CULTURAL AND SOCIAL DIMENSIONS OF THE PREHISTORIC GULF ISLANDS SOAPSTONE INDUSTRY

by

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ABSTRACT

This thesis is based on an analysis of a large and unique collection of prehistoric soapstone artifacts from the Gulf Islands of British Columbia. Until recently lack of archaeological context and inadequate sample sizes have prevented detailed analysis of the soapstone complex artifacts. The purpose of this analysis is to characterize the collection and to derive socio-cultural information about the nature of society during the time these artifacts were in use. The significance of these soapstone artifacts lies in the fact that they indicate aspects of behaviour rarely identifiable in the archaeological record. Standard archaeological methods are employed in this analysis. These methods include the following: classification and description of the artifacts and formulation of a typology; ^{14}C dating and cross-dating of types to determine the chronology of the artifact types; and the use of ethnographic analogy and archaeological context to determine the role these artifacts played in the society which produced them. The study has resulted in several conclusions. Since the soapstone came from distant sources, trade connections over a wide area can be inferred. Properties of the raw material and artifact morphology indicate that these artifacts were ornaments. In the Gulf of Georgia region the soapstone ornament industry is limited temporally to between 5000 and 2000 years ago. Archaeological context and ethnographic analogy indicate that they were part of a system of cultural practices related to social status and cosmology expressed through personal adornment. Diversification and elaboration of forms of soapstone ornaments over time are consistent with an increase in interest in status and rank during this period.

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TABLE OF CONTENTS

APPROVAL ii
ABSTRACT iii
ACKNOWLEDGEMENTS iv
LIST OF FIGURES vii

FRONTISPIECE ..... Ia
CHAPTER ONE:
INTRODUCTION 1

CHAPTER TWO:
THE GULF ISLANDS SOAPSTONE INDUSTRY 13
Raw Material and Sources 13
Tools 19
Tools at Pender 21
Method of Manufacture 24

CHAPTER THREE:
THE ARTIFACTS AND THEIR ARCHAEOLOGICAL CONTEXT 30
Typology 30
Types and Distributions 32
Within the Gulf of Georgia region 33
Outside the Gulf of Georgia 77

CHAPTER FOUR:
ROLE OF THE SOAPSTONE INDUSTRY IN GULF ISLANDS CULTURE 83
Universal Aspects of Facial Ornaments 86
Status and Rank 91
Differences in Symbolic Meaning 96
Summary 100

CHAPTER FIVE:
DISCUSSION AND CONCLUSIONS 102

REFERENCES: 109

APPENDIX 1: Metric characteristics of soapstone artifacts..... 131
APPENDIX 2: Catalog of artifacts 133

LIST OF FIGURES:

Frontispiece. Woman wearing oval labret and child with nosepin 1a

1. Map of the Gulf Islands and San Juan Islands 3

2. Map of Pender Canal Area 8

3. Map of Soapstone Sources 17

4. Raw Material and Finished Artifacts 20

5. Raw Material and Finished Artifacts 20

6. Soapstone Working Tools, Saws and Files 22

7. Soapstone Working Tools, Abraders and Files 23

8. Manufacturing Sequence 25

9. Filed Groove with Ridges 26

10. Polished and Decorated Slides 26

11. Raised Circle and Dot Motif 28

12. Bone Insets 28

13. Button and T labrets 38

14. Button and T labrets 40

15. Slides 40

16. Slides 41

17. Salamander Antler Spoon 43

18. Salamander Antler Spoon 43

19. Composite Ornament Parts, boat shaped, hollow, short slide 45

20. Composite Ornament Parts, rectangular drilled 48

21. Composite Ornament Parts, flared, channeled 48

22. Composite Ornament Parts, flared, rectangular drilled, channeled 49

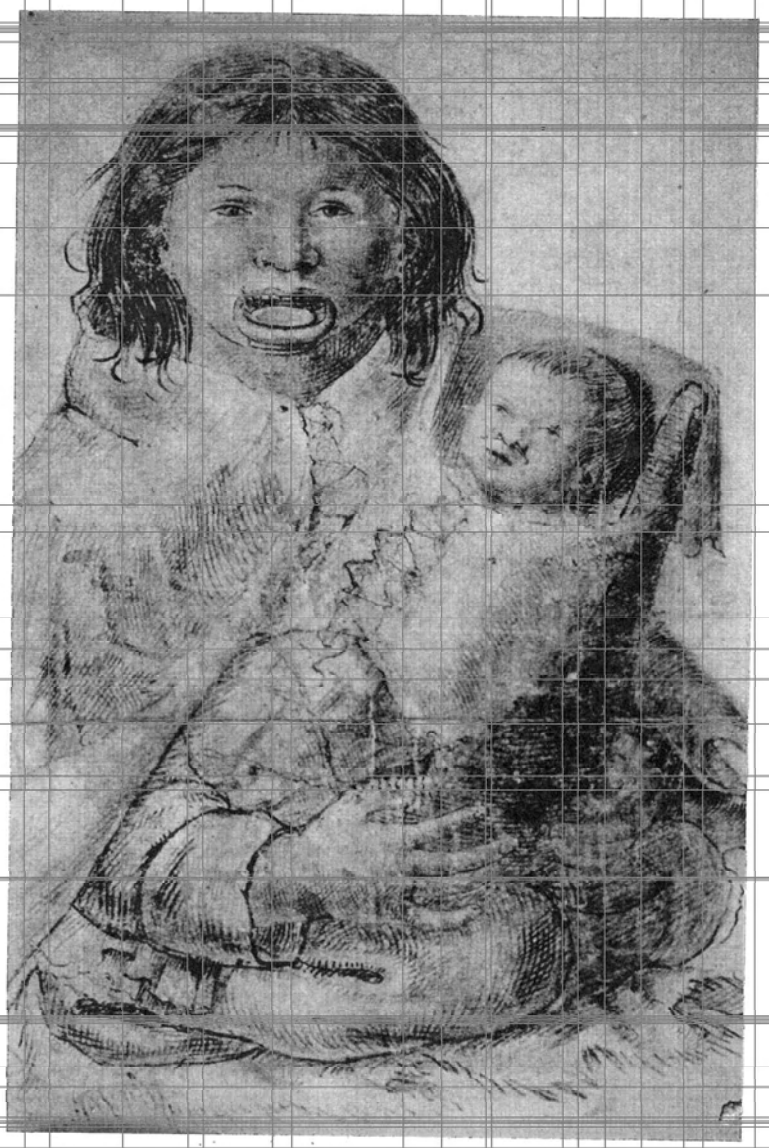
23. Composite Ornament Parts, grooved 52

24. Composite Ornament Parts, other and pendants 55

25. Composite Ornament Parts, and other 57

26. Composite Ornament Parts, inlay, grooved and other 60

27. Ornaments of shell, bone and stone 61
28. Beads 64
29. Oval labrets 70
30. Earspools 73
31. Oval labrets 74
32. Earspool 74
33. Time Ranges of Types 76
34. Lateral labrets, Kotzebue Sound 81
35. Masks with composite labrets, Aleutian Islands 81
36. Lateral labrets and composite nose ornament, Unalaska Island 82
37. Composite labret and nose ornament, Kodiak Island 82



A Tlingit woman of Yakutat Bay wearing
a solid oval labret; and her baby wearing a nose pin.
Drawing by Thomas de Suria, 1791. (from Higueras 1991: 81)

CHAPTER ONE

Introduction

The materials that are the basis for this thesis are a collection of 205 soapstone artifacts recovered from excavations at the sites of DeRt 1 and DeRt 2 in the Gulf Islands of southern British Columbia. The relevant deposits at these sites are radiocarbon dated to about 5,000 to 2,000 years ago (Carlson and Hobler: 1993). First the collection of artifacts is characterised; the raw materials, methods of manufacture, and types and styles are described. Secondly, the known distribution of the artifacts in time and space is given. Lastly an attempt is made, using historic and ethnographic analogy, to discover what these artifacts can tell us about the way of life at that remote time.

The Gulf Islands are a group of about a dozen large, and another fifteen or more small islands in the Strait of Georgia. The "Gulf of Georgia" as it is known anthropologically, has been identified as a distinct natural and ethnographic region of the Northwest Coast. This region lies in the Georgia depression section of the Coastal Trench bounded to the east by the Coast and Cascade mountains and to the west by Vancouver Island and the Olympic mountains. It ends to the north at the tightly grouped islands west of Discovery Passage and to the south at the entrance to Puget sound. This region is dominated by the tidal waters of the Strait of Georgia, which reach as far inland as Pitt Lake, and the Fraser River and delta due east of the Gulf Islands. It has been subdivided into three climatic and roughly coinciding biotic zones; the Puget Sound Lowlands, the Gulf Islands and the Coast Forests (Mitchell 1971; Burley 1980: 2-5).

The centre of the area considered here is DeRt 2 and DeRt 1, the Pender Canal sites on North Pender Island. North and South Pender are two of the Gulf Islands in the southern Strait of Georgia. The Gulf Islands are bounded on the west by the southeastern coast of Vancouver Island from Victoria to Nanaimo

and on the east by the mainland from Bellingham Bay to Howe Sound. The Gulf Islands are separated from the San Juan Islands by Boundary Passage. The names of the larger islands from northeast to southwest are; Gabriola, Valdes, Galiano, Saltspring, Mayne, North Pender, South Pender, Saturna, Waldron, Orcas, San Juan and Lopez (Fig. 1). Selected sites relevant to this analysis are also located on figure 1. Gulf of Georgia region will hereafter refer to all three zones of the Gulf of Georgia.

The southern Gulf Islands are approximately at the centre of the ethnographic Coastal Salishan linguistic area. Halkomelem was spoken in the Gulf Islands and Straits Salish in the San Juan islands. These Central Salishan languages are "...apparently [in] the surviving heart area of the original dialect continuum" (Thompson and Kincade 1990: 36; cf. Kincade 1976). Linguistic evidence suggests that Proto-Salishan spread from the Central Salish area north, and further south, along the coasts and later up the inlets and rivers to the interior (Suttles and Elmendorf 1963; Suttles 1987: 248-264).

Climate and environment overlap with the other two zones in the north and south. The Gulf Islands support a variety of terrestrial flora and fauna and waterfowl and the marine and intertidal areas are also rich in subsistence resources (Hanson 1991: 35, 40-41; Suttles 1990: 16-29; Mitchell 1971: 7-13; 1971a: 146). The density of sites in the area confirms that the Gulf Islands are well suited to human occupation. With over 2,000 recorded sites, this region contains more than a third of coastal B.C's recorded sites (Carlson 1990: 113).

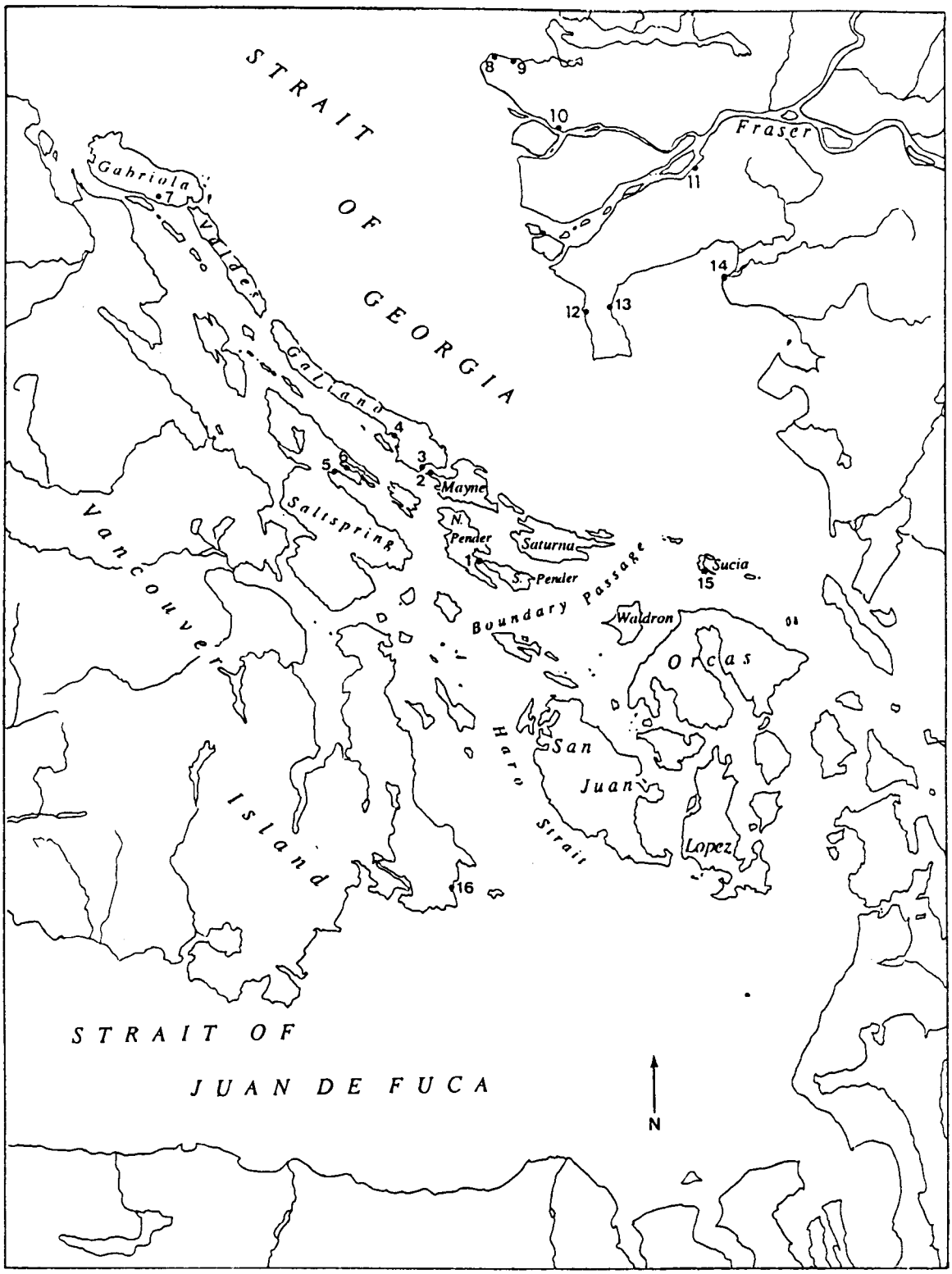
> "As a setting for human occupation the Gulf of Georgia region is set off from areas to the north and east by the more equable climate (warmer in winter... drier in summer and winter...). It is distinguished from areas to the west primarily in the possession of many more miles of protected waterways, and in considerably less precipitation. From regions immediately to the south and from all other neighbouring regions, it is set off by the magnitude and quality of the fish runs passing through the Gulf and entering the Fraser River" (Mitchell 71:17,18-19).

Figure 1

The Gulf Islands and San Juan Islands

Selected archaeological sites in the area:

1. The Pender Canal site, DeRt 1 and DeRt 2
2. Helen Point, DfRu 8
3. Georgeson Bay, DfRu 24
4. Montague Harbour, DfRu 13
5. The Hill Site, DfRu 4
6. Long Harbour, DfRu 44
7. False Narrows, DgRw 204
8. Point Grey, DhRt 5
9. Locarno Beach, DhRt 6
10. Marpole, DhRs 1
11. Glenrose, DgRr 6
12. Tsawwassen, DgRs 2
13. Beach Grove, DgRs 1
14. Crescent Beach, DgRr 1
15. Fossil Bay, 45SJ105
16. Bowker Creek, DcRt 13


STRAIT OF GEORGIA
Fraser
Gabriola
Valdez
Galiano
Mayne
Saltspring
Pender
Saturna
Pender
Sucia
Boundary Passage
Waldron
Orcas
San Juan
Lopez
Haro Strait
Vancouver Island
STRAIT OF JUAN DE FUCA
N
1
2
3
4
5
6
7
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16

Mitchell argues for an extension, not only of distinct biota and climate, but also of the ethnographically distinct culture of the Central Coast Salish into the prehistoric past.

Soapstone, or steatite, is a massive variety of talc. It is very soft. It is easier to carve than ivory or antler, has no grain and comes in a variety of colours. It feels soft and smooth; 'soapy' in fact. It is an acid resistant stone and wears well in a variety of conditions. There are no *in situ* sources of soapstone in the Gulf Islands. The soapstone artifacts are small and well made. Some of them are easily identifiable facial ornaments, for example the earspools and some of the labrets. Others are more difficult to identify and have been called "Gulf Island complex artifacts". As late as the 1980s they were catalogued as "whatzits" by puzzled excavators. Some of these unidentified items were also made of shell, bone, coal and other stone. Chapter two deals with the soapstone industry. Physical properties of soapstone relevant to the prehistoric manufacture of these ornaments are described and extant sources of similar types of soapstone are given. The tools needed and methods of manufacture are also discussed.

The first archaeological research in the Gulf of Georgia region was conducted by Charles Hill-Tout and concurrently by Harlan I. Smith, the archaeologist for the Jesup North Pacific Expedition. By 1900 a number of sites on Vancouver Island and the lower mainland had been excavated (Hill-Tout 1907; Smith 1907). Following the Jesup expedition little archaeological work was undertaken in the Gulf region until after the Second World War. After the war, resurgence of archaeological research in the Fraser Delta was led by Carl Borden of U.B.C. Between 1946 and 1950 he directed excavations at five sites in the lower mainland; Marpole, Locarno Beach, Musqueam, Point Grey and the Whalen Farm site at Point Roberts. Based on data from these excavations he established the first chronology in B.C. (Borden 1951). This sequence of archaeological cultures has remained valid to the present. During the nineteen fifties and sixties there was a florescence of archaeological activity in the Straits and Halkomelem

language areas. Local cultural chronologies were established using radiocarbon dating, as well as now traditional archaeological methods (Willey and Sabloff 1974). By the early 1970s the cultural phases first defined by Borden had been verified and local variants added or synthesized (Carlson 1960; Borden 1970; Mitchell 1971; Abbott 1972; Matson 1974).

The earliest archaeological components in the Gulf of Georgia region belong to the Pebble Tool Tradition (~9000 - 5000 BP). This Early Period tool kit is not present in the Gulf Islands but is "clearly ancestral to post 5000 BP phases" (Roy Carlson 1994 pers. com.). It is found in the Fraser canyon at Milliken by 9000 BP and is well represented in the lower Fraser at the Glenrose Cannery site between 8200 - 5750 BP (Carlson 1983: 18-19; Matson 1976). Fragments of ground and polished soapstone, the earliest known use of this material on the Northwest coast, red ochre, and obsidian from Oregon were found at Milliken in components dating between 9000 and 8000 BP (Borden 1983: 131-132; Carlson 1990: 63). Knowledge of Early Period cultures is based on tool technologies and subsistence pursuits; there are no burials which might indicate other aspects of culture. The Pebble tool Tradition appears to center on the Gulf of Georgia region reaching as far north as the Queen Charlotte islands, south to the Oregon coast and east up the rivers and inlets, perhaps initially following spawning salmon (Carlson 1992: 62-63). This distribution suggests that it is ancestral to the Salishan and Wakashan speaking peoples (Carlson 1983: 19; 1990: 69).

The first half of the Middle Period, ~5000 - 3200 BP, is represented by the Eayem phase in the Fraser canyon, St. Mungo and Charles phase in the lower Fraser area and by the Mayne phase in the Gulf Islands. These phases are represented by components on the Gulf Islands at Pender (DeRt 2), Helen Point (DfRu 8) and Georgeson Bay (DfRu 24); on the mainland at St. Mungo, Glenrose and Crescent Beach, and at Esilao Village in the Fraser canyon. Labrets of soapstone and other materials are first seen early in the Mayne phase at DeRt 2. During the second half of the Mayne phase there is an increase in soapstone

artifact types; soapstone beads, and composite ornaments (whatzits) make their appearance. Symbolic feeding of the dead with elaborately carved antler spoons and clam bowls is found late in the Mayne phase. Large soapstone earspools, large oval labrets and artificial cranial deformation, or head shaping, are first seen at the end of the Mayne phase at DeRt 2. An increase in emphasis on social rank and status is partially inferred from this increase in ornament types and is also evident in the "special", or at least more expensive, treatment given to some burials (Dissanayake 1992: 107-108, 111; Schulting 1994: 10, 14).

The second half of the Middle period in the Gulf of Georgia consists of the Locarno Beach phase, ~3200 - 2500 BP and Marpole from ~2500 - 1500 BP. The Locarno Beach phase is well documented in the Gulf of Georgia with components found at 29 excavated sites (Mitchell 1990: 341). The archaeological evidence indicates continuity from the Mayne phase and increasing elaboration during the Locarno (Burley 1980: 9). Burial practices remain the same, flexed or seated with evidence of ritual feeding of the dead. Large labrets and earspools, of soapstone, shell and coal are found, usually in burial grounds, throughout the Gulf Area. Soapstone, shell and bone composite ornaments are also found and new types are introduced; these have a more restricted distribution centering on the Gulf Islands. Head shaping occurs more frequently and by the end of the Locarno at DeRt 2 different styles have been introduced (Weston 1994). This continuity, of traditions in burial practices, personal ornamentation and other artifacts, from the Mayne to the Locarno does not continue into the Marpole phase. Soapstone labrets, earspools and whatzits are less frequent and by ~2000 BP head shaping and perhaps other forms of facial adornment, tattooing or painting, may have replaced these ornaments in the Gulf of Georgia. Soapstone is still in use, and soapstone seated human figure bowls have been found in Marpole components. There is also some evidence of the use of native copper for ear and nose ornaments (Burley 1980; 23, 27). At Pender during this time burial ritual changes from actually feeding the dead to burning food for the dead (Carlson and Hobler

1993: 49). Burials are usually placed in shallow holes in a flexed position at the back of the midden with rock slabs or boulders placed over the body. There is some evidence of cairn burials during the Marpole phase and also of above ground deposition with later interment. The burning of food and other items for the dead was practiced into the ethno-historic period (Kew 1970: 229-234). After ~2200 BP the Pender Canal sites are no longer part of a winter village but are used seasonally up to contact (Carlson and Hobler 1993: 49-50).

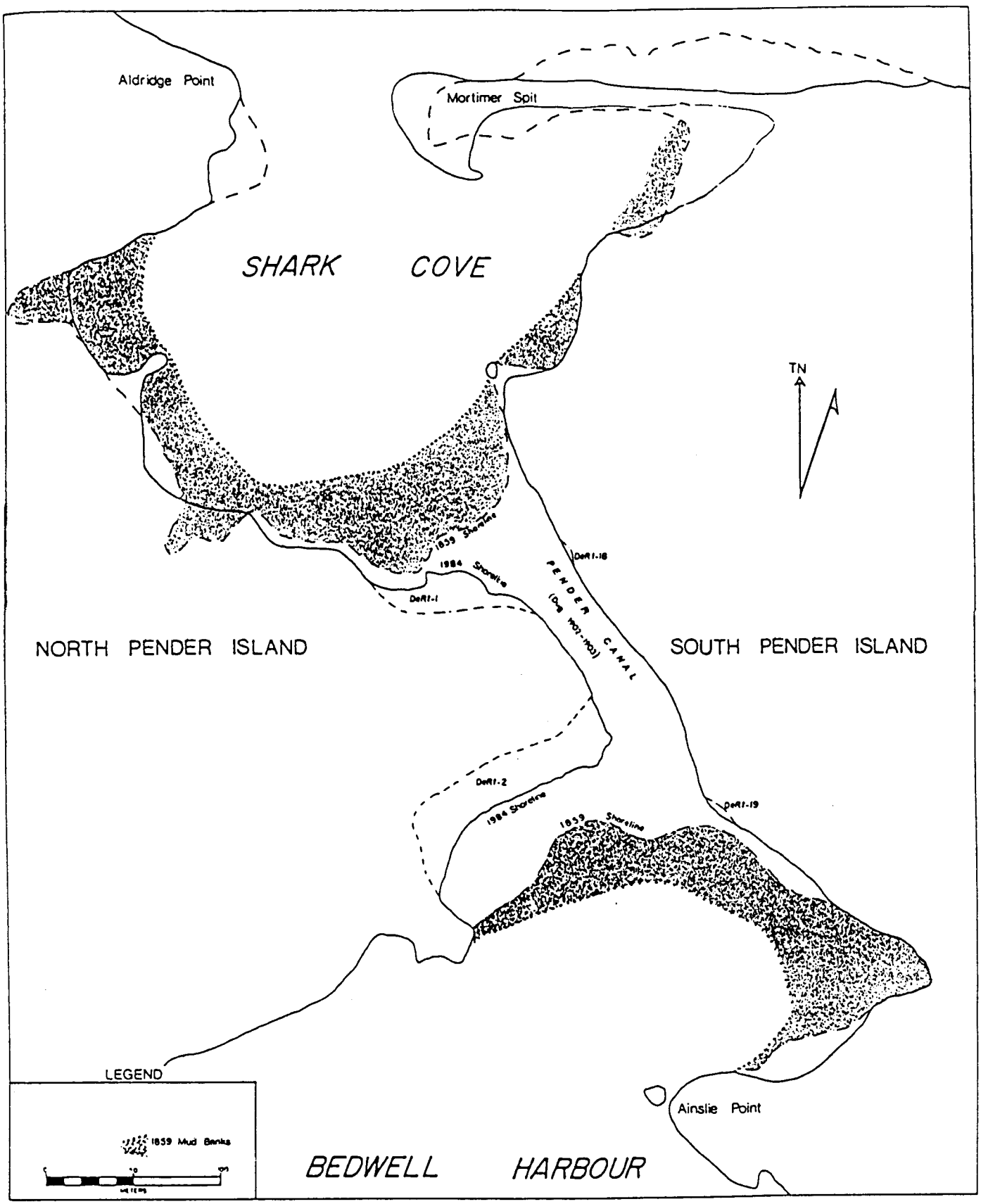
It is generally accepted that the Developed Coast Salish culture, ~1500 BP to contact, evolved from the Marpole phase. A number of different burial practices are seen in the Gulf region during this time. Burials were flexed or loosely flexed in stone cairns and earth mounds of different sizes. Above ground repositories included boxes, canoes and caves. There are very few grave inclusions and only a few copper, or copper and shell, ear ornaments and a few copper rings and nose pins have been found in burials. Different types of head shaping were practised in different areas in the Gulf of Georgia region.

Depictions made at contact of high status people from the Gulf Islands area show them wearing ear ornaments of dentalia shells, beads and pendants, necklaces of dentalia sections and other shells or teeth. Head shaping was common and the chiefs depicted are wearing decorated truncated cone shaped basketry hats or skull cap hats with down and feather decorations. Some have painted faces (Higueras 1991: 134-141; Suttles 1990). It is quite clear from these early drawings and paintings that ornaments are associated with high status.

A number of soapstone artifacts were already in private collections when Wilson Duff (1956) first brought them to academic attention. More than half of the forty two soapstone pieces he studied came from a site known as the Pender Canal site. The Pender Canal, finished in 1903, is ~200m long and joins Shark Cove (in Port Browning) to Bedwell Harbour, separating North from South Pender Island. The canal excavations and later water erosion from canal traffic uncovered many artifacts at what are now DeRt 1 and DeRt 2 (Fig. 2).

Figure 2.
Map of Pender Canal Area.

Map of Pender Canal area showing the location of archaeological sites DeRt 1 and DeRt 2, and showing the 1984 shoreline and the pre-canal shoreline as mapped by Capt. G.H. Richards and officers of H.M.S. Plumber between 1858 and 1860. (from Carlson 1986:4)


Aldridge Point
Mortimer Spit
SHARK COVE
TN
1859 Shoreline
1984 Shoreline
DeRt-1
DeRt-18
PENDER CANAL
NORTH PENDER ISLAND
SOUTH PENDER ISLAND
DeRt-2
1984 Shoreline
1859 Shoreline
DeRt-19
LEGEND
1859 Mud Banks
Ainslie Point
BEDWELL HARBOUR

Archaeological excavations had not yet been conducted in the Gulf Islands when Duff speculated that the small well made soapstone artifacts in these collections were 'utilitarian objects of unknown use'. One type is like the "... cord attachers of a type used by Eskimo sea-mammal hunters"(1956: 54). They were found with local Locarno Beach assemblages, which in turn were similar to those of early Eskimo cultures (Duff 1956: 47,54). When Duff wrote this there were no artifacts similar to these known to him on the Northwest coast or indeed from North America. In 1957 Wilson Duff and Michael Kew of the British Columbia Provincial Museum excavated a five square foot test pit at the southwest end of DeRt 2 in hopes of discovering *in situ* cultural associations of the soapstone complex artifacts (Kew 1958). The following year a second trench, three by fifteen feet, was excavated. In all, five soapstone 'whatzits' were recovered from the excavations. Three of these were found in levels below a charcoal lens which produced a 14C date of 2200±120 (M-1515) (Duff 1963). They were associated with Locarno Beach phase artifacts. During the 1960s six soapstone ornaments along with other artifacts were collected from the beach in front of DeRt 2 by Kay Sykes.

By 1984 Gulf Islands complex artifacts, labrets and earspools, had been excavated at Georgeson Bay and Montague Harbour (Galiano Island); Helen Point (Mayne Island); the Pender Canal site (DeRt 2); the Hill site (Saltspring Island); Fossil Bay (Sucia Island) Locarno Beach, Crescent beach, Beach Grove and Whalen on the mainland and Chemainus Bay and Oak Bay on southeastern Vancouver Island. These excavations helped to place the soapstone artifacts in time and culture but the low numbers of these artifacts found up to this time and even lower numbers in association with dated material, discouraged any more detailed, or contextual, analysis. How some of these soapstone complex artifacts were used was a mystery. Duff's original suggestion, that they were utilitarian objects, could only be applied to one or two types which were similar to Eskimo cord attachers and line holders. Nevertheless the 'utilitarian object' theory continued to surface. One recent suggestion was that the rectangular drilled type,

Duff's cord attachers, were weaving or twining implements (Blukis Onat 1992). The fact that many of the whatzit types were useless in the utilitarian sense, and their association with labrets and other ornaments of soapstone convinced Duff at a later date that they were 'objects of unknown meaning'; "The pure form "whatsit" resists all specific suggestions as to use and image" (Duff 1975: 35). It seems almost a shame to attempt to destroy the mystery surrounding these elegant 'whatzits', Duff's "ancient abstractions ... which may be expressions in pure form of their most essential meanings" (Duff 1975: 35). However, on a more mundane level these artifacts were made for a purpose, or to convey messages to their viewers, and to decipher these messages only adds to their already obvious inherent value. Chapter three consists of the descriptive typology, which includes how they were worn or used, and the spatial and chronological distribution of each type. The artifacts are described in some detail. Chronological and spatial distribution of the soapstone artifacts from the Pender sites is used as a reference base for comparison with assemblages from other sites in the Gulf of Georgia region. Some types remain unique; no comparative artifacts have been found. The remainder of the chapter deals with their cultural affiliations and the archaeological distribution of similar artifacts.

The excavations at the Pender Canal sites in 1984, 1985 and 1986 have provided an unparalleled collection of these soapstone artifacts. There are 120 'whatzits' (including inlay and pendants), 22 labrets and earspools, 64 beads, and 35 unidentifiable fragments and pieces of raw material. The Pender sample more than doubles the number of soapstone pieces previously known from archaeological context in this area. This well documented and dated sample will be the main source of data for this thesis. Soapstone artifacts excavated from other archaeological sites in the Gulf of Georgia area and many of those collected without provenience are included in the analysis. This information was gleaned from previous dissertations and theses, published and unpublished site reports, papers, articles and the available artifact collections.

These soapstone artifacts have not been made or used in the Gulf Islands region for about 2000 years. Labrets, composite labrets, nose and ear ornaments were still worn at European contact by coastal peoples from Douglas Channel and the Queen Charlotte Islands in B.C. to Kotzebue Sound in north-western Alaska and west to Umnak Island in the Aleutian islands. Because their context includes the people who were using them, the library research has focused on early contact descriptions, comments and depictions of similar artifacts and on ethnographic accounts in an attempt to discover how they were worn and, more importantly, why they were worn. The ethnographic comparisons are very wide ranging and include modern examples from Africa and South America as well as accounts from northern B.C. and Alaska. This broad coverage is done in an attempt to discover whether there are universal aspects associated with these types of ornaments. It is also partly necessary as there are very few studies of facial ornaments that attempt any analysis beyond description. Chapter four is mainly concerned with reasons for wearing facial ornaments. The Tlingit, Haida and Tsimshian are the nearest peoples, both culturally and physically, who were still practising labretifery at European contact. Comparisons to these people are therefore dealt with in more detail.

The central research goal is to define the soapstone industry and from it to make inferences about the socio-cultural system of which it was part. As this is the central research goal extra attention is given to the possible meaning of, or information portrayed by, the soapstone ornaments to their prehistoric wearers and viewers. A number of specific questions need to be answered to reach this goal:

1. Can the different types be seriated? What are the associational relationships of the soapstone materials with the one hundred plus burials from the Pender sites and do these change over time? Are there definable correlations between the soapstone artifacts from burials and other aspects of those burials?
2. Do distant sources of soapstone add to our knowledge of early trade routes? Do

these trade networks change over time and if they do how does this relate to other changes in the archaeological record?

3. The soapstone industry of the Gulf Islands is no longer apparent after ~2000 BP. Are there any discernible reasons for this apparent demise? Are there cultural forms, e.g. head shaping, tattooing or painting, that replace the soapstone ornaments, and again, how does this correlate with other aspects of the culture?

4. Lastly, and an important question in this context, how pertinent are ethnographic analogs to cultural manifestations over a thousand kilometres and three thousand years apart. Chapter 5 consists of discussion of the initial questions posed and conclusions.

CHAPTER TWO

The Gulf Islands Soapstone Industry

Boy: "In our world, a star is just a huge ball of flaming gas"
Ramandu: "Even in your world, that is not what a star is, but only what it is made of" *C.S. Lewis*

Raw material and sources

The following summary of the physical properties of soapstone is taken from Hamilton et al. 1980: 124,125; Read 1962: 408-415; and Pough 1960: 250-253.

Soapstone, or steatite, is an aggregate or massive variety of the mineral talc. Talc is composed of $Mg_3(Si_4O_{10})(OH)_2$. This is a hydrous magnesium silicate with a hardness of 1-2 on the Mohs scale. Other minerals in this division of silicas are serpentine, $Mg_6Si_4O_{10}(OH)_8$, hardness 2.5 - 4, and meerschaum (sepiolite) $Mg_2Si_4O_9(OH)_4$, hardness 2 - 2.5.

Other varieties of talc relevant to the Gulf Islands artifacts are called potstone and rensselaerite. These three varieties vary in hardness, colour and reaction to heat and one type, rensselaerite, is decomposed by acids. The talcs have been put to a variety of uses. Talc is ground into talcum powder, used as a filler for paints, rubber and crayons and used as an absorbent for nitroglycerine. Potstone, as its name suggests, has been used to make cooking vessels. Rensselaerite, which is harder than other soapstones and takes a high polish, has been used to make ink stands and ornaments. Soapstone, due to its resistance to acids, has been used for acid baths, lab sinks and counter tops as well as ornaments. The Babylonians made cylinder seals from it and the Egyptians used soapstone as a base for blue faience figurines. Soapstone was also used for axe moulds in the Irish Bronze Age (O'Kelly 1989: 158).

Serpentine, $Mg_6Si_4O_{10}(OH)_8$, is also commonly used for decorative carvings. Serpentine and soapstone have similar chemical and atomic structures

and many physical properties in common. Serpentine has been more hydrated than talc and is harder.

Many Chinese "soapstone" carvings are a fine grained pyrophillite, a hydrous aluminum silicate, with many of the physical properties of talc.

For the sake of simplicity recognisable aggregate varieties of talc used in the Gulf Islands will be referred to as soapstone.

Some physical properties of talc, relevant to prehistoric soapstone carving, are:

Hardness: 1-2.5 Softest grade in Mohs scale; cuts easily with a knife and the softer types can be scratched with a finger nail. Rensselaerite is harder than other talc and takes a high polish.

Colour: talc: white, silvery white, apple green, greenish grey, dark green.
soapstone: white or grey of various shades, sometimes greenish or reddish.
potstone: greyish green, dark green, iron-grey or brownish black.
rensselaerite: white, yellow or black.

Streak: The streak of a mineral is the colour of its powder. Soapstone's streak is white to pale grey or pale green.

Fracture: 5. Earthy. When hit with a hammer soapstone breaks into small irregular lumps, as in the fracture of meerschaum or gypsum.

Cleavage: Perfect basal, giving thin plates which are flexible but not elastic, i.e. thin plates can be dented or bent under pressure and remain bent when the pressure is removed, unlike flexible elastic minerals, e.g. mica, which spring back to their original position when the pressure is removed. This property is more evident in the softer soapstones.

Feel: Greasy or soapy to pearly, smooth.

Tenacity: Certain physical properties depend on the tenacity of the mineral. Soapstone is sectile, it can be cut with a knife and the resulting slice

breaks up when hammered, unlike malleable minerals, e.g. gold or copper, which will flatten out under a hammer.

Specific Gravity:

Ratio of the weight of the body to that of an equal volume of water. The specific gravity of talc is 2.6-2.8, of serpentine 2.4-2.6 and of meerschaum 2.

Fusibility: Reaction to heat treatment. Soapstone will whiten and exfoliate when heated alone before a blowpipe and fuses to an enamel on the edges only.

The hardest talcs are not as hard as slate or chert and the softest are as easy to scratch as chalk. Other properties, especially fracture and tenacity, also render soapstone impractical for any functions that would put it under stress. For example, activities such as cutting, chopping, hammering or grinding will soon break or erode a soapstone tool. Soapstone can be heat treated to a hardness of 8 but becomes brittle and will fracture or shatter on impact (Yamaura 1991; 1992). Heat treatment or burning also affects the colour. The lighter coloured grey-greens acquire orange or brown-orange colours and streaks when they are heated.

On the other hand soapstone is extremely easy to carve and polish and it is available in a variety of colours. The soapstone artifacts and blanks in the Pender collection are light grey or silvery white, dark grey to black, dark brown and dark greenish brown with some light green to jade coloured and some grey green and dark green-black.

Talc occurs as a secondary mineral resulting from the alteration of magnesium bearing silicates of the olivene, pyroxene and amphibole families of minerals (Hamilton et al 1974: 126). The alteration of these magnesium bearing silicates can occur under conditions of low temperature and high pressure. These conditions may be caused by a combination of moderate depth of burial and a 'tectonic overpressure' produced by thrust faulting. The soapstone deposits of B.C.

and the northwestern United States occur where serpentinite rock and siliceous sedimentary rocks are in contact with each other along fault lines caused by tectonic movements (Leaming 1978: 6,13-15; Coleman 1989: 170).

Other aggregates of these minerals produced under similar circumstances are jadeite, a variety of pyroxene, and nephrite, an amphibole.

Soapstone occurs *in situ* in areas near these fault lines. *In situ* deposits are often found along river banks, the Fraser, Coquihalla, Similkameen, Skagit and perhaps Columbia, where the river has eroded down through overlying layers of deposits. These deposits are more visible and accessible than those in other areas along the fault lines which are not crossed by rivers. Alluvial deposits caused by river or glaciofluvial erosion are also found, again usually along river banks (Fig. 3). Deposits of soapstone similar to that found in archaeological context on the Gulf Islands are found in the following areas. *In situ* deposits are known in the Coquihalla river drainage near Jessica and at the Carolin Mines site (Fig. 3a). This soapstone is light 'apple' green in colour and has a hardness of about 1.5. These deposits occur where the Hozameen fault system crosses the Coquihalla river (Leaming 1978:19; Bruce MacLellan 1992: pers. com.). It has also been found in the Similkameen valley near Cawston associated with the Pasayton fault system (Fig. 3b) (Atkinson 1952: 11). The Pasayton fault system runs almost parallel to the Hozameen only further east and meets the Fraser system south of Lytton. The Hozameen fault system runs in a north-northwesterly direction from Ross Lake in northern Washington to the Fraser river just south of Boston Bar where it meets the Fraser fault system. In this area of the Fraser fault system there is a deposit of light grey or light grey green soapstone at North Bend, now covered by fill for the new bridge (Fig. 3c). West of the Fraser river on the Nahatlatch river there is a source of green-brown soapstone (Fig. 3d) (Knut Fladmark 1993: pers. com). A grey to light grey soapstone from this area is for sale at a gift shop near Kanaka in the Fraser canyon on Highway 1.

Further north along the Fraser valley and fault system there is a source of

Figure 3

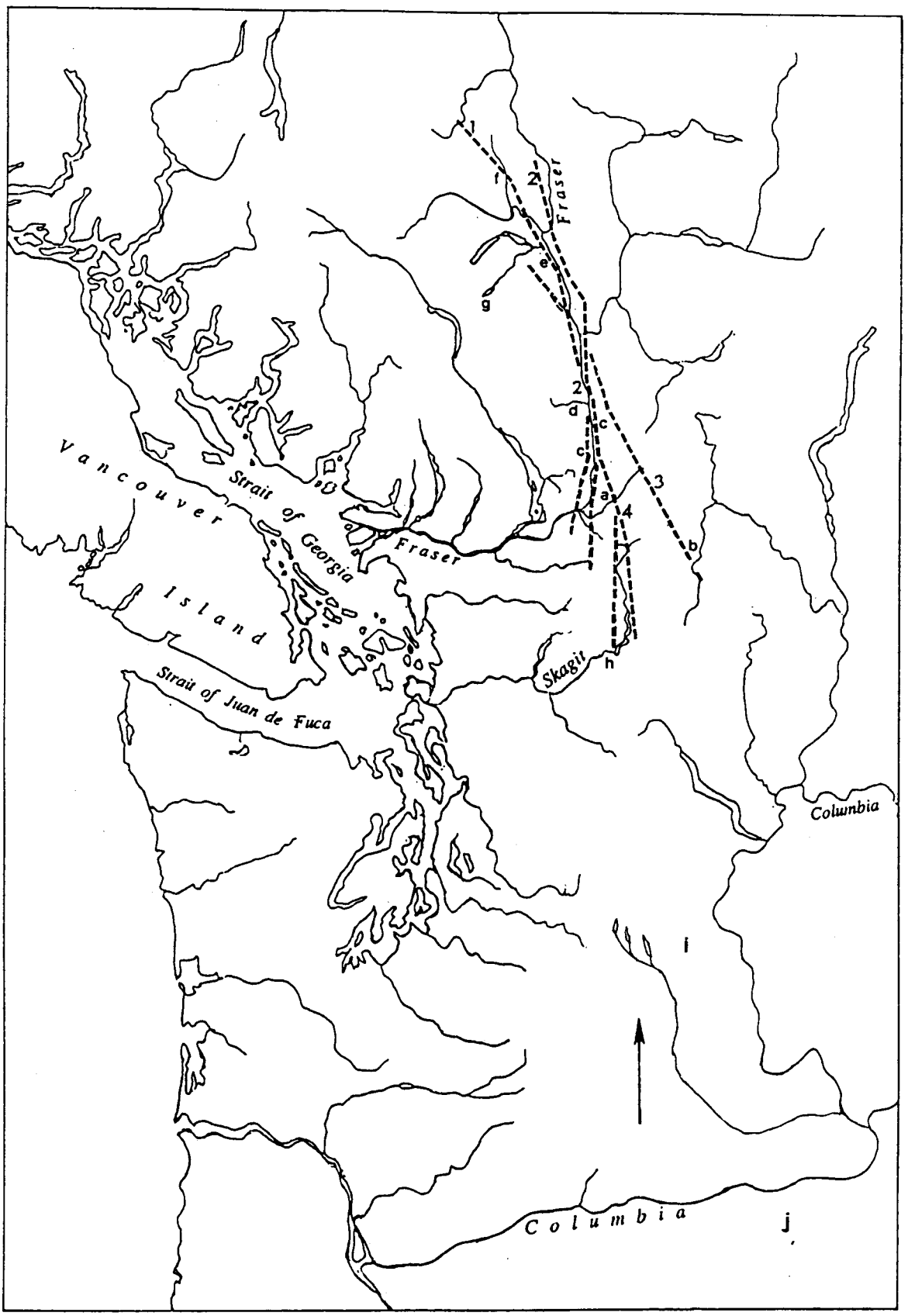
Map of Soapstone Sources

Relevant fault systems:

1. Yalokam fault system
2. Fraser fault system
3. Pasayton fault system
4. Hozameen fault system

Sources of soapstone similar to types found at DeRt 2:

a. Jessica, Coquihalla river
b. Cawston, Similkameen
c. Fraser Canyon sources
d. Nahatlatch
e. Lytton - Lillooet
f. Shulaps sources
g. Duffy Lake
h. Skagit
i. Blewett Pass
j. Northeast Oregon


Fraser
Vancouver Island
Strait of Georgia
Fraser
Strait of Juan de Fuca
Skagit
Columbia
Columbia
1
2
3
4
a
b
c
d
e
g
h
i
j

17b

hard smooth dark grey to black soapstone found between Lytton and Lillooet which polishes to shiny black (Fig. 3e). A number of artifacts found in the Gulf Islands are of this type of soapstone and the Lytton area is the only documented source in the Northwest.

There are other deposits to the northwest of Lillooet, associated with the Yalakom fault system, at the head of Hell Creek, at Bret Creek, and a schistose talc is found at Hog and Jim Creeks, all in the Shulaps Range (Fig. 3f)(Leaming 1978: 22-27).

Going south again, and west of the Fraser, there is a source of green soapstone at the west end of Duffy Lake which drains to the Cayoosh River and then into the Fraser River at Lillooet (Fig. 3g) (Bruce MacLellan 1992: pers. com.).

Soapstone is also found much further north, at about 55°45', some 160k due north of Burns lake, near Ogden creek which flows into the Omineca (Leaming 1978:23).

It is also found across the border on the Skagit river east of Concrete (Fig. 3h) (Nelson 1960). The Skagit river soapstone comes in a number of colours, pale to dark grey, greens and brown (Bruce MacLellan 1992: pers. com.). It is also found at Blewett Pass, between Cle Elum and Wenatchee, Washington, near small outcroppings of serpentine (Fig. 3i) (Butler 1959: 19). A soft white soapstone is found on the Oregon side of the Columbia river east of the Dalles (Fig. 3j) (Bruce M Lellan 1992: pers. com.). This Oregon soapstone is the only modern source of this very light coloured soft type I have discovered. There are a few pieces of soft silvery white soapstone from the Pender site which may have been imported from this area. A few other unconfirmed sources are; along Talc Creek which flows into Cogburn Creek and then Harrison Lake, and near D'Arcy at the head of Anderson Lake.

The soapstone from the Pender sites appears to have come from sources as distant as Lytton and northeastern Oregon. There are 55 pieces of hard black soapstone which is only found in the Lytton area and only seven pieces of the soft

whitish soapstone which may be from Oregon. Figures 4 and 5 show pieces of raw soapstone from DeRt 2 next to finished artifacts of identical material. Figure 5a is a hard black type identical to the Lytton soapstone and figure 4a and 4d are the soft silvery white type which may be from Oregon. Figure 4b is probably from the Coquihalla source. The majority probably come from the Skagit river source where the most variety is available. This source is also the nearest to Pender Island at about 190 km, 60 by sea and 130 up the river. The Coquihalla source is about 215 km away, 40 km by sea and 175 km up the rivers, and the Lytton source is about 300 km from Pender, about 260 km from the river mouth. Trace element analysis has been used on obsidian artifacts excavated from the Gulf of Georgia and the Central Coast. Results confirm sources as far away as Oregon (Carlson 1985). This method could also be used to confirm sources of the different types of soapstone found in the Gulf Islands. Archaeological evidence also indicates that dentalium shells were imported from the Northwest Coast to the plateau as early as 6000 BP (Barton 1994).

Tools

The properties of the raw material and the size, shape and finish of the artifact, will determine the tools and method of manufacture involved. Soapstone is as easily worked as wood but does not have the same properties. Tools like choppers, adzes and chisels are not needed. The tools necessary to manufacture small soapstone artifacts include a variety of abrading tools, saws, knives, engravers, borers or drills and polishing materials. Water is useful to wash away the abraded material, a fine talcum powder which clogs the interstices of the tool, produced in most stages of the manufacturing process (Eliscu 1972).

Saws and knives: Saws are used to cut workable pieces of raw material from the parent rock or boulder. This is most easily done in the same way that nephrite blanks were cut. Grooves are made first, then the blank is broken off. Smaller blanks of softer soapstone are as easily made in the same manner with a

Figure 4 and Figure 5

Raw Material and Finished Artifacts

Both figures show pieces of unworked soapstone paired with finished artifacts; raw material on the left and finished artifacts on the right.

4a: White to ivory coloured soapstone, soft. This type may be from northeast Oregon. (Artifact #2-1621, flared)

4b: 'Apple' green with darker and lighter flecks, medium hard, probably from the Coquihalla source. (Artifact #2-2612, slide)

4c: Dark brown to black, hard. Probably from the Skagit source but may also be from the Lillooet area. (Artifact #2-277, flared)

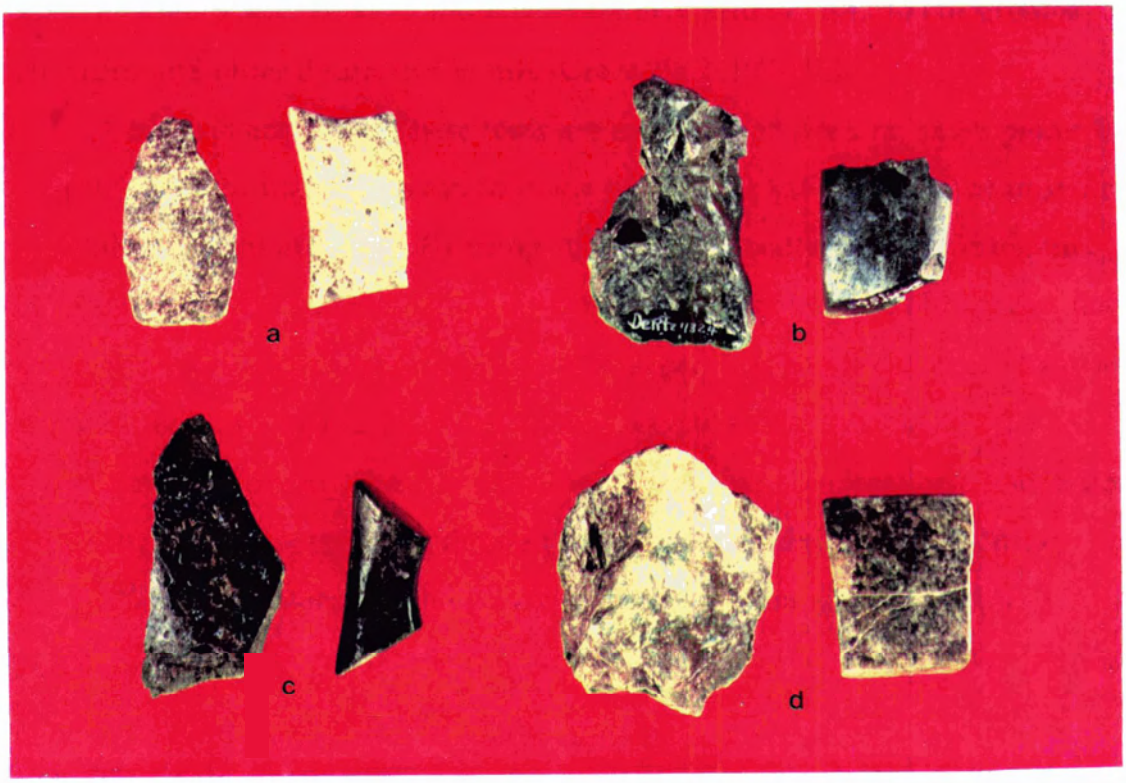
4d: Silvery white or white with greyish patches, very soft. This is the softest type of soapstone and is probably from Oregon. (Artifact #2-1276, channeled)

5a: Black, no flecks or patches, hard. The hardest type of soapstone found only in the Lytton to Lillooet area. (Artifact #1-339, flared)

5b: Green, small black flecks and lines, medium hard. Probably from Skagit source. (Artifact #2-3317, inlay)

5c: Pale green-grey, medium hard. Probably from Fraser canyon. (Artifact #2-1630, slide)

5d: Olive green with lighter lines, medium hard. Probably from Skagit source. (Artifact #2-3501, channeled)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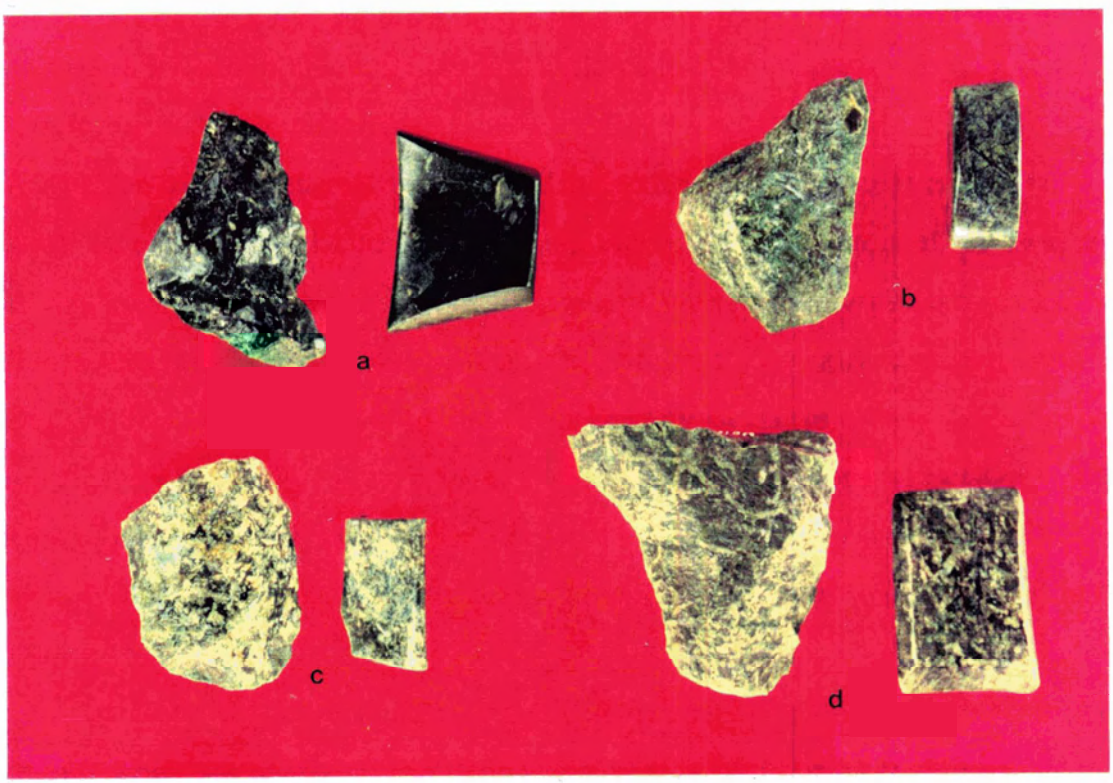
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knife or draw-knife. Knives and engravers may also be used to cut grooves, lines, chevrons and other decorative motifs (Grace 1989: 108-110).

Abraders and files: These tools are essential for working small pieces of soapstone. The initial shape can be made by rubbing the soapstone against a rasp, or other large grit abrasive. By using successively smaller grit and different shaped abrading materials, e.g. pointed files or rifflers (curved files) the artifact can be brought almost to completion. Holes, grooves and hollows can be made using different shaped and sized pointed files and drills. (Eliscu 1972: 56-65.)

Borers or drills: These are used mostly to make perforations, hollows and especially straight sided holes through long beads or tubes (Grace 1989: 113).

Polishing materials: These may range from a fine grit abrader, such as silt stone, to abrasive powders and final polishing with a soft material e.g. cloth or leather (Eliscu 1972; Grace 1989).

Tools at the Pender sites:

Slate saws and knives beaver tooth incisors, bone drill bits, and pointed and chisel shaped stone, bone and antler implements were discovered as well as hundreds of abrading stones.

Due to the nature of the fracture properties of soapstone it cannot be knocked or hammered into suitable sized pieces like obsidian or flint. Saws or knives may have been used to cut the rough shape from a large piece of soapstone (Fig. 6 e,f). Most of the unworked pieces from DeRt 2 are already small enough and would not have needed to be sawn. The largest pieces of raw soapstone may have been sawn into smaller pieces. Saws made from a string of twisted sinew or inner cedar bark with sand for the abrasive may have been used as well. This type of saw was used by the Tlingit to cut jade and other hard stones (Emmons 1991: 170).

About 500 abraders and fragments of abraders of all shapes and sizes were found. They are nearly all sandstone or silt stone of different textures from very

Figure 6

Soapstone Working Tools, Saws and Files

6a: Siltstone file (#2-2188). Pointed working end, oval cross section. The other end is broken off but was flat and probably rounded.

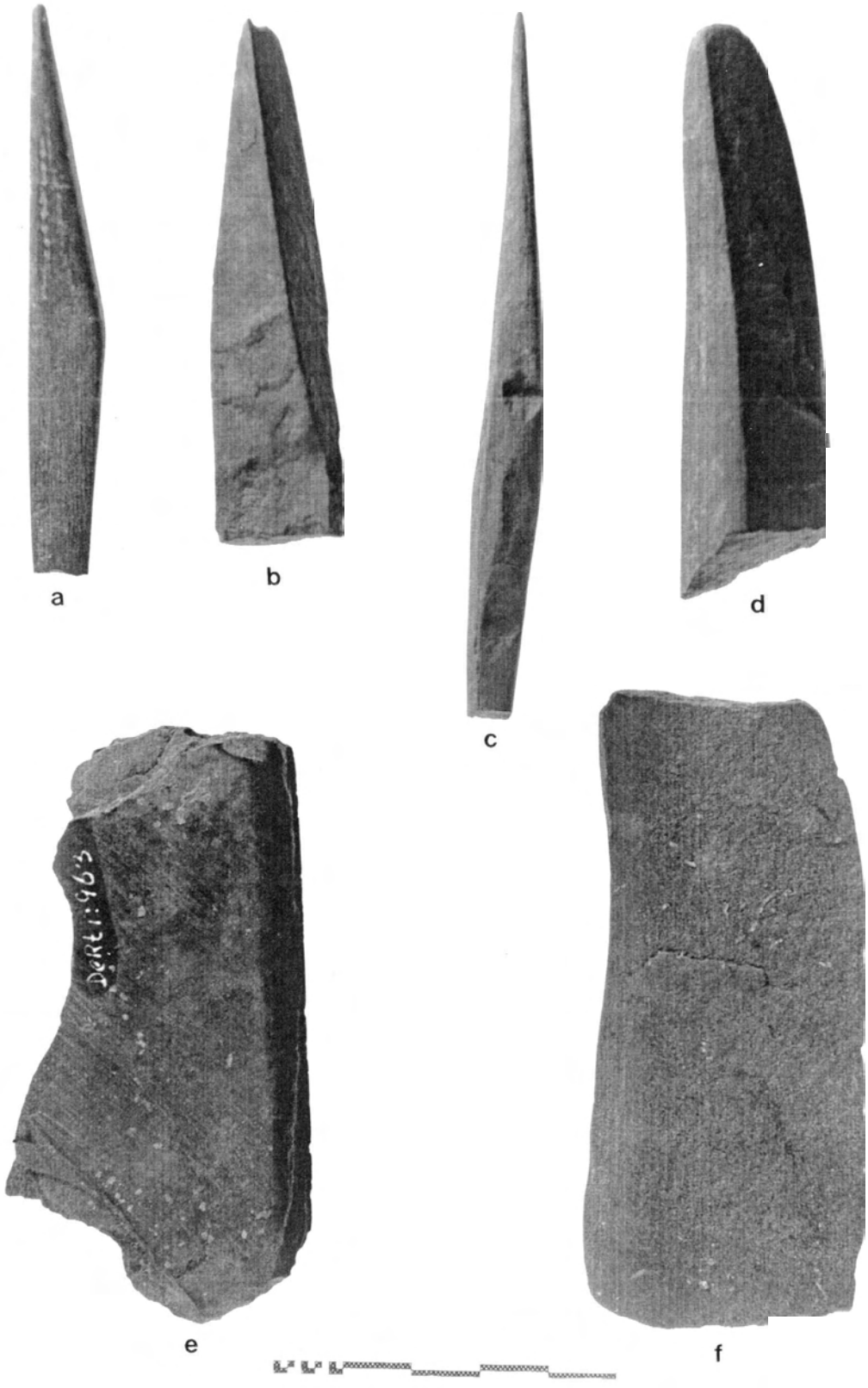
6b: Siltstone file (#2-2203). Wedge shaped working end, rectangular cross section.

6c: Siltstone file (#2-3132). Fine pointed working end, oval cross section The other end is flat and may have been rounded.

6d: Siltstone file (#2-1747). Large rounded working end, triangular cross section.

6e: Slate knife (#1-963).

6f: Sandstone saw (#2-863).



22b

Figure 7

Soapstone Working Tools, Abraders

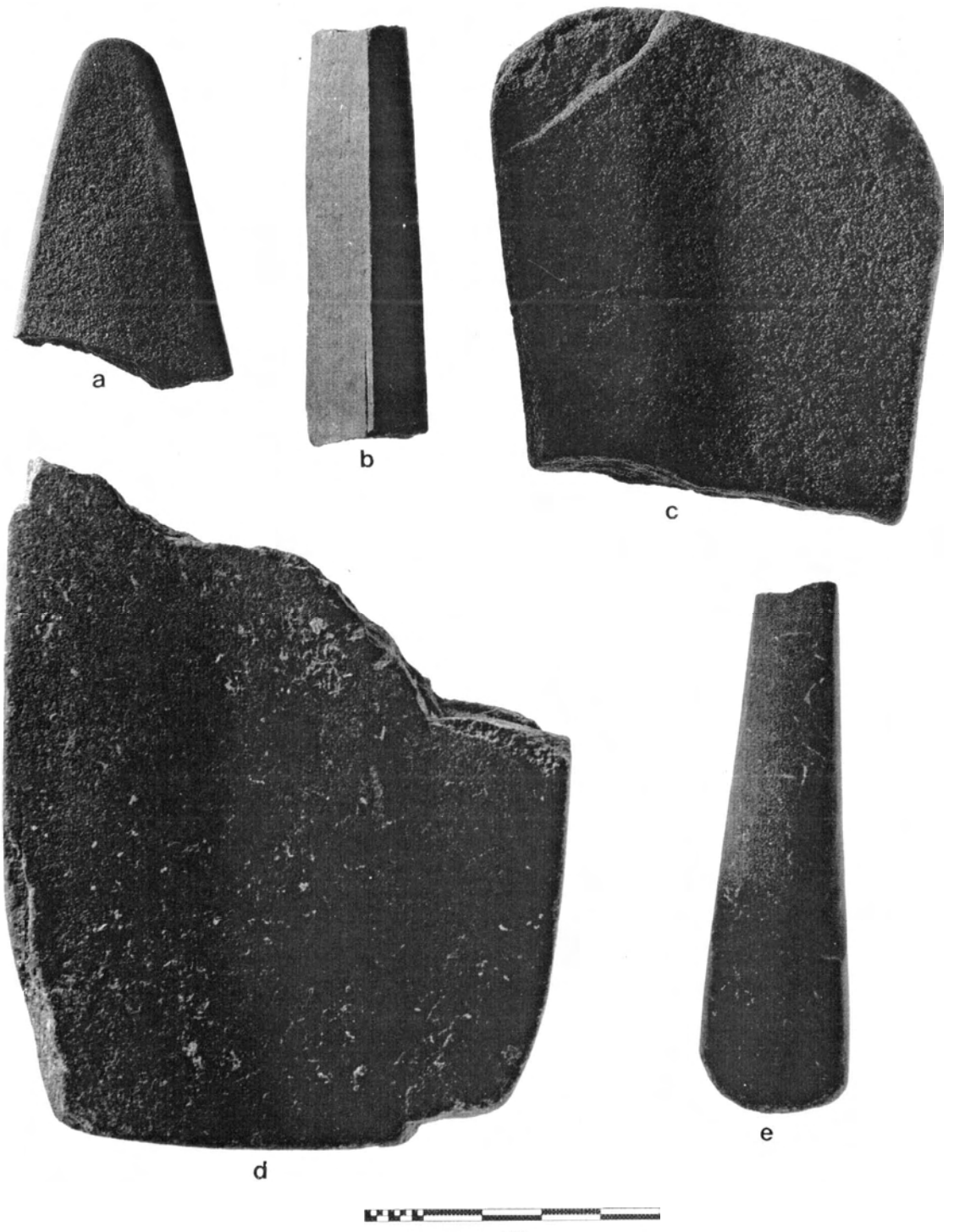
7a: Sandstone shaped abrader (#1-174). One flat surface shows shows use wear. The edge may have been used as a file.

7b: Siltstone abrader or file (#2-2063). Rectangular cross section. Flat sides show signs of use wear.

7c: Sandstone shaped abrader (#1-8).

7d: Sandstone abrader, rough grit (#1-72).

7e: Siltstone abrader or file with rounded end (2-3627).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cm

rough large grit to fine small grit. They occur throughout DeRt 1 and DeRt 2 from the lower levels to the littermat. (Fig. 7, a,c-d).

Over fifty files were found. Most of them are silt stone, some are slate and the larger files are sandstone (Fig. 6a-d, Fig. 7b,e). There is a variety of shapes. Some of the smaller silt stone files have a round shaft which comes to a sharp point (Fig. 6a,c). Others are more oval in cross section and have a spatula shaped end (Fig. 7e). There are also square shafted files with wedge shaped ends (Fig. 6b). Some of the small files appear to have had two different working ends, e.g. a pointed end and a spatula shape at the other end (Fig. 6, a and c).

Though these tool types may have been used to manufacture artifacts of other raw materials, e.g. bone and shell, personal experiments and interviews with other people who make small soapstone artifacts confirm that abraders, rasps and files, and running water are the most essential tools.

Method of manufacture

Many of the soapstone artifacts appear to have been made using only abraders and files. To illustrate this inference the production sequence of a particular artifact type can be described. One composite ornament part, described as 'slide' type, is found in all stages of manufacture. Figure 8 shows slide type artifacts from DeRt 2 at various stages of manufacture from the raw material stage to a finished and polished slide. Figure 8a is a piece of soapstone approximately the right size. It has been smoothed or cut and abraded on one side. The piece is rubbed on a rough large grit abrasive until the basic shape of the artifact is achieved (Fig. 8b). A saw is used to cut a shallow groove the length of the piece (Fig. 8c). The groove is widened and deepened using files. A round pointed file is worked first from one end and then from the other end of the groove until it is the desired width and depth (Fig. 8, d-e). Figure 9 is a close up of Figure 8e and the grooves and ridges made by the file are clearly visible. This method leaves the middle of the groove or channel narrower so that it can grip whatever it is

Figure 8

Manufacturing Sequence

8a: Raw material abraded on one side.

8b: Basic slide shape achieved by abrasion.

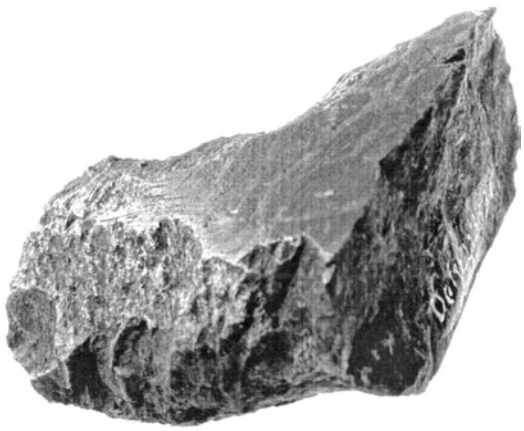
8c: Basic slide shape with saw line.

8d: Saw line widened and deepened with files.

8e: The groove is widened with a round pointed file worked from each end.

8f: Finished unpolished shape.

8g: Finished polished artifact (#2-3335)



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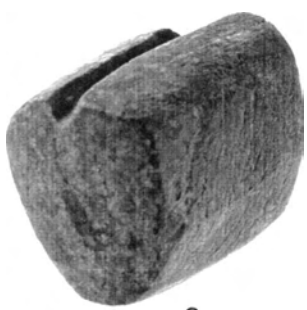

c

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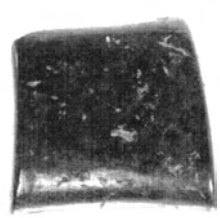
e

f



g

cm

Figure 9

Filed Groove with Ridges

9: Close up of figure 8e showing the grooves with ridges created by using a round pointed file (#2-1350, length 21.5 mm).

Figure 10

Finished Polished and Decorated Slides

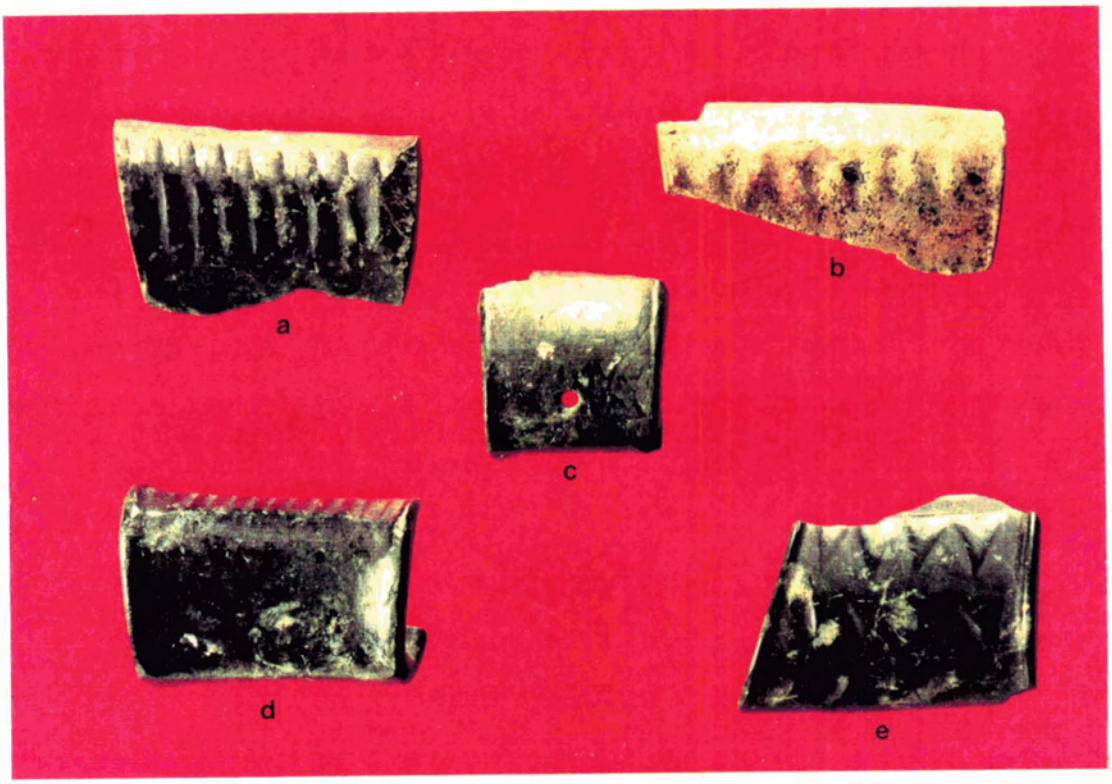
10a: Incised lines (#2-339, length 29.8 mm).

10b: Smoothed lines and ridges (#2-1721, length 34.4 mm).

10c: Perforated with raised edge or lip on each end (#2-3338, length 18.2 mm)

10d: Incised lines along the outside edge of the channel, raised lip at each end (#2-3057, length 28.9 mm)

10e: Rows of raised chevrons and raised lip at each end (#3279, length 28.8 mm)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slid onto. Ridges from the filing and facets on the outside are sanded down with finer abrasive tools (Fig. 8, f). The Salish and also the Tlingit were known to have used the skin of dog-fish for sandpaper (Emmons 1991: 166; Jenness n.d: 16). Finally the artifact is polished, or incised with a decorative motif and polished (Figs.8,g and fig. 10). The final polish may have been done with leather or wool or simply by rubbing with the hands (cf. Emmons 1991: 167).

Most perforations have been biconically drilled, probably using pointed files or bone drills. The tube bead has a straight sided hole its entire length and was probably made with a hafted bone drill (Fig. 28b). Almost all the beads appear to have been biconically drilled. The disc beads may have been cut from a prepared cylinder and then drilled. Two of the medium size beads are faceted all over. They appear to be intentionally faceted and not merely unfinished (Fig. 28o)

Many of the composite parts have the holes drilled at an angle i.e. not perpendicular to the surface of the artifact. The hole is drilled or ground from one side at an angle to near the centre. The artifact is turned over and the other half of the hole is drilled at a different angle; a more difficult procedure than drilling a hole perpendicular to the two surfaces. This lack of symmetry is definitely intentional and whatever was put through the hole was meant to enter or exit at a specific angle (Fig. 20).

The hollow whatzits are amongst the most finely finished and delicate of the composite parts. They are rectangular, flattened tubes, with holes drilled through one side (Fig. 19a-f). The walls of these are very thin, 1-2 mm, and it is no surprise that only one of these delicate artifacts has survived intact (Duff 1956: 46, 48, 50).

Decorative motifs include incised and raised lines and circles, chevrons and raised edges. It is much easier to incise lines than it is to carve away the surface and produce a raised line or circle. The raised lines, circle and dot motif on one slide (DeRt 2, #3433) must have taken some time and skill to execute (Fig. 11).

Figure 11

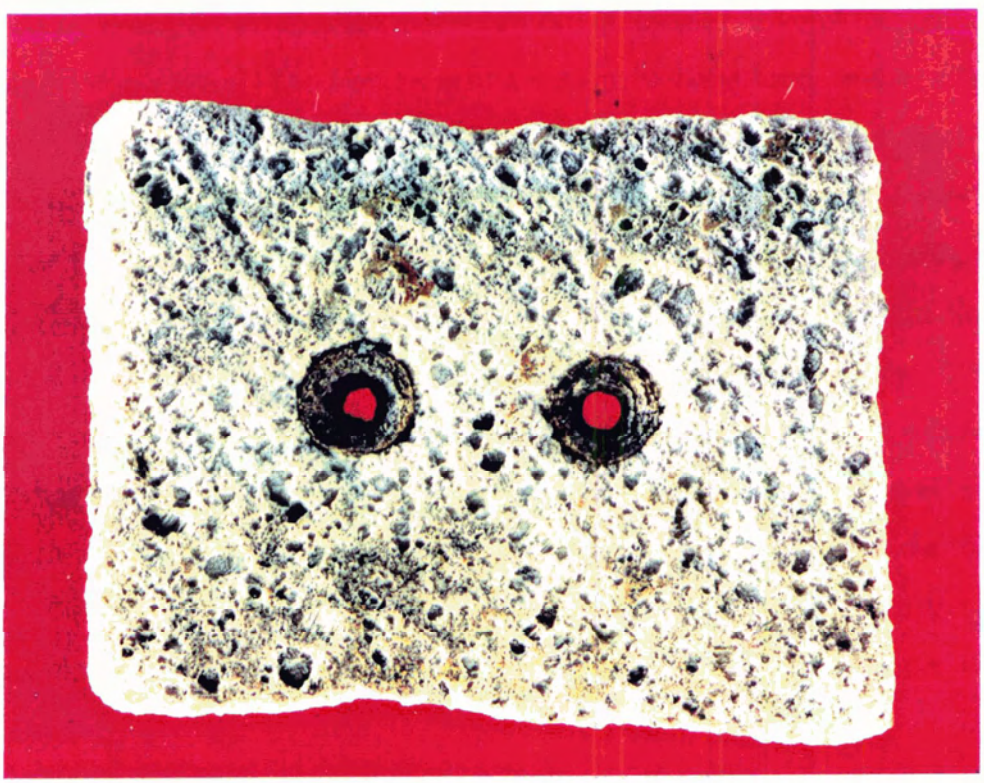
Raised Circle and Dot Motif

Figure 11: Close up showing details of incised lines with raised edges and raised circles and dots (#2-3433, slide, length 42.1 mm)

Figure 12

Bone Insets

Figure 12: Close up showing details of insets, possibly bird bone, in the holes of a rectangular shell artifact (#2-3302, length 28.1 mm)



28 b

Many of the whatzits must have had other parts which have not survived. They may have been hung from leather thongs or sinew or attached to other parts with wooden or bone pegs and spruce gum or other glue. A rectangular drilled shell whatzit has insets, or liners, of some other material in the holes; it looks like bone, perhaps bird bone (Fig. 12). These liners are very small (less than 4mm in diameter) and fit tightly into the holes. Some artifacts are partially drilled, not perforated. These indents may have been used to attach other decorative elements; for instance small beads could have been glued in, or they may have contained pigment. Figure 14k shows a button labret with the protrusion broken off. The bottom of a hole is visible on the surface of the broken protrusion. There is also an artifact shaped like a large thick bead but instead of a perforation there is an indent on one side only.

It is clear even at this stage of analysis that the soapstone complex artifacts were not tools or implements which could function under stress. The ridges produced by biconical drilling are not worn down; indeed none of the artifacts show signs of use wear. The broken artifacts seem to have been broken after deposition or interment. The broken edges are sharp and jagged and there is no evidence of reworking of larger broken pieces to form smaller types; though this would not be obvious given the methods used to manufacture these artifacts. Artifact #737 (and #2458, see fig. 20a and 22f) was found in two pieces in adjacent two metre units and in different levels; level 9 and level 8 respectively. These levels date to ~3000 BP and yet the two pieces fit together perfectly. It would appear that they were broken and deposited in this position at that time. This deposition may have been the first interment of this artifact or it may be the result of disturbance, at ~3000 BP, of an even earlier interment. Given the evidence the most likely function of the soapstone artifacts is to be decorative or ornamental.

CHAPTER THREE:

The Artifacts and their Archaeological Context

"Even God cannot change the past"

Agathon 447-401 B.C.

This chapter consists of a type by type description of the artifacts with their chronological and geographical distribution and cultural associations. The final section is an overview of the distribution of similar artifacts outside the Gulf of Georgia.

Typology

Typology is a kind of classification used to sort entities into mutually exclusive categories. To achieve this they must be rigidly bounded and each artifact must fit into only one category (Adams 1988: 43). The reason for making the original descriptive typology is to make the rest of the analysis easier, or as Adams puts it "..the value of any type and typology, like that of any other measure, can only be judged by it's utility" (1990: 70). All the soapstone artifacts from the Pender sites have been placed in a category of artifacts that relate to ritual or social behaviour and not directly to subsistence or manufacture. This type of classification, where items are sorted according to function, works very well when used to sort a variety of objects from a multiple use site or indeed to sort a category such as pots which can also be subdivided according to function. Carlson's (1986) artifact Class III; Wealth Status and Ceremony, encompasses pins, pipes, spoons, whistles and rattles as well as beads, labrets, 'whatzits' and earspools. Class III artifacts are made of a variety of materials ranging from soapstone to antler, bone and shell. It seems appropriate at this point to define or

'name' the soapstone complex artifacts. Chapter Four deals with reasons for wearing these types of artifacts, and enhancing or embellishing the body and face as a means of civilising or socialising the natural body is discussed. English words for this type of embellishment have roots which indicate a similar original meaning; 'cosmetic' from the Greek *kosmos*, meaning order, arrangement, adornment or ornament, and 'decorate' from the Latin *decorus* or *decorare*, meaning seemliness, propriety or beauty. The most appropriate word for the soapstone artifacts is 'ornament' meaning to embellish or adorn (from Latin *ornare;* adorn, furnish, deck, embellish).

The use, or way of wearing, many of the soapstone pieces is not known and can only be inferred by their size, shape and other variables and, in some cases, by comparison to some types of composite labrets and other ornaments still worn by people of the Aleutian Islands and northwestern Alaska at contact. For this reason these types are sorted by intrinsic variables rather than by how they were worn. Size, weight, shape and colour are used to sort the whatzits into types. Basic morphological variables have been chosen that will give useful information to help answer specific questions. For example the variable "colour" may indicate a change in sources over time or that some ornaments are only made in a certain colour. There are all kinds of shapes: round and oval, both solid and rings; rectanguloids and quadrilaterals; tubes solid and hollow, flattened and perforated; butterfly and dragonfly shapes. These types have been given names that relate to their shape or features, for example grooved, hollow and rectangular drilled. Time and culturally specific names such as 'collar stud' and 'cleat shaped' have been avoided (Sailors called one type of labret cleat shaped. Rick Percy, who collects antique cars, called one, a T labret, "the extended mainshaft" type [Percy 1974: 251]).

Some of the soapstone artifacts are easily identified and how they were worn is known. Beads can be worn in a number of ways, labrets are worn in or through a hole or holes around the mouth and earspools are worn in the ear

lobe. All of the types, whether named by function, (how worn) or by morphology, fit into one of two basic functional categories based on what is known about how they were worn. They are either one piece ornaments or composite ornament parts. One piece ornaments are: button labrets, 'T' labrets, solid oval labrets, lipspools and earspools. Composite ornament parts are: beads, slides, solid rectangular drilled, hollow, flared, boat shaped (drilled flanged), channelled, inlay, pendants, grooved and other. Inlay, pendants and beads can be placed with composite ornament parts because they are worn or used as ornaments in combination with other parts.

Measurements are expected to aid description, visualisation and comparison. Length is given on the longest axis of the artifact, width is the greatest dimension at right angles to length on the same axis, and thickness the maximum dimension at right angles (normal) to the length-width plane. Dimensions are in millimetres and weight in grams for each artifact type. Appendix 1 is a list of artifact types with their mean dimensions, and the range and standard deviations of these. Artifacts with one or more measureable dimensions are included in Appendix 1. In some cases identical artifacts of other materials have been included in the measurements; for instance there are only two T labrets and three button labrets (one broken) of soapstone so artifacts of these types made of other stone are included in the measurements. In other cases only artifacts of soapstone have been measured; for instance beads and pendants of other materials have not been measured and the slides are all made of soapstone. Appendix 2 is a catalog of artifacts used in this analysis organized by type with provenience.

Types and Distributions

The chronological distribution is based on radiocarbon dates from material excavated at the Pender Canal sites, DeRt 1 and DeRt 2. DeRt 2 consists of the remnants of two low mounds that were used as a burial area and midden. The

remains of over one hundred human burials were recovered. Due to this use as a burial ground the deposits are not in nicely layered strata but are "composed of interleaved layers and lenses of crushed and burned shell, whole shell, scattered fire broken rock, humus and charcoal, which contain human burials, hearth and rock cairn features, disarticulated human, animal, fish and bird bones, and artifacts" (Carlson 1988:11). A total of 205 soapstone artifacts were recovered. Deposits at DeRt 1 on the other hand are in stratified layers which can be ordered chronologically. There were only six burials recovered from DeRt 1 and only 17 soapstone artifacts were excavated. There are 16 radio-carbon dates from DeRt 1, 15 derived from charcoal samples and one from bone. Dates from DeRt 1 fall between ~2,700 and ~400 BP. There are 28 radiocarbon dates from DeRt 2 and 23 of these are AMS dates on carbon extracted from collagen from one gram human bone samples (Carlson 1993: 32-35; Nelson et al 1985). Based on the disposition of these dates and provenience data Carlson divided the DeRt 2 midden into three sequential units (1993: 37-38);

1. Early Midden: 5,000-4,500 BP, corresponding to the Mayne phase in the Gulf of Georgia
2. Main Midden: 4,500-2,500 BP, corresponding to the second half of the Mayne phase and the Locarno phase, and
3. Late Midden: 2,500-800 BP, which corresponds to the Marpole and San Juan phases.

Within the Gulf of Georgia

The distributions that follow are presented on a type by type, presence or absence basis in chronological order. The majority of soapstone ornaments have been found in burial contexts. Other burial areas in the Gulf of Georgia have not been as thoroughly radiocarbon dated as DeRt 2. Burial grounds were used over hundreds or even thousands of years. Earlier interments are often scattered by

later ones and primary provenience of the artifacts is lost. The date ranges given here are based on the excavations from DeRt 2 because of the quantity of radiocarbon dates for this site and the large numbers of soapstone artifacts. For each ornament type the sites excavated in the Gulf of Georgia that have produced similar artifacts are listed along with the culture phase in which they appear to occur. Composite ornament parts, other than beads, are rarely found outside of the southern Gulf Islands and lower Fraser area. The few that have been found at other sites in the area are often recorded as Gulf Islands complex artifacts without further subdivision into types. For the purpose of the present analysis sites with unidentified soapstone ornament parts are listed under 'solid rectangular drilled'. Types of labrets not found at Pender, e.g. bowl shaped or double button labret are listed with the types they most resemble. Comparisons to similar artifacts still in use after European contact are described.

BUTTON LABRETS (Fig. 13, a-c, g; fig. 14, d-g, k-l) n. soapstone 3; n. total 12.

Dimensions: L 29.8 W 15.2 Th 14.8 Wt 6.3

Description: An elliptical or lenticular flange with a cylindrical protrusion perpendicular to the flange. The flange is worn inside the lower lip to hold the labret in place and usually has a slight concave curve in profile. The protrusion extends from the flange through a hole below the bottom lip and looks like a plug or stud. The flange of a button labret is longer than the protrusion. These have been called hat shaped and plug labrets. One soapstone button labret has a shallow hole drilled into the protrusion (Fig. 14k). This may have contained inlay or had another part pegged or glued on. The protrusion is broken off and the base of the hole is visible. A button labret excavated from Crescent Beach has a similar hole drilled in the face of the protrusion (Percy 1974: 141b, fig. 41h)

Colour: Two are dark grey to black and the third is a lighter grey. Those of other materials range from off white (shell) to dark grey (slate).

Distributions: ~5,000-3,000 BP

The earliest direct evidence for labrets in the Gulf Islands, or indeed from any site on the Northwest coast, is from burial number 84-12, an adult male, at the Pender Canal site, DeRt 2. The lower anterior teeth have polished facets indicating labret wear, though no labret was found in direct association with this burial (Cybulski 1973; 1991). This burial also had lambdoidal cranial flattening which may or may not have been deliberate head shaping (Darlene Weston 1994: pers. com.). Bone collagen from this burial gave a ^{14}C date of 5170±220 (RIDDL 100). Of the three other burials from the Early Midden deposits two, both probably female, had soapstone button labrets in association (burial 84-33; 4,430±170 RIDDL 104; Fig. 13c; and burial 84-32; Fig. 13a and 14e) (Weeks 1985). Burial 84-33 had suffered ante mortem tooth loss of all mandibular anterior teeth which also indicates labret wear. In a study of labret wear from burials at Greenville, on the lower Naas river, Cybulski found that ante mortem loss of lower anterior teeth is common in jaws affected with labret abrasion and was "quite possibly a function of wearing labrets" (1991: 2-13).

The remaining nine button labrets at DeRt 2 are from the Main Midden deposits. One of these, of shell, is associated with burial 84-31 dated 4320±220 BP (RIDDL 96). Two other ornaments, a T labret (Fig. 14c) and a perforated shell disc (Fig. 27 h) were also found with this burial. No button labrets were recovered from the Late Midden deposits at DeRt 2.

One fragment of what appears to be a button labret of white limestone was found at DeRt 1 (Locarno phase) This may also be a fragment of a double button labret.

Other Sites in the Gulf of Georgia:

Georgeson Bay, DfRu 24: Mayne-Locarno (Haggarty and Sendey 1976: 33, Fig. 13i)

Helen Point, DfRu 8: Mayne-Locarno (McMurdo 1974: 78, fig. 28a)

Hill site, Salt Spring island, DfRu 4; Locarno (Hall and Haggarty 1981: 95, fig. 6f)

Montague Harbour, DfRu 13; Mayne-Locarno (Mitchell 1971: 114-119)

Gabriola Island, DgRw 204; probably Locarno (pers. com. Joanne Curtin 1993).

Fossil Bay, Sucia Island, 45SJ105; probably Marpole (Kidd 1969: 54).

Tsawwassen, DgRs 2; St. Mungo (Mayne phase), dated burials with tooth faceting; and Marpole inferred by association (Arcas: 1991 vol. 3: 201, 219, 269).

Beach Grove, DgRs 1; Locarno-Marpole (Abbot 1962: 97-99)

Crescent Beach, DgRr 1; St. Mungo (Mayne), Locarno (Percy 1974: 138-142b; Matson et al 1991: 125, 127).

Glenrose, DgRr 6; Marpole inferred, but probably earlier (Matson 1976: 127 fig, 8v)

Locarno Beach, DhRt 6; Locarno (Pratt 1991: 143)

Comments: Double button labrets have also been found though there were none found at Pender. A large complete double labret was found at Locarno Beach. These have two buttons, one close to each end of the flange, which would protrude below the lip to the sides of the mouth. Large one piece ornaments such as this are found in later, Locarno and Marpole, deposits.

Comparisons: This type of labret is not depicted anywhere on the Northwest Coast at the time of European contact. Button labrets were still worn at contact in northwest Alaska from Kuskokwim Bay north to Kotzebue Sound. The closest analogous types are the lateral labrets worn by the "Malemut men" of Kotzebue Sound northeast of Bering Strait. Only the men of Kotzebue Sound wore button labrets and these were lateral (fig. 34). They also had composite button labrets. One composite type, "having a slot cut in it's outer face in which is fitted a well modeled piece of serpentine ... repesenting the tail of a right whale" (Nelson

1899:47). The tail was secured by a wooden peg in a hole through both the button and the base of the tail. (Nelson 1899: Plates XIII, XXII, XXIII).

T LABRETS (Fig. 13, d-f, h; fig. 14, a-c, h-j) n. soapstone 2; n. total 10.

Dimensions: L 29.9 W 16.8 Th 6.9 Wt 3.2

Description: As the name implies, a T shape. The flange is often concave and the stem of the T, or protrusion from the flange, extends through a hole in the lip in the same manner as the button labret. The stem is oval to round in cross section. These have been called crutch shaped, pin and peg labrets and also novice labrets. Novice because these thin ones may have been the first type worn after the initial lip piercing (Nelson 1899; de Laguna 1934: 205). They could be replaced by larger diameter labrets when the initial hole had healed.

Colour: Grey.

Distributions: ~4,500-3,000 BP

One of the soapstone T labrets found at DeRt 2 was associated with burial 84-31 which was radiocarbon dated to 4320±220 BP (RIDDL 96) (Figs. 14c and 27l) . Eight more (three of shell) are fairly evenly distributed in the Main Midden deposits.

Other Sites in the Gulf of Georgia:

Crescent Beach, DgRr 1; St. Mungo, Locarno (early) (Percy 1974:141,142; Matson et al 1991:)

Glenrose, DgRr 6; Marpole, inferred Glenrose, DgRr 6; Marpole inferred, but probably earlier (Matson 1976: 127 fig, 8s).

Figure 13

Button and T Labrets

13a: Black button labret, soapstone (#2-381). The flange is very thin and the rounded ends have broken off (see fig. 14e). Found near burial 84-32 in Early midden deposits.

13b: Light brown button labret, fine siltstone (#2-1039).

13c: Light brown button labret, fine siltstone (#2-386). Associated with burial 84-33, (^{14}C age 4430±170 BP, RIDDL 104).

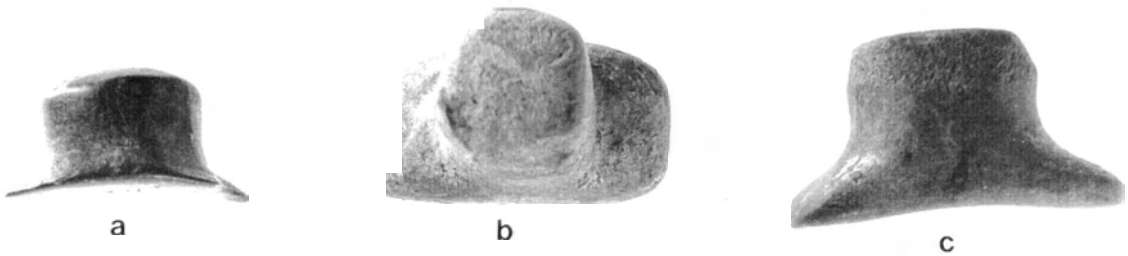
13d: Dark grey T labret, slate (#2-567). Associated with burial 84-49 in Early midden deposits.

13e: Grey T labret, soapstone (broken) (#2-252).

13f: Grey T labret, soapstone (#2-3122).

13g: Grey-white mottled button labret, soapstone (#2-282). The flange has sharper concave curve than the other button labrets; this may have been a lateral labret.

13h: Grey T labret, soapstone (broken) (#2-2477)



a

b

c

d

e

f

g

h

cm

Comments: There are four T shaped labrets of shell and two very small ones of bone from DeRt 2 (Fig. 14 b,i, bone, 27 f, shell). There is one very large T labret from DeRt 2; the protrusion is ~23mm in diameter. It is made of a soft concretion- like stone and chronologically belongs with the later large one piece ornaments (Fig. 27k). If T labrets were used as "novice" labrets, i.e. only worn temporarily until the perforation could be further expanded, then one would expect to find them in later deposits which also contain larger labrets regardless of type. Strings of sinew, cedar bark and leather, or 'pin' labrets of wood, bone, ivory and copper were also used as 'beginner' labrets in the historic period.

Comparisons: T labrets were also still in use in northwest Alaska at contact. Nelson describes the process of enlarging the hole in the lip by inserting increasingly larger T labrets until the holes are "so large that the teeth are visible through the opening when the labret is not in place" (1899: 48). The six to eight T labrets used in this process were strung on sinew and kept as souvenirs or they were decorated with etched lines and hung as pendants from the wife's waist belt or strap of her needle case (Nelson 1899:48, fig. 9 p. 47, and Plate XXII)

SLIDES (Fig. 15; fig. 16; fig. 19 g-j) n. soapstone 56.

Dimensions: L 25.3 W 20.4 Th 16.2 Wt 10.9

Description; These are a round edged bar, with a deep groove running the whole length. They are roughly oval in cross section and the deep groove gives them a 'C,' or tunnel, cross section. Many have one end cut at an angle, the other end is cut at a right angle to the length (Fig. 16 a b,f). The groove is wider at the ends. The central constriction would hold the artifact in place on a thong or cord pulled through the groove. Indeed it has been suggested that these were used as 'line holders', like a similar artifact found in inland Eskimo sites (Duff 1956).

Figure 14

Button and T Labrets

14a: T labret (#2-567). 14b: T labret, bone (#2-3650).

14c; T labret, soapstone (#2-384). Associated with burial 84-31 (4320±220 BP RIDDL 96). 14d: Button labret (#2-282).

14e: Button labret (#2-381). 14f: Button labret (#2-386).

14g; Button labret, (#2-940). 14h: T labret (#2-3122).

14i: T labret, bone (#2-3262). 14j: T labret (#2-2477).

14k: Button labret, soapstone with indent (#2-905).

14l: Button labret (#2-1039)

Figure 15

Slides

15a: Slide (#2-517) 15b: Slide (#2-2070)

15c: Slide (#2-3433). Associated with burial 85-22 (3970±60 BP SFU 541).


a
b
c
d
e
f
g
h
i
j
k
l

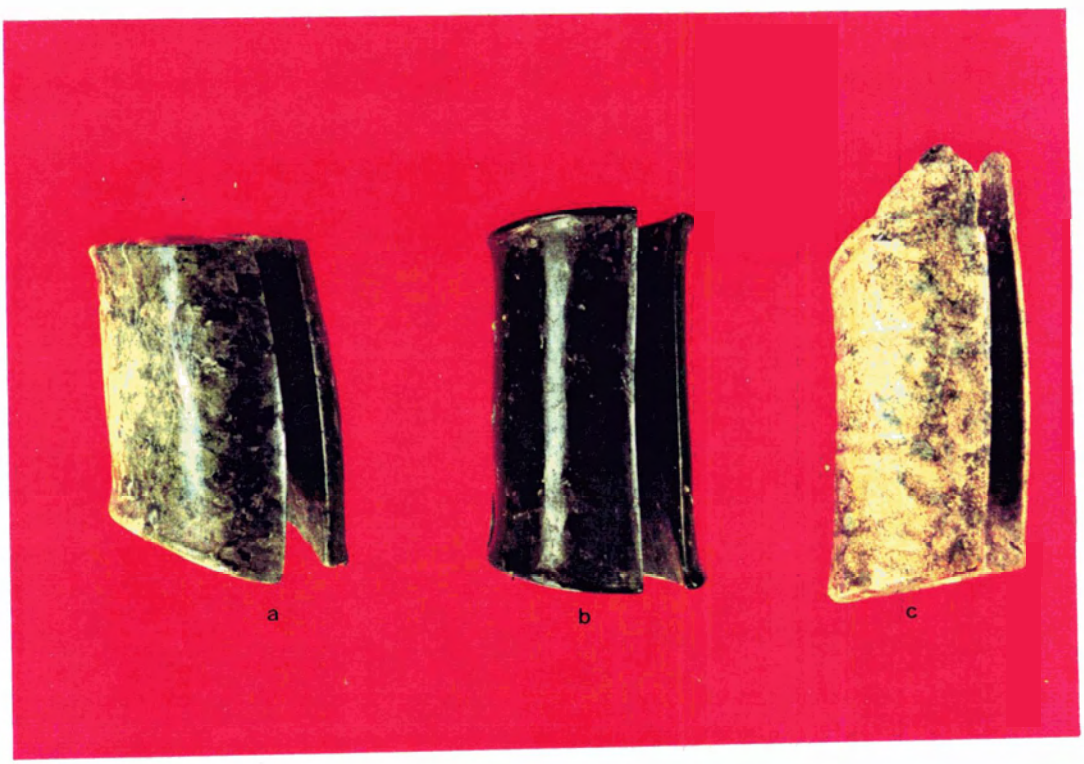

a
b
c

Figure 16

Slides

16a: Slide, incomplete (#2-3390)

16b: Slide, incomplete (#2-3279)

16c: Slide, incomplete (#2-3057)

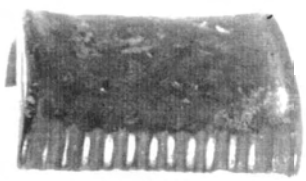
16d: Slide (#2-3433)

16e: Slide (#2-2070)

16f: Slide (#2-517)

a

b



c

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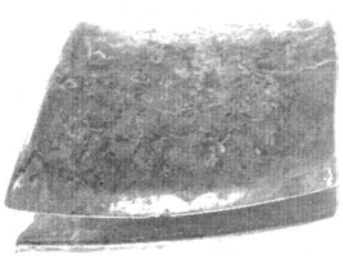
e



f

Colour: buff, greens, brown, black.

Distributions: ~4,000-2,500 BP

These are scattered throughout the deposits of the Main and Late Midden at DeRt 2. The majority (36/56, 64%) are in Main Midden deposits. Comparatively few of these items have been found at other sites. Some of these are very well made and polished; a few of the long slides are incised with lines, chevrons or circles. Others are incomplete or broken and some have been burnt.

One of the most elaborate of these slides (Fig.11, Figs. 15c and 16d) was found in direct association with burial 85-22 with a ^{14}C date of 3970±60 (SFU 541). Other artifacts included in this burial were; bone pins, a quartz microblade, oval quartz inlay (#2-3416), small mica disc beads and a horse clam bowl. There were also fish bones included and associated rocks.

Other Sites in the Gulf of Georgia:

Helen Point, DfRu 8; Mayne-Locarno

Georgeson Bay, DfRu 24; Locarno (Haggarty and Sendey 1976: 32,33)

Locarno Beach, DhRt 6; Locarno (Kew and Duff 1958; Arcus 1993: 40)

Comments: The shape and pattern of lines and circles on one of these artifacts, (DeRt 2-3433, Fig. 15c and 16d) are very like the motif found on the 'salamander antler spoon' also from Pender (Figs. 17 and 18). The shape is like the salamander's body or rib cage. The lines depict the ribs of the salamander and circles represent joints. Exposed ribs and joints are a continuing theme in Northwest coast art and they are especially associated with shamanic art.

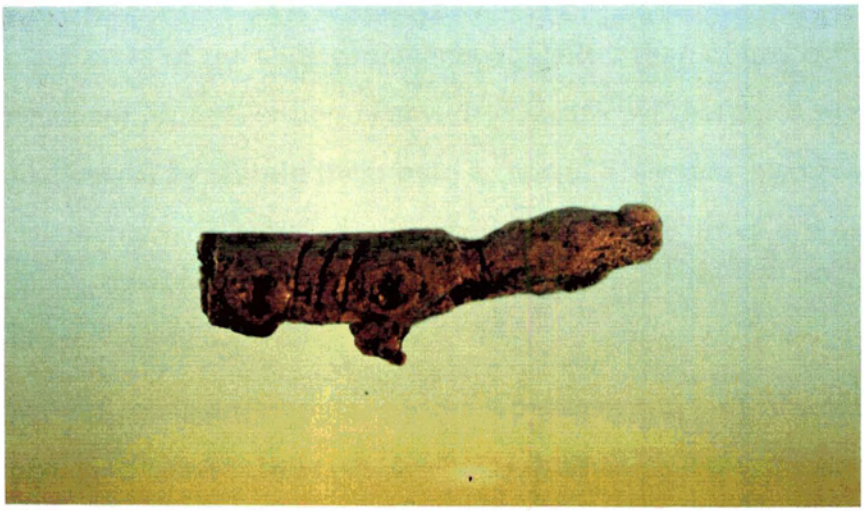
It can be seen from the dimensions that many of these artifacts are 'shorter' than they are wide (Fig. 22g-j). These would have been given a separate type

Figure 17
Salamander Antler Spoon

17: Salamander antler spoon handle in profile showing lines and circles representing ribs and joints. (Photo by Roy Carlson)

Figure 18
Salamander Antler Spoon

18: Salamander antler spoon, plan view, showing incised lines representing the backbone and ribs. (Photo by Roy Carlson)



43b

name, 'short slide', had evidence of bi-modal distribution been present. Many of the shorter slides are not well finished and others are in varying stages of manufacture (Fig. 7). Some of these short slides have been burnt.

There are more of the slide ornaments at DeRt 2 than of any other soapstone ornament type including beads. It is suspected that these may have been used, like beads, by sliding them onto a thong. They may also have formed composite ornaments with wood or other perishable parts. They are made of all types and colours of soapstone.

Comparisons: No ornaments similar to this type were worn during the historic period. Artifacts similar to the small, or short slides were found at Namu on the central coast in components IV and V dating between ~3500 and 3000 BP.

HOLLOW (Fig. 19, d-f) n. soapstone 10. n. total 11.

Dimensions: L 31.8 W 23.3 Th 12.2 Wt (no complete artifacts)

Description: Hollow, flattened tubes; rectangular shaped. They have from one to four holes drilled in one side. They are very thin walled and no complete specimens of this type were excavated. There is a complete one in the Spalding collection at the RBCPM. It has one hole which has two notches cut diametrically opposite on the long axis of the artifact (Duff 1956: 48, fig. 2, B-1).

Colour: green, dark brown, black.

Distribution: ~4,000-2,500 BP.

Other Sites in the Gulf of Georgia:

Montague Harbour, DfRu 13; Mayne-Locarno (Mitchell 1971: 115)

Figure 19

Composite Ornament Parts

19a: Boat shaped (flanged and drilled) (#2-720)

19b: boat shaped (#2-866) 19c: boat shaped (#2-2367)

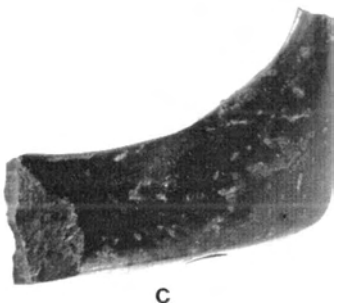
19d: Hollow (#2-2161) 19e: hollow (#2-717) 19f: (#2-1969)

19g: Slide (#2-3206) 19h: slide (#2-3335) 19i: slide (#2-1564)

19j: slide (#2-2269)

a

b



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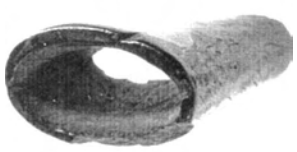

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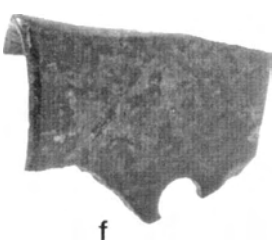

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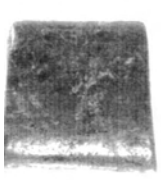
g



h

i

j

These are not documented from other sites in the area though one fragment from Georgeson Bay (Haggarty and Sendey 1976: 34) and another from Helen Point may be of this type (McMurdo 1974: 78, fig. 28b).

Comments: There is one hollow whatzit of shell. It has no holes and is not rectangular but 'butterfly' shaped (Fig. 27g).

Comparisons: No artifacts similar to this type were worn during the historic period. There are no similar ornament parts documented archaeologically.

FLARED (fig. 21a; fig. 22, a-c;) n. soapstone 6.

Dimensions: L 34.0 W 13.7 Th 9.3 Wt 8.6

Description: Very well made and polished. They flare out and are thicker and wider at each end. One long side is flat or straight, the other is slightly concave and in three (out of six artifacts) the concave side is also shorter. Two of this type are from DeRt 1 (#1320 and #339).

Colour: dark green, dark grey, black

Distribution: ~4,000-2,400 BP.

Other Sites in the Gulf of Georgia:
Helen Point, DfRu 8; Mayne, Locarno (McMurdo 1974: 78, fig. 28k)

Comments: It is unlikely that these served as inlay. They are very well made and polished on all surfaces. A flared whatzit from Pender (see Duff 1975: 34,35) has a shallow channel all around the narrow middle of the artifact. A strap or band

may have been inset in this channel and used to hold the artifact in place.

Compare: No artifacts similar to this type were worn during the historic period.

SOLID RECTANGULAR DRILLED (Fig. 20; figs. 22 d-g;) n. soapstone 9, n. total 11.

Dimensions: L 36.5 W 18.9 Th 8 Wt 9

Description: Rectangular; two, one of soapstone the other of slate, have rounded corners and edges, and the other ten have almost square corners. All soapstone examples have two holes which are not drilled straight through, i.e whatever went through there would enter and exit at different angles. The two holes are not in line, they are slightly offset and give the artifact a slightly 'goofy' or cross-eyed look. The one of slate has one central hole straight through and the shell artifact has holes drilled straight through with bone insets (Fig.12 and 22g)

Colour: green to dark green- brown.

Distribution: ~3,000 -2,400 BP. These and the four other composite parts, i.e. hollow, grooved, boat shaped and solid flared have a similar chronological distribution. 'Other' composite parts and fragments are also found in this time range.

Three types of composite parts (listed below) occur only in the Late Midden deposits. More composite parts are found in the Late midden (81/126, 64%).

Other Sites in the Gulf of Georgia:

Georgeson Bay, DfRu 24; Mayne-Locarno (Haggarty and Sendey 1976: 32,33)

Helen Point, DfRu 8; Mayne-Locarno (McMurdo 1974: 78, fig. 28l)

Figure 20

Composite Ornament Parts

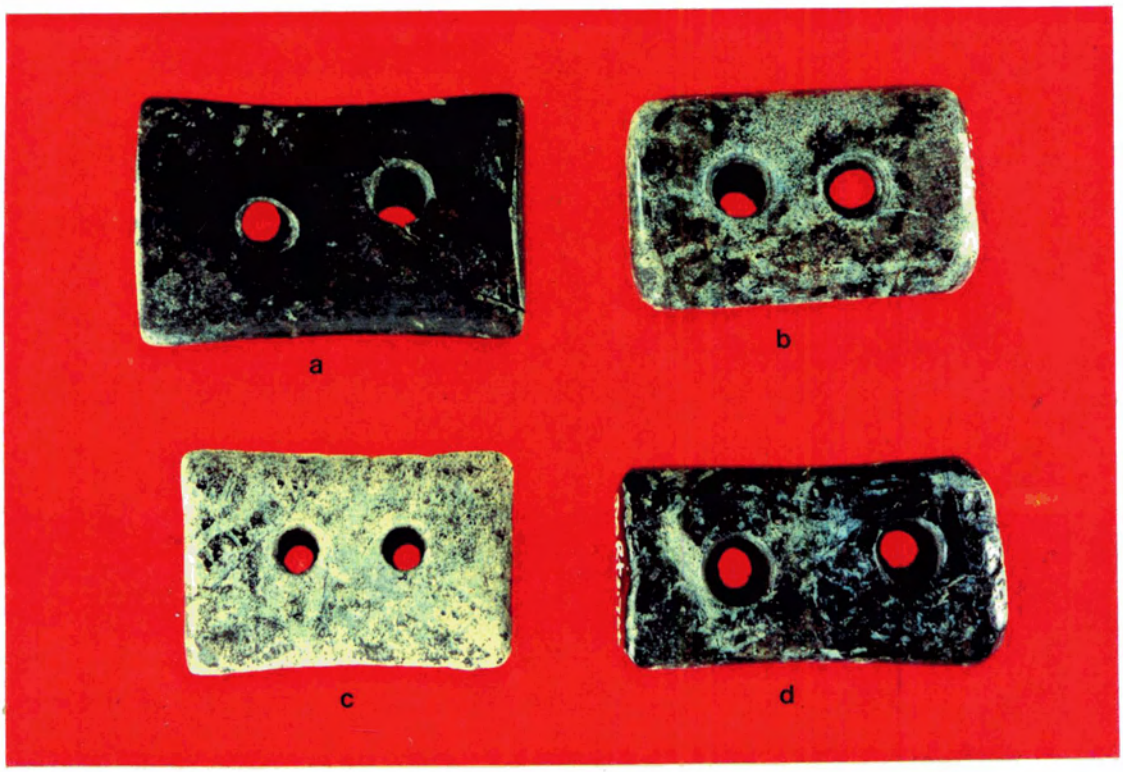
20a: Rectangular drilled (#2-2458 and #2-737) 20b: rectangular drilled (#2-2979)

20c: rectangular drilled (#2-3684) 20d: rectangular drilled (#2-766)

Figure 21

Composite Ornament Parts

21a: Flared (#1-339) 21b: Channeled (#2-1276)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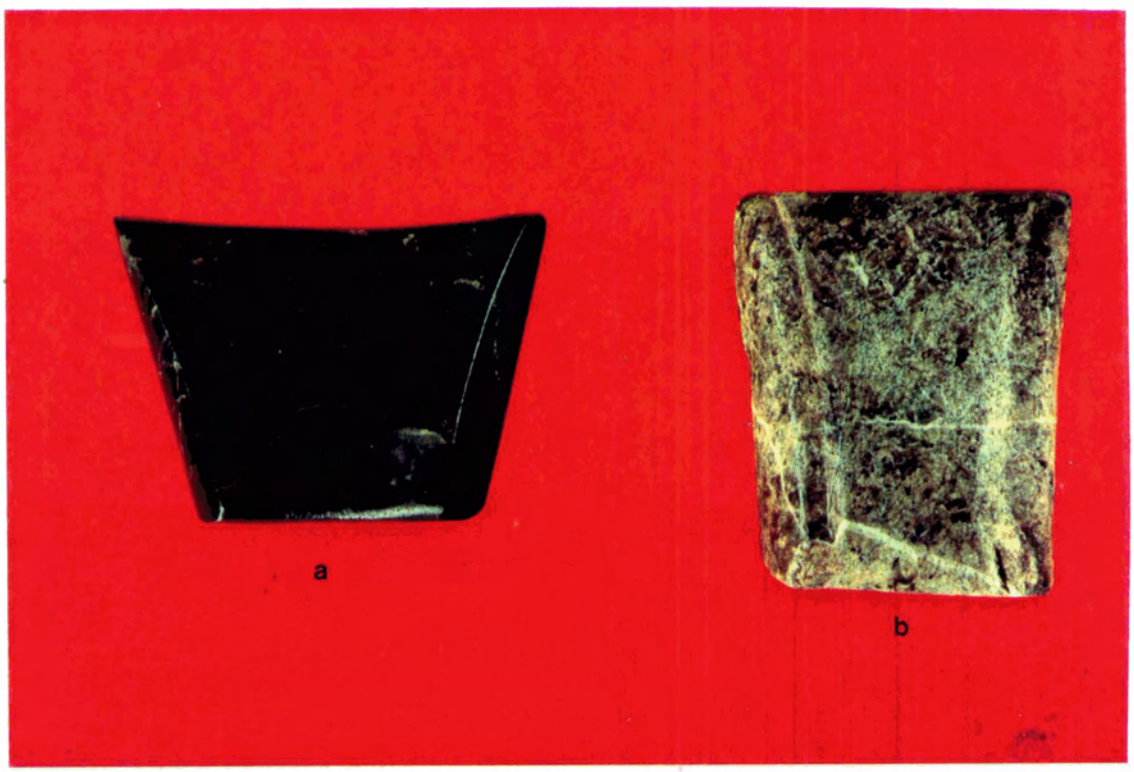

a
b

Figure 22

Composite Ornament Parts

22a: Flared (#2-903) 22b: flared (1-339) 22c: flared (#2-277)

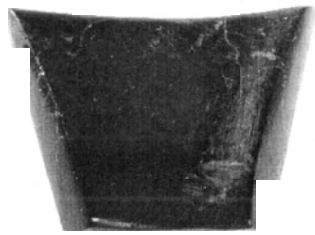
22d: Rectangular drilled (#2-2979) 22e: rectangular drilled (#2-2310)

22f: rectangular drilled (#2-2458 and #2-737)

22g: rectangular drilled, shell (#2-3302)

22h: Channeled (#2-1276) 22i: channeled (#2-109) 22j: channeled (#2-3501)

a



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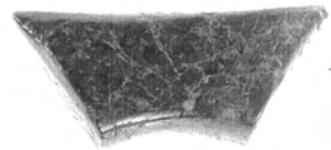

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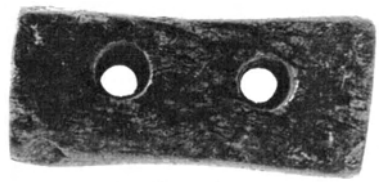

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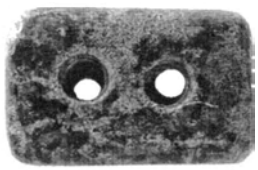

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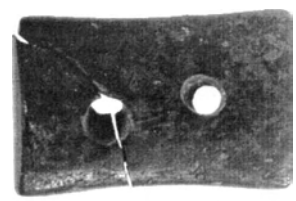

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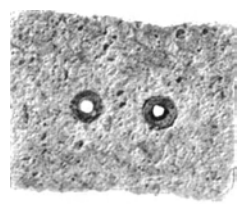

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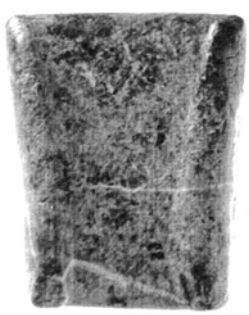

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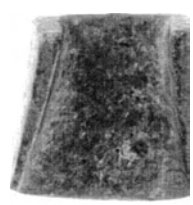

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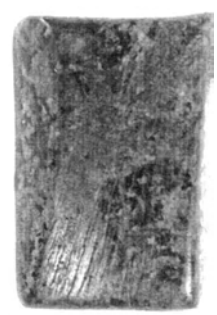


j

cm

Montague Harbour, DfRu 13; Mayne-Locarno (Mitchell 1971: 114-119)

Long Harbour, DfRu 44; Mayne (Johnstone 1992)

Crescent Beach, DgRr 1; St. Mungo (Mayne), Locarno (early) (Matson 1991:124)

Locarno Beach, DhRt 6; Locarno (Pratt 1991:143)

Whalen Farm, DfRs 3; Locarno (Whalen I) (Thom and Matson 1991:148)

Comments: These are probably composite labret parts. It is also possible that they are nose ornaments. Iochelson illustrates an artifact identical to a bone composite part from DeRt 2 (Fig. 27 b) which was used as a nose ornament (1925; 98, fig 96). A string of sinew was hung through the septum and the two holes in the artifact under the nose. Beads were strung on the end of the sinew and hung over the chin. These may also have been composite parts of articulated masks or inlay for masks (fig. 35). Similar solid rectangular artifacts with one central hole have been found at Kachemak Bay (Kenai Peninsula, Alaska) in association with labrets, pendants and human skeletal remains. A rectangular drilled artifact from Crescent Beach has a single lenticular hole (Percy 1974: 141)

Comparisons: Ornament parts similar to these were used as composite labrets on Kodiak Island. Dall illustrates one worn as a labret on a mask. Two strings with round and tubular beads, which may be dentalia, hang down from the holes (1884: 90 and fig. 71A). Billings describes a woman from the same area wearing a similar ornament (Sauer 1802: 38 and plate xi). An artifact identical to this type was excavated at Yukon Island in Kachemak Bay, Kenai penninsula (De Laguna 1934: 105-106 and plate 50).

BOAT SHAPED (FLANGED AND DRILLED). (Fig. 19, a-c) n. soapstone 7

Dimensions: L 50.5 W 10.4 Th 12.6 Wt 11.8

Description: The plan view shows two holes and the artifact narrows at both ends almost to a point. The side view shows the ends curving upward very much like the prow of a canoe. This type are all made of soapstone.

Colour: dark brown, grey to black.

Distribution: ~3,500 -2,400 BP.

Other Sites in the Gulf of Georgia:
Georgeson Bay, DfRu 24; Mayne-Locarno (Haggarty and Sendey 1976: 32,33)
Helen Point, DfRu 8 (Active Pass); Mayne-Locarno (Duff 1956: 49,52)
Montague Harbour, DfRu 13; Mayne-Locarno (Mitchell 1971: 114-119)

Comments: There is another from the Pender Canal area in the Spalding collection, RBCPM.

Compare: No artifacts similar to this type were worn during the historic period. A type of labret with a similar shape in profile (the ends turn up) but no perforations was found associated with a burial on Yukon Island, Kenai penninsula (De Laguna 1934: 110 and Plate 51 nr. 31). Jochelson excavated similar boat shaped labrets on Umnak Island in the Aleutians. He describes these; "in a hole in the middle of the lower lip the Aleut inserted a labret in the form of a skin boat, grooved all around to keep it in the hole" (1925: 96 and fig. 90B, p. 97).

GROOVED (Fig. 23; fig. 25 a,c and fig. 26, d-h;) flat n. 7; oval n. 1; cylinders n. 2; pointed n. 2. n. total 12 (soapstone).

Dimensions: flat L 24 W 16.5 Th 6.5 Wt 5
oval L 30.3 W 14.4 Th 7.5 Wt 5.6

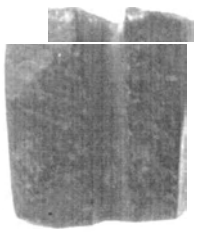
Figure 23

Composite Ornament Parts, Grooved

23a: Flat grooved (#2-1696) 23b: flat grooved (#2-1020) 23c: flat grooved (#2-1056)

23d: Oval grooved (#2-2548) 23e: Cylinder grooved (#2-1321)
23f: cylinder grooved, with grooves around each end (#2-1569)

23g: flat grooved, shell (#2-2816) 23h: flat grooved, bone (#2-2114)



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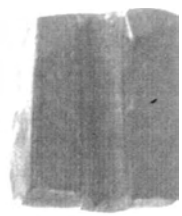

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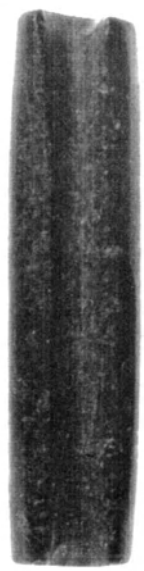

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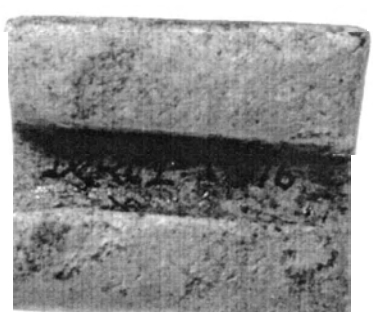

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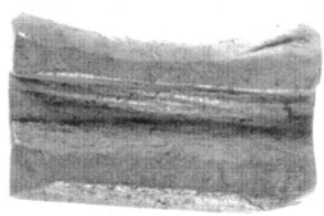


h

cm

cylinder L 28.3 W 8 Th 6.7 Wt 4

pointed L -- W -- Th 4.8 Wt --

Description: There are more flat rectangular shapes with a groove on one side than there are other grooved items. There are also flat grooved artifacts of other materials (Fig. 23g, shell and 23h, bone). There are two cylinders, grooved lengthwise and the smaller cylinder has a groove around both ends (Fig.-23e,f). There are two pointed grooved pieces, both incomplete, one has a hole at the wider end (Fig. 25 a, c.) The groove in the oval shaped piece does not reach the ends of the artifact (Fig. 23d). The grooves may have been merely decorative, used to attach other parts, or may have contained other material as inlay or pigment.

Colour: grey, black

Distribution: ~3,500-2,400 BP.

Other Sites in the Gulf of Georgia:

Georgeson Bay (Haggarty and Sendey 1976: 33, fig. 13a)

These are not documented from other sites in the area.

Comments: The pointed artifacts may have been nose ornaments worn through a pierced septum. Grooved perforated cylinders have been used as toggles to manipulate articulated masks (Wardwell 1993: 46).

Comparison: Grooved labret Nelson 1899: 47, plate XXII, 15. A few grooved cylinders have been found in sites in the Dalles area on the lower Columbia (Strong 1960: 127-129)

PENDANTS n. 4 of soapstone (Fig. 24 e-g)

Dimensions: L 22.5 W 12.9 Th 4.2 Wt 1.5

Description: The soapstone pendants are all roughly isosceles triangle shaped. The single perforation is at the apex; or where the two equal sides meet.

Colour: dark green, black.

Distribution: ~3,500-2,400 BP.

Other Sites in the Gulf of Georgia:

There are no pendants of soapstone documented from other sites. Pendants of other materials, bone, shell, other materials and especially teeth, have been found at many sites in the area.

Comments: Pendants may have been worn in any of a number of ways. They were worn hanging from the pierced septum under the nose and may also have been ear ornament or labret composite parts.

OTHER (Fig. 24, a-d; fig. 25 b,d; Fig. 26 i-k, l;)

Description: A variety of odd shapes and sizes that don't fit into any other category, though some show similarities to other types. Some of these are difficult to describe verbally and are better understood by illustration.

Distribution: ~4,000-2,400 BP.

Other Sites in the Gulf of Georgia:

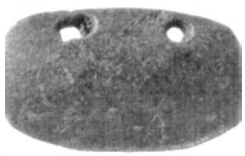
Figure 24

Composite Ornament Parts, Other and Pendants

24a: Small oval drilled (#2-939) 24b: small oval drilled, the holes are drilled at an angle from the ends to the flat side (#2-3087)

24c: butterfly shaped (#2-918) 24d: dragonfly shaped (#2-1624)

24e: pendant (#2-3008) 24f: pendant (#2-2349) 24g: pendant (#2-544)



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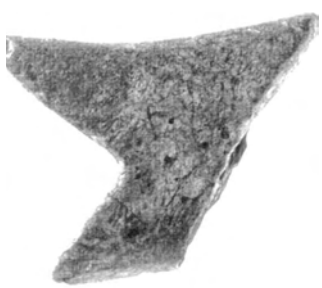

c

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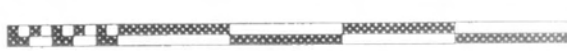


cm

These are not documented from other sites in the area.

Other, butterfly and dragonfly n. 2 (Fig. 24 c, d)

Dimensions: butterfly L 29.1 W 22.3 Th 8 Wt --
dragonfly L 39.4 W 25.8 Th 7.5 Wt 6.25

The butterfly shaped whatzit is broken. It is shaped like a bow tie or butterfly. There is a hollow shell artifact the same shape (Fig. --). The dragonfly shape is similar to a 'T' labret but the top cross is much wider and angular and the trunk of the T flares out at the bottom.

Colour: dark grey to black.

Other, small oval drilled n. 2 (Fig. 24 a, b)

Dimensions: L 21.5 W 9.9 Th 4.2 Wt 1.48

One resembles the rectangular drilled ornaments with rounded corners but is much smaller. It has two holes near one of the long sides. It is well made and polished (Fig. 24a). They both have one flat side and one convex curved side. The holes of the second piece are drilled at an angle from the flat side through the ends (Fig. 24b)

Colour: dark green.

Other, shouldered n. 1 (Fig. 25 b)

Dimensions: L -- W 28 Th 15 Wt --

It is similar to the boat shaped artifacts but instead of a flat 'keel' it has a round protrusion. There were two holes drilled in the top (plan view) which meet at the centre and exit through the keel protrusion. If it is turned over so the protrusion is on top it resembles a whale's tail fluke. This artifact is broken and

Figure 25

Composite Ornament Parts and Other

25a: Pointed grooved, with perforation (#2-90)

25b: boat shaped with protusion (#2-3294) 25c: pointed grooved (#2-3452)

25d: Other, three sided (#2-2858)


a


b


c


d

cm

may not have been symmetrical, like a whale's tail or boat, at all.
There is another unusual shouldered soapstone artifact in the Spalding collection at the RBCPM. On this artifact the protrusion does not extend from the keel but from the top, like a truncated mast. It has sharp lines incised along the bottom edge and parallel lines, like a ladder, on the side.

Other, three sided n. 1 (Fig. 25 d)

Dimensions: L 68 W 47.6 Th 18.8 Wt 65.7

This is a most unusual artifact and almost defies description. It is a large thick artifact like a fat flattened Y shape. The three sides are concave, which makes the trunk of the Y flare out at the bottom. One arm of the Y is slightly longer than the other. It looks as though it may have been a template or pattern for ear or lip spools. There is an almost identical artifact in the Spalding collection, RBCPM. In this case the trunk of the Y is wider and it is described as having one straight side and three concave sides.

Colour: grey

Other, rods n. 2

Dimensions: L 27.5 W 10 Th 8.1 Wt 3.4

Small long rectanguloid shape. One is more rectangular than round in cross section and one is narrower at one end. Both appear to be broken. They resemble the partially drilled cylinder, figure 28a, but are thicker and may also be bead blanks.

Colour: dark grey - black.

Other, flat oval ring n. 1 (Fig. 26 l)

A fragment of a flat oval ring. One surface is flat and the 'top' surface is convex

and very nicely polished. There are no similar artifacts known.

Dimensions: L -- W -- Th 6.3 Wt --

Colour: dark green.

Other, serrated n. 1 (Fig. 26 i)

Dimensions: L 16.5 W 7 Th 6.3 Wt 0.95

A small oval shaped artifact with one flat surface. It is serrated or denticulate along one side and narrows at the ends.

Colour: black

Other, small slug shaped n. 1 (Fig. 26 k)

Dimensions: L 24.1 W 6.9 Th 3 Wt 0.8

A small long narrow oval with one flat side. There are no other pieces like it. It has been burnt.

Colour: brown

Other, bead shaped n. 1 soapstone (1 other stone)

Dimensions: L 17.2 W -- Th 7.8 Wt 3.7

These resemble large thick beads. They have a shallow indentation on one side only where the hole should be. One of soapstone is from DeRt 2 and may have been inlay.

INLAY (Fig. 26, a-c) n. soapstone 8.

Dimensions: L 27.7 W 11.9 Th 8 Wt 5.7

Figure 26

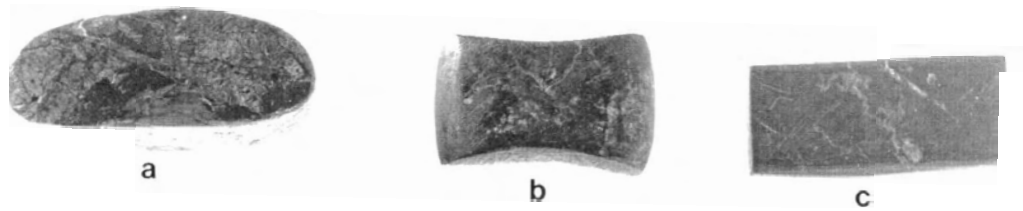
Composite Ornament Parts, inlay, grooved and other

26a: inlay (#2-3317) 26b: inlay (#2-797) 26c: inlay (#2-2085)

26d: grooved, flat (#2-1056) 26e: grooved, flat (#2-1020)
26f: grooved, flat (#2-1691)

26g: grooved, cylinder (#2-1321) 26h: grooved, cylinder (#2-1569)

26i: other, serrated (#2-1855) 26j: grooved, oval (#2-2548)
26k: other, slug shaped (#2-1826) 26l: other, flat oval ring (#2-2509)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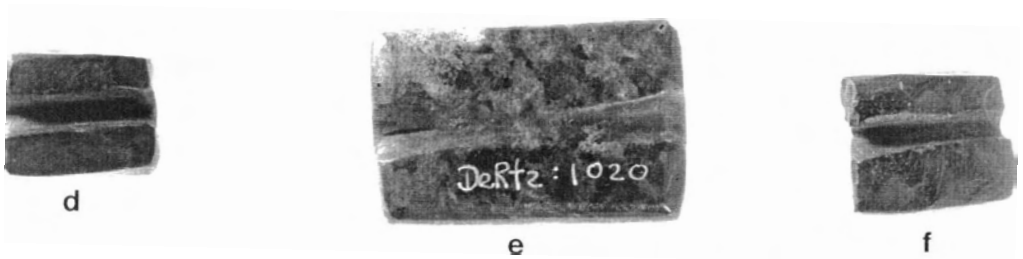
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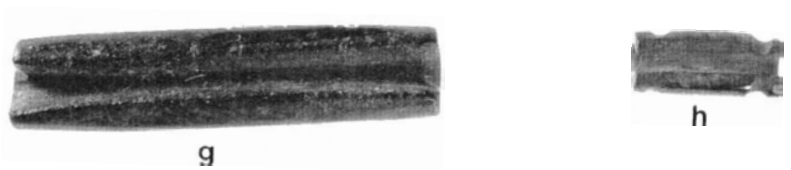
DeRtz:1020
e
f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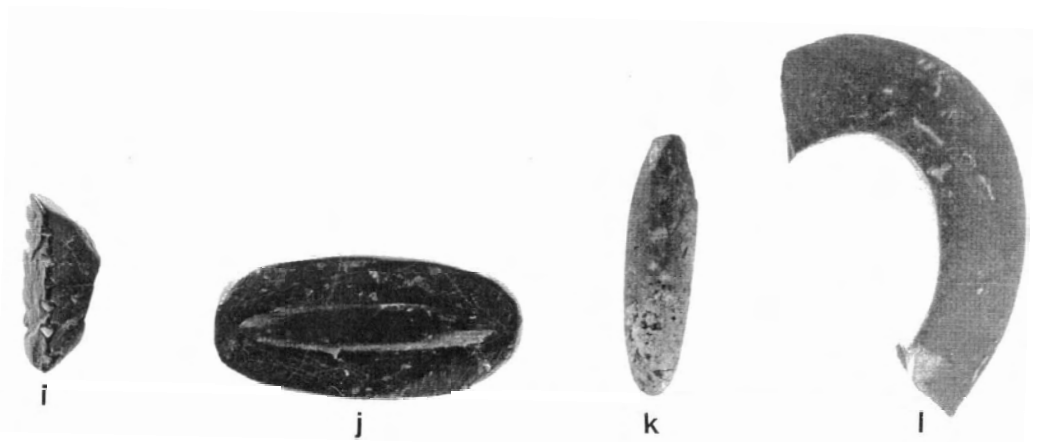

i
j
k
l


cm

Figure 27

Ornaments of shell bone and stone

27a: T labret, bone (#2-3650)

27b: nose ornament, bone (#3466)

27c: bone (#2-148)

27d: shell (#2-310)

27e: shell (#2-3602) associated with burial 86-32b in Main midden deposits

27f: T labret, shell (#2-1430)

27g: hollow, shell (#2 2058)

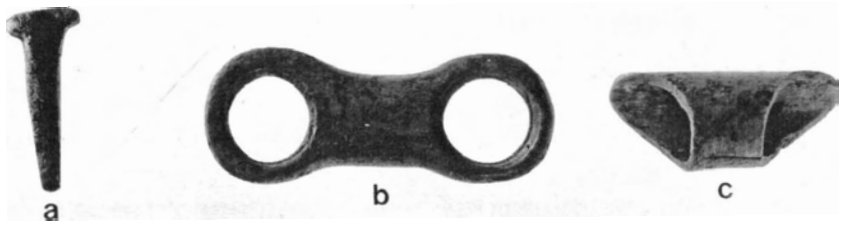
27h: shell disc (#2-3602), associated with burial 84-31 (4320±220 RIDDL 96)

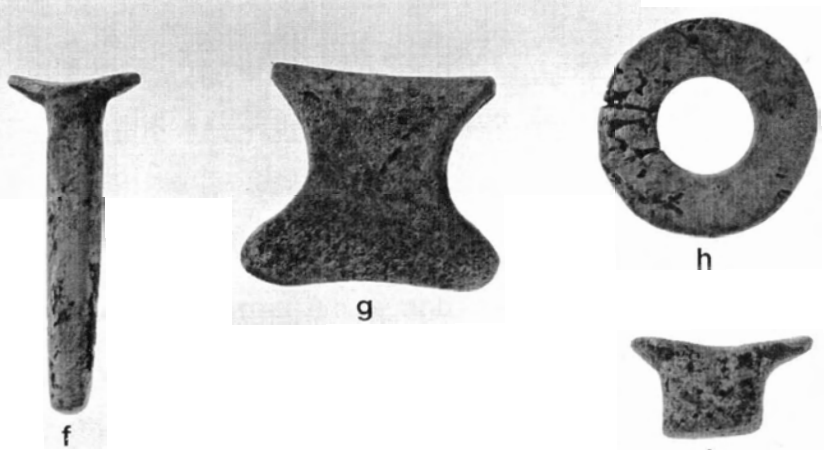
27i: button labret, shell (#2-1440)

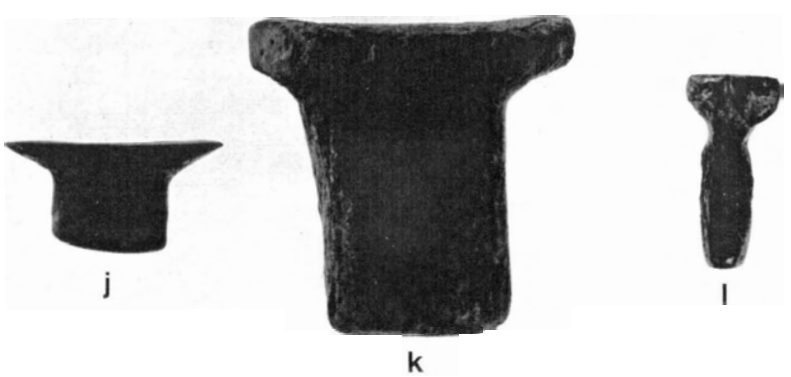
27j: button labret, siltstone (#2-940)

27k: large T labret (#2-59)

27l: T labret, soapstone, associated with burial 84-31 (4320±220 RIDDL 96)







61 b

Description: Small, well finished and polished, there are no holes, grooves or flanges to attach them and so it is assumed they were inlay. The five inlay of soapstone are rectangular. Four of these have concave curved long sides, which makes them narrower at the centre.

Colour: green, dark brown.

Distribution: ~3,500-2,400 BP.
Two thirds of these artifacts are from the Main Midden deposits (6/9, 66%)

Other Sites in the Gulf of Georgia:
Georgeson Bay, DfRu 24; Mayne-Locarno (Haggarty and Sendey 1976: 32,33)
Helen Point, DfRu 8; Mayne-Locarno (McMurdo 1974: 78, fig. 28j)

Comments: There are two oval pieces, one of quartz crystal and the other of either serpentine or nephrite. These and other composite parts may have been used to embellish other ornaments e,g wooden bowl labrets or masks. (There is a possibility that the waisted inlay are scratching or rubbing stones cf. Emmons 1991 and Kan 1989)

Comparisons: Inlay of shell, stone, haliotis and copper was used in masks, wooden labrets, bowls and boxes at contact.

DISC BEADS (Fig. 28, g-l) n. soapstone 26.

Dimensions: L 7.1 W -- Th 2.7 Wt 0.26

Description: Small flat beads. They may have been cut from a prefabricated cylinder and are biconically drilled. The hole is in the centre. Over 85 disc beads

of shell and 20 of mica were also found.

Colour: green and grey to black.

Distributions: ~ 3,500- 1,500 BP.

Hill site, Salt Spring island, DfRu 4; probably Locarno (Hall and Haggarty 1981: 95, fig. 6g)

Tsawwassen, DgRs 2; St. Mungo (Mayne phase equivalent) beads were found with a dated burial with tooth faceting; and Marpole (Arcus 1991: 219)

Crescent Beach, DgRr 1; St. Mungo, Locarno (early) (Matson et al. 1991; Trace 1981)

Locarno, DhRt 6; Locarno (Pratt 1991:143; Percy 1974)

Georgeson Bay, DfRu 24; Mayne-Locarno (Haggarty and Sendey 1976: 35)

Marpole, DhRs 1; Marpole (Burley 1980: 23)

False Narrows, DgRw 4, Gabriola; Marpole (Burley 1988: 93 fig. 28f)

Comments: Shell and other small disc beads occur more often in Marpole deposits, though this could be the result of differential preservation (Burley 1980:23)

MEDIUM THICK BEADS (Fig. 28, m-q) n. soapstone 17

Dimensions: L 9.3 W -- Th 4.1 Wt 0.6

Description: These are more round in cross section, which makes them thicker. They are also biconically drilled through the centre. Two of these beads are faceted and polished (Fig. 28 o).

Colour: grey, green, black.

Figure 28

Beads

28a: partially drilled cylinder, bead blank? (#2-1455) 28b: soapstone tube bead (#1-1316)

28c: shell tube bead (#2-152) 28d: large shell bead (#2-3005)

28e: coal barrel bead (#1-667) 28f: coal barrel bead (#1-147)

28g to 28x soapstone beads:

g: small disc (#2-2405) h: small disc (#2-3167) i: small disc (#2-3429)

j: small disc (#2-3638) k: small disc (#2-1184) l: small disc (#2-906)

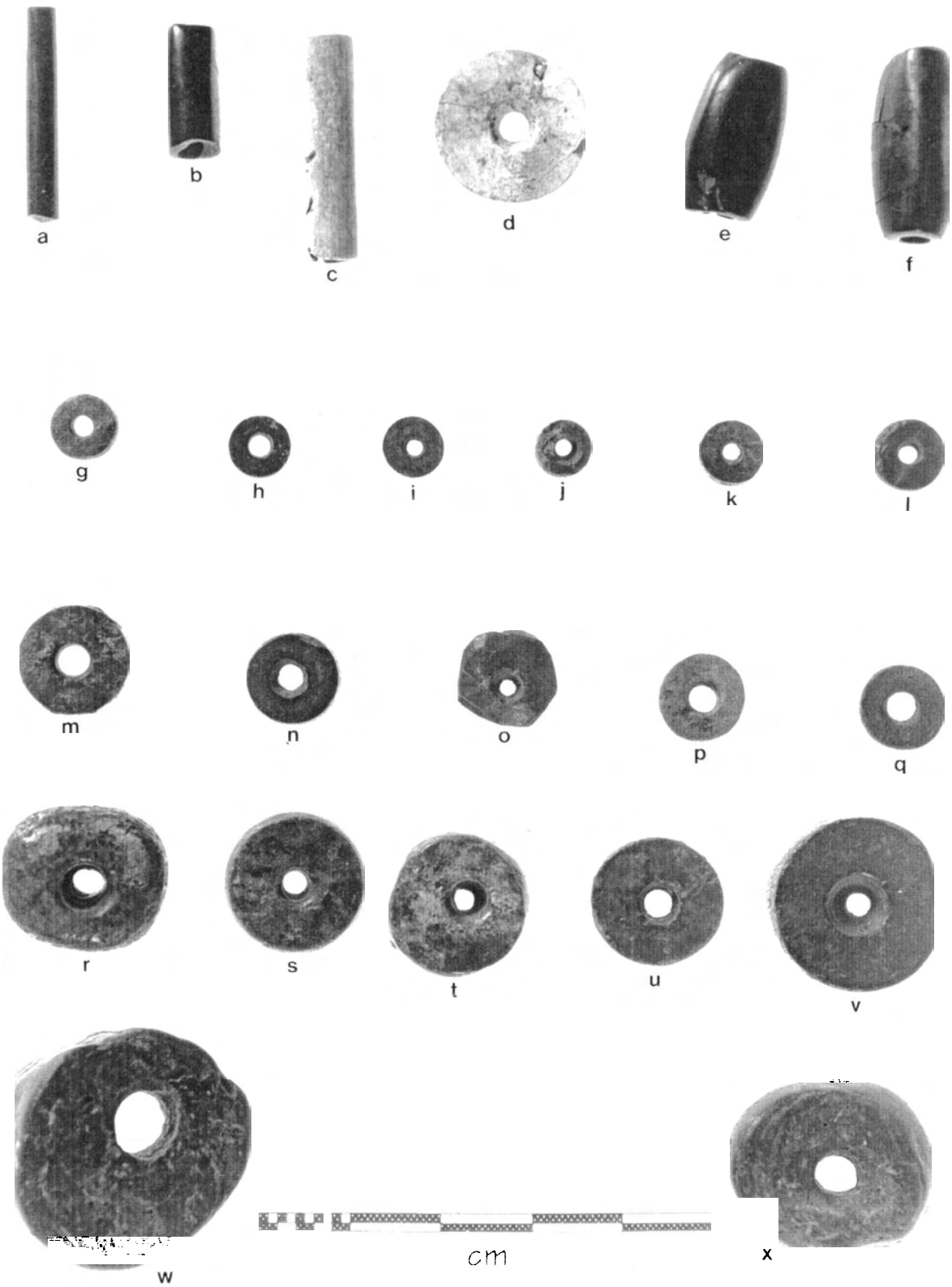
m: medium (#2-596) n: medium (#2-2319) o: medium, faceted (#2-3354)

p: medium (#2-625) q: medium (#2-2139)

r: large, rounded (#2-179) s: large, flat (#2-1078) t: large, rounded (#2-3484)

u: large, flat (#2-613) v: large, flat (#2-1596)

w: crinoid (#2-228) x: crinoid (#1-719)



64b

Distributions: ~ 3,500- 1,500 BP. These and Stone disc beads, Crinoid beads, tube beads and other beads have similar chronological and geographical distributions. More of these (24/37, 65%) occur in Late Midden deposits. Four large, 11 medium, four crinoid and three coal barrel shaped beads were found at DeRt 1.

Other Sites in the Gulf of Georgia:

Georgeson Bay, DfRu 24; Mayne-Locarno

Hill site, Salt Spring island, DfRu 4; probably Locarno (Hall and Haggarty 1981: 95, fig. 6g)

Montague Harbour, DfRu 13; Mayne-Locarno (Mitchell 1971: 116 fig. 49g)

Long Harbour, DfRu 44; Mayne (Johnstone 1992)

Fossil Bay, Sucia Island, 45SJ105; probably Marpole (Kidd 1969: 54)

Bowker Creek (Oak Bay), DcRt 1; Mayne-Locarno, one bead, possibly crinoid (Mitchell 1979: 89 fig. 9g)

Tsawwassen, DgRs 2; St. Mungo (Mayne phase equivalent) beads were found with a dated burial with tooth faceting; and Marpole (Arcus 1991: 219)

Crescent Beach, DgRr 1; St. Mungo, Locarno (early) (Matson et al. 1991; Trace 1981)

Locarno, DhRt 6; Locarno (Pratt 1991:143; Percy 1974)

Whalen Farm, DfRs 3; Locarno (Whalen I), Whalen II (Thom and Matson 1991:148)

Marpole, DhRs 1; Marpole (Burley 1980: 23)

False Narrows, DgRw 4, Gabriola; Marpole (Burley 1988: 93 fig. 28c-e)

Comments: There are two of bone from DeRt 2 but no comparable shell beads. Beads were used in a variety of ways: strung as necklaces (fig. 37), and used as parts of other ornaments (fig. 35 and 36) including labrets (fig 37).

LARGE THICK BEADS (Fig. 28, r-v) n. 15 (soapstone)

Dimensions: L 15.4 W -- Th 7.6 Wt 2.8

Description: Larger and thicker than the other beads. Most have flat surfaces, like large disc beads but a few are rounded (Fig. 28 r,t).

Colour: green, grey, black.

Distributions: ~3,500-1,500 BP
These are evenly divided between the Main and Late Midden at Pender.

Other Sites in the Gulf of Georgia:
Hill site, Salt Spring Island, DfRu 4; probably Locarno.

Comments: There are no similar beads of other stone or bone. There are two large flat thick shell beads (Fig. 28d)

CRINOID BEADS (Fig. 28, w,x) n. soapstone 5

Dimensions: L 23.3 W 18.3 Th 9.9 Wt 7.4

Description: Large, thick, irregular shaped beads, with the straight sided hole off centre. A crinoid is a fossil sea lily and some of these may be fossils, but some appear to be irregularly shaped drilled stones. The soapstone beads are the same irregular or 'lily' shape which gives the fossil its name, crinoid. Most have one surface cut at an angle so the bead is thicker on one side. They may be purposely made irregular unlike the other types of bead. There are similar crinoid shaped beads from layer VII at Ushki I and V, which dates to ~ 14000 BP (Dikov 1989: 8-9, figs. 3 and 4).

Colour: dark brown and black.

Comments: There are four of sandstone. There are three of soapstone from DeRt 2 and two from DeRt 1.

TUBE BEADS (Fig. 28, a-c) n. soapstone 1; n. total 5.

Dimensions: L 14.5 W -- Th 6.1 Wt 0.4

Description: A straight sided narrow bead with a straight sided hole it's full length. Fig. 28a is a narrow cylinder but the hole is only drilled through to 2mm. There is only one tube bead of soapstone, the other four are of shell. Figure 28c is a tube bead of shell.

Colour: black.

Distribution: ~4,000-2,400 BP.
A tube bead of shell (1489) and a soapstone fragment (1521) were associated with burial 85-17 which has a 14C age of 3520±170 (RIDDL 275). Teeth of this burial showed signs of possible labret wear.

Other Sites in the Gulf of Georgia:
Soapstone tube beads are not documented from other sites in the area. Bone and shell tube beads have been found at a few other sites.

CHANNELLED (Fig. 19, h-j, fig. 21 b) n. 4

Dimensions: L 31.4 W 24 Th 10.9 Wt 12.5

Description: A rectangular shape slightly wider and thicker at one end. The channel is almost the width of the artifact. Two of these have channels with straight sided narrow walls giving them a square bracket shaped cross section (Fig. 19 i). The two straight sided examples have flat surfaces on the back (Fig. 19 j), the others have a smooth concave surface the length of the artifact.

Colour: light grey- green.

Distribution: ~2,500-2,400 BP. The channeled, small oval and butterfly types of composite parts occur only in the Late midden. There are 4 channelled, 2 small oval and 2 butterfly shaped.

Other Sites in the Gulf of Georgia:
Crescent Beach, DgRr 1; St. Mungo (Mayne)-Locarno (early).

Comments: There are three channelled whatzits from the Pender Canal site in the RBCPM. Two of these have concave back surfaces and the third has a squared groove on the dorsal surface. They are well made and polished.

Comparisons: No artifacts similar to this type were worn during the historic period.

OVAL RING LABRETS, LIPSPOOLS (Fig. 29 a-c; fig. 31a) n. soapstone 10

Dimensions: L 68.3 W 37 Th 17.4 Wt 36.7

Description: Elliptical shape with flattened sides, like a race track. The outside rim has a smooth groove all the way around to hold it in place in the lip (or

under the lip) and the inside surface is correspondingly convex.

Colour: mottled black and greenish black.

Distributions: ~2,750-2,400 BP. The oval and solid oval labrets are more frequent in the late midden (7/12). Other large solid one piece labrets, double button and 'chin-protrusion' labrets are included in the geographical distribution.

Hill site, Salt Spring Island, DfRu 4; a large T shaped labret and a large shell labret with a curved protrusion which would have hung below the chin. Locarno (Hall and Haggarty 1981: 91, fig 5n; 95, fig. 6j)
Locarno, DhRt 6; Locarno, double button labret
Point Grey; no provenience, button labret with protrusion extending down over the chin (Duff 1975: 33, 168)
Penn Cove, Whidbey Island; no provenience, button labret with protrusion extended down over the chin similar to one found at Point Grey.
Hammond: no provenience (Smith 1907)

Comments: The oval ring labrets probably had an inset of perishable material. One white fragment may not be soapstone. This type has not been recorded from other sites in the region. Fragments of unrecognised oval spools may have been placed in the collective 'Gulf Islands complex' artifact type.

Comparisons: No artifacts similar to this type were worn during the historic period.

SOLID OVAL LABRET (Fig. 29 d; 31 b) n. soapstone 1

Dimensions: L 74.1 W 31.7 Th 17.2 Wt 65.8

Figure 29

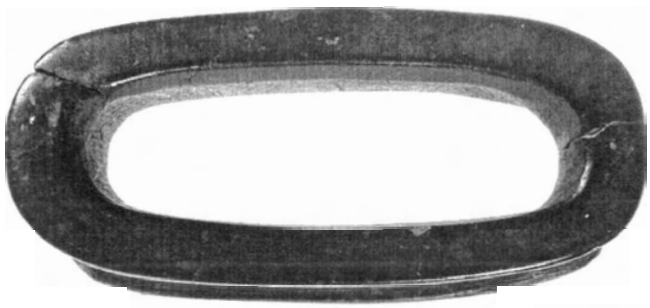
Oval labrets

29a: oval ring labret or lipspool (#2-207)

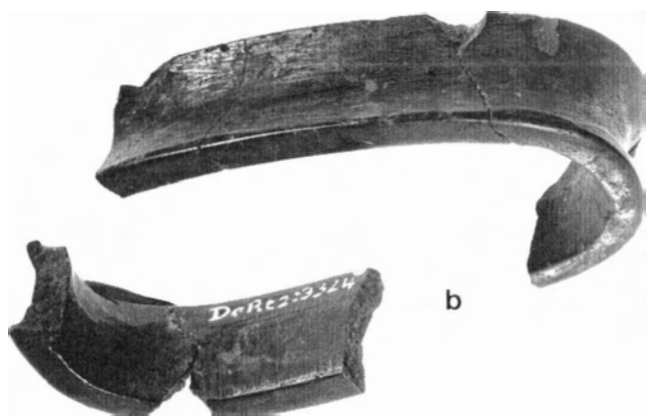
29b: lipspool (#2-3324 and #2-3324A)

29c: lipspool (#2-3402)

29d: solid oval labret (#2-982)



a



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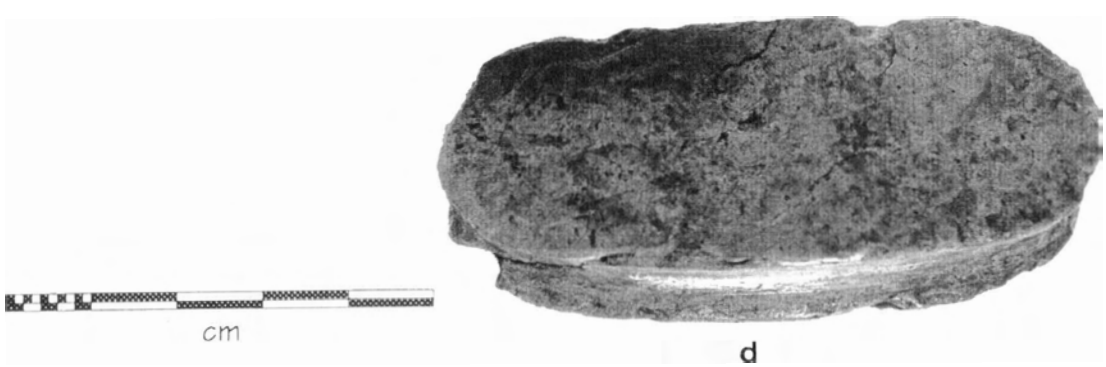


d

Description: an elliptical or oval solid shape. The outside rim has a smooth groove all the way around, again to facilitate wearing it in a large hole under the lower lip. There was only one of this type recovered during excavations at DeRt 2. It was found in Late Midden deposits.
Colour: Pale greenish grey colour.

Distributions: ~2,750-2,400 BP. The solid oval labret was found in late midden deposits.

Other Sites in the Gulf of Georgia:
Georgeson Bay, DfRu 24; Locarno, one coal oval
North Saanich; oval flanged labret (Smith 1907:350)
Bowker Creek (Oak Bay), DcRt 1; Locarno, one coal oval labret
Locarno, DhRt 6; Locarno, coal oval (Arcas 1993: 66 fig. 20)

Comments: A similar artifact from the pender Canal, more round or bowl shaped, with a perforation at an angle through the rim, is in the Spalding collection R.B.C.P.M.

Comparisons: Solid oval labrets were worn by the Haida, Tsimshian and Tlingit at European contact. Haida labrets were worn flat against the lower teeth and mandible through an opening below the lip. They were still seen worn by elderly high status Haida women in the 1890s (Keddie 1981: 59; Stewart 1981: 92).
The Tsimshian and Tlingit labrets were more round shaped like a disc or shallow bowl. They were worn projecting outward and held in place by the lower lip which was stretched around the rim (Higueras 1991: 81, 85; King 1981: Plate 38). Some of these large labrets were further decorated with inlay of haliotis or other materials (Halpin and Seguin 1990: 277 fig. 12; King 1981 Plate 39)

EARSPOOLS (Fig. 30 and 32) n. 5

Dimensions: L 49.8 W -- Th 16.4 Wt 97.6

Description: A circular, pulley-like ring. The outside rim has a smooth concave curved groove or channel all the way around to help hold it in place when worn. The extended earlobe fits into this groove like a solid tyre on a wheel rim. The inside of the ring, or the sides of the hole, are not straight sided either but convex which makes the hole narrower at the centre in the same way a biconically drilled hole is narrower at the centre. They are very well made and polished smooth.

Colour: Mottled grey to mottled black colour, one (two fragments) buff coloured which appears to have been burned.

Distributions: ~2,750-2,300 BP.

Earspools are found late in the Main midden and in the Late midden. More are found in the Late midden (4/7) and two earspool fragments were found at DeRt 1 also in Locarno contexts.

Other Sites in the Gulf of Georgia:

Crescent Beach, DgRr 1; St. Mungo, Locarno (early). (Matson et al)

Marpole; Marpole

Helen Point, DfRu 8; Mayne-Locarno (McMurdo 1974: 83, fig. 30d)

Comments: These large ear ornaments may have had insets in the holes. Similar ornaments worn by the Aztecs had insets of rolled leather or other materials in the hole.

Comparisons: No artifacts similar to this type were worn during the historic

Figure 30

Earspools

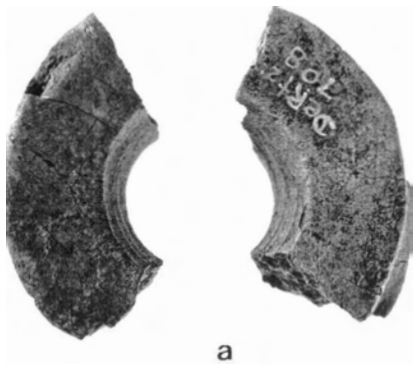
30a: Earspool fragments, light brown, probably burnt (#2-729 and #2-708)

30b: earspool fragment showing the grooved outside rim (#1-117)

30c: earspool fragment, inside rim (#1-168)

30d: earspool fragment (#2-171)

30e: complete earspool (#2-204)



a

b

c

d

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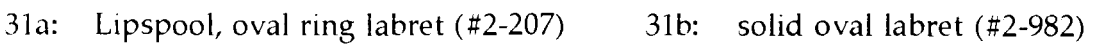
73 b

Figure 31

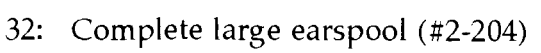
Oval labrets



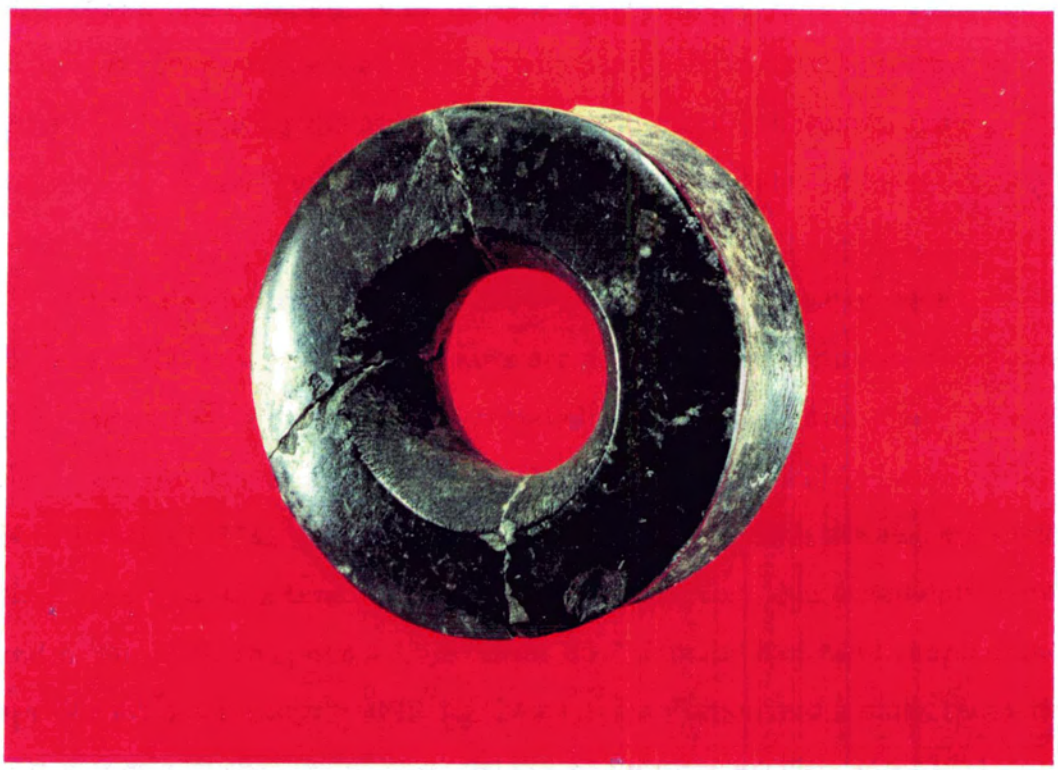
31a: Lipspool, oval ring labret (#2-207) 31b: solid oval labret (#2-982)

Figure 32

Earspool



32: Complete large earspool (#2-204)



74b

period. A variety of other types of ear ornaments were worn on the Northwest coast in the historic period. Rings of ground and polished stone have been found in the lower Columbia area (Strong 1960: 58, 129, 131). A ground stone ring was also found at Crescent Beach (Percy 1974; 140, 141).

The distributions show an increase in types of composite parts over time at DeRt 2 (Fig. 33). This diversity continues into the latter half of the Locarno Beach phase. The introduction of large earspools, large oval labrets, other large one piece ornaments and pronounced frontal head shaping in the Locarno Phase at Pender marks the limit of diversification of soapstone ornaments. Other types of large one piece labrets and nose ornaments occur in Locarno and perhaps Marpole components at sites in the lower mainland. There is evidence indicating that labrets, earspools and head shaping overlap for perhaps 700 years. This evidence includes evidence of head shaping from DeRt 2, at ~3600 BP (Weston 1994) and artifacts found associated with Marpole components which depict earspools and head shaping. One of these is an antler carving (Borden 1983: 141) and there is also a human figure bowl which appears to have large earspools (Duff 1975: 65). During the Marpole phase head shaping becomes more prominent. It is seen over a larger area and different 'styles' of head shaping appear.

Both male and female burials show signs of labret wear or have labrets in association. Composite ornament parts are also found in burials of both sexes. Carved antler spoons were found associated with female burials only. The earliest dates for carved antler spoons are 3600±160 (RIDDL 272), burial 85-36 and 3630±140 (RIDDL 274), burial 85-38. Cairns and rock features are also associated with burials from this time onwards as is head shaping. No ornaments were found in burials with spoons. One burial, 85-7 (female) had head shaping and a soapstone artifact (butterfly #918, fig, 24 c.) in association and a male, burial 85-17 had two composite ornament parts (#1489, shell tube, fig. 27 c, and #1521,

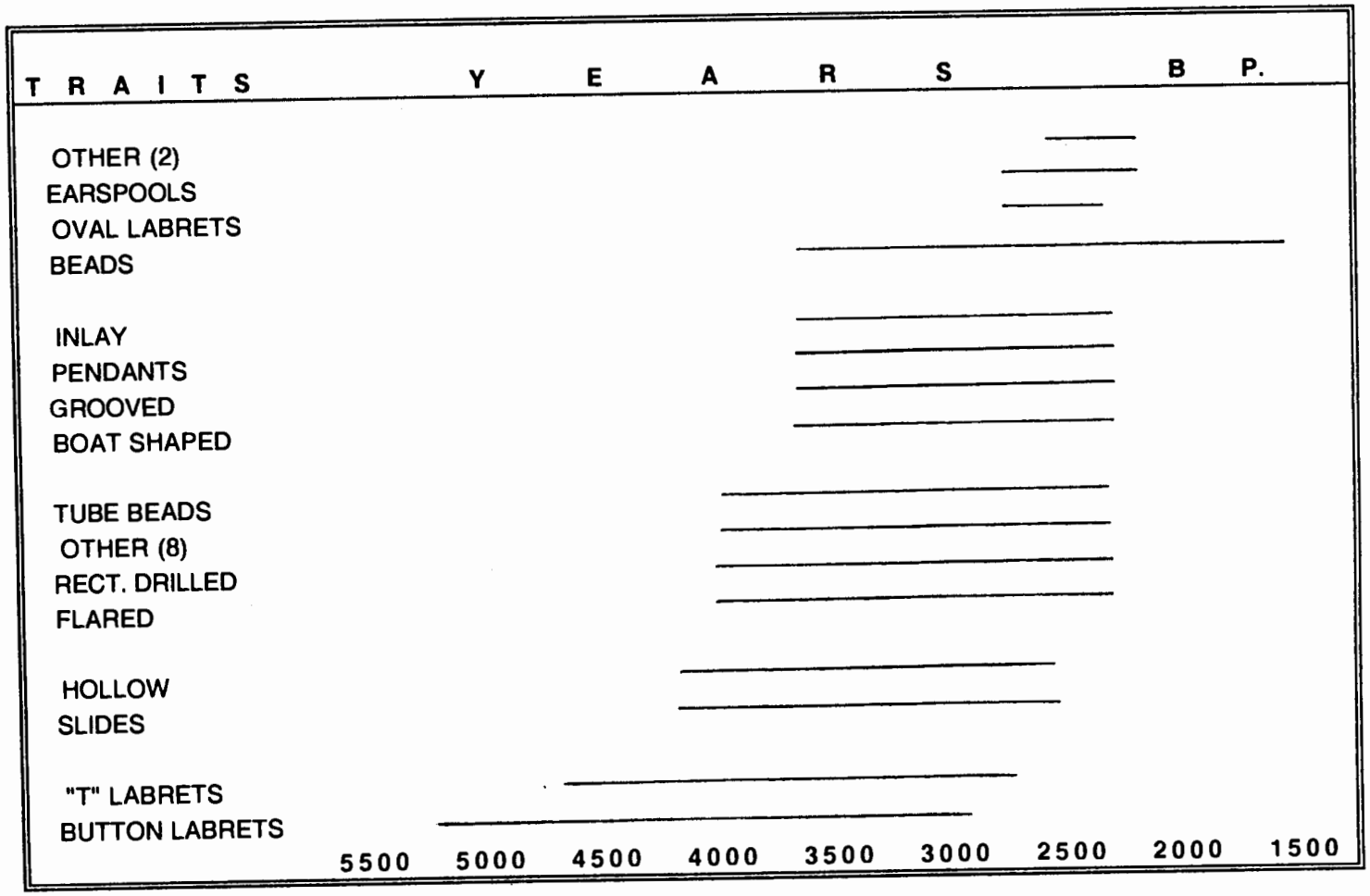


Figure 33 The approximate temporal distribution of the Gulf Islands Complex artifacts.

soapstone fragment) seven other artifacts and had signs of possible labret wear.

Beads of various types are found throughout the prehistoric deposits and there is an increase in small slate and shell disc beads in the Gulf of Georgia during the Marpole phase. This apparent increase may be partly due to the survival of a higher number of burials from this later period. A large number of small stone disc beads and dentalia beads were found with a burial at Tsawassen with a 14C date of 1520±50 BP (Beta-38352) (Arcas 1991: 191). The majority of the small disc beads at DeRt 2 were found in main midden deposits (Mayne phase).

Button labrets are not evident at DeRt 2 after the Locarno phase but have been found in other sites in the southern Gulf region and assigned mainly to the Locarno phase based on component content. Earspools have also been found in Locarno and Marpole deposits but lip spools and solid oval labrets have not.

Composite ornament parts are limited in their distribution in both time and space. They are found in the Mayne and Locarno phases only in the southern Gulf Islands, and a few have been found in sites in the Fraser Delta area. There are stone artifacts similar to slides from Namu on the central coast. These were found in levels dating between ~3500 and 3000 BP (Carlson 1994: pers. com.)

In the Gulf Islands labrets and composite ornament parts are associated with the Mayne and Locarno phases. Labrets, earspools and head shaping continue to occur early in the Marpole phase but by ~2,000 BP beads and other ear ornaments have replaced the large earspools, and labrets are no longer worn.

Outside the Gulf of Georgia

The known distribution of prehistoric composite ornament parts, other than labrets, beads and earspools, is very limited. Labrets and beads on the other hand are fairly obvious and have been discovered in the archaeological record in four or five unrelated areas in the world. Beads have been found in early Aurignacian sites, dating to 35,000 BP (White 1989). The earliest documented stone bead in North America, from Charlie Lake Cave in northeastern B.C., is

~10,500 years old (Fladmark et al. 1988). The earliest well documented labrets are found on the eastern slopes of the Zagros mountains in the Tigris Euphrates area in the Near East. Labrets are found from the area south of the Caspian sea to the head of the Persian Gulf between ~8,400 BP and ~7,000 BP. They are found on the western shores of the Black Sea at ~7,000 BP (Masson and Sarianidi 1985: 44-46; Keddie n.d).

In Africa they first appear in the central Sudan south of the Blue and White Nile confluence at ~5,300 BP. From here they spread along presumed trade routes south to the Congo drainage and then southeast to the Zambezi, and west along the Niger as far as Mali. Labrets were no longer worn in most areas by 1100 BP due to the influence of Islamic Arab immigrants (Keddie 1989).

In Mexico labrets are first seen depicted on figurines, with earspools, at ~3,500 BP on the Pacific coast of Chiapas. By 600 BP they are seen throughout Mexico and the Aztecs specify the type of labret worn for each rank (Keddie 1989; Bernal 1980: 53).

The earliest evidence for labrets in south America, at ~2,500 BP, is in coastal Ecuador. By 1,500 BP they are found in Peru, Bolivia, the Parana-Paraguay area in northern Argentina and in the east from the Orinoco to Uruguay. Large disc shaped labrets, large earspools and ear discs and other types of lip, ear or nose ornaments are still worn by tribal societies of central Brazil (Seeger 1975: 211).

In the North Pacific labrets have been found in archaeological contexts from northern Hokkaido island through the Kuril islands to southeastern Kamchatka. Labrets have been reported at the Ushki site in Kamchatka in layer VI which has dates to ~10,700 BP (Dikov 1983:357; 1989:8-11). These early dates are questionable as other artifacts and a child burial with inclusions and ochre from layer VI are more like later Neolithic components in the area.

Labrets have been excavated from sites on the Aleutian Islands and in western Alaska, from the Alaska Peninsula and Kodiak Islands north to Kotzebue

Sound and across the Bering Strait in the Chukchi Peninsula, where they are found with early pottery between 3,200-2,600 BP (Lightfoot 1989: 264-265). Sites in the Kodiak Islands and the Alaska Penninsula have labrets associated with ground slate points in levels which date between 4500 and 3500 BP (Steffian 1992: 119; Lightfoot 1989: 264-265; Clark 1977: 37,93-94,236).

Composite ornament parts have been excavated from sites in the Aleutian islands and the Kenai penninsula. These, and one from Ushki, layer VI, which resembles fig. 24a, are some of the few excavated composite ornament parts outside of the southern Strait of Georgia (Dikov 1989: fig. 4, 20). A composite ornament part almost exactly the same shape and size as one of bone found at DeRt 2 (Fig. 27b) was excavated on Umnak Island (Jochelson 1925: 98). Composite lip, ear and nose ornaments were worn into the historic period in the Aleutians.

On the northern Northwest coast button and T labrets are first seen dating between 4600 and 3200 BP in Component II at the Hidden Falls site in the Alexander Archipelago, southwest Alaska (Lightfoot 1989: 233,234). Some of these are of serpentinite and there are also irregular shaped beads of soapstone, similar to the crinoid shaped beads, from this component. Other similarities between Hidden Falls Component II and the Mayne and Locarno Phase of the Gulf Islands are stemless ground stone points, cross hatched incised stones and ground stone adze blades. Lightfoot (1989: 266) states that the Component II artifacts are more similar to those of the Locarno Beach phase than any other assemblages from coastal B.C. of this time period.

Evidence of labrets is found in early levels in the Queen Charlotte Islands at Blue Jackets Creek (Murray 1981:156), and further south at Namu in the earliest shell midden deposits between 4,700 and 4,400 BP. Tooth faceting on the labial surfaces of molars and premolars indicates that the Namu population were using lateral labrets (Curtin 1984:104-107). Tooth faceting of lower canines and incisors, indicating medial labret wear, is seen in skeletal material from Prince Rupert Harbour dated between 3,500 and 1,500 BP (Cybulski 1974).

Labrets have not been recorded on the Northwest coast south of Puget Sound. Recent excavations at the West Point site in Seattle uncovered a labret in deposits three meters below present sea level dating to ~4,300 BP (Lewarch et al 1994). Large flat circular rings of soapstone, which may be ear ornaments or pendants, and numerous beads of soapstone and other materials have been found in Washington in the Dalles-Deschutes. Grooved cylinders similar to those from Pender were also found in this area (Strong 1960: 58,128-133).

Soapstone disc beads and earspools have been excavated from sites in the Central Coast region of California. Objects resembling T labrets, which are probably ear ornaments, some of soapstone, have been found in this area and in the Central Sierra Nevada (Kidd 1964: 152, Moratto 1984: 262,263, 322,323).

The distribution of labrets outlined above indicates early cultural connections up the coast to Alaska and to the Aleutians and Kamchatka. The earliest evidence of labret use is from Pender but this is also the earliest burial with the appropriate tooth faceting. Unfortunately, the earliest burial at Namu (ElSx 1), dated to 5,590±100 BP, did not have the teeth that might have shown labret wear and also had no associated artifacts. Field work has shown that labrets are essentially limited to burial contexts and there are no earlier burials than this. Thus, efforts to trace specific directions and times of spread of early labret wearing remain frustrated. One is inclined to expect a north to south distributional process based on extant evidence, especially that from the west coasts of Alaska, but the field data available to date neither prove or refute this expectation.

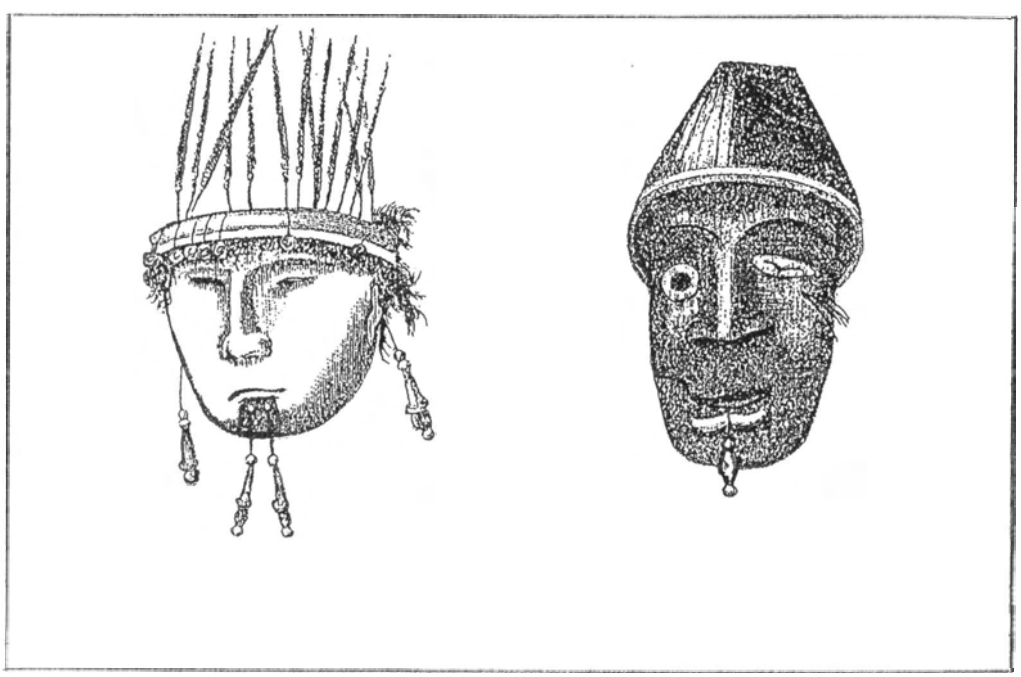


Figure 34

Men of Kotzebue Sound wearing lateral labrets and ear ornaments; and a woman with black lines tattooed on her chin. Color lithograph of a drawing done by Louis Choris in 1816-1817. (from Henry 1984: Plate 2).

Figure 35

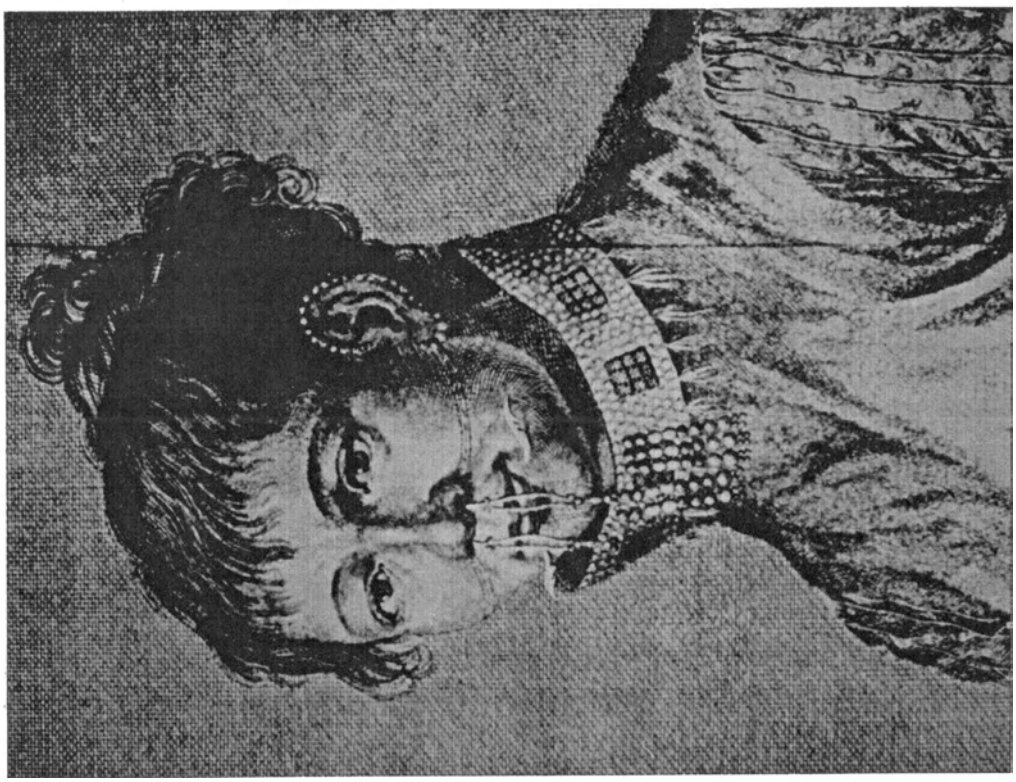
Aleutian dancing masks "showing the method of wearing the labret then in vogue" (Dall 1884: 90). Lithograph of drawings done by Luka Voronin ~1790. (from Sauer 1802: Plate XI)

Figure 36

A woman of Unalaska Island wearing a composite nose ornament, ear ornaments and barbed lateral labrets. She also has tattoos on the cheeks and chin. Engraving of a drawing by Luka Voronin ~1790. (from Henry 1984: 18)

Figure 37

A man of Kodiak Island wearing a nose ornament and a composite labret. He has lines tattooed across the nose and cheeks. Engraving of a drawing by Luka Voronin, 1791. (from Sauer 1802: Plate VI)



CHAPTER FOUR:

Role of the Soapstone Industry in Gulf Islands Culture

"Nothing is Hidden"

Maria-Francois Guédon (1984)

This chapter will examine the function of the soapstone ornaments. Function in this case means reason for wearing these ornaments as they were not used for any practical activity but to convey personal and social information about the wearer. This type of information is not readily available in the archaeological record and there is debate about whether it is possible to understand or define the meaning of these more abstruse or symbolic artifacts. The problem is compounded in this case as soapstone ornaments have not been made or worn in this region for about 2000 years. In spite of this an explanation of the *raison d'etre* of these artifacts will be attempted based on the premise that "The prehistorian is not doing his job ... if he fails to attempt some interpretation of the esoteric material from his excavations" (Carlson 1979: 6).

Analyses of any artifacts involve different levels of certainty. It is certain that the artifacts described here are made of soapstone. It is slightly less certain that the tools used to make them were identical to those described in Chapter Two and that the methods of manufacture were similar. Even less certain, but still reasonable, is the explanation that these artifacts functioned as facial ornaments. Moving to an interpretation of the meaning of these artifacts takes us to the most abstract level of their analysis. The messages they conveyed are less easily derived and must rely on a different method of analogical reasoning, one which depends more on semiotics and metaphor and less on the more comfortable certainties of physical analyses (Ucko 1989: xiv; Gell 1993: 21-23; O'Hanlon 1989:17-18). Duff recognised the metaphorical nature of these soapstone complex artifacts: "The meaning is in the relationships being expressed. The marriage of image and

artifact creates a metaphor. A metaphor is a form of equation." (1975:16). He also says of "pure form" ornaments (flared, fig. 22 a-c), "These ones, the masterpieces and very images of their kinds, may be expressions in pure form of their most essential meanings." (1975: 34, 35). Though this indicates a method of approach and suggests potential information it does not explicate the metaphorical equation. Mitchell, even less optimistic about deciphering their use or meaning, stated that "In the case of the Gulf Islands complex artifacts, the function of this distinctive class of artifacts can only be guessed. Analogy fails entirely" (1971: 61). It is assumed here however, that no cultural manifestations, including metaphorical equations, are born in a vacuum and ethnographic descriptions and depictions of these types of artifacts, and their meaning, will be used to infer their purport in the past (cf. Carlson 1979: 2). Ethnographic analogy is another area in which there is no way to measure accuracy or precision. Although the validity of this type of analogy has been debated it remains a valid key to the interpretation of coastal prehistory (Stahl 1993: 237-244; Hodder 1982).

The difference between the two approaches, physical analysis and comparative analogy, used in this study can be compared to different ways of understanding the arrangement of events which occurred in the prehistoric past. Archaeology's view of the past is strongly object oriented. It usually involves a linear time sequence with stages defined by sequential assemblages of a limited range of artifacts (Ucko 1989: xi; Hobler 1992). The 'stages' are often named after present day European site names, e.g. Locarno, Marpole and Rupert Harbour. This could be called the "objectivist" view of the past and is based mainly on physical analyses (Johnson 1987; xxi-xxxviii). In contrast, in the Pacific Northwest, the native view seems to see the past as a non-sequential milieu of place-specific ancestral, mythical and moral stories which are closely linked to the social order and religious practises of the present (Hobler 1992; Jenness 1955: 10-34; Sapir 1916). This could be termed the "metaphorical" view of the past (Johnson 1987: 65-100; Naumburg 1955: 436-439). Researchers have demonstrated that the

meanings or messages delivered by facial and body adornment, especially permanent types of adornment (tattooing, piercing or scarification), are more closely linked to social order and religious beliefs than are other more practical artifacts such as tools or hunting equipment (Gell 1993: 1-4, 8; O'Hanlon 1989: 16-18; Johnson 1987: 6, 10-11). It has also been argued that religious and socio-political structures are functionally contiguous and that changes or innovations in one will directly affect the other. This functional relationship is characterized by considerable stability through time. Hulin explains this; "As religion serves to legitimate existing social categories, it is necessarily resistant to change; for a religious system to alter perceptions of socioreligious realities is to undermine its own power base" (1989: 93). The resistence to change in these institutions is evident in the survival of myths and histories and the potlatch system on the Northwest coast despite the pervasive technological and demographic changes of the contact period. The above arguments form the basis for relying upon comparative analogy derived from ethnographies and other descriptive accounts. The information gleaned from these accounts will be used to supplement and expand on information provided by the archaeology.

Artifacts similar to types found at Pender were still worn at contact by Tsimshian, Haida and Tlingit women and by the Aleuts and people further north to Kotzebue Sound where only the men wore lateral labrets and women tattooed their chins to resemble beards. A great deal of information, especially concerning the coastal northern people, is available from the early contact period. Information from early explorers on such things as dress, ornaments and masks is mostly descriptive but in some cases the recorder inadvertently includes more contextual information. The early European explorers and traders found labrets, especially the large disc and oval labrets, ugly and disfiguring and were not loath to say so. They certainly appear uninterested in discovering reasons for wearing such obvious ornaments to display social status. Ethnographers of the 19th and early 20th century collected stories and explanations which in the aggregate help

to decode the meaning of these ornaments. Their informants by this time were no longer wearing large labrets but still remembered them and were able to communicate something of their social context and personal meaning. These early descriptions and later ethnographic accounts and studies have been invaluable sources and without them Mitchell's prognosis might well be the only one.

Universal Aspects of Facial Ornaments

It is appropriate here to briefly discuss the meaning of facial ornaments in general before embarking on an explanation of these particular ornaments and reasons for wearing them. A number of studies have been done on the importance of facial appearance and face perception. These have concentrated on the social and psychological importance of facial appearance based on tests, questionnaires and observations performed by western social scientists on modern western people and only rarely are cross cultural comparisons included (Alley 1988; Bull and Rumsey 1988; Jackson 1992). Little research has been done on the meaning of facial ornaments in 'primitive' or prehistoric societies. Many studies have focused on descriptions and the distribution of single ornament types and do not concentrate on analyses of their cultural context or meaning (cf Keddie 1989; Schultz 1962).

Studies that have been done confirm that there are many aspects of facial appearance which are universal. Research in neurology has demonstrated that there are specific neural systems that are responsive to the face; some cells in the temporal lobe of monkeys respond only to faces (Alley 1988; 143-144). The face is widely recognized as the most important area of the body for transmitting information such as age and gender during social interractions (Alley 1988:1). Besides being the source of verbal communication the face is associated with individual identity and the expression of emotions (Jackson 1992: 3; Bull and Ramsey 1988: 1). Kan (1989: 60) says of the Tlingit of the northern Northwest coast

that "the face was the main surface on which the emotions as well as the social identity of the person were depicted". Injuries to the face were an embarrassment and they were careful never to strike each other in the face.

Most social psychological studies have concentrated on defining and measuring facial attractiveness and agree that "an attractive face is nothing more than a face that most people consider attractive" (Jackson 1992: 4; Langlois 1990) and this of course will vary inter-culturally. When the social importance of the face is considered, it is not surprising that decoration, elaboration and alteration of facial features is a common human activity. Perhaps this commonality is one reason why the "psycho-social impact of most techniques of changing facial appearance remains largely unexplored by science"(Alley 1988: 2).

There are universal aspects and associations of facial ornaments, at least in non-industrial societies, which are relevent to the prehistoric meaning of the soapstone artifacts. The ears, eyes, nose and mouth are orifices which connect the internal person to the external world. All five senses are centred on the face. These, of course, are universal but emphasis may be placed on one or the other according to the importance of the function of that orifice in the various cultural contexts. Conversely, methods used to emphasize the same facial feature may vary from region to region even though the message is similar. It is obvious that differences in symbolic meanings of the same organs and their associated ornaments in different cultures can only be understood in relationship to the rest of the culture.

In non-literate societies body and facial alteration, decoration and ornaments are primarily a symbolic language used to make intangible concepts, such as beliefs and values, tangible and visible (V. Turner 1967: 49-50; Ray 1987: 67). This symbolic language is metaphoric in nature and best understood or translated into literal "propositions" by the rules of semiotics or semiology, the study of signs (Johnson 1987: 65-74;). Terrence Turner (1971: 103) notes that the labrets, ear plugs, penis sheath, leg and arm bands and body painting of the

Northern Kayapo of Central Brazil "make up a symbolic language that expresses a wide range of information about social status, age and sex. As a language, however, it does more than merely communicate this information from one individual to another: at a deeper level it establishes a channel of communication within the individual between social and biological aspects of his personality". Seeger comes to similar conclusions about the Suya, another Ge speaking tribe of Central Brazil; "The ear discs and the lip discs of the Suya are symbols with a variety of referents which unite the poles of "natural phenomena" (the organs and senses) with components of the moral and social order"(1975: 221). Both men and women of the Hageners of New Guinea wear large ornaments through the septum of the nose, especially in conjunction with other body ornaments and painting at celebratory dances. The Stratherns (1971:1) emphasize that self decoration for the Hageners "... is a medium through which people demonstrate their relationship to their ancestral spirit, express certain ideals and emotions, in short make statements about social and religious values".

This dichotomy of the internal-external, biological-social and physical-spiritual aspects of body decoration is also seen on the Northwest Coast. Ear and nose ornaments and face painting were used by all coastal groups and tattooing by most (Suttles 1990). The Tlingit, Haida and Tsimshian practised a number of methods of facial decoration, labrets, ear and nose ornaments, tattooing and face painting, which were indicative of the social order and inheritance of the wearer (Kan 1989: 49, 60). The piercings of ears, nose and lower lip were aides to "socializing the orifices of the head, which mediated between the inside and the outside of the body" (Kan 1989: 61). Initial piercing for the ornaments is always done at particular times in the life cycle, or during rites of passage, i.e. christening or naming ceremonies, puberty or 'coming of age' ceremonies and sometimes after childbirth.

Among the Eskimo tribes north of the Yukon River boys received their first labrets at puberty when the voice broke and girls were tattooed on the chin after a

period of isolation at the onset of menstruation. Further south, between the Yukon river and Kuskokwim bay, both men and women wore lateral labrets, albeit of different types, and the incisions for these were made at puberty (Gritton 1989:189)

Some accounts of the Tlingit say that lip piercing was done soon after birth and others that it was done at the first puberty confinement. Dixon says of the Tlingit in the late 1760s, "When girls are about fourteen to fifteen years old, the center of the lower lip in the thick part near the mouth is pierced and a piece of copper wire inserted to prevent it from growing together" (Krause 1956: 96). La Perouse in the 1780s describes the solid oval labret of the Lituya Bay Tlingit; "All the women, without exception, have the lower lip pierced the full length of the mouth ... and in this incision they have a kind of wooden spoon without a handle, ... The young girls just have a nail in the lower lip and the married women alone have the right to wear the spoon" (Krause 1956:96). Lisiansky describes a high ranking Sitka woman ("the ambassador's wife") in 1805. She wears a solid oval labret and her child, "... though it could not be more than three months old, had the nose and lower lip pierced and hung with strings of beads" (Lisiansky 1814: 225). He says that the lower lip and also the septum were perforated following a purification bath twenty days after birth (ibid: 201). Von Langsdorff, however, also describing the Sitka Tlingit in the early 1800s says; "When a girl has obtained her thirteenth or fourteenth year, a small hole is made in the centre of the under lip, into which is run, at first, a thick wire, then a double wooden button..." (Von Langsdorff 1968: 115). All accounts agree that the first labret, other than a pin or string, was inserted during the girls' first menses ritual.

The Haida girls had their lower lips pierced for the first time at puberty. Caamaño descrbes chief Cunnyha's eldest daughter, Koota-Hilslinga in 1792; "She wore no wooden toggle in her lower lip and was indeed a very good looking girl" (Cole 1980: 71). Eight months after her visit with Caamaño, Koota-Hilslinga was

drawn by Bacstrom and has a pierced lower lip with a long piece of sinew or string suspended from a hole below the lower lip (Cole 1980: 71; Henry: 116).

The Coast Salish pierced the infants ears and or septum four days after birth and, of course, head shaping commenced shortly after birth as well (Barnett 1955:75). Nootka babies had their ears pierced shortly after birth and were given their first name (Arima and Dewhirst 1990: 405).

These liminal periods in life are often considered dangerous or 'polluting' in the sense that they are biological events or transformations that are internal to the person and therefore more closely related to the intangible spiritual or uncontrolled, wild, 'not social' world. These transformations, at birth or puberty, can be partially prescribed through ceremony or ritual which brings the biological event into the social realm where it can be tamed or controlled. Conversely, surviving such contact with the natural, as opposed to cultural, world was empowering and the status of the initiate was increased. Piercing and other types of body alteration, including head shaping, made the person more "civilized" or more human (Dissanayake 1992: 105-112). This taming of the wild anti-social aspects of the spirit world is also the main theme of the Hamatsa initiation ritual of the Kwakiutl of the central coast (Walens 1976).

Amongst the Suya children are not expected to understand social mores or to behave well. This situation changes at puberty when instruction in proper adult behaviour begins. Both girls and boys have their ears pierced at puberty "in order to achieve correct behaviour" (Seeger 1975: 218). In addition boys have their lips pierced in the late teens, when they are fully adult and expected to behave accordingly. Ear, nose or lip piercing, and also head shaping, are ways of socialising the body and emphasizing certain behaviours.

This civilising and socialising began even before birth on the Northwest coast. Pregnant women would speak to the fetus, instructing it in correct behaviour (Kan 1989:59). The unborn baby, even though for the Tlingit it is a reincarnated matrilineal ancestor, is still a member of the 'other' world where

untamed cannibal like behaviour is the norm. Unborn babies were greedy voracious little cannibals who took their sustenance from the mother. Breech births were especially feared because these babies seemed to have stronger connections to the other 'cannibal' world. The socialising process begins in earnest at birth and piercing the ears and septum and especially head shaping are aides in this process. Crying was considered uncivilised and binding the baby to a cradleboard and putting pressure on the head had a soporific effect (Barnett 1955: 75, 131: Harper 1971: 93; Jenness n.d: 52). Head shaping was extreme among the southern groups and was accomplished by binding or strapping the head to the cradleboard for up to a year. The Tlingit molded the newborn's head by hand. Von Kotzebue witnessed this manipulation at Sitka in 1825; "Immediately after the birth, the head of the child is compressed, to give it what they consider a fine form, in which the eyebrows are drawn up, and the nostrils stretched asunder" (Emmons 1991:257). This social training and physical shaping continued through childhood. Children, especially those of high status parents, were discouraged from talking loudly or too much, their diet was strictly regulated and their physical stamina was bolstered by cold baths and flagellation with cedar or hemlock switches (Barnett: 1955: 131,141; Jennes n.d.: 52). This social and physical training was necessary to achieve physical and spiritual purity which ensured the child's success in future endeavours (Kan 1989: 90).

Status and Rank

The most "basic" status divisions are based on criteria of age and sex. At this basic level of differentiation the status of an individual will change at certain points in the life cycle; birth, puberty, marriage and death. Status can also be expected to increase with age and the ability to aquire wealth or have children (Rothschild 1990:5; Schulting 1994: 21-22). These natural, or automatic status changes are marked by ceremonies or initiation rites in all types of societies from simple foraging societies to hereditary chieftainships and even modern states.

In more complex societies, where socio-economic inequality is evident, a correspondingly complex heirarchy of status positions, which may cross-cut age and sex criteria, can be expected. In this situation status is often 'ascribed' or inherited as well as earned or 'achieved'. The initial development of economic inequality is dependant on a surplus of subsistence requirements and the storage and control of this surplus (Schulting 1994:18; Hayden1990). As society becomes more segmented status groups may be distinguished by differences in material possesions. Piercing, in conjunction with 'christening' or coming out ceremonies indicated a change in basic status of the subject. In all cases examined here ornaments, or other facial alterations, indicate the status of the wearer and distinguish groups by sex, age and affiliation (Faris 1972: 21; Seeger 1975: 218; Kan 1989: 61).

Throughout the Northwest coast girls were isolated and confined and fasted during their first menstruation. Boys had to go alone into the forest on a vision quest which, for the Salishan boys, could last up to a year. This venture alone into the wilderness to find his spirit guide also brought physical and mental maturity. Salishan girls were secluded and fasted for four, eight or sixteen days and this was followed by purifying baths in a lake (Jenness 19--:56-57, Hill-Tout-1902: 14, Barnett 1955: 150-152). Tlingit girls were secluded for four months, a year, or up to a maximum of two years for daughters of high ranking chiefs (Jonaitis 1988: 196; de Laguna 1972: 519). The first regular labret, introduced at this time whether or not the lip had been previously pierced, indicated her transformation from childhood to maturity and marriageability. Kan goes so far as to say that "this decoration was the mark of womanhood par excellence" (1989: 61).

Piercing the ears, septum and lips not only indicated a change in status from non-human to human at birth and from child to adult at puberty but also indicated rank or socio-economic status. North of the Yukon the size, material and type of labret signified the status or wealth of the wearer. Labrets with blue stone insets were particularly valued and indicated the wealth and therefore

status of the owner. As late as the early 1900s Vilhjalmur Stefansson reported that one blue bead could be traded for five cross foxes, two silver foxes, a sled with a team of five dogs and twenty slabs of bone (Gritton 1989: 186). According to Spencer a pair of lateral labrets with beads was worth a large whaling boat called an umiak (1959: 156, 242).

Children of high ranking Tlingit, Tsimshian and Haida parents were involved in the potlatch system from birth. High ranking Tlingit also pierced children's ears and nose, or gave them tattoos, during a special potlatch for children associated with a memorial potlatch (Kan 1989:87-88). Only the wealthiest of aristocracy could afford to sponsor the necessary feasts and potlatches during which their children had the ear and nose piercing done and were given the accompanying hereditary names and privileges (Kan 1989: 87-88; Garfield 1939: 194; Murdoch 1936). These hereditary rights were usually passed on during a memorial potlatch. Wealth distributed at a memorial potlatch was later returned with interest. Only the very wealthy chiefs could afford separate feasts for their childrens' investitures as this expense could not be recouped. As Kan (1989: 88) puts it, "Aristocrats used every opportunity to reiterate and raise their children's and through them, their own status and rank". Olson (1967: 68-69) describes such a potlatch given by a Tlingit chief for the children of his house. On the fourth day the children have their ears pierced and are tattooed; "The host then distributed the property, most of it going to the chiefs who did the ear piercing or tattooing. An average would be fifty blankets for ear piercing or tattooing the hands, one hundred blankets for a chest tattoo". According to Veniaminov (1984: 424) only people with pierced ears were considered aristocrats. Each perforation required a separate feast up to a maximum of eight and the right to give these feasts was hereditary.

Olson (1969: 51) was told of another such potlatch given by a Taku Tlingit chief to avenge an insult to his daughter (she had been called "little dog" by another child): "This eighth potlatch and ear piercing finished the series. No one

could have done more for his children than this. The five children of Yetlnawuh were present to see the final glorification of their father". A slave was given away at this potlatch and "the door end of the house was filled almost to the roof" with property to be given away.

Decorations worn by higher ranked people were made of more valuable materials like copper, sharks teeth or abalone shell, rather than wood or bone. Emmons (1991: 245) reports that "the largest labrets were generally of wood for the sake of lightness, and in some instances were elaborately inlaid on the upper surface with haliotis shell. These were worn only by older women of high rank." One of Olson's informants (1969: 49) describes a wealthy Sitka chief's daughter: "In those days (about 1820) only the rich and wellborn could wear labrets ... and the bride was wearing one of copper valued at five slaves". Slaves were not entitled to wear labrets or other ornaments.

The size of the labret also indicated the status of the wearer. Almost all of the early descriptions indicate that the highest ranked women of the Tlingit, Tsimshian and Haida wore the largest labrets: "...it is considered here as a mark of the highest dignity, and held in such esteem that the women of consequence strive to bring their lips to as large a size as possible" (Lisiansky 1814: 244). Langsdorff on Kodiak Island in 1805 observes that "All the women, without distinction, have it but the circumference of the piece of board seems to mark the age or rank of the wearer. ... but the wives of the chiefs have it much longer and broader. I have even seen ladies of very high rank with this ornament full five inches long and three broad" (Dall 1882: 89). MacKenzie reports that the Haida women in competition for the highest status would increase the size of the labret until the lip split. They then wore the labret tied to the hanging lip (1891: 55).

It is interesting to note that the informants often seem unaware of or unable to explain the esoteric or symbolic meaning of the ornaments they wear. They take these reasons for granted perhaps in the way a businessman takes wearing a tie for granted. The Suya said their labrets and ear discs were "good"

and "beautiful"(Seeger 1975:223). The Hageners said that ornaments are worn "to make the crowd cry out and admire them" (Strathern 1971;126). The northwest coast people responded similarly. Paul Kane heard reference to " 'Beautiful Biglips' ... Great importance is attached to the size of the lip, as it constitutes the standard of female beauty" (Harper 1971: 103,107). The type of information conveyed by informants, and their observations, often lead to some insights concerning status, rank, political or familial affilition. Nevertheless, questions about meaning, which were rarely posed by explorers or early ethnographers, cannot be expected to reveal deeper causalities. De Laguna (1972: 792) suggests that the Tlingit did not have a developed cosmological scheme, but myths, rituals and sometimes unrelated statements or actions made by informants reveal basic concepts and their conceived structure of the universe was also reflected in their social organization and daily life. As in many cultures the other-world appears to be only relevant by the reflection it casts on this world. Thus on further examination it is found that labrets, earspools and other types of body alteration always refer to, or infer aspects of cosmology and, or mythical ancestors.

The design on the Suya lip disc represents the Pleiades constellation and the Pleides are the design on the lip disc of "a man in the sky"(Seeger 1975: 218). A Hagener clan can only acheive success if they have the support of their ancestral ghosts and decorations can be described as an omen of the ghosts; "Shabby, dull ornaments would mean that the clan has been unsuccessful in securing the help of it's own ghosts ... whereas if decorations are splendid, this implies good luck for the future also" (Stratherns 1971:132, 193).

The Haida Bear Mother, ancestress of the bear clan and wife of the Bear spirit, is depicted wearing a large solid labret as is Lennaxxidaq the wealth bringer, or Property Woman, of the Tlingit. Tsauda, an ancestral half-god of the Tsimshian, has a daughter who is born with "four holes in each ear and a hole in her lip and in the septum of the nose as a sign of her high rank". (Boas 1916: 303; Jonaitis 1988: 199, Hymes 1990: 595).

The hole or holes are important aspects of the ornament wearing complex on the Northwest coast. The symbolic meaning of the hole underlies, or is a basis for, the different meanings of the ornaments, and the hole may be a Northwest Coast 'universal' aspect of these types of ornamentation. Holes; the smoke-hole, the door-hole, which translates to "mouth of the house" in Tlingit (Kan 1989: 64), were passageways from one world to another and the area around these holes was liminal. The beach, the intertidal zone, an area between land and sea, and the area behind the village, between the back of the houses and the forest, were also liminal areas. Thus the slaves occupied the area near the dangerous doorway and their dead bodies were deposited on the beach. Chiefs, on the other hand, occupied the back or "head" of the house where the sacred ancestral regalia were also kept. Blowing through holes was one way of connecting with, or influencing the spirit world. The entrance to the 'higher' spirit world for those who died by violence was a "mouth"opening in the clouds (de Laguna 1972: 770). "When a woman met a grizzly bear she took out her large labret and blew toward the bear through the hole in her lip. Then the bear would not touch her" (Swanton 1970: 455). Blowing, or putting things through the lip hole figures in some of the myths where it invokes unusual powers (Boas 1916: 299-300). "Before her lip was pierced for the labret a woman fasted, for otherwise she thought that the hole would spread and take her mouth entirely away" (Swanton 1970: 437). It is not surprising to find that more holes in the ears and larger lip holes are prerogatives of higher ranked families who are able to`` control, or had access to, more of these god-given powers.

Differences in Symbolic Meaning

The symbolic meaning of the ear, nose, mouth, etc. may be different from one culture to another. Decorating or emphasising certain features or body parts indicates that those features have more social significance than other features. For instance the ears and hearing may be embellished with earrings to emphasize

the 'listening' qualities of a person and imply also that they are passive and obedient, not outspoken or vociferous. Chamberlain (1905) notes a connection in Indo-European languages between 'hearing' words and morality, tractability and obedience. On the other hand, amongst the Suya, hearing and public speaking are complementary 'aggressive' qualities (Seeger 1975) and "I hear" is synonymous with the English "I see" (I get the picture) meaning, in both cases, "I understand". Adult Suya men and women wear large ear discs but only adult men wear the large disc shaped labrets in the lower lip. The Suya place great emphasis on speaking ability and this is an important characteristic of the adult males and especially leaders. A primary duty of leaders is to solve disputes by public speaking and some types of oratory are restricted to chiefs and ritualists. The eyes and vision are characteristics connected with witches and eyes are not ornamented (Seeger 1975: 214-216).

Amongst the Fali of Africa it is the women who wear labrets and here again they are associated with verbal ability. Women pass on information, originally given to an ancestral woman by a frog, to their daughters. The labret is said to make the women look like frogs which reinforces their teaching (Seeger 1975: 221).

The Tlingit labret, worn only by women, seemed to indicate the opposite. The spoken word was powerful and could be used for good or evil purposes. Talking too much, gossip or careless words, especially when spoken to the opposite moiety, could cause dissension and wars. The Tlingit, at least the higher ranked people, were careful to control their speech for this reason. The labret was said to help the woman speak slowly and quietly and discouraged too much talking (Kan 1989: 61-62; De Laguna 1972: 444). Vancouver's encounters with the Tsimshian in 1793 seem to contradict this aspect of labretifery. On two occasions he was met by armed Tsimshian demanding fire arms and ammunition instead of the proferred trade goods. In both cases the men in the canoes were vociferously directed and urged to attack by authoritative women wearing large

"impressive" labrets. In the following year Lieutenant Whidbey narrowly escaped a Chilkat (Tlingit) war party. Five large canoes in this party were each commanded by 'aristocratic' women wearing labrets (Emmons 1991:347-349; Vancouver 1801: 133-137, 171, 429-435).

Throughout the Northwest coast great emphasis was placed on food and feasting. Large gaping mouths, protruding tongues, and teeth are frequent themes seen in the traditional art of the Northwest coast (cf. Jonaitis 1988: 193). Many of the most powerful of the animal spirits, Raven, Bear, Wolf and Killer Whale are voracious omnivores. Feasts were a major component of the potlatch and food was served in massive wooden containers. These serving dishes, bowls, ladels and spoons were often decorated.

The large solid bowl shaped labrets were also symbolically connected to the importance of feasting which in turn is related to the potlatch and wealth. Portlock in 1787 describing the large bowl labrets adds, "When they eat, it is customary for them to take more in the mouth at a time than they can possibly swallow; when they have chewed it, the lip piece serves them as a trencher to put it out of their mouths on, and then they take it occasionally" (Emmons 1991: 247). In another translation of this passage "... they are apt to use the labret for a plate on which to lay the masticated food and for this purpose it is occasionally removed" (Krause 1956: 96). Von Kotzebue also noted the use of the labret as a dish or spoon; "During the meal [of rice boiled with treacle], the women were much inconvenienced by their lip troughs; the weight of the rice made them hang over the whole chin, and the mouth could not contain all that was intended for it" (Emmons 1991: 248). Another account describes a meal served to "eminent Kolushans" (Tlingit) on board the Russian frigate Krotkoi; "... the lip plug was removed in spite of the difficulty of contracting and expanding the lower lip. During the meal several old women laid the wooden plates they had removed from their lips beside the European plate from which they were eating" (Krause 1956: 98). Captain Marchand in Sitka in 1791 describes the labret as resembling

"the bowl of a table-spoon" (a modern serving spoon) which makes it appear as if the women had "two mouths" (Emmons 1991: 247). Some of the Tlingit labrets are shaped more like bowls or deep saucers: the edge of one surface is extended and they resemble a shallow bowl on a pedestal (illustrated in Gunther 1966: 60). Many of the oval labrets were also dished out on one surface and were described as "trenchers" or "troughs".

The ears were also emphasized and ear ornaments were worn by all the coastal groups. Tlingit ear ornaments had names and were often worn in conjunction with other ornaments and face painting to depict a family story or crest. Swanton asked his Tlingit informants to fill in face paintings on pre- drawn blank faces and to explain the different designs. The informants had to draw on the ears as many facial paintings had accompanying ear ornaments. Informants were able to distinguish and name villages and families who owned different face paintings and ornaments (Swanton 1970: 486-487, Plates XLVIII to LVI).

The shape and types of labrets and other ornaments varied from place to place. These different styles were indicators of tribe or family membership and in many cases were inherited with names or stories. One of Swanton's informants told him that; "The broad labrets are said to have been made by old women, but the long ones by men to give to the women they were in love with" (1970: 437). Juan Crespi, sailing with Perez in 1774, reported seeing Haida women with wooden labrets which were painted (Gunther 1972:10). The Tlingit wore bowl or disc shaped labrets and oval labrets and the Haida and Tsimshian wore mostly oval labrets (Niblack 1890: 256; Gunther 1966: 61- 62). Emmons thought that the oval labrets were indicative of Aleut influence. These stylistic differences are seen in other areas where similar ornaments are worn by different tribes in a culturally homogenous region (Faris 1972: 36). The Hageners and Suya were well able to distinguish differences between their own decorations and those of other groups in their region, often by criteria indiscernible to the anthropologists (Seeger 1975: 218-220; Strathern and Strathern 1971: 127-129;).

Summary

With reference to the Pender material, it has been shown in this chapter that there are certain aspects of ornaments which are common throughout many groups around the world who wear them. The most tangible inference is that the prehistoric soapstone ornaments were worn in, through or suspended from a hole in the ear, lips, nose septum or combinations of these. Ethnographic accounts agree that they generally indicate a successful transformation from one state, or period of the life cycle, to another and they are linked to aspects of the belief system or cosmology. Carlson argues that in many respects the basic tenets of the belief system on the Northwest coast have not changed much in the last 5000 years (1979). The decorated antler spoons and clam shell bowls excavated at DeRt 2 and dating back to about 3700 BP provide direct evidence of feeding the dead, a major feature both within and external to the memorial or funerary potlatch (Carlson and Hobler 1993: 45).

In most cases in world ethnography these types of ornaments also indicate the relative wealth or socio-economic status of the wearer, whether this is achieved or ascribed. Ethnographically on the Northwest coast, labrets validated mythical ancestral relationships and thus also validated inherited socio-economic status. The intact burials at Pender, one as early as 5100 BP, have a range of grave goods including ornaments and these may reflect differences in socio-economic status . The differentiation of ornamants into a variety of labrets, and composite parts beginning at about 4000 BP may also signal growing social complexity with corresponding divisions of socio-economic status.

In world ethnography different types of ornaments, and styles of similar ornaments, were identified with family, group, or region. Archaeologically in the north on the Nass River Cybulski found that by 1500 BP only women were wearing labrets (1991: 11-18). Evidence from earlier burials in this area, from ~4000 BP to ~2000 BP, at Prince Rupert Harbour and Blue Jackets Creek (Queen

Charlotte Islands), indicates that both men and women were wearing labrets (Cybulski 1994: 79). This may well relate to the ethnographic pattern of matrilineal descent among the Tlingit, Haida and Tsimshian. Possibly related is the fact that at Pender only females were found with antler spoons. Other distinctions may also be seen prehistorically on a regional scale. At Namu and at Blue Jackets Creek labrets were worn laterally in contrast to Prince Rupert Harbour and Pender where labrets were worn medially (Cybulski 1994: 79). For the post contact Nootka, Kwakiutl and Salish, descent was bilateral and though they wore ear and nose ornaments and shaped their heads, they did not wear labrets after about 2000 BP.

In some world ethnographic areas ornament size and rare raw materials were certainly important status indicators. On the North coast materials such as copper and haliotis inlay were particularly prestigious. Soapstone is not available in the Gulf Island and had to be obtained from distant sources. Soapstone ornaments were therefore more 'expensive' than similar ornaments of shell or other locally available materials. Soapstone was also used exclusively for non-utilitarian items, ornaments and later soapstone bowls and pipes. This can only strengthen the argument that soapstone was a prestigious material. As for size, extremely large labrets definitely indicated high status among the Haida, Tlingit and Tsimshian. The large one piece ornaments, oval labrets and earspools, which first appear late in the Main Midden deposits at DeRt 2, may well indicate the higher status of their owners, as they do later on the northern coast of B.C. and in other cultures, particularly the Aztecs of Mexico. Depictions of large earspools and labrets on stone bowls also strengthen this argument (Duff 1975: 65, 144-145).

Chapter Five

Discussion and conclusions

The materials that are the main subject of the thesis are a large collection of soapstone facial ornaments that were recovered from excavations at the site of DeRt 2 in the Gulf Islands of southern British Columbia. They range in age from more than 5000 years ago to some 2000 years ago. The collection is unique in the degree to which it reveals an aspect of Native life that is usually not visible to the archaeologist. The main job of the thesis is to characterize the collection: to explore its types and styles and to examine its raw materials and methods of manufacture. Secondarily, I have attempted to look at the way these materials are distributed in time and space. Lastly, I have tried, largely through historic and ethnographic analogy, to see how they may have fit into Indian life at that remote time. My success has varied in proportion to the abstractness of each of these goals. One is tempted to treat the more pedestrian of these goals as the less important but in fact they are the building blocks upon which this study, and any subsequent ones must be based.

The artifacts themselves are well made. The finished artifacts are polished and some are decorated. Though many of them are broken none show signs of wear from use as tools. The limitations of the raw material, especially its softness and fracture, also point to a non-utilitarian function. Based on the evidence from the raw material alone the most logical explanation of the artifacts of soapstone excavated at DeRt 2 and other sites in the Gulf Islands is that they are ornaments or parts of ornaments. Certainly in both material and finish they resemble a number of types of ornaments such as ear spools, conventional labrets, and beads which were worn to convey information about the wearer.

There are no sources of soapstone on the Gulf Islands. The nearest

documented sources are along the Hozameen fault where it meets the Fraser, Coquihalla and Skagit rivers. Of these the Skagit source is the closest to Pender Island at about 190 km, 60 by sea and 130 up the river. The Coquihalla source is about 215 km away, 40 km by sea and 175 km up the rivers, and the Lytton source is about 300 km from Pender, about 260km from the river mouth. Distant sources also favour the argument that these are exotic or "special" artifacts. However, none of these soapstone sources is as far from Pender as the Oregon obsidian sources are from Namu. Trace element analyses on obsidian artifacts from the Central Coast show that Oregon obsidian was in use there before 4,000 BP (Carlson 1984: 5). Though obsidian may have been considered an exotic raw material there is no doubt that its value lay in its ability to perform utilitarian tasks.

The Northwest Coast people were known to travel long distances during the 18th and 19th century for trade and warfare. The Haida took slaves from as far as Puget Sound and the Tlingit were known to have paddled from SW Alaska to Puget Sound and even as far as the Columbia river mouth to raid or exact revenge (Emmons 1991: 45, 332-334). Some trade routes at contact stretched for hundreds of miles over very difficult routes. Routes to the interior via the Coumbia, Fraser, Bella Coola, Skeena and other large coastal rivers are well documented in the early contact period.

As for the origins of these types of artifacts, a review of the literature shows that labrets similar to those found in the Gulf of Georgia are not so unique and unusual in the prehistoric past as we might think. Labrets have been found in various areas of the world and over a time span of 8,500 years. One must bear in mind that this extensive archaeological distribution reflects only ornaments of non-perishable materials. During the European Aurignacian, as early as 35,000 BP, exotic raw materials, including shells and serpentinite, were brought from sources over 100 km away and made into beads (White 1989). It is likely that some form of personal ornamentation was part of the material culture of the first humans to set foot in the New World. The earliest documented stone bead in

North America, from Charlie Lake Cave in northeastern B.C., is about 10,500 years old (Fladmark et al. 1988: 371-384 and fig. 5). Personal adornment has been around for a very long time and specific kinds of ornaments were probably re-invented independently in a number of areas.

Although there is no evidence to confirm that the soapstone ornaments from the Gulf Islands were independently invented there this cannot be entirely ruled out given that the earliest dates in North America for such items are from DeRt 2. The most similar ornaments to those excavated at Pender are found to the north in coastal Alaska. Artifacts that "appear to be labrets", stone beads and pendants, leaf shaped points, burins and wedge shaped cores are found in the Late Ushki culture on the Kamchatka penninsula with 14C dates between ~10,000 and 11,000 BP (Dikov 1988: 12; 1989: 8-11). This assemblage, minus the labrets, is similar to the earliest components in northwest Alaska and also Namu. Component II at Hidden Falls has labrets and other artifact types in common with the Mayne and Locarno phases of the Gulf of Georgia. The later button and T labrets of Kamchatka are almost identical to types found north of the Yukon River and very similar to those found at DeRt 2. The few artifacts directly analogous to some of the composite ornament parts from the Gulf Islands have been excavated in the Aleutians and the Kenai penninsula. Composite labrets, ear and nose ornaments were still worn in these areas at the time of European contact. Given the evidence available, especially from the Ushki I - V sites and the Aleutians, one is inclined to expect a north to south distributional process. The field data available to date from this early period do not include many burials which might verify or refute this expectation.

The soapstone ornaments are characteristic of the Mayne Phase in the Gulf Islands. Due to the nature of the site at Pender a definitive seriation of types is not possible however some general trends and changes in types can be distinguised. The earliest types are simple button and T labrets and there is evidence of diversification in ornament types during the Mayne phase and into

the Locarno. By the Marpole phase large labrets, earspools, and composite labrets are no longer worn in the Gulf of Georgia and head shaping has become prevalent. By this time ritual feeding of the dead has been replaced by burning food for the dead. There has been no small amount of debate concerning the cultural associations or successor(s) of the Locarno in the Gulf area. The Locarno has many elements in common with early cultures to the north, including labrets and composite ornaments. In contrast, Marpole has similarities with interior types. Theories of migration and population displacement have been advanced to explain the apparent differences between the two phases (Locarno and Marpole). On the other hand, environmental and internal developments have been invoked by others to explain these same differences (Burley and Beattie 1987; Ames 1991; Cybulski 1994; Suttles 1987: 256-264; Suttles and Elmendorf 1963). There are two basic choices; either the changes that came at the end of Locarno were imposed by pressure from outside the area; or they are an internal change in preference. The earliest evidence of deliberate head shaping, again from DeRt 2, suggests that this was a local innovation which spread along established trade routes eventually reaching as far north as Bella Coola and inland to the Flatheads of Montana. The demise of the soapstone industry would suggest an internal development possibly influenced by increased communication with southern interior peoples and less communication with the labret wearing groups along the coast to the north. Earspools, large oval labrets and head shaping co-exist over more than 500 years from the Locarno into the Marpole culture phase in the Gulf of Georgia. Burnt ornaments in late Locarno midden deposits at DeRt 2 may also indicate a long overlap. Of course earlier artifacts may have been burnt by accident when newer burials were put in. However most other soapstone artifacts from the same time range were not burnt. The slides may have been burnt on purpose with burning food and articles for the dead.

One of the changes at the end of the Locarno is the replacement of soapstone with coal (jet). Coal artifacts are not found at DeRt 2. They are found at

DeRt 1, and in other Marpole components in the Gulf of Georgia. Is the shift to coal at the end of Locarno merely a change in preference? Black is certainly a preferred colour and figures prominently in later art. Coal also burns and may have been preferred for the reason that it could be sent, through fire, to the spirit world upon the death of its owner. Could sources of soapstone have been cut off due to new ownership of sources or new arrivals? Soapstone bowls found in the lower mainland during the Marpole phase could have been imported already manufactured. That some soapstone use persists is seen in the bear and other carvings of the Baldwin Phase of the Fraser Canyon, the soapstone bowls of the lower Fraser, and later in the Lower Columbia river area soapstone was used for pipes and figurine bowls (Borden 1983: 149-163).

As for use and meaning of these objects, ethnographic comparisons suggest that the Gulf Islands materials were worn in, through, or suspended from, holes in the lips, ears and nose. This is in part confirmed by the presense of wear facets on teeth found in context with the soapstone artifacts. Their function was to convey personal and social information about the wearer. That the ornaments worn in these pierced areas were not simply fashionable is brought home in the experiences of a number of early Europeans on the coast who attempted to acquire them and found them simply not available. Native women refused to part with labrets. They could not be bought or traded for, even when exorbitant prices were offered. La Perouse in Lituya Bay in 1786 remarks "We sometimes prevailed on them to lay aside this ornament; but it was with difficulty; and they made the same gestures, and testified the same embarrassment, as an European woman on discovering her bosom" (Emmons 1991: 246). Most of the artifacts in this study do indeed have analogs in history and ethnography and these have been invaluable in the exploration of the role of these types of artifacts in the lives of the ancient Gulf Islanders. A number of interesting connections and conclusions concerning the role of these ornaments in society have been found in the ethnographic and early contact record. Kan, though his field research was

conducted as late as 1979 and 1980 has provided new insights into historic lip ornament use and meaning (1989). In world ethnology facial piercing for ornaments was done to mark life cycle changes, especially birth and puberty. The ethnographies also show that within any group the presense of a labret or related facial ornament or its size and type indicate the owner's position within that society. In many cultures only higher ranked individuals are entitled to wear certain ornaments and for the Aztec different types indicated the rank and of the wearer. This indication can be as simple as differentiating pubescence, or marriage but more often shows subtle variations in wealth, influence, or heredity and is closely linked to other social structures. In an ethnographic example Gritton shows this obvious relationship in his account of what happened when the Alaskan Inuit traditional hunting and whaling methods were superceded by commercial whaling in the 1840s: "The function of these art forms, [lateral labrets] essentially manifesting one's place or role within the heirarchy of hunting life -- became obsolete as the way of life itself disappeared"(1989: 190) .

Labrets in the ethnography have come to be regionally and ethnically specific so that at least by the historic period one could recognize the origin of foreigners from the type of facial ornaments they are wearing. The archaeological record on the Northwest coast may show the beginnings of this regional diversification as early as about 4000 BP. Schulting's archaeological study of the Plateau shows that grave goods reflect socio-economic status (1994). Burials at DeRt 2 show status differentaition at ~4000 BP as reflected in the co-occurrence of facial ornaments with other "valuable" grave goods.

We are left with the final question of whether the role served by these ornaments disappeared with them or whether it continued only to be expressed through certain new practices and their material concomitants. The soapstone bowls may have assumed some of the meanings previously expressed by large labrets. Two stone bowls, one from Quatsino (Kwakiutl) the other from Kiusta (Haida) seem to represent wide open mouths, bowls, and labrets all at the same

time (Duff 1975: 128, 144). The function of these bowls is unknown. They may have been tobacco mortars, paint dishes or used as ceremonial dishes. Head shaping comes in with the decline of the soapstone industry and could have taken over some of its symbolic functions. The earliest known deliberate head shaping on the northwest coast is found at Pender at about 3600 BP. Head shaping has antecedents in the distant past and it has been tentatively suggested that this practise goes back 60,000 years in the Old World (Trinkaus 1982). Head shaping is well documented in the Near East by 10,000 BP (Meiklejohn 1992). Though head shaping may not have been 'invented' here to replace soapstone ornaments the reasons for this practise in the historic period have elements in common with piercing for ornaments. At Pender the earliest evidence for deliberate head shaping is from an individual who was buried with two antler spoons and another artifact. This would indicate that head shaping was practised initially by individuals of high status. The Tlingit, though they didn't bind the head, pressed and shaped the baby's face and body and they also pierced the newborns ears and lips for ornaments.

The central concept of the thesis is that these objects represent a complex set of cultural practices expressed through personal adornment. Their chronological distribution shows diversification and elaboration over time in the Gulf Islands and then their gradual disappearance. Dating at the moment shows an apparent origin point in the Gulf Islands but this may simply be a result of lack of sufficient burial data to the north, or to the south, along the coast. The thesis affirms the essential integrity of the ethnographic record on the coast and its relevance to archaeological interpretation despite sometimes distant geographical and chronological separation.

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APPENDIX 1

Metric characteristics of soapstone Artifacts.

Artifact types with their mean dimensions, and the range and standard deviation of these. Artifacts with one or more measurable dimensions are used in appendix 1.1

ARTIFACT TYPE	N	LENGTH/DIAM.			WIDTH			THICKNESS			WEIGHT		
		range(mm)	mean	s.d.	range(mm)	mean	s.d.	range(mm)	mean	s.d.	range(g)	mean	s.d.
One piece ornaments													
Labret, button.	7	19.0-40.0	29.8	6.7	10.5-21.6	15.2	4.8	13.1-18.3	14.8	1.8	3.3-8.6	6.3	2.5
Labret,"T"	5	26.7-32.9	29.9	3.1	13.0-26.1	16.8	5.4	3.3-11.3	6.9	3.1	1.1-5.6	3.2	2
Labret, oval solid	1	74.1	-	-	31.7	-	-	17.2	-	-	65.8	-	-
Labret, oval ring	10	65.6-72.2	68.3	3.5	32.2-40.8	37	4.4	15.7-20.5	17.4	1.5	23.6-40.7	36.7	5.7
Earspools	7	44.0-57.5	49.8	6.9	-	-	-	14.8-17.3	16.4	1.4	97.6	-	-
Comp. Ornament Parts													
Bead, tube	1	14.5	-	-	-	-	-	6.1	-	-	0.4		
Bead, small disk	26	4.1-8.5	7.1	0.9	-	-	-	1.6-4.1	2.7	0.6	0.15-0.4	0.26	0.7
Bead, medium thick	17	6.0-12.3	9.3	1.5	-	-	-	2.5-6.3	4.1	1.2	0.2-1.2	0.6	0.2
Bead, large thick	15	12.4-19.8	15.4	2.1	-	-	-	4.5-11.5	7.6	2	1.0-4.6	2.8	1.2
Bead, crinoid	5	14.3-27.5	23.3	5.3	12.9-21	18.3	4.6	6.9-15.9	9.9	3.6	1.6-14	7.4	5.1
Slide	50	9.0-44.0	25.3	7.7	10.0-34.0	20.4	5.6	6.0-25.0	16.2	4.9	3.0-25.0	10.9	6.7
Solid rect., drilled	8	29.0-43.0	36.5	6.2	16.0-24.0	18.9	2.7	5.0-11.0	8	2	4.0-16.0	9	3.7
Hollow	7	31.7-31.9	31.8	0.1	23.0-23.6	23.3	0.3	8.0-17.8	12.2	4.4	-	-	-
Flared	6	22.3-43.5	35.2	8	10.3-26.8	16.3	6.2	6.8-10.3	8.4	1.7	3.0-16.1	9.4	6
Boat shaped	6	50.5	-	-	9.6-12.1	10.4	0.9	10.3-13.8	12.6	1.3	11.8	-	-
Channeled	4	22.9-36.9	31.4	6.3	19.5-29.2	24	3.9	9.0-12.2	10.9	1.4	6.3-16.8	12.5	5.2
Inlay	8	21.7-34.5	27.7	4.4	9.2-15.3	11.9	1.9	3.6-13.4	8	3.5	2.5-10.6	5.7	2.8
Pendant	4	21.0-23.9	22.5	-	10.5-16.7	12.9	3.3	2.7-5.8	4.2	1.5	1.2-1.8	1.5	0.4
Grooved													
" flat	7	15.0-36.0	23.8	8.6	11.0-23.0	16.6	4.8	4.0-18.0	8	4.8	2.0-10.0	5	2.9
" oval	1	30.3	-	-	14.4	-	-	7.5	-	-	5.6	-	-
" cylinder	2	14.5-42.0	-	-	6.0-10.0	-	-	5.5-7.9	-	-	1.5-6.6	-	-
" pointed	2	-	-	-	-	-	-	4.5-5.1	4.8	-	-	-	-

ARTIFACT TYPE	N	LENGTH/DIAM. range(mm)	mean	s.d.	WIDTH range(mm)	mean	s.d.	THICKNESS range(mm)	mean	s.d.	WEIGHT range(g)	mean	s.d.
Other													
" dragonfly	1	39.4	-	-	25.8	-	-	7.5	-	-	6.25	-	-
" butterfly	1	29.1	-	-	22.3	-	-	8	-	-	-		
" oval drilled	2	21.0-22.0	21.5	-	7.0-12.9	9.9	-	3.9-4.5	4.2	-	1.45-1.50	1.48	-
" shouldered	1	-	-	-	28	-	-	15	-	-	-	-	-
" Three sided	1	68	-	-	47.6	-	-	18.8	-	-	65.7		
" flat oval ring	1	-	-	-	-	-	-	6.3	-	-	-	-	-
" serrated	1	16.5	-	-	7	-	-	6.3	-	-	0.95	-	-
" slug shaped	1	24.1	-	-	6.9	-	-	3	-	-	0.8	-	-
" bead shaped	1	17.2	-	-	-	-	-	7.8	-	-	3.7	-	-
" rods	2	25.9-29.0	27.5	-	10	-	-	7.8-8.4	8.1	-	3.3-3.5	3.4	-
Unfinished, fragments	19	22.0-70.0	39	14.7	14.0-49.0	28.4	12.2	3.0-27.0	12.5	6.4	3.0-84.0	26.9	28.1

APPENDIX 2

Catalog of Artifacts

Catalog of artifacts used in this analysis organized by type with provenience to unit and level.

TYPE	DeRt	CAT.NO.	EX. UNIT	LEVEL
One piece ornaments				
Labret, button.	2	282	32-34 S, 24-26 W	8
" "	2	381	22-24 S, 22-24 W	5
" "	2	386	20-22 S, 22-24 W	7
" "	2	403	32-34 S, 18-20 W	14
" "	2	905	28-30 S, 20-22 W	7
" "	2	940	28-30 S, 20-22 W	10
" "	2	1039	28-30 S, 22-24 W	4
Labret,"T"	2	252	32-24 S, 16-18 W	18
" "	2	384	24-26 S, 16-18 W	18
" "	2	2477	32-34 S, 14-16 W	12
" "	2	3122	30-32 S, 14-16 W	9
Labret, oval solid	2	982	36-38 S, 18-20 W	1
Labret, oval ring	1	169	2	31
" " "	2	207	32-34 S, 24-26 W	5
" " "	2	227	32-34 S, 18-20 W	4
" " "	2	629	surface	0
" " "	2	2287	42-44 S, 24-26 W	4
" " "	2	2414	22-24 S, 18-20 W	8
" " "	2	2437	42-44 S, 24-26 W	7
" " "	2	2999	38-40 S, 16-18 W	3
" " "	2	3324	36-38 S, 14-16 W	6
" " "	2	3402	36-38 S, 14-16 W	6
Earspools	2	171	32-34 S, 22-24 W	1
"	2	204	32-34 S, 24-26 W	5
"	2	708	40-42 S, 24-26 W	6
"	2	729	40-42 S, 24-26 W	8
"	2	847	44-46 S, 24-26 W	5
"	2	2270	42-44 S, 24-26 W	
"	1	168	surface	0
"	1	117	3	0
Comp. Ornament Parts				
Bead, tube	1	1316	33	16
" "	2	86	32-34 S, 24-26 W	3
" "	2	101	24-26 S, 18-20 W	3
" "	2	123	32-34 S, 20-22 W	6
" "	2	486	32-24 S, 20-22 W	14
" "	2	906	44-46 S, 24-26W	8
" "	2	1118	28-30 S, 20-22W	5
" "	2	1184	30-32 S, 24-26 W	6
" "	2	1327	34-36 S, 18-20 W	3

" "	2	1353	34-36 S, 18-20 W	4
" "	2	1361	34-36 S, 18-20 W	4
" "	2	1432	40-42 S, 26-28W	5
" "	2	1494	26-28 S, 18-20 W	17
" "	2	1599	34-36 S, 18-20 W	6
" "	2	1809	34-36 S, 22-24 W	2
" "	2	2306	46-48 S, 30-23 W	12
" "	2	2306	46-48 S, 30-23 W	12
" "	2	2306	46-48 S, 30-23 W	12
" "	2	2306	46-48 S, 30-23 W	12
" "	2	2405	38-40 S, 16-18 W	5
" "	2	2826	42-44 S, 20-22 W	3
" "	2	2926	40-42 S, 18-20 W	3
" "	2	3062	34-36 S, 16-18 W	4
" "	2	3361	36-38 S, 14-16 W	6
" "	2	3425	36-38 S, 20-22 W	1
" "	2	3429	36-38 S, 20-22 W	1
" "	2	3638	42-44 S, 20-22 W	7
Bead, medium thick	2	92	32-34 S, 28-30 W	5
" " "	2	99	24-26 S, 18-20 W	3
" " "	2	625	surface	0
" " "	2	778	28-30 S, 22-24 W	2
" " "	2	781	38-40 S, 26-28 W	5
" " "	2	812	38-40 S, 26-28 W	7
" " "	2	1230	30-32 S, 16-18 W	2
" " "	2	1431	40-42 S, 26-28 W	5
" " "	2	1648	30-32 S, 22-24 W	6
" " "	2	1666	34-36 S, 24-26 W	6
" " "	2	2139	38-40 S, 14-16 W	1
" " "	2	2513	42-44 S, 24-26 W	11
" " "	2	3167	44-46 S, 20-22 W	11
" " "	2	3354	36-38 S, 14-16 W	6
" " "	2	3480	36-38 S, 20-22 W	2
" " "	2	3484	42-44 S, 20-22 W	3
Bead, large thick	1	94	3	19
" " "	1	552	24	21
" " "	1	1326	24	33
" " "	2	115	32-34 S, 26-28 W	4
" " "	2	119	32-34 S, 26-28 W	4
" " "	2	179	32-34 S, 20-22 W	9
" " "	2	505	32-34 S, 18-20 W	2
" " "	2	596	28-30 S, 24-26 W	0
" " "	2	613	28-30 S, 16-18 W	11
" " "	2	614	28-30 S, 16-18 W	11

" " "	2	1078	36-38 S, 18-20 W	3
" " "	2	1596	30-32 S, 20-22 W	10
" " "	2	2319	44-46 S, 28-30 W	11
" " "	2	2905	38-40 S, 20-22 W	4
" " "	2	3631	38-40 S, 18-20 W	3
Bead, crinoid	1	391	21	14
" "	1	719	18	11
" "	2	228	32-34 S, 18-20 W	4
" "	2	248	surface	0
" "	2	1308	26-28 S, 16-18 W	5
Slide	1	63	surface	0
"	1	175	2	32
"	2	339	32-23 S, 16-18 W	6
"	2	517	32-34 S, 18-20 W	4
"	2	593	44-46 S, 28-30 W	4
"	2	663	30-32 S, 22-24 W	0
"	2	826	42-44 S, 26-28 W	4
"	2	1022	42-44 S, 26-28 W	10
"	2	1167	42-44 S, 26-28 W	12
"	2	1350	36-38 S, 26-28 W	6
"	2	1563	40-42 S, 26-28 W	9
"	2	1564	40-42 S, 26-28 W	9
"	2	1587	40-42 S, 26-28 W	10
"	2	1604	40-42 S, 26-28 W	10
"	2	1619	40-42 S, 26-28 W	11
"	2	1620	40-42 S, 26-28 W	11
"	2	1630	30-32 S, 22-24 W	5
"	2	1653	30-32 S, 20-22 W	11
"	2	1691	34-36 S, 24-26 W	7
"	2	1693	26-28 S, 20-22 W	8
"	2	1721	38-40 S, 24-26 W	9
"	2	1737	30-32 S, 22-24 W	10
"	2	1740	38-40 S, 24-26 W	10
"	2	1752	38-40 S, 24-26 W	11
"	2	1784	23-34 S, 28-30 W	3
"	2	1864	16-18 S 16-18 W	0
"	2	2070	36-38 S, 22-24 W	11
"	2	2071	30-32 S, 14-16 W	4
"	2	2159	32-24 S, 14-16 W	5
"	2	2177	32-24 S, 14-16 W	6
"	2	2187	36-38 S, 16-18 W	6
"	2	2234	36-38 S, 16-18 W	7
"	2	2368	40-42 S, 20-22 W	10
"	2	2508	42-44 S, 24-26 W	10

"	2	2612	surface	0
"	2	2737	34-36 S, 20-22 W	4
"	2	2865	34-36 S, 20-22 W	7
"	2	2906	38-40 S, 20-22 W	4
"	2	3006	34-36 S, 16-18 W	4
"	2	3032	34-36 S, 16-18 W	4
"	2	3057	38-40 S, 20-22 W	7
"	2	3129	surface	0
"	2	3131	38-40 S, 16-18 W	5
"	2	3206	38-40 S, 20-22 W	10
"	2	3228	40-42 S, 22-24 W	7
"	2	3279	34-36 S, 16-18 W	5
"	2	3300	40-42 S, 22-24 W	8
"	2	3335	34-36 S, 16-18 W	9
"	2	3380	38-40 S, 20-22 W	12
"	2	3393	40-42 S, 22-24 W	11
"	2	3433	40-42 S, 22-24 W	11
"	2	3435	36-38 S, 20-22 W	1
"	2	3448	40-42 S, 18-20 W	9
"	2	3515	36-38 S, 20-22 W	3
Solid rect., drilled	2	722	34-36 S, 26-28 W	3
" " "	2	766	42-44 S, 26-28 W	2
" " "	2	938	42-44 S, 26-28 W	9
" " "	2	2310	42-44 S, 24-26 W	4
" " "	2	2979	40-42 S, 18-20 W	3
" " "	2	3684	40-42 S, 14-16 W	4
" " "	1	1206	31	25
" " "	1	1129	31	0
Hollow	2	74	32-34 S, 28-30 W	3
"	2	717	40-42 S, 24-26 W	7
"	2	2161	38-40 S, 24-26 W	13
"	2	2269	40-42 S, 20-22 W	7
"	2	2868	30-32 S, 14-16 W	4
"	2	3187	44-46 S, 20-22 W	12
"	2	3591	30-32 S, 18-20 W	3
Flared	2	277	46-48 S, 28-30 W	7
"	2	903	38-40 S, 22-24 W	4
"	2	1621	34-36 S, 18-20 W	7
"	2	1782	38-40 S, 24-26 W	10
"	1	1320	33	0
"	1	339	surface	0
Boat shaped	2	720	38-40 S, 26-28 W	3
" "	2	866	42-44 S, 26-28 W	6
" "	2	913	44-46 S, 24-26 W	8

" "	2	1649	34-36 S, 24-26 W	5
" "	2	2367	44-46 S, 28-30 S	12
" "	2	3325	46-48 S, 28-30 W	14
Channeled	2	109	32-34 S, 26-28 W	3
"	2	1276	34-36 S, 18-20 W	2
"	2	2049	40-42 S, 20-22 W	4
"	2	3501	36-38 S, 20-22 W	3
Inlay	2	103	24-26 S, 18-20 W	3
"	2	414	surface	0
"	2	797	38-40 S, 26-28 W	6
"	2	1735	38-40 S, 24-26 W	10
"	2	2078	36-38 S, 22-24 W	11
"	2	2085	36-38 S, 22-24 W	11
"	2	2288	42-44 S, 22-26 W	4
"	2	2857	34-36 S, 14-16 W	2
"	2	3001	40-42 S, 22-24 W	3
"	2	3317	40-42 S, 22-24 W	9
Pendant	2	544	32-34 S, 18-20 W	6
"	2	2349	38-40 S, 14-16 W	4
"	2	3008	34-36 S, 20-22 W	9
"	2	3353	36-38 S, 14-16 W	6
Grooved				
" flat	2	1006	36-38 S, 24-26 W	2
" "	2	1020	36-38 S, 24-26 W	6
" "	2	1056	36-38 S, 18-20 W	7
" "	2	1696	30-32 S, 22-24 W	7
" "	2	2045	36-38 S, 22-24 W	10
" "	2	2114	36-38 S, 22-24 W	0
" "	2	2876	34-36 S, 14-16 W	1
" oval	2	2548	42-44 S, 24-26 W	13
" cylinder	2	1321	surface	0
" "	2	1569	40-42 S, 26-28 W	9
" pointed	2	90	32-34 S, 28-30 W	4
" "	2	3452	40-42 S, 18-20 W	9
Other				
" dragonfly	2	1624	30-32 S, 22-24 W	4
" butterfly	2	918	34-36 S, 22-24 W	5
" oval drilled	2	939	42-44 S, 26-28 W	9
" shouldered	2	3294	40-42 S, 18-20 W	6
" Three sided	2	2858	34-36 S, 14-16 W	3
" flat oval ring	2	2509	42-44 S, 24-26 W	10
" serrated	2	1855	34-36 S, 24-26 W	8
" slug shaped	2	1826	40-42 S, 20-22 W	1
" bead shaped	2	3631	38-40 S, 18-20 W	3

" rods	2	2091	36-38 S, 22-24 W	11
" "	2	2614	34-36 S, 20-22 W	2
Unfinished, fragments	2	390	22-24 S, 21-22 W	3
" "	2	1029	surface	0
" "	2	1251	30-32 S, 16-18 W	2
" "	2	1339	42-44 S, 22-24 W	9
" "	2	1745	34-36 S, 24-26 W	8
" "	2	1748	34-36 S, 24-26 W	8
" "	2	2034	36-38 S, 22-24 W	10
" "	2	2060	36-38 S, 22-24 W	11
" "	2	2224	40-42 S, 20-22 W	7
" "	2	2692	34-36 S, 20-22 W	4
" "	2	2734	36-38 S, 20-22 W	9
" "	2	2858	34-36 S, 14-16 W	3
" "	2	3061	38-40 S, 20-22 W	7
" "	2	3092	34-36 S, 20-22 W	10
" "	2	3094	34-36 S, 20-22 W	10
" "	2	3331	40-42 S, 18-20 W	6
" "	2	3563	26-28 S, 14-16 W	15
" "	2	3704	surface	0