Stselax phases. Including the two Belcarra Park dates, there are now ten radiometric dates for the problematic A.D. 400–1200 gap (Fig. 54). Mitchell tentatively considers the single Whalen II date of 370 A.D. ± 100 as a late Marpole component. Six of the ten dates appear to date components of the Stselax/San Juan/Gulf of Georgia type. We might also add the Alberni Canal date of 500 A.D. ± 80 (GaK 5108) from a component closely resembling the Gulf of Georgia culture type (McMillan and St. Claire 1975:72). A recently excavated site in the northern Gulf of Georgia has yielded a date of 1160 A.D. ± 80 (GaK 6035) which apparently dates a Gulf of Georgia component (Monks 1975). Three dates from the Helen Point site on Mayne Island are within the A.D. 400–1200 time range. Component association for these dates is still unclear as Carlson (1970:120) initially reported no evidence of human occupation for that particular time period.

The first date submitted for the A.D. 400–1200 time period was from the late component at the Fossil Bay site (UW–24) 436 A.D. ± 40 (Kidd 1969). As it did date a late component, Kidd (1969:57) considered the date to be "surprisingly early" and of "doubtful validity". Even recent articles (Spurling 1976:59) refer to the Fossil Bay and Dionisio Point dates as "controversial".

However, with ten dates now clustered in the time period the picture, at least in terms of culture history, is becoming clearer. The evidence from the Belcarra Park site, plus evidence from at least five other sites, concurs with Mitchell's suggestion that the gap between the Marpole phase and cultures of the Gulf's historic inhabitants "may be closed by cultures of essentially the recent Salish form" (Mitchell 1971b:167).

Culture Change

Carlson (1970:120), referring to the A.D. 400–1200 period on the southern coast, states that "a significant degree of culture change took place during this 800 year interval". The major change involved the near disappearance of chipped stone technology and its replacement with ground and polished bone tools (1970). He suggests three possible hypotheses which may help to explain the change. The first hypothesis is based upon a migration model not dissimilar to Smith and Boas' suggestion some 68 years previously. This model suggests that "the bearers of the Marpole phase culture were replaced by another human population with a different technology" (Carlson 1970: 122). It was precisely this position that Borden utilized in an attempt to explain a "sudden break" in the cultural development as represented by his Whalen II phase ... "perhaps these sudden breaks in cultural development are somehow linked with the movement of new ethnic groups into the lower Fraser region" (1970:109). Yet paradoxically, virtually every major researcher, including Borden (1970: 101), has made a statement to the effect that:

> . . .a pattern is beginning to suggest itself of the whole southern Gulf of Georgia being already occupied two to three thousand years ago by a relatively homogeneous culture which had already achieved the fundamental ecological adaptations necessary for the maximum human utilization of the area at a pre-industrial level. These are the adaptations basic to the development of Northwest Coast culture as known ethnographically (Abbott 1962:111).

While the migration hypothesis has not been conclusively disproven, the accumulated evidence presented to date argues against such a possibility.

An alternate suggestion for explaining culture change in this 800 year period relates to a technology adapting to a shift in environmental conditions. As Carlson (1970:122) states. . ."a second possible hypothesis for the changes which took place. . .is that the changes in technology were a response to changing conditions of the natural habitat". However, no detailed paleoecological sequence has been presented for the region which would allow for the reconstruction of past environments. Heusser (1960) reports cooler and more humid conditions than at present, with western hemlock and sitka spruce dominating in south coastal British Columbia during his late Postglacial stage which began at about 3000 B.P. Fladmark (1974) places sea-level stabilization on the Northwest Coast at approximately 5000 B.P. and postulates that ensuing environmental stability correlates with large dependable salmon runs resulting from gradient maturation of the river systems. These factors are associated at this time with massive shell middens resulting from heavily populated winter aggregates that "reflect a settlement type characteristic of the ethno-

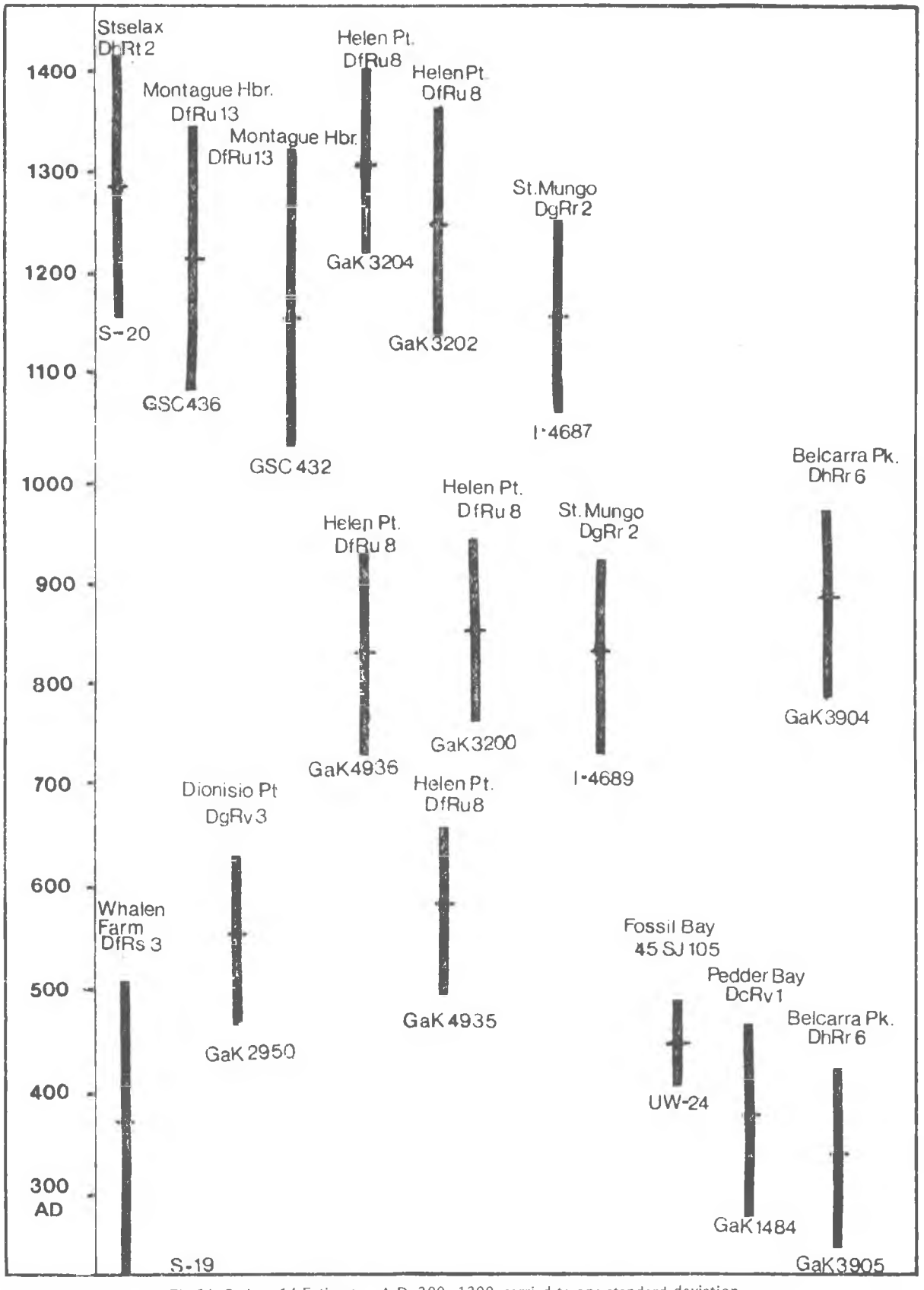

Fig 54. Carbon 14 Estimates, A.D. 300–1300, carried to one standard deviation.

S-20, 1290±130; GSC 436, 1220±130; Gak 3202, 1250±110; GSC 432, 1160±130; Gak 3204, 1310±90; I-4687, 1160±95; Gak 4936, 830±100; Gak 3200, 850±90; I-4689, 830±95; Gak 3904, 880±90; S-19, 370±140; Gak 2950, 550±90; Gak 4935, 580±85; UW-24, 436±40; Gak 1484, 370±100; Gak 3905, 330±90. (AD 1950).

graphic Northwest Coast cultural pattern" (1974:262).

A recent study by Mathewes (1970:2085) attempted to outline the post-glacial vegetation changes for two sites near Haney, British Columbia which is located approximately 26 kilometres east of the Belcarra Park site. Mathewes noted a hemlock/cedar dominance above the Mazama ash layer which indicated wet climatic conditions not dissimilar to those of the present. Mathewes concluded that "the palynological evidence, supported by well-preserved bryophyte subfossils, suggests that humid coastal conditions have prevailed in the study area since about 10,500 B.C". While the paleoecological evidence is still tentative in nature, what is available strongly suggests that environmental shifts are a rather unlikely explanation for any culture change which may have taken place during the last 2000 to 3000 years.

Carlson (1970:122) presents a third alternative one of... "a gradual change of the culture of the Marpole phase into that of the San Juan phase as the result of the introduction of new techniques for exploiting the environment". This position appears to be the most likely alternative and evidence from the Belcarra Park II assemblage supports this hypothesis, at least in part.

What then are the technological changes characteristic of the time period under discussion? As noted previously Carlson cites the reduction and near disappearance of chipped stone tools and replacement with a wide variety of ground and polished bone tools. This phenomenon has been reported from virtually every site in the region that has a late prehistoric component dating A.D. 1200 or later. All three sites in the lower Fraser drainage that date or appear to date to the A.D. 400—1200 time period, however, contain *significant* percentages of small, light, chipped stone projectile points.

For the Whalen II component, Borden (1970:106) reports chipped stone tools in abundance and illustrates a series of chipped stone projectile points that he considers diagnostic. Those points and in particular, side-notched and corner-notched varieties, he notes as being unknown on the Fraser delta before this time. Crowe-Swords (1974) has also reported a series of similar projectile points from the nearby Carruthers site. At this single component site, chipped stone projectile points of the small triangular variety form 71.2% of the chipped stone projectile point class (triangular 32.9%, side-notched 13.4%, stemmed 12.1%, corner-notched 12.8%). At the Belcarra Park site chipped stone projectile points of the small triangular form make up 82.4% of all chipped stone projectile points from the late component (triangular 8.8%, side-notched 48.2%, stemmed 14.0%, corner-notched 11.4%).

The side-notched points from the Belcarra Park component (N=55) were compared with side-notched points from sites with late components in the Lillooet area. Stryd (1972:37) analyzed the attribute of projectile point neck width from a sample of 142 in order to determine function, the assumption being that "small light points with narrow necks function as arrow points whereas larger and heavier points served as atlatl or spear points". Two well-defined clusters of neck widths became apparent. The Belcarra Park side-notched points fall within the range for projectile points defined by Stryd as arrow points. We can then, on the basis of the combined evidence, document the introduction of the bow and arrow in the lower Fraser drainage in late prehistoric times, A.D. 100—400. Stryd (1972:37) has the bow and arrow being introduced in the southern interior of the province ca. 200 B.C. and the total disappearance of the atlatl by A.D. 1250.

Table XXXIX Local vs. Imported Lithics for Chipped Stone Industry: Belcarra Park Site

Lithic Material Utilized		COMPONENT Belcarra Park I	Belcarra Park II	Site Total
Local	) Granular Basalt	66.6%(34)	56.4%(114)	148
	) Green Quartzite	17.6% (9)	8.4%(17)	26
	) Slate	7.8% (4)	0.5% (1)	5
Imported	) Vitreous Basalt	5.9% (3)	30.2% (61)	64
	) Chalcedony	2.0% (1)	2.0% (4)	5
	) Chert	0.0 (0)	1.0% (2)	2
	) Pitchstone	0.0 (0)	1.0% (2)	2
	) Petrified Wood	0.0 (0)	0.5% (1)	1
		100.0%(51)	100.0%(202)	253

By the beginning of Belcarra II there is indirect evidence for increased contact (trade and/or diffusion) with populations of the Southern Interior. In the Belcarra Park II component a number of artifact classes could "fit" comfortably in late prehistoric sequences from the Southern Interior (i.e. side-notched and corner-notched projectile points, two drills and a single graver). Decorated items (bone blanket pins, decorated bone fragment, straight awls) exhibit "Interior" geometric designs. The increase in the amount of stone tools manufactured from lithics not available locally is noted (Table XXXIX). The large increase (fivefold) in tools made from fine grained vitreous basalt may be especially significant as it is this material which is utilized for the vast majority of arrow points in assemblages from the Southern Interior. At this point then it is feasible to hypothesize the introduction of the bow and arrow on the Southern Coast from the Southern Interior Plateau.

The precise ramifications on a society's techno-economic system resulting from the introduction of such a major technological innovation is unknown at present. We do know, however, that "large" to "medium" chipped stone

points (atlatl or dart points?) disappear on the southern coast after A.D.400 and I would suggest that this form of technology was rapidly replaced by a bow and arrow technology. That the bow and arrow persisted until Euro-American times is abundantly evident from both historic and ethnographic information. The reduction and virtual disappearance of chipped stone projectile points in components dating after A.D.1200 is well documented; I would suggest that many of the variety of bone points reported from these same components functioned as arrow points, replacing the chipped stone arrow points. The confirmation or rejection of such a hypothesis must wait until more refined typological studies can be undertaken. In this regard, though, the preliminary data from the Ozette site may provide a key. To date the late prehistoric component from this unique site has yielded an impressive array of complete and fragmentary bows, complete and fragmentary arrow shafts as well as a large number of wood and bone arrow points (Daugherty:1975).

Conclusions

This report has presented a detailed description and analysis of materials excavated from a large prehistoric site located on Indian Arm, a few miles northeast of Vancouver, British Columbia. The poorly understood time period of A.D.400–1250 has been the focus of the study. By utilizing the cultural materials excavated from the Belcarra Park site and by making inter-site comparisons, the above time period was discussed in terms of chronology and culture change. Previous theories which related to the time period and which relied heavily upon models of migration and cultural diffusion to explain observed changes in the frequencies of artifact types, were reviewed. The concept that culture change during late prehistoric times in the Strait of Georgia can best be explained as a response to environmental shifts was also examined. Finally, explanations for an observed change in some technological items from the Belcarra Park site were offered.

The analysis of the Belcarra Park assemblage and of the stratigraphic data has shown that two discrete cultural components are represented at the site. Zone B deposits contain the Belcarra Park I component. This, the earlier of the two components present, is represented by a small assemblage (N=99) that is culturally related to previously defined Locarno Beach components. The later component (Belcarra Park II) was dated between the 4th and 9th Century A.D. and is culturally related to previously described components of the Gulf of Georgia culture type. Also noted was a small assemblage (N=29) of historic materials from the disturbed plow zone of the site. The majority of the historic artifacts are late historic items, but a few may have been trade goods and these were fully described.

Prehistoric site occupation was not continuous in the areas examined and the two components are separated temporarily by approximately 500 years. To date, less than 1% of the Belcarra Park site has been excavated. If future excavations were conducted and if a probabilistic sampling design were utilized, it would not be at all surprising if cultural materials from the 400 B.C. – A.D. 400 time period were represented in the assemblage.

Continuities and discontinuities were observed between the two components at the Belcarra Park site. The most obvious difference is the stratigraphic break between the nearly shell free deposits of Zone B and the complex admixture of various molluscs in Zone C. Chipped and ground stone artifacts dominate in Zone B, while in Zone C chipped stone and ground stone items decrease relatively and bone and antler tools increase. As well, some artifact types have exclusive distributions in either zone. Some discontinuities may be explained by differential preservation, differential site utilization and by the sampling design used.

Considerable continuity between the two components is suggested by shared technologies and inferred subsistence activities. The basic manufacturing processes such as the chipping, pecking, grinding, and sawing of stone; and the grinding, sawing, snapping, cutting and adzing of bone and antler are all shared. The drilling of stone, bone and antler and decorative incising was observed only in the late component although sampling and differential preservation factors may have biased the results.

Basic subsistence activities such as the hunting of land and sea mammals and fishing are implied for both components, although the relative reliance on each pursuit has yet to be examined. Evidence of shellfish collecting is limited to the late component.

Certain artifact types such as "large" and "medium" chipped stone projectile points and "large" stemless ground slate points are present only in the early component. They appear to be replaced by smaller, more numerous chipped stone and ground stone triangular projectile points. Considerable discussion concerning this phenomenon was presented and arguments for the introduction of a new technology (bow and arrow) were offered.

Future Research

Historically, archaeological research in the Strait of Georgia region has been concerned with the establishment of local chronologies. I would expect that a considerable number of researchers will continue to work within this cultural historic framework, and that refinements to the chronologies will be suggested. While it can be argued that chronology building is an essential step in archaeological research, that does not necessarily mean that this should be viewed as an end result of research, but rather as an introductory step to broader problems. It appears that researchers in the Strait of Georgia are now ready to address some of the broader problems, as witnessed by recent attempts to examine the subsistence base and settlement patterns of prehistoric populations (Imamoto 1974, Ham and Irvine 1975, Boucher 1976). As well, other obvious problems need to be solved. The establishment of a detailed paleoecological sequence is badly needed. Work in establishing typologies of tool types is required. Detailed typologies of the plethora of bone and antler tools in sites with late components would be an obvious starting place. In this regard, research on "wet sites" in the region will aid in determining function. The lack of detailed published reports with comparative data is a perennial problem, and new series begun by Simon Fraser University and the Heritage Conservation Branch should help to alleviate the situation.

The whole problem of sampling needs to be addressed and our assumptions in this regard need to be questioned. In the majority of cases thus far, sites selected for excavation have been arbitrary and often biased in favour of large, deeply stratified sites. Generally, hypotheses are not explicitly stated and excavation units are arbitrarily selected. In some cases, the above approaches can be rationalized in that they were responses to salvage needs. However, sampling procedures at both the regional and site specific levels, until recently, have not been addressed. Yet, if our goal is "to derive results that reliably represent the populations being investigated" (Binford 1963), then the application of probability sampling designs to the data collecting process becomes essential. Boehm (1973:100) comments on sampling at the site specific level:

> . . .It is clear, however, that attempts to identify and describe processual change should be based on samples that are both large and representative of a wide area of the site. Sampling a wide area of the site will help to offset the biases introduced by differential use occupancy of site areas at one time. It is not enough that total artifact count from the site be high. A large sample must be recovered from each horizontal stratigraphic division of the site, as the factors producing sampling biases operate at each level of occupation.

On a regional level, ethnographic research (Duff 1964, Suttles 1960a, 1963) has exposed us to the cultural dynamics of Coast Salish culture and has made us aware of the complexities of the culture as it is known ethnographically. The ethnographic record of late prehistoric aboriginal groups in the Strait of Georgia region suggests that specific locations were not occupied throughout the year, but rather were occupied on a seasonal basis depending upon the resources to be exploited. These facts have important implications for archaeological research not only in terms of attempting to reconstruct the prehistoric lifeways of the Coast Salish (Abbott:1971, 1972) but also in the sampling strategies to be employed. Only by establishing research problems and utilizing a probabilistic sampling approach can we begin to accomplish the goals suggested by Binford. This is not to say that judgemental sampling designs have no place in future research in the region, or that probability sampling should be utilized rigidly in a "cookbook" fashion. Often the archaeologist is faced with external factors (e.g. site destruction, private property) which dictate that judgemental sampling is the only alternative. Moreover, judgemental sampling techniques such as crosstrenching may be essential in maintaining strict temporal control in highly complex midden situations. Rather, I would view probabilistic and judgemental sampling designs as complements to one another, as methodological tools dependent upon the explicitly stated research problems being investigated.

An over-riding factor which further complicates the attainment of research objectives is the present condition of the archaeological resources. In light of the degradation of the data base in the region it is becoming increasingly apparent that archaeologists will have to very quickly establish overall research priorities for the area. That the attrition rate of archaeological sites is high in the Strait of Georgia is witnessed by the results of the first *systematic* inventory of the Gulf Islands region. The project, begun in January, 1974, had by September of the same year recorded and assessed 590 sites. This figure represented a 100% sample of the Gulf Islands shoreline surveyed to that date. Initial figures revealed that only 35 sites (5.9%) were considered to be three-quarters or more intact while 269 sites (45.6%) were either badly damaged or totally destroyed (Charlton, et al. 1975). There are no detailed figures available for the lower Fraser River although I suspect that site attrition in this area, due to urban expansion and other surface altering activities, is probably higher than in the Gulf Islands.