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Surveys of amateur artifact collections in southwest Oregon indicate that traditional settlement pattern models for this region may be in error. Based on the distribution of major styles of projectile points, at least two distinct periods of occupation are definable. The Early period is tentatively dated between 1000 B.C. and 500 A.D. and the Late period between 500 A.D. and 1856 A.D. The Early period was characterized by reliance upon upland resources, and the focus of occupation was along the upper reaches of coastal rivers. The Late period was characterized by reliance upon riverine and maritime resources, and the focus of occupation was on coastal bays and estuaries. Three sites located along the upper Coquille and Rogue River estuaries may reflect a transition period, when the adaptation from upland to maritime resources took place.

The results of this study demonstrate that amateur artifact collections can be useful sources of information about a region's prehistory, especially if little scientifically documented evidence is available.

The Identification of Early Prehistoric Settlement Patterns Along the Coast of Southwest Oregon: A Survey Based Upon Amateur Artifact Collections

By

Reginald John Pullen

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The Identification of Early Prehistoric Settlement Patterns Along the Coast of Southwest Oregon: A Survey Based Upon Amateur Artifact Collections

CHAPTER I

INTRODUCTION

Archaeologists traditionally have felt that prehistoric cultures along the coast of southwest Oregon and northwest California are reflective of a relatively recent adaptation to a marine environment. Most native groups of this region spoke the Athapascan language, which probably was introduced no earlier than 900 A.D. (Elsasser 1978:50). Excavations at several large coastal shell middens have indicated that initial occupation took place at between 900 A.D.-1300 A.D. (Berreman 1944; Cressman 1952; Newman 1959; Elsasser & Heizer 1966). Ethnographic studies of the Tolowa and Yurok, among others, have shown that coastal cultures were almost entirely dependent upon marine resources and spent very little time away from the immediate coastline (Elsasser & Heizer 1966; Gould 1966).

Recent discoveries, however, are beginning to raise some serious questions about traditional models for coastal settlement. Several sites located on the top of prominent coastal headlands contain cultural deposits dated at between 1000 B.C.-50 B.C. Furthermore, these sites show no evidence of a maritime adaptation; in most cases, only a thin deposit of lithic detritus; large leaf-shaped, contracting and expanding stem projectile points, and fire-cracked rock marks the occupation.

Previously excavated sites of this type include Point St. George (Gould 1966) near Crescent City, California and the Blacklock (Ross 1979) and Blunden (Minor, Greenspan, and Beckham 1980) sites near Port Orford, Oregon.

There are two possible explanations for the presence of early headland sites, often called "bluff" sites. They may be sites that had other functional roles in the settlement pattern of marine-oriented people, or represent the presence of an early non-marine adaptation (Minor & Toepel 1981). If the first explanation is accepted, where are the early sites reflecting a marine adaptation? The fact that sea level changes probably have resulted in inundation and/or erosion of much of the southern Oregon coastline as it existed 5000 years ago makes it unlikely that any such sites will ever be found (Minor & Toepel 1981:6). It should be noted that such sites do exist to both the north and south; the Umpqua-Eden site at the mouth of the Umpqua River has been radiocarbon dated at 1000 B.C. (Ross 1980), and the West Berkeley Shellmound on San Francisco Bay has provided a date of 2000 B.C. (Wallace & Lathrap 1975).

Evidence for an early non-marine adaptation has also been lacking in the past. Early coastal surveys focused on the coastline and the easily identifiable shell middens found there. Only in recent years have surveys been conducted along the river valleys and ridges leading from the coast to the interior of southwest Oregon. Numerous sites have been identified through such surveys, from the crest of the Coast Range to the floors of several large interior valleys. Detailed studies of these interior sites will help to determine if the coastal cultures of

southwest Oregon and northwest California possessed a marine culture that was secondarily adapted to riverine environments, or whether they were originally river-oriented cultures which have adapted to the open coast (Elsasser & Heizer 1966:4).

Rick Minor and Kathyrn Toepel of the University of Oregon have attempted to resolve this problem in a recent study of coastal settlement patterns based on descriptions of all the previously identified sites from the mouth of the Coquille River to the Oregon-California border. Sites up to 50 kilometers inland were included in an effort to encompass the territory occupied by coastal dwelling Athapascan groups (Minor & Toepel 1981).

All sites were typed according to function and environmental setting. Sites were defined as: (A) Villages - places where multiple activities were carried out by a sizable number of people over a considerable period of time; deep cultural deposits over an extensive area; presence of housefloors typical, though not essential. (B) Shell middens - large deposits of shell; absence of housefloors; used for the gathering of shellfish on a seasonal basis, with material accumulating as the result of brief but repeated occupation. (C) Camps - shallow cultural deposits restricted in nature and extent; special purpose sites used on a temporary and seasonal basis for purposes other than the gathering of shellfish. Environmental factors included location along the outer coast, around coastal lakes, along coastal estuaries, or in the interior (Minor & Toepel 1981).

The results of the study showed that a majority of sites (69%) were within one kilometer of the ocean, while 31% were located in the

interior. Most of the interior sites were only temporarily occupied camps; the six interior villages were along major rivers and probably represented favorable fishing locations. Using the Tolowa as a model, they proposed a settlement pattern reflective of an orientation to marine resources, with occupation of inland areas for only short periods of the year (Minor & Toepel 1981).

Minor and Toepel's study did not, however, consider the relative age of each site, so that possible changes in settlement pattern through time could be documented. While it is probable that late prehistoric coastal cultures were primarily adapted to the marine environment, the issue is much less clear in regard to early cultures.

Interior sites containing projectile points comparable with those found at Point St. George, The Blunden site, and Blacklock previously have been identified near the head of the Middle Fork of the Coquille River, at Camas Valley (Hanes 1978). Two of these sites were large, contained housepits, a variety of artifact types indicative of varied economic pursuits, and were probably semi-permanent villages rather than temporary hunting camps (Hanes 1978:26). Other sites containing similar projectile point forms also have been identified along the South Fork of the Coquille River and the North Fork of Sixes River (Nesbit 1981). The possibility therefore exists that during the early occupation of southwest Oregon, orientation was toward riverine and upland resources, with only occasional use of the open coastline.

At the present time, not enough published data are available to determine the nature of early settlement patterns in southwest Oregon. Limited site excavation has provided a very sketchy record of

chronological development and subsistance activities (Beckham & Minor 1980).

However, another source of information is present in southwest Oregon. Amateur collectors have been gathering artifacts from coastal sites for many years. While in some cases this has resulted in the destruction of information, it has also preserved evidence from sites destroyed by erosion and/or construction. The use of amateur collections to help solve questions relating to regional prehistory has been proposed by archaeologists in the past (Gould 1964; Pettigrew 1977; Hanes 1978).

Typically, such collections contain large numbers of projectile points, which are prized by amateurs and more resistant to the ravages of time than most other types of artifacts. Since projectile points have changed significantly in form throughout time, they can be very useful in establishing cultural chronologies, and have often been the basis for such efforts in western North America (Cressman 1977; Elsasser 1978; Pettigrew 1978; Minor & Toepel 1981). If collections can be associated with specific sites, they can provide some general indications of the period when those sites were occupied.

This technique has been employed by Richard Pettigrew (1978) in a seriation analysis of 24 excavated sites in southwest Oregon and northwest California. Pettigrew discovered that projectile point styles have changed greatly over time in this region, from leaf- and lozenge-shaped forms to large broad-necked triangular to small narrow-necked and concave base triangular forms. Based on this study,

he defined four periods of settlement, including: A. The Historic Period (after 1792 A.D.) based on the presence of items of Euro-American manufacture; B. The Late Prehistoric Period (A.D. 500-1792) based on the absence of items of Euro-American manufacture and the presence of small narrow-necked and concave base projectile points that were used as arrow points. Pettigrew has hypothesized that the bow and arrow were introduced into southwest Oregon around 500 A.D; C. The Middle Prehistoric Period (1000 B.C.-50 A.D.) based on the presence of large stemmed projectile points with broad necks and leaf- or lozenge-shaped projectile points. These forms were used as either spear or dart points, and have been found in association with radiocarbon dates of 1000 B.C.-50 B.C. Pettigrew also proposed an Early Prehistoric Period, based on the similarity of some projectile point forms from southwest Oregon with those from other western sites radiocarbon dated several thousand years earlier (Minor & Toepel 1981).

This paper addresses the problem of identifying and defining early prehistoric adaptations in southwest Oregon through the use of projectile points. Pettigrew's analysis of southwest Oregon projectile points will be examined in light of existing data from excavated sites and additional data provided by amateur collections from a large number of previously unreported sites. The study area includes all of the coastal river drainages from the Coquille in the north to the Chetco in the south, and the Rogue upstream as far as the confluence of the Illinois River. The first portion of the study is devoted to developing a projectile point typology that encompasses all the forms found in this region and that can be used to compare assemblages from previously

excavated sites with assemblages from surface collected sites. This will allow for the relative dating of sites represented by amateur collections. The second portion of the study considers the environmental setting and probable function of all excavated and collected sites. Sites are then grouped according to age, location, and function in an effort to determine if there was an early non-marine adaptation in southwest Oregon.

CHAPTER II

ENVIRONMENTAL SETTING

GEOGRAPHY

Southwestern Oregon has been divided into two distinct geologic provinces, divided by the drainage of the Coquille River. To the north lies the Coast Range province which extends beyond the Columbia River. To the south of the Coquille is the Klamath Mountain province, which reaches into California and merges with the Siskiyou Mountain Range (Baldwin 1959).

The Coast Range province extends from the Pacific Ocean to the crest of the Coast Range, where it achieves a height of 3000 feet. A narrow coastal plain broken by rugged headlands of intrusive rock extends to the north of the Coquille River. Long fjord-like estuaries extend inland as much as 15 to 20 miles in some cases, as the result of the gradual submergence of the continental shelf since the late Pleistocene (Baldwin 1959:4-5). In general, these coastal estuaries are bordered by broad terraces that have been the focus for human occupation of the region.

The Klamath Mountain province to the south is a dramatic contrast to the Coast Range. Elevations vary from sea level to 7,530 feet along the edge of the interior Rogue River Valley. The Siskiyou Mountains begin as a series of broad ridges reaching from the edge of the Pacific Ocean and running eastward into the interior of southwest Oregon. In the northwest, a broad marine terrace several miles in width extends

from the Coquille River to Port Orford (Loy 1976:108). Smaller marine terraces are located near the mouths of the Rogue, Pistol and Chetco Rivers, all of which bisect the Siskiyous. In many places, old beach terraces and hills bordering the coastline break off precipitously into the Pacific. Because of the steepness of the terrain and rapid fall in gradient of all of the coastal rivers in the Klamath province, estuaries are small or, in some cases, almost non-existent (Baldwin 1959:66).

The Klamath Mountain region is geologically one of the oldest in Oregon. Underlying formations contain both Paleozoic and Mesozoic volcanic and sedementary rock (Baldwin 1959:66). During the Miocene and Pliocene periods, these formations were truncated, allowing for the formation of narrow river valleys. Considerable erosion has taken place along the rivers, wearing down the ancient formations and resulting in the development of extensive alluvial deposits high above present stream courses (Baldwin 1959:66-71). These alluvial deposits have formed broad terraces along the interiors of the Sixes, Rogue and Chetco Rivers.

CLIMATE

The climate of much of this region is moist and temperate due to prevailing western winds and the proximity of the Pacific Ocean. Winters are cool and moist, while summers are warm and dry with very infrequent rainfall. Average annual rainfall varies from approximately 55 inches at the mouth of the Coquille River to 99 inches near Cape Blanco and up to 100 inches along the crest of the Coast Range. Approximately 80% of the precipitation occurs from October through March (Townsend, Pomerening and Thomas 1977:33).

Notable exceptions to this climatic description are found in the interior valleys of southwest Oregon. Here the rainfall is somewhat less than on the coast, and falls largely during the midwinter period. Summer temperatures commonly reach 100°F, and it is not unusual for only slight amounts of precipitation to occur during the five month period from June through October.

FLORA

The coast of southwestern Oregon has been classified in the Picea Sitchensis Zone by Franklin and Dyrness (1973). Generally extending inland only a few miles from the Pacific Ocean, the dense coniferous forests of this zone are comprised of Sitka spruce (Picea sitchensis), Western hemlock (Tsuga heterophylla), Western redcedar (Thuja plicata), Douglas-fir (Pseudotsuga menziesii), Grand fir (Abies grandis), Lodgepole pine (Pinus contorta), Red alder (Alnus rubra), Coast redwood (Sequoia sempervirons), California myrtle (Umbellularia californica), and Port Orford cedar (Chamaecyparis lawsonia). Understory species found in association with this coastal coniferous forest include swordfern (Polystichum munitum), salal (Gautheria shallen), Pacific rhododendron (Rhododendron macrophyllum), and Hairy manzanita (Arctostaphylos columiana) (Franklin & Dyrness 1973).

The vegetation of southwest Oregon, and especially of the Klamath region, is much different from that of the rest of western Oregon. Morton Peck has stated that "the vegetation of this area is decidedly Californian in character, with an aspect quite different from that of the northern coast." (Peck 1961:17) This is certainly true of the interior valleys, which often have a savannah-like aspect as the result

of the dominance of drought-resistant species such as the California Black oak (Quercus kelloggii) and Oregon White oak (Quercus garryana) (Loy 1977:144). The vegetation found along the interior river valleys of southwest Oregon has been classified as the mixed evergreen vegetational zone, in which Douglas-fir and Tanbark oak (Lithocarpus densiflorus) are the dominant and climax vegetation (Franklin & Dyrness 1973:133-136).

FAUNA

Sea mammals are present in great number and variety in the waters along the coast of southwest Oregon. Northern sea lions (Eumetopias jubatus) and California sea lions (Zalophus californianus) migrate along the coast throughout the year and often rest on established rookeries on offshore rocks near Five Mile Point, Coquille Point, Rogue River Reef, and Cape Ferrelo. Northern fur seals (Callorhinus ursinus) are present in the open sea off the Oregon coast between November and February, and may sometimes haul out on open beaches (Snyder 1978). Harbor seals (Phoca vitulina) are present year-round in both estuaries and in riverine environments.

A number of large land mammals are also common to the coast and interior of southwest Oregon. Blacktail deer (Odocoilus columbianus) are found throughout the area, while Whitetail deer (Odocoileus virginianus) are confined to the interior valleys. Elk (Cervus elaphus) were once the most common form of large game found in the area, occurring primarily along the river bottoms. Due to Euro-American encroachment and land development, elk now are confined largely to the interior coast range. Black bear (Ursus americanus) are found throughout the region, but especially along the major river drainages.

Anadromous species occur in all of the rivers of southwest Oregon. Coho (Oncorhynchus kisutch), chinook (O. tshawytscha) and chum salmon (O. keta) migrate upriver in late summer and fall. Steelhead (Salmo gairdneri) occur throughout midwinter, and are also found in the Rogue River during late summer and early fall. The Rogue is also the only stream of this region that possesses a Spring chinook run, which occurs from March through June.

Within the estuaries and along the outer coast are found abundant shellfish resources. Tidepool and splash zone species include: California mussel (Mytilus californianus), piddock (Zirfaea pilsbryi) and Littleneck clam (Protothaca staminea). Razor clams (Siliquá patula) are found on many of the sandspits from the mouth of the Coquille River to Pistol River. Species particular to bays and estuaries include the Gaper clam (Schizothaerus nuttalli), Basket cockle (Clinocardium nuttalli), and Butter clam (Saxidomus giganteus).

CHAPTER III

ETHNOGRAPHY

The southern coast of Oregon from the mouth of the Coquille River to the mouth of the Chetco River historically was occupied by several groups who spoke the Athapascan language and shared a common culture (Barnett 1937; Berreman 1937; Drucker 1937). They were a part of the Northwest Coast Culture Area, which extends from southeast Alaska to northwest California (Kroeber 1939:28-31). The area from the mouth of the Coquille River, Oregon to Cape Mendocino, California generally has been considered the Lower Klamath Subarea or the Northwest California Province of the Northwest Coast Culture Area (Kroeber 1939:28-31; Drucker 1955). This division reflects the "peripheral position" of southern Oregon/northwest Californian coastal cultures in respect to cultures located on the British Columbia coast (Kroeber 1953:30-31). Cultures along the Lower Klamath River were dominant within the Northwest California Province, and strongly influenced neighboring groups as far north as Coos Bay (Barnett 1937:159).

Coos Bay and surrounding areas were occupied by the Penutian-speaking Coos. The Coos were divided into two groups speaking the Miluk and Hanis dialects. The Miluk Coos territory included the south side of the Coos Bay estuary and the Lower Coquille River as far upstream as the confluence of the North and South Forks of that river (Beckham 1977; Beckham and Minor 1980).

All of the forks of the Coquille River, including the East, North, Middle, and South forks, were occupied by the Athapascan-speaking Upper Coquille. The precise relationship between the Lower and Upper Coquille

groups never has been established. Melville Jacobs has suggested a fair amount of conflict between the two groups, as well as the more powerful position of the Upper Coquille at the beginning of the Historic Period (Jacobs 1937).

The Miluk Coos or Lower Coquille were bordered on the south by the Athapascan-speaking Tututni, who were divided into many small groups. The Quahtomah band lived in the area from Floras Lake to Port Orford. The Cosuthnetun lived at Mussel Creek, and the Euquachetunne villages were near the mouth of Euchre Creek. The Chemetunne claimed the Lower Rogue River valley from Edson Creek to the ocean, and a few miles of the coastline on both sides of the river. Upstream from the Chemetunne lived the Tututni Proper, in villages between Edson and Lobster Creeks. The Mikonotunne occupied the Rogue River Canyon from Lobster Creek to the mouth of the Illinois River, where they bordered the Shasta Costa. The Chetlessentun band utilized a territory south of Rogue River along the Pistol River, and the Wishtenatin lived near Whaleshead, a prominent headland a few miles north of the Chetco River (Beckham and Minor 1980:83-84).

The Chetco possessed a territory extending along the coast from a few miles north of the Chetco River to the mouth of the Winchuck River, and inland for a considerable distance. South of the Chetco were the Tolowa, a large group of eight major villages, located between Smith River and Lake Earl. The Yurok lived in many large villages between Trinidad Bay and Lake Earl, and inland along the lower 45 miles of the Klamath River. The Wiyot lived around Humboldt Bay, but claimed a territory from near Trinidad Bay to Cape Mendocino (Gould 1978; Pilling 1978; Elsasser 1978).

Each group was made up of several small independent villages inhabited by between 20 and 80 individuals. Members of the village were related by paternal lineage, and were governed by a wealthy headman who inherited his position. A good example of the division of each tribe into many small villages is provided by an Upper Coquille informant, who was able to name 32 distinct village locations (Dorsey 1890). Hudson's Bay trappers exploring the Coquille River in 1826 noted the presence of many small villages on both banks of the river from the mouth to well above the Forks (Davies 1961:188).

Winter villages were located in protected coves along the coast or at elevated terraces along major rivers. Each village was comprised of several split cedar plank houses. These houses were between 20 and 50 feet in length, and 10 to 20 feet in width. Houses were constructed by digging a deep rectangular pit that was lined with vertically set cedar planks. Planks were split with elkhorn wedges driven by large stone mauls, then smoothed with schist adzes. Corner posts and ridgepole posts supported timbers upon which cedar planks were laid to form a steep-sloping gabled roof. The inside of each house was lined with benches that were used for sleeping and to store baskets of preserved foods. Large houses may have been occupied by several families, but the typical household consisted of two families. Subterranean or semi-subterranean sweathouses were also built at winter villages and were often used as sleeping quarters by the men and boys of the village (Beckham 1977).

Subsistence patterns varied greatly from group to group, reflective of the diversity of environments in southwest Oregon and northwest

California. Two groups, the Upper Coquille, who occupied the interior valleys along the Forks of the Coquille River, and the Tolowa, who occupied the coast near Point St. George, serve to illustrate the subsistence practices of interior and coastal occupants.

The Upper Coquille were limited to reliance upon upland and riverine resources. Interior valleys were rich in faunal and floral resources, and large runs of salmon and steelhead returned annually to the Coquille River. A wide range of resources was available within a few miles of most village sites.

Camas bulbs were gathered during the spring blooming season at serpentine meadows along all the forks of the Coquille River. Women harvested the bulbs through the use of digging sticks, and carried them back to the village, where they were roasted in earthen ovens. The roasted camas bulbs were either dried and stored in burden baskets or ground into a paste and used to make a thick mush. During the winter, stored camas bulbs were an important staple (Drucker 1937).

Lampreys (Entosphenus tridentatus) were available during the early spring as they attempted to slither over falls on the north, middle and south forks of the river. Lampreys were speared with barbed harpoons and spitted and dried over low fires. They were then stored in burden baskets and provided an important staple used throughout the year (Beckham 1977).

During the late fall and winter, salmon and steelhead were available to the Upper Coquille. These fish were taken in weirs constructed in shallow portions of the streams, or, more commonly, netted or speared as they attempted to ascend the numerous falls found

along all the forks of the river (Drucker 1937). Alexander McLeod observed Indians spearing salmon at a falls on the South Fork of the Coquille River during the early winter of 1826 (Davies 1961:196-197).

Acorns were undoubtedly an important resource because of their availability throughout the territory of the Upper Coquille Tribe. Groves of White oak, Tanbark oak, and Myrtle line the river valleys and cover many upland areas as well. Acorns were gathered during late fall by women and children. After the nuts were dried, they were pounded into a flour through the use of mortars and pestles. Hot water was poured over the flour to remove the bitter tannic acid found in acorns and the powder that remained was either served as mush or baked on hot rocks near the fire into an acorn bread (Barnett 1937:166).

Hunting was more important to the Upper Coquille than to neighboring Athapascan groups who had easy access to maritime resources. While bows and arrows were sometimes used, the most important hunting technique involved the use of pits dug in well-used game trails. Dogs or fire were also used to drive deer and elk to hunters waiting in ambush (Drucker 1937).

The subsistence patterns of the Tolowa of northwest California are the best known of any of the Athapascan groups who occupied this region. Studies by Phillip Drucker (1937) and Richard Gould (1966, 1975) have clearly revealed the annual cycle of these people.

The Tolowa spent most of the year in large semi-permanent villages located near the mouths of rivers or at coastal lakes. During the spring and summer, the tide pools and rock islands adjacent to Point St. George provided a rich source of food. Northern sea lions were taken by

means of harpoons and clubs as they rested on nearby rocks. Mussels and clams were gathered from tidepools during the minus tides of the spring. Cormorants and other species of birds using offshore rocks as rookeries provided a source of eggs and partly grown young that could not fly (Gould 1966:95).

During the late summer, most of the people moved to temporary camps near gravelly beaches, where smelt could be taken with V-shaped dipnets. The smelt were then dried and packed into baskets and carried back to the main villages (Gould 1966:89).

When the smelt runs began to decline, the Tolowa would move inland to take advantage of ripening acorns and fall runs of salmon. In early September, the most important economic activity was the gathering of acorns, but fishing became much more important as fall progressed.

Winter saw a return to the main village, where the foods gathered during the spring, summer, and fall were consumed. This was the ceremonial season, when dancing, gambling, and feasting prevailed (Gould 1966:92).

During early spring, small parties left the main villages and moved to upstream camps, where Lampreys and Spring chinook were taken. These were trips of short duration and did not provide any major source of food (Gould 1966:92). It appears that only when the availability of foods within the interior completely outweighed those of the coast, as is the case during the fall, did the Tolowa spend any appreciable amounts of time in the interior (Gould 1978).

CHAPTER IV

ARCHAEOLOGICAL BACKGROUND

SOUTHWEST OREGON

The first archaeological investigations along the southern Oregon coast were conducted by A. W. Chase, who examined several midden sites between Coos Bay and the mouth of the Chetco River during the early 1870s. He provided a stratigraphic description of each midden, and observed that prehistoric settlements in general were located in close proximity to sources of food, fuel and water, and most offered a good view of the surrounding terrain (Chase 1893).

Paul Schumacher spent two field seasons examining aboriginal sites along the southern Oregon coast between 1873-1875. Schumacher's work was sponsored by the Smithsonian Institution, with the express desire of obtaining a representative sample of artifacts for a display at the United States Centennial Exposition. Schumacher visited a number of sites between the mouth of the Rogue River and Crescent City, including those at Pistol River and Lone Ranch. His report includes the descriptions of several burials as well as various forms of artifacts (Schumacher 1877).

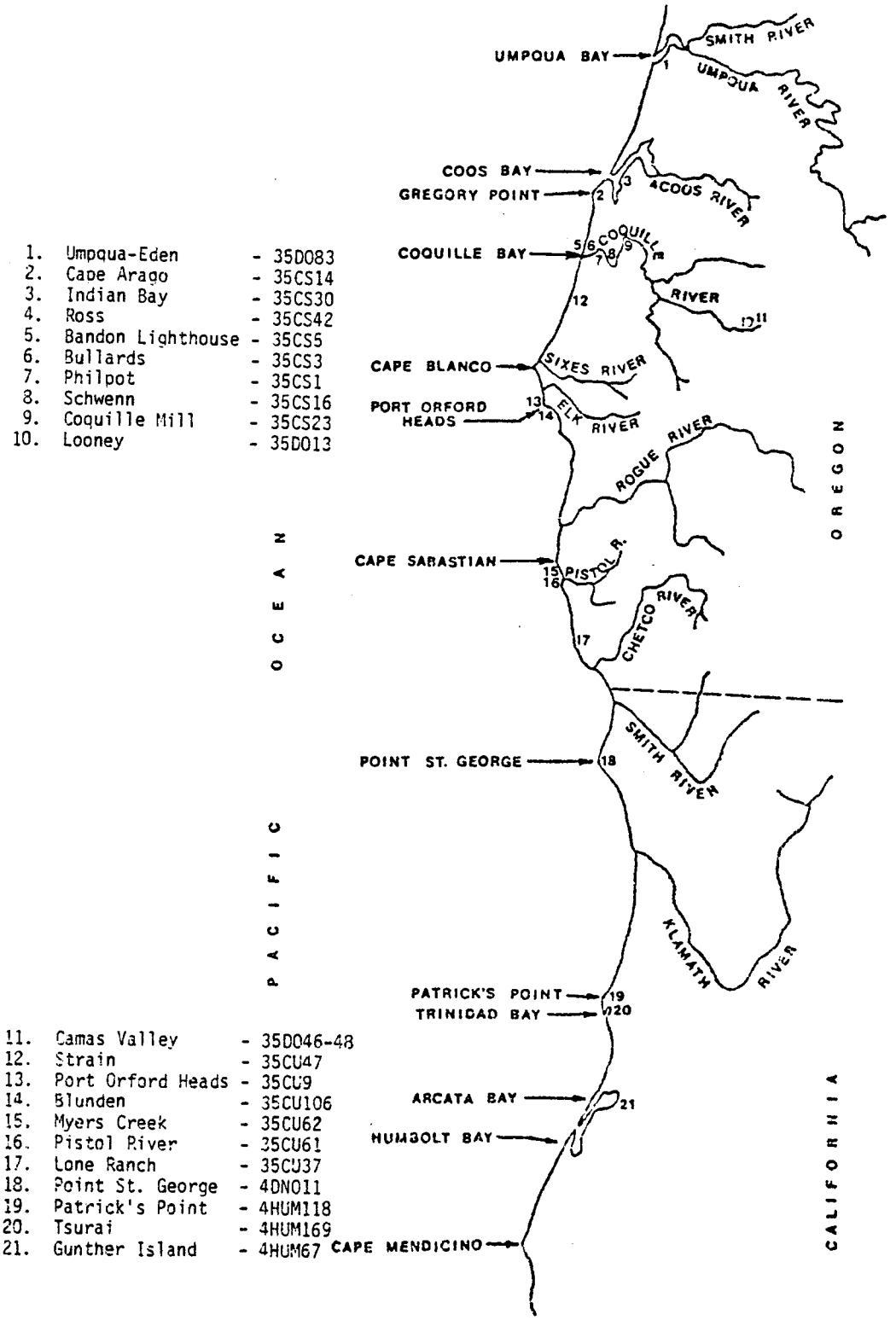
The southern Oregon coast was not visited again by archaeologists until 1935, when a detailed survey of the coastline between Sixes River on the north and Klamath River on the south was carried out by Joel Berreman of Stanford University. Berreman was primarily concerned with locating large aboriginal midden sites and assessing their potential for

future excavation. He also either tested or surface collected several sites, the results of which are included in his report. He was able to record the location of 45 archaeological sites in Curry County, Oregon and 14 in Del Norte County, California (Berreman 1935). Many of these sites have since been destroyed, lending additional importance to this survey.

Berreman returned to the southern coast during the summers of 1936 and 1937 to excavate a site at the mouth of Lone Ranch Creek (35CU37), which he considered to be the most significant of the entire region. This site covered an area of approximately 200 square feet, with a maximum depth of 10 feet. The midden was comprised primarily of blue mussel shell, but also contained an abundance of mammal bone. Five rectangular house floors and 32 human burials were encountered within the site. A wide variety of artifacts was recovered from the site, including items of bone, stone and shell. Berreman concluded that the site was used extensively for several hundred years, based on the depth of the deposit and the large number of artifacts encountered. The lack of trade goods suggested abandonment sometime before Euro-American contact (Berreman 1944).

During the late 1930s Alex Krieger and Kenneth Leatherman of the University of Oregon excavated two sites along the lower Coquille River. The first was located at Bullards Beach (35CS3), near the mouth of the river. The remains of three housepits and associated midden deposits were excavated, resulting in the removal of three burials and 150 artifacts, largely made of bone.

Figure 1
Previously Excavated Sites



1. Umpqua-Eden - 35DO83
2. Cape Arago - 35CS14
3. Indian Bay - 35CS30
4. Ross - 35CS42
5. Bandon Lighthouse - 35CS5
6. Bullards - 35CS3
7. Philpot - 35CS1
8. Schwenn - 35CS16
9. Coquille Mill - 35CS23
10. Looney - 35DO13

11. Camas Valley - 35DO46-48
12. Strain - 35CU47
13. Port Orford Heads - 35CU9
14. Blunden - 35CU106
15. Myers Creek - 35CU62
16. Pistol River - 35CU61
17. Lone Ranch - 35CU37
18. Point St. George - 4DNO11
19. Patrick's Point - 4HUM118
20. Tsurai - 4HUM169
21. Gunther Island - 4HUM67

Leatherman and Krieger also spent a short period of time at a midden located five miles farther upstream, which they termed the Schwenn site (35CS16). Thirty artifacts, including several leaf-shaped projectile points, were recovered from a few shallow test pits. A comparison of artifact assemblages at the Schwenn and Bullards sites led the two archaeologists to conclude that the Schwenn site was much earlier in origin, and had few cultural similarities with sites located farther downstream (Leatherman & Krieger 1940).

Lloyd Collins attempted to survey portions of the Oregon coast during the summers of 1951 and 1952, focusing upon the area north of Berreman's survey. Collins' main objective was to locate sites with large midden deposits that would be useful for detailed excavations. He succeeded in recording 133 sites, 35 of which he considered significant enough for future study. He found that most sites were located on terraces bordering river mouths or on sand spits near coastal bays (Collins 1953).

During the course of his survey, Collins discovered a large village site near the mouth of the Coquille River. Luther Cressman spent much of the 1952 field season excavating at this site, 35CS5. Several housepits were encountered, as well as a representative sample of bone artifacts, but few items of stone were encountered. Faunal remains and artifacts suggested that the inhabitants of CS-5 were primarily oriented toward exploitation of a marine environment, including the hunting of sea mammals, fishing, and gathering of shellfish. Elk bone was unusually plentiful, and served to indicate a secondary reliance upon the hunting of large land mammals. Trade goods recovered from the site

indicated that occupation continued after historic contact (Cressman 1952).

Cressman also spent a few days excavating at a midden located about 18 miles upstream from the mouth of the Coquille River, and near the head of tidal influence. Construction work at the Coos Bay Lumber Company Mill resulted in exposure of the midden, which was 80 centimeters in thickness and largely comprised of mussel shell and fire-cracked rock. Based on the depth of alluvial deposits above the midden deposit, and the poor preservation of faunal materials, Cressman felt that the site was between 3000-5000 years old. However, subsequent radiocarbon dating of charcoal samples established occupancy around 1600 A.D. (Newman 1959).

Five housepits and a shallow midden (35CU47), located near the outlet to Floras Lake, were investigated during the field seasons of 1958 and 1959 by Thomas Newman of the University of Oregon. The midden was very thin and contained only small amounts of shell. However, a considerable quantity of elk and deer remains was encountered, revealing a surprising reliance upon upland resources by the inhabitants of this site. The shallow nature of the deposit and presence of numerous trade items suggested to Newman an occupation between A.D. 1800-1850 (Newman 1959).

Construction of a highway between Gold Beach and Brookings prompted several salvage excavations at sites near the mouth of Pistol River during the early 1960s. In 1961, David Cole of the University of Oregon excavated the corner of a housepit located on a headland between Pistol River and Myers Creek (35CU61). A partially burned wooden beam provided

a radiocarbon date of 1000 B.C., one of the earliest reported dates for southern Oregon coastal sites. Two leaf-shaped projectile points were found near the housepit and have been associated with the radiocarbon date (Cressman 1977).

Most of the salvage work at Pistol River was done at CU-62, situated on a bluff overlooking the ocean and original river mouth. This large village site once contained more than 30 housepit depressions and had a depth of more than seven feet. Eugene Heflin, a dedicated amateur, attempted to salvage as much of the site as possible before completion of the highway project. He recovered a large number of bone, chipped stone, baked clay, and ground stone artifacts. Twenty aboriginal burials, many associated with trade materials, were also encountered. The midden contained approximately 20 species of shellfish, with Bay and Blue mussels the most common. Fish vertebrae and bird bone were reported, as well as the remains of deer, elk, bobcat, sea lion, and whale. The artifact assemblage suggested to Heflin that occupation lasted from 1750-1856 A.D. (Heflin 1966).

In 1973, Ron Stubbs of Southwestern Oregon Community College excavated a large shell midden situated on the South Slough of Coos Bay, which he named the Indian Bay site (35C530). The midden, located at the edge of an extensive tidal marsh, contained a five foot deposit of primarily shellfish remains. A marine-estuarine adaptation is suggested for the inhabitants of this site, based on the presence of Bay and Blue mussels, cockles and Gaper clams; dense quantities of fishbone, especially those of cabazon and salmon; and only small amounts of land mammal remains. Radiocarbon dating of charcoal found in a small hearth

at the bottom of the midden established a period of occupancy between A.D. 1650-1850. Stubbs concluded that the site was occupied year-round, based on the environmental setting and types of resources being utilized (Stubbs 1973).

The site at Bullards Beach, 35CS3, first excavated by Leatherman and Kreiger in 1939, was the subject of further fieldwork in 1974. Continued erosion of the site began to reveal the presence of several aboriginal burials. Salvage efforts were deemed necessary to prevent vandalism of the burials. Two distinct zones of occupation were revealed during the excavation. The upper deposit contained three aboriginal burials and a considerable quantity of glass trade beads. Also recovered from the upper zone were projectile points, scrapers, an adze blade, and utilized flakes. Based on the presence of trade materials, occupation was estimated at between A.D. 1800-1825. The lower zone, from which no diagnostic artifacts were recovered, is representative of an earlier period of occupation predating historic contact (Ross 1976).

In 1974, the Umpqua-Eden site (35DO83), was partially excavated by members of the Oregon Coastal Indian Archaeological Association, under the direction of Peter Stenhouse. A circular housefloor was uncovered about one meter below the surface of the site. Oregon State University archaeologists, under the direction of Richard Ross, returned to Umpqua-Eden during the summers of 1978, 1979 and 1980 to do further work at a site now considered to be one of the most significant along the central Oregon coast (Ross & Snyder 1979).

This site is located on a high terrace along the south bank of the lower Umpqua River, one mile upstream from the mouth. The river forms a deep channel adjacent to the site, but extensive tidal flats are present within a short distance. Faunal remains identified in midden deposits include a variety of clams and mussels, Starry flounder, salmon, ducks of various species, Sea and River otter, beaver, whale, Harbor seal, Stellar sea lion, bear, raccoon, elk, and deer. While adaptation to a marine environment is indicated by the faunal remains, upland resources available near the village were not neglected by its inhabitants. Charcoal taken from the base of the midden has provided a radiocarbon date of 960 B.C., making this one of the earliest known sites along the Oregon coast. Artifacts recovered from the same level as the radiocarbon date include lanceolate projectile points, sun-baked clay pipes, barbed bone harpoon points, and decorated bone ornaments. The presence of both circular and rectangular housepits indicates that DO-83 was probably occupied on more than a seasonal basis (Ross & Snyder 1979).

Most of the sites excavated in southwest Oregon have been located within a few miles of the Pacific Ocean. However, in 1976 Richard Pettigrew of the University of Oregon conducted a salvage excavation at the Looney site (35DO13), near the headwaters of the Middle Fork Coquille River. Pettigrew determined that the site was a base camp used on a seasonal basis, with hunting and the gathering of acorns the major economic activities of the inhabitants. Radio-carbon dating was not attempted at the Looney site, but based on the presence of leaf-shaped and contracting stem projectile points, Pettigrew felt that occupation took place between A.D. 1-500 (Pettigrew 1978).

Camas Valley, situated a few miles upstream from the Looney site, was the subject of test excavations at three sites during the summer of 1977. Under the direction of Richard Hanes, Roseburg Bureau of Land Management Archaeologist, sites 35DO46 - 35DO48 were evaluated to determine the potential effects of a proposed logging operation on cultural values. Hanes recovered a variety of artifacts, and used the collections of local amateurs to further expand his sample. Two of the three sites appear to have been used on a semi-permanent basis, with the inhabitants engaging in a variety of economic activities. Comparisons of projectile points recovered from the Camas Valley sites with those from other excavated and dated sites in the region led Hanes to assign a probable date of 1000-4000 years (Hanes 1977).

Test excavations were initiated at the large shell midden on top of the Port Orford Heads (35CU9) in 1976, under the direction of Richard Ross of Oregon State University. Midden deposits covered an area of several acres, with a maximum depth of one to two meters. However, construction activities had badly disturbed the midden and original contents. The remains of shellfish, fish and sea mammals indicated a primary reliance upon maritime resources, but some land mammal remains were also present in the midden. The Port Orford Heads site is fairly recent in origin, but lack of trade goods suggested abandonment sometime before historic contact. Several large leaf-shaped and heavily serrated projectile points were recovered, suggesting that portions of the deposit may contain evidence of early coastal occupancy (Ross 1977).

In 1977, the large shell midden on Gregory Point near Cape Arago was tested by Glenn Hartman, representing the U.S. Coast Guard. Large

quantities of marine shell, sea mammal bone, and fish bone served to indicate that the prehistoric inhabitants of Gregory Point (35CS13) utilized resources from nearby tidal pools and offshore rocks. The presence of a housefloor suggested use as a semi-permanent village, somewhat surprising considering the exposed nature of Gregory Point. A radiocarbon date of 500 A.D. was obtained from a bone sample (Draper & Hartman 1979).

The Philpot site (35CS1), a large midden situated on the north bank of the Coquille River a few miles upstream from the mouth, was investigated by archaeologists from Oregon State University in 1978. Test excavations revealed a site more than an acre in extent, with a maximum depth of 65 centimeters. Faunal preservation was poor because of periodic inundation of the cultural deposits, but the site was rich in lithic detritus. The remains of several adjacent fish weirs provided evidence that site function was related to fishing. However, manufacturing of stone tools was also an important activity, fostered by the presence of numerous cobbles of chert in nearby gravel deposits. Radiocarbon dating of charcoal from the base and upper portions of the midden indicated that occupancy was between A.D. 1350-1700 (Draper 1980).

Oregon State University archaeologists also completed fieldwork at two other sites during the summer of 1978. Site 35CS43, adjacent to the original location of the town of Bandon, was tested to determine if any undisturbed cultural deposits existed. The excavation revealed no undisturbed areas, but did provide evidence of occupancy during the late prehistoric period by a group of people primarily dependent upon maritime resources (Draper & Barner 1979).

Test excavations were also undertaken at the Ross site (35CS42) located on the west side of Catching Slough, a tributary of the lower Coos River. Two distinct shell middens with depths ranging from 80-120 centimeters were identified during the project. The remains of fish-drying racks and position of the Ross site on the Coos River floodplain suggested occupation during the fall anadromous fish run. A radiocarbon date of 800 A.D. was obtained from charcoal samples (Draper & Barner 1979).

In 1979 and 1980, test excavations were conducted at the Blunden site (35CU106), located on top of the Port Orford Headlands near the site excavated by Ross in 1976. Rick Minor, from the University of Oregon, determined that the Blunden site consisted of two distinct components. The lowest level contained lithic tools and debitage, but no faunal remains. Radiocarbon dating of charcoal from a hearth at the lowest level provided a date of 50 B.C. The upper level contained a dense deposit of mollusk shell, fish, and sea mammal remains. Radiocarbon dating indicates that the maritime adaptation began sometime after 1300 A.D. (Minor, Beckham, and Greenspan 1980).

The most recent archaeological study in southwest Oregon was carried out in 1980 by Richard Ross and Sandy Snyder of Oregon State University. They placed several test pits in the site at Blacklock Point (35CU75), a few miles north of Cape Blanco and the mouth of Sixes River. An extensive deposit of lithic detritus and a fragment from a sandstone mortar were encountered, but no diagnostic artifacts were recovered. Amateur collections from Blacklock contain large serrated leaf-shaped projectile points, providing some indications of an early period of occupancy. A radiocarbon date of 750 B.C. served to confirm early occupation.

Figure 2 - Radiocarbon Dates
from Southwest Oregon / Northwest California

Site	Radiocarbon Dates	Laboratory Number	References
Umpqua-Eden (35DO83)	2960 ± 45 BP	DIC-1174	Ross & Snyder 1979
Indian Bay (35CS30)	250 ± 80 BP	GUL/?	Stubbs 1973
Cape Arago Lighthouse (35CS11)	1540 ± 50 BP	DIC-1398	Draper & Hartmann 1979
Ross Slough (35CS42)	1150 ± 55 BP	DIC-1397	Richard Ross, personal communication
Philpot (35CS1)	250 ± 40 BP	DIC-1395	Draper 1980
	570 ± 50 BP	DIC-1396	
Coquille Mill (35CS23)	350 ± 150 BP	L-1898	Cressman 1952, 1953; Olson & Broecker 1959
Blacklock (35CU75)	2750 ± 55 BP	DIC-1911	Ross, personal communication
Blunden (35CU106)	2050 ± 80 BP	DIC-1777	Minor & Toepel 1981
	650 ± 55 BP	I-11, 334	
Myers Creek (35CU61)	3000 ± 90 BP	GAK-1317	Cressman 1977
Point St. George (4DNO11)	2260 ± 210 BP	I-4006	Gould 1966, 1972
Patrick's Point (4HUM118)	640 ± 90 BP	GXO-181	Elsasser & Heizer 1966
	545 ± 115 BP	GXO-182	
Gunther Island (4HUM67)	1050 ± 200 BP	M-938	Crane & Griffin 1961

NORTHWEST CALIFORNIA

L. L. Loud was the first archaeologist to conduct scientific excavations of sites in northwest California. He spent part of the 1918 season excavating a large shell midden on Gunther Island, located at Humboldt Bay. A large number of burials was encountered, as well as a variety of artifacts including many ceremonial obsidian blades and carved stone clubs. Most of the projectile points were deeply barbed, and this type, which has a wide regional distribution, has since been termed "Gunther Barbed". Loud estimated the age of midden deposits at 1500 years; later radiocarbon dating served to confirm that occupation began at 900 A.D. (Crane & Griffin 1961:119).

In 1948, excavation of the Patrick's Point site (4-HUM-118) commenced under the direction of Robert Heizer and Albert Elsasser of the University of California at Berkeley. This site was utilized on a seasonal basis for the exploitation of maritime resources. Radiocarbon dating established initial occupation at around 1300 A.D. The upper levels of the Patrick's Point site contained materials of Euro-American origin, indicating that occupancy continued during the historic period (Elsasser & Heizer 1966).

The historic Yurok village of Tsurai, located on Trinidad Bay, was excavated by archaeologists from the University of California in 1949. The presence of housefloors and large numbers of burials served to identify Tsurai as a large semi-permanent village. Ethnographic data

also indicated the importance of Tsurai to the historic Yurok tribe. Materials from lower levels were similar to artifact assemblages from Gunther Island and Patrick's Point, while the upper horizons revealed an adaptation to Euro-American influences. Occupation of Tsurai began around 1620 A.D., and extended into the Twentieth Century (Elsasser & Heizer 1966).

The most comprehensive study of any site in northwest California was carried out by Richard Gould at Point St. George in 1964. He determined from surface surveys of sites along the coast that the large shell midden at Point St. George contained evidence of both early and late aboriginal occupation. Gould also sought to employ local Tolowa Indians in the interpretation of artifacts and features encountered at the site. Radiocarbon dating established the initial occupation of Point St. George at 300 B.C. by a group of people who were not adapted to a marine environment, and were more interested in the presence of chert nodules at the point than they were in the faunal resources found there. Later occupants of the site were closely adapted to marine resources, lived in rectangular plank houses, and spent most of the year exploiting resources found near the village (Gould 1966).

SUMMARY

Most of the previously excavated sites in southwest Oregon and northwest California have been located along the coastline or adjacent to coastal estuaries. Such sites are usually comprised of dense deposits of shellfish remains and reflect a maritime adaptation. Radiocarbon dating has established the development of these coastal communities after 500 A.D.

However, several headland sites without associated shellfish deposits have also been identified. These include sites at Blacklock Point, Port Orford Heads, Myers Creek and Point St. George. Radiocarbon dates from all four sites have indicated occupation at between 1000 B.C. - 50 B.C. The lack of faunal remains and abundance of lithic debitage have led most archaeologists to conclude that those early coastal sites were temporarily occupied lithic manufacturing stations.

Limited excavations have also been conducted at three interior sites along the Coquille River drainage. All of these sites contain artifact forms similar to those found in early coastal sites, but two of the sites are considerably larger than coastal headland sites and may reflect more intensive occupation.

At present, the archaeological record for this region is highly biased because of the preoccupation of most previous archaeologists with coastal shell midden sites. Until more is known about the relationship between interior riverine and coastal sites, it will be impossible to define settlement patterns.

CHAPTER V

METHODOLOGY

There are many different types of artifacts in amateur collections, including items of bone, shell, ground stone and chipped stone. Many of these types of artifacts have remained virtually unchanged in form throughout time. However, projectile point forms have changed significantly in form throughout time and can be very useful in establishing regional cultural chronologies (Cressman 1977; Elsasser 1978; Pettigrew 1978; Minor & Toepel 1981). They are also the most commonly collected form of artifact. Most amateur collectors are heavily prejudiced toward the gathering of arrowheads (projectile points) to the virtual exclusion of other materials. The relative indestructability of projectile points also assures their presence in sites where bone and wooden artifacts have long since disappeared. For these reasons, this study has focused upon projectile points.

Several amateur artifact collectors were contacted regarding the use of their collections. This effort was aided by the fact that I was once a well-known collector and had many ties with the amateur community. Although some suspicion and hostility was encountered, nine individuals were willing to participate in the study. None of the people contacted had any formal training in archaeology; hence their designation as amateur artifact collectors. However, all were highly interested in local archaeology and most had read some of the more readily available publications on this subject.

These individuals contributed two types of information. Their collections were photographed so that the represented assemblages could

be examined in greater detail at the convenience of the investigator. They also provided the provenience of the artifacts and a description of the sites where the collections were made. Several new sites were identified in this manner. Collections were not used unless they could be associated with specific sites.

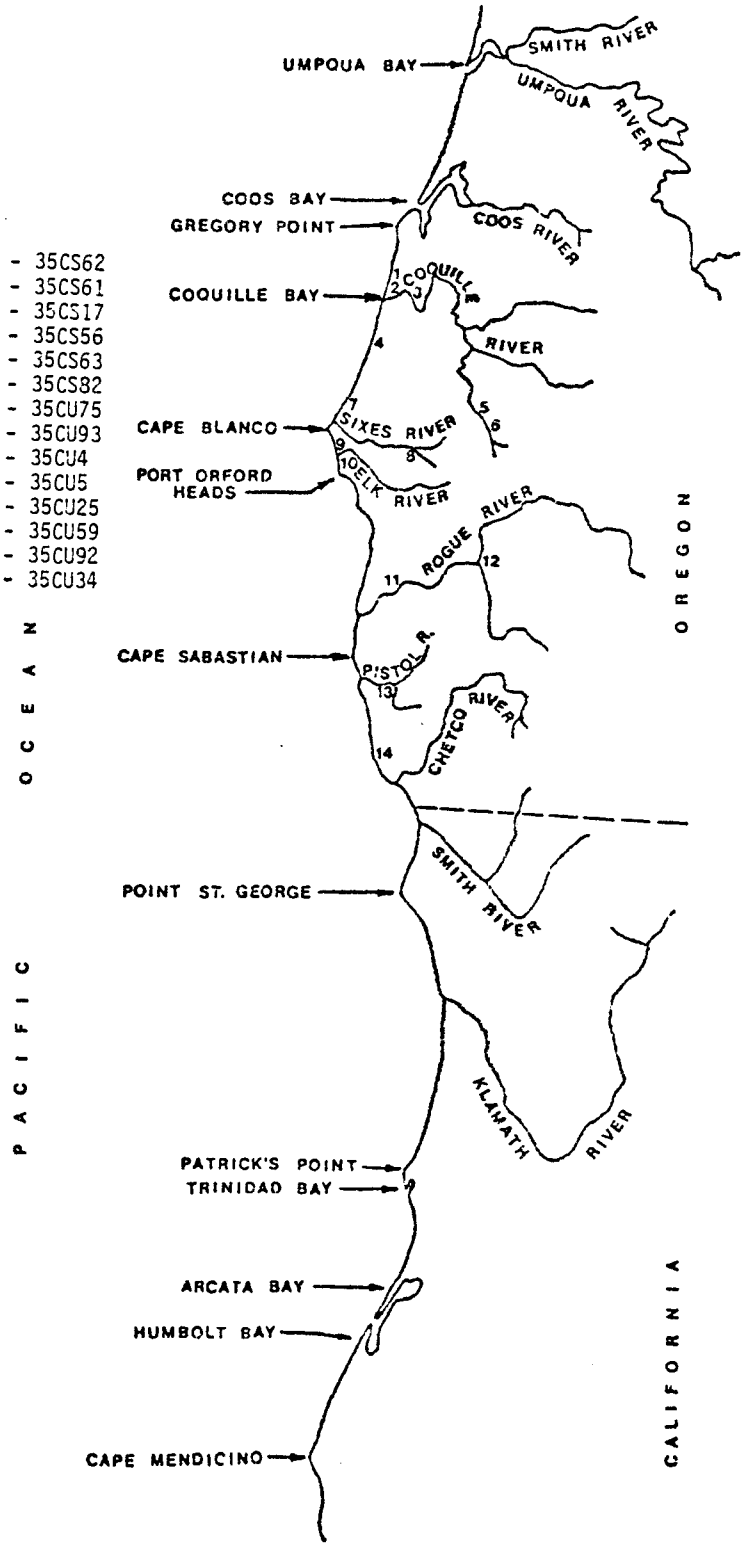
The following people made their collections available for study and are the basis for this paper:

Elmer Bens	- Port Orford Heads; Elk River
Robert McKenzie	- Elk River
Pete Hull	- Lower Coquille River
Bill Woodruff	- Blacklock Point; New Lake
Dow & Anna Beckham	- Lower Illinois River
Roy & Jackie Hofsess	- Upper Coquille & Sixes Rivers
Don Hogue	- Lower Rogue & Pistol Rivers
Dennis Graves	- Lower Rogue River
Reg Pullen	- Lower Coquille River; Five Mile Point; Blacklock Point

Each collection was photographed, and the negatives were developed into 8 x 10 inch prints. Several thousand projectile points were thus made available for cataloguing. However, it was first necessary to formulate a system of classification so that the projectile points could be divided into major groups, allowing for comparisons between sites. Previous typologies employed by regional archaeologists were incorporated into this system, so that comparisons could also be made between collected and excavated artifact assemblages.

Figure 3
Location of Surface Collected Sites

1. Whiskey Run - 35CS62
2. Barrows - 35CS61
3. Carlson's Island - 35CS17
4. New Lake - 35CS56
5. Lescom - 35CS63
6. Shorb - 35CS82
7. Blacklock - 35CU75
8. Dement - 35CU93
9. McKenzie - 35CU4
10. Knapp - 35CU5
11. Bagnell's Ferry - 35CU25
12. McGinnis - 35CU59
13. Pistol River School - 35CU92
14. Indian Sands - 35CU34



The scientific validity of amateur collections was also considered during this study. It was recognized that prejudices and biases are reflected in many of the collections. For example, some amateur artifact collectors are only interested in certain styles of projectile points and may not recognize or collect other styles of points. A review of previous scientific studies of amateur collections provided some indications of the problems that might be encountered and suggested some methods that might be used to maximize the value of such collections.

After a classification system had been devised, all of the projectile points represented in the photographs were catalogued according to shape and size. The projectile point assemblages from excavated sites were also reclassified using the same system, so that direct comparisons could be made between collected and excavated sites. All sites were then grouped according to dominant projectile point forms. The environmental setting and probable function of each site also were taken into consideration.

USE OF AMATEUR COLLECTIONS

The collection of Indian artifacts has long been a popular recreational activity in the state of Oregon, beginning with white settlement in the mid-1800s. While the original settlers could not tolerate the presence of Indian populations, they became fascinated with their artifacts once the Indians had been removed to reservations. The thousands of aboriginal campsites scattered throughout Oregon became the focus of both casual surface collection and more intensive digging

through midden deposits. Organizations such as the Oregon Archaeological Society and its publication "Screenings" have provided impetus in the past for a strong feeling of community among amateur collectors. This has resulted in the presence of numerous private collections, many from sites that have been totally obliterated by erosion, construction activities or vandalism.

Archaeologists have sometimes attempted to use these collections to learn more about Indian culture, with varying degrees of success. The absence of scientific excavations has often rendered it imperative that amateur collections be studied, since they contain the only available data for comparative purposes.

Two previous masters' theses about Oregon's prehistory were based upon studies of amateur collections. Collections from Sauvies Island were used to demonstrate the close relationship between cultures of the Lower Columbia River and Willamette Valley (Brown 1960). Collections from several sites along the South Fork of the Umpqua River were used to establish the culturally homogenous nature of aboriginal settlement in that area (Marchiando 1965). Both studies revealed some of the possible pitfalls involved in using amateur artifact collections. Brown attempted to relate the materials from Sauvies Island with excavated assemblages from other parts of the state, including the Lone Ranch Site on the southern Oregon coast. Sites located along the same river are difficult to compare when all that is available is a small collection of projectile points, and it is even more difficult in sites located several hundred miles apart. Marchiando used collections of artifacts mixed together from a large number of sites, and thus was not able to make any determination of the age of any of the represented sites.

Richard Gould also used private collections as the starting point for a study of Tolowa prehistory on the northwest California coast. He first examined a large private collection of projectile points taken by the Van Meter family from sites along the southern Oregon and northern California coast. He attempted to arrange the projectile points in terms of what he considered the probable order of change through time from one form to another. Once this was accomplished, he looked at the collection of a local Tolowa, Frank Richards, to determine if any sites existed where a full range of point styles could be found. Richards' collection was useful because he had segregated the artifacts according to where they had been found, while the Van Meters had not. Gould was able to identify one site, Point St. George, with a full range of styles and subsequent excavations at that site corroborated his sequence of projectile point change through time (Gould 1964:52).

Richard Pettigrew used private collections from the Lower Columbia-Willamette Basin to develop a cultural sequence for that area. He determined that projectile points were the most chronologically sensitive form of artifact, although he also considered changes in styles of many other types of artifacts. The study involved first test-excavating seven sites along the Columbia-Willamette River drainages. After the field season, local collections were examined from all but one of the excavated sites. Pettigrew felt that a larger sample size than that provided by the excavated artifacts was necessary in order to identify chronological patterns, so the sample was broadened through the inclusion of amateur collections. He made a conscious effort to ensure the authenticity of each collection, with most of the artifacts either

gathered by the Oregon Archaeological Society or by collectors closely familiar with the local geography (Pettigrew 1977:29).

Pettigrew was able to demonstrate the value of including private collections in his study. In most cases, he found only minor differences in the relative frequencies of styles of projectile points from excavated or collected sites. Only in one site, 35MU1, were the differences significant, and Pettigrew felt that this was caused by the differences between an excavated sample representing a cross section of the site and a borrowed collection taken either from the surface or from shallow excavation (Pettigrew 1977:295).

Richard Hanes has also demonstrated the usefulness of amateur collections in a study of Umpqua Basin Prehistory. He enlarged a sample of artifacts taken by excavations at sites 35DO46-48 through the use of a private collection gathered by a local landowner. Hanes has said about the use of private collections, "obviously, in the not-so-distant future, certain selected Umpqua River Basin private collections should be thoroughly recorded and published while these collections are still concentrated in only a few households" (Hanes 1977:6).

It is apparent that amateur collections can be used to gain some information about chronological relationships. However, there are many associated problems that render them less-than-perfect sources of scientific data. This became obvious as amateurs were contacted throughout the course of this study.

Perhaps the greatest problem involves context, or where the artifact is from. Many collectors mix artifacts from different geographical zones such as western and eastern Oregon, making their

collections virtually worthless in terms of scientific studies. There is little doubt that even the most careful amateur will occasionally forget where he found some of the artifacts in his collection. This problem becomes compounded when the collection in question contains thousands of artifacts gathered during the course of a lifetime.

Both Pettigrew and Gould attempted to employ collections with valid provenience. Both also tried to demonstrate the reliability and care taken by their informants during the gathering of these collections. However, even the most careful and conscientious collector will undoubtedly mix artifacts from sites without the impetus of scientific laboratory techniques. It is the rare collector who catalogues each artifact as it is found. Only one such individual was encountered in the course of this study.

Another problem relating to provenience has to do with the common practice of using glass cases to display artifacts. One collector of artifacts from the lower Coquille River has organized his projectile points according to shape within each frame. The fact that the artifacts were probably gathered from several sites and then mixed together makes this collection less than ideal.

There is also a fair degree of bias represented in the collections. Certain styles of projectile points are favored over others and appear more frequently in a collection than would normally be the case. The small tanged and barbed points, often called "bird points" by collectors, are highly prized and probably occur in an unnaturally high frequency in most collections. A comparison of collections made at the same site by different collectors will often demonstrate that one is

locating small and finely worked projectile points while the other is collecting larger and sometimes less finely made projectile points.

Amateur collections are often skewed by the the techniques of collection that are employed. Some individuals only collect artifacts from the surface, while others dig and screen through the cultural deposits. If a site has considerable depth, artifacts exposed through erosion may not reflect the total range of point styles found there. Natural forces may also play a part in this. For example, 35CU59, located at the confluence of the Rogue and Illinois Rivers, was partially washed away by the catastrophic flood of 1964. Collections made at the site shortly after the flood abated contained a much higher percentage of leaf-shaped projectile points than collections made before the flood because the lowest levels of the site were exposed for the first time.

There is a good deal of distrust between the amateur collector and the professional archaeologist. In the past, archaeologists have "borrowed" items from amateurs and then failed to return them. Amateurs have also been berated for their destruction of sites and are often highly sensitive about criticism from the professional. They are resentful of the fact that local sites are excavated by "outsiders" who remove artifacts from the area and never inform the local community about their findings. Under such circumstances, it is always possible that incorrect site locations will be given to the investigator to protect favored collecting areas.

It is often difficult to examine the individual artifacts within the amateur's collection. Most amateurs are willing to spend two or

three hours with the investigator, but this scarcely allows for detailed examination of the hundreds or possibly thousands of artifacts included in the collection. The artifacts are usually in glass cases, often glued to the back of the case, and simply cannot be examined individually. The only possible solution is to photograph the collection. Photographs of artifacts in glass cases usually contain a high degree of glare and distortion that may make later analysis difficult. Also, while the investigator is trying to photograph the artifacts, he is trying to determine exactly where they were found, sometimes a rather confusing process.

It is apparent that there are many problems related to the study of amateur collections. However, for the most part, amateurs are willing to share their knowledge and artifacts. They are also interested in learning more about the area's first inhabitants, and, if approached tactfully, will usually respond in a positive manner.

DEVELOPMENT OF A TYPOLOGY

The development of classification systems is based on the concept of culture as a continuum of interrelated concepts, ideas and beliefs through time and space. Any group of people living at a particular time and in a specific place have received a set of beliefs from their predecessors, have been influenced by cultures surrounding them, and will pass portions of their culture on to future generations (Byers 1967:3). Inherent in this process is the recognition that culture is not static but everchanging due to a variety of mechanisms (Byers 1967:3).

Furthermore, culture provides stability and order to customary behavior. At any particular time, a given culture will have a certain core of ideas and beliefs about the right way to do things. This is certainly reflected in the artifacts left by that culture. As a part of culture, artifacts are both constantly changing and reflecting the internal order and stability of a culture (Byers 1967:3).

The makers of those artifacts have a "mental template" that tells them what an artifact should look like, based on the standards established by the culture of which that individual is a member. Each finished object is made up of many individual features which, when combined, make the tool a particular type of object. Each of these features is termed an attribute (Deetz 1972). According to Frank Hole and Robert Heizer, "Attributes are recognizable features such as size, shape, color, material and decoration. A single pot may have many attributes (Hole & Heizer 1965:206).

Classification systems attempt to utilize identified attributes as the building blocks to order information which has little meaning in and of itself. There are two distinctly different approaches to classification that have polarized American archaeologists. One focuses on the individual attributes as the basis for classification, while the other considers combinations of attributes (Thompson 1972:36).

Classification using individual attributes is based on the belief that their "selection is in some way influenced by certain non-material factors in the maker's culture, and the selection of one attribute is not influenced by the same factors as the selection of another" (Deetz 1972:113). Rowe has stated that the "units of composition" of artifacts must be identified and the rules worked out for how they are combined (Rowe 1959).

However, the combination of attributes is most often used as the basis for classification. Within this system, the first step is to identify the various attributes of the artifacts in question. The artifacts are then compared with those from other sites and from different time periods to determine which attributes change through space and time. Those that do are termed modes and can be used for comparative purposes (Rouse 1960; Byers 1967:4). Artifact types are established by a clustering of modes that have significance in time and space. The type must be broad enough to allow for "individual variations in the execution of a definite constructional idea" (Byers 1967:4).

The development of a typology based on the clustering of modes has been supported by Raymond Thompson, who states:

> "On the one hand, all classifications are arbitrary in part. At the same time, the very clustering of similarities that make classification possible demonstrates some patterning of the evidence that reflects, even though imperfectly, the pattern of reality in the past" (Thompson 1972:36).

The use of descriptive types, based on all the attributes that the classifier can show to be shared by the artifact class, is perhaps most useful in studies of function or chronology (Jennings 1968:22). Artifact types can thus be useful in making "rather general statements of relationships between archaeological cultures in time and space" (Deetz 1972:113).

The objective of archaeological classification systems is to simplify the comparison of artifacts from different sites so that chronological and cultural relationship can be established (Hole & Heizer 1965:201). When typology is based on verifiable judgments about the customary behavior of the individuals who originally created the artifacts, it then has historical meaning (Spaulding 1953). The objectives of any typology must be to detect cultural process and reconstruct cultural history, because the artifacts in and of themselves have little meaning (Hole & Heizer 1965:217).

For this reason, a typology developed for the artifacts from a certain region may have little value if transferred to another region that has little or no cultural continuity. The application of typologies developed for the lower Columbia River to southwestern Oregon assemblages is an example of the misuse of classification systems. There is a considerable possibility that the two areas developed independently of each other or had very limited contacts, and are not

directly related. Jesse Jennings has strongly criticized the typologists who would demonstrate direct historical relationships between two groups of people in widely divergent geographical locations on the basis of artifact form. He states that "pots, of course, can't move. They may be carried, but they reveal no evidence of how or why the carrying was done." He further observes that "nearly all explanations of migrations, population mixtures, or replacement or progress of pottery across a land should be summarily rejected" (Jennings 1968:25).

One of the major problems facing the western archaeologist is the question of the antiquity of certain leaf-shaped projectile point forms, often called "Cascade," that have been dated in the six- to eight thousand year old range along the Columbia River. It is dangerous to compare projectile points from one area to another on the basis of vague general morphological similarities, yet the term Cascade often appears in descriptions of leaf-shaped projectile points from southwestern Oregon. Named types are used to achieve specific historical meanings, and should not be applied to specimens whose cultural relationships are remote (Hole & Heizer 1965:219).

Another problem of typology lies in the fact that artifact styles do not always change at a consistent and measurable rate. Many types of artifacts may remain unchanged for centuries. This is particularly true for stone, which can be worked into only a certain number of forms because it is not plastic (Jennings 1968:23).

There is a considerable degree of difference among archaeologists in regard to the typing of artifact collections. One recent study

involving the classification of pottery shards clearly reveals this problem. Four analysts experienced in handling a certain well-known style of ceramics and trained in a taxonomic system by the same instructor examined 90 individually numbered shards. After each had classified the shards, it was found that discrepancy in classification ranged from 22% to more than 30% between any two participants (Fish 1978:89).

This creates serious problems when trying to compare collections from one site with those of another described by a different investigator. Richard Pettigrew has encountered this problem in studies involving both collections from the Columbia River and from southwest Oregon (Pettigrew 1976, 1978). The use of purely arbitrary types results in different archaeologists choosing various types to describe the same assemblages. This makes it very difficult to compare archaeological data (Hole & Heizer 1965:205).

There are obviously a great many pitfalls associated with the development of typological systems of classification. However, artifact types can be especially useful in determining chronological relationships between various sites. When types from a single occupation or even a surface collection, are compared with artifact types from sites with several components, they can often be placed in their relative position on the basis of similarities and differences (Byers 1967:4). In studies of this kind, it is important to minimize the number of types and use as many attributes as possible for each group so that type percentages will be large enough to reveal meaningful patterns from site to site (Pettigrew 1976:37).

Three previous studies have a great deal of bearing upon the typological system employed in this study. These include the works of Albert Elsasser and Robert Heizer (1966), Richard Gould (1966), and Richard Pettigrew (1978).

Elsasser and Heizer excavated several sites in northwest California during the 1960's. The typology they employed to define projectile point forms was first developed by Heizer in 1949, based on types found throughout California. It includes the following types:

Type 1 - leaf-shaped, convex base with sides gently curving or nearly straight

Type 2 - leaf-shaped, pointed base

Type 3 - triangular, straight base

Type 4 - triangular, concave base

Type 5a - short, barbed, rounded or square stem

Type 5b - short, barbed, rounded or square stem, long extended tip

Type 6 - long-barbed with short stem, basal notched

Type 7a - sloping shouldered point

Type 7b - shouldered, but developing small pointed stems

Type 8 - large side-notched, convex base

Gould's typology was based upon a large collection of projectile points gathered from sites between Point St. George, California and Pistol River, Oregon. He attempted to arrange the points in a hypothetical order of development, by "distinguishing the various stylistic traditions and their interrelationships" (Gould 1964:40). He identified two major traditions, termed "pointed stem" and "rounded

base," within the collection and detailed an evolutionary sequence where the "rounded base" tradition eventually led to the development of concave base projectile points, and the "pointed stem" tradition led to the development of tanged projectile points. Several subtraditions were also identified on the basis of changes in the basal shape of projectile points. Subsequent excavation at Point St. George demonstrated that "pointed stem" and "rounded base" points developed at the same time as "double-pointed" forms. Next in line of progression were leaf-shaped points with flat bases, stemmed points with slight tangs, and points with expanding stems that appear almost side-notched. The final stages of development include triangular points with flat bases, concave base points with the center basal edge flattened, points with tangs and stems equal in length, and points with tangs much longer than the stems (Gould 1964).

More recently, Richard Pettigrew has attempted to organize the published data on projectile point types from southwest Oregon through a typology originally developed on the lower Columbia River. Points that are stemmed or side-notched are divided into broad-necked and narrow-necked catagories. Narrow-necked points are less than 7.5 millimeters in width, while broad-necked points are 7.5 mm or more (Corliss 1972). Barbed points, defined as having a blade corner with a downward projection, are segregated from shouldered points. Shoulders can be either sharp or rounded. Another distinction is between diverging and non-diverging stems, with stems narrowest at the neck considered to be diverging.

Pettigrew's typology encompasses the following groups:

Type 1 - broad-necked, barbed, diverging stem

Type 2 - broad-necked, shouldered, diverging stem

Type 3 - broad-necked, incurvate stem base

Type 4 - broad-necked, barbed, non-diverging stem

Type 5 - broad-necked, shouldered, non-diverging stem

Type 6 - ovate, diamond-shaped, or bipointed in outline, unnotched and unstemmed

Type 7 - narrow-necked, barbed, diverging stem

Type 8 - narrow-necked, shouldered, diverging stem

Type 9 - narrow-necked, barbed, non-diverging stem

Type 10 - narrow-necked, shouldered, non-diverging stem

Type 11 - ovate, side-notched

Type 12 - triangular blade, side-notched and unstemmed

Type 13 - unnotched, unstemmed, incurvate base

Type 14 - triangular blade, base not incurvate, unnotched and unstemmed

Type 15 - side-notched, stemmed

Each of the three systems of classification was based upon the objectives of the individuals who developed them. Elsasser and Heizer were involved in the excavation of a large number of sites in northern California. They devised a very general typology so that it would be possible to make comparisons between sites in widely divergent locations. Gould developed a typology that could be used to test the premise that the early and late cultures at Point St. George were historically related. This typology was very subjective, and makes it difficult to compare materials from Point St. George with other regional sites. Pettigrew utilized a system originally developed for materials from the Columbia River, and made the assumption that cultures from the Lower Columbia and Lower Klamath Cultural areas were closely related. Each point type was defined very strictly, in the hope that other investigators would utilize the same typology and thus facilitate comparisons between excavated assemblages.

The typology used in this study is based upon the concept of broad general types. As many attributes as possible are listed for each type of projectile point so that comparisons can be made with collections of projectile points already described by other investigators. Within this system of classification, the typologies of Elsasser & Heizer, Pettigrew and Gould are incorporated to facilitate such comparisons.

PROJECTILE POINT DESCRIPTIONS

The following is a description of the various types of projectile points that will be used as the basis for comparisons between the sites identified for southwest Oregon and northwest California.

Type I — Stemless, leaf-shaped, rounded base. Blade edges are parallel to slightly convex. The broadest portion of the point is generally about one-third of the way from the end. Specimens are quite thick with a lenticular cross section. The overall dimensions of this group are highly variable. Heavily serrated edges are fairly typical. Incorporates Heizer's Type 1, Pettigrew's Type 6, and Gould's "Rounded Base" type.

Type II — Stemless, leaf-shaped, pointed base. Blade edges are parallel to slightly convex. The broadest portion of the point is generally about one-third of the way from the end. Specimens are generally quite thick with a lenticular cross section. The overall dimensions are highly variable. Heavily serrated edges are fairly common. Incorporates Heizer's Type 2, Pettigrew's Type 6, and Gould's "Double-pointed" type.

Type III — Stemless, leaf-shaped, flat base. Blade edges are parallel to slightly convex. The broadest portion of the point is generally about one-third of the way from the base. Specimens are generally quite thick with a lenticular cross section. The overall dimensions are highly variable. Heavily serrated edges are fairly common. Incorporates Pettigrew's Type 6, and Gould's "Leaf-shaped with flat base" type.

Type IV — Stemmed, leaf-shaped, expanding stem. Blade edges are parallel to slightly convex. The stems flare outward and often are parallel with the edge of the blade. Most specimens are quite thick with a lenticular cross section. The overall dimensions are highly variable between specimens. Deep lateral edge serrations are occasionally found in this group. The width of the stem at the base of the blade, or neck width as it will henceforth be called, is typically broad or over 7.5 mm as defined by Corliss (1972). Incorporates Pettigrew's Type 1 and 2, and Gould's "Expanding stems that appear almost side-notched".

Type V — Stemmed, leaf-shaped, contracting stem. Blades are triangular with a stem that is widest next to the base of the blade and then gradually constricts into a point. Neck widths within this group are generally broad. Shoulders can be either sharp or rounded. Most specimens are quite thick with a lenticular cross section. Overall dimensions are highly variable between specimens. Deep lateral edge serrations are sometimes found in this group. Incorporates Heizer's Type 7b, Pettigrew's Type 5, and Gould's "Pointed Stem" type.

Type VI Stemmed, leaf-shaped, square stem, square shoulders. Blades are triangular, with broad square stems that form a 90° angle where they join the blade. Neck widths are broad. Specimens are typically thick in cross section, but overall dimensions are highly variable within this type. Not defined by Heizer, Pettigrew or Gould.

Type VII Stemmed, leaf-shaped, square stem, slight shoulders. Blade outline is triangular, but shoulders are rounded rather than sharp as in Type VI, and it is often difficult to determine where the shoulders end and the stem begins. Typically, one shoulder is more pronounced than the other, lending a somewhat lopsided appearance to the point. Stems are broad, with parallel edges and a flat base. Specimens are typically thick in cross section, but overall dimensions are highly variable. Incorporates Heizer's Type 7a.

Type VIII Side-notched. Specimens have a triangular blade, and are typically thick in cross section. Side notches are deep and U-shaped, and extend at 90° angles inward from the lateral edges of the base, which is either flat or slightly convex. Neck widths are broad, and overall point dimensions are large. Incorporates Heizer's Type 8, and Pettigrew's Type 11.

Type IX Concave base, side-notched. Triangular, with concave indentations in the base, and very shallow side-notching along the lower one third of the lateral edges of the point. Specimens are generally quite thin in cross section. Neck widths are narrow, or less than 7.5 mm, and the overall dimensions of this type tend to be quite similar between specimens. Incorporates Pettigrew's Type 12 and Gould's "Hollow base, side-notched" type.

Type X Concave base, parallel edges. Triangular blade, thin in cross section, with straight lateral edges, and a concave indentation of the base that may be shallow or quite deep. Overall size dimensions are quite similar among specimens. Incorporates Heizer's Type 4, Pettigrew's Type 13, and Gould's "Hollow base, concave lateral edges" type.

Type XI Concave base, expanding edges. Triangular, with lateral edges that are strongly convex, and a wide but shallow indentation of the base. Blades are thin in cross section, but are typically thicker than the blades of Type X. Overall size dimensions are also much greater than in Type X points. Incorporates Heizer's Type 4, and Gould's "Hollow base, convex edges" type.

Type XII Triangular. Triangular in outline, with a flat base, thin in cross section, but highly irregular in overall size dimensions. Incorporates Heizer's Type 3, Pettigrew's Type 14, and Gould's "Triangular with flat base" type.

Type XIII Stemmed, expanding tangs. Basally notched, with straight to slightly constricting stems. Tangs flare sharply outward from the base of the blade. Neck widths are narrow. Lateral edges are straight or slightly concave and often are characterized by shallow edge serration. Overall size dimensions among specimens in this type are fairly consistant. Incorporates Pettigrew's Type 9.

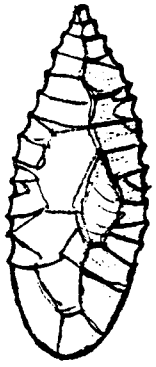
Type XIV Stemmed, extremely tanged. Basally notched, with straight to slightly constricting stems. Tangs extend down from the blade to well beyond the base of the stem. Blades are triangular and thin in cross section. Neck widths are narrow. Lateral edges are straight or slightly concave, and are often characterized by shallow edge serration. Incorporates Heizer's Type 6, and Gould's "Points with tangs much larger than stems."

Type XV Stemmed and tanged. Basally notched, with straight to slightly constricting stems. Tangs extend down from the blade, but are equal to or less than the length of the stem. Blades are triangular and thin in cross section. Neck widths are narrow. Lateral edges are straight or slightly concave and are often characterized by shallow edge serrations. Overall size dimensions among specimens in this type are fairly consistent. Incorporates Heizer's Type 5a & 5b, Pettigrew's Type 9 and Gould's "Points with tangs and stem equal in length" type.

Type XVI Stemless, tanged. Triangular, thin in cross section, with straight lateral edges and a concave base with the center of the basal edge flattened. These points appear to have been constructed in much the same manner as Groups XIII-XV, but the stems were removed before use. There is little size range between specimens. Incorporates Gould's "Hollow base points with the center basal edge flattened."

Type XVII Stemmed, slight tangs. Triangular blade, with shoulders extending down slightly to form rudimentary tangs. Stems are straight to slightly constricting. Specimens exhibit a fair degree of variability in overall dimensions. Neck widths are generally narrow, but some specimens do have necks in excess of 7.5 mm. Incorporates Gould's "Stemmed points with slight tangs."

Figure 4
Projectile Point Types 1-8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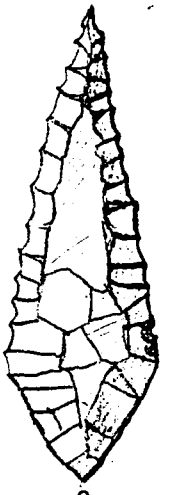
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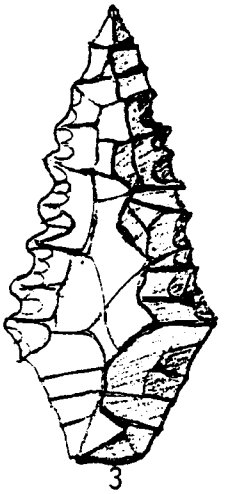
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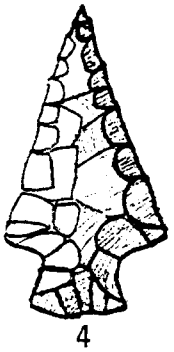
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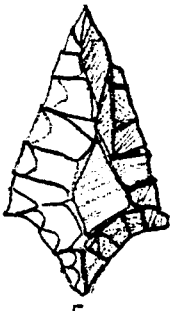
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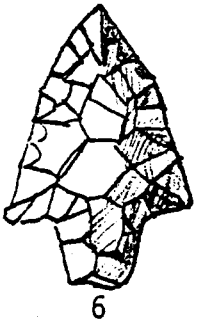
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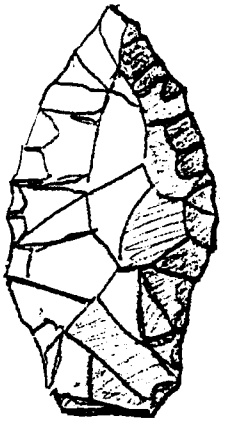
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Figure 5
Projectile Point Types 9-17

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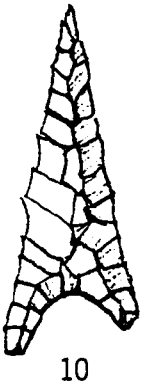

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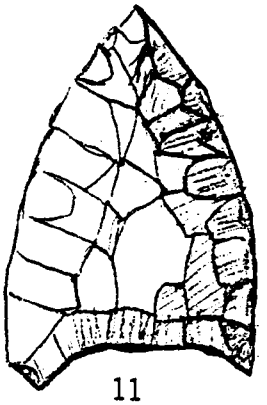

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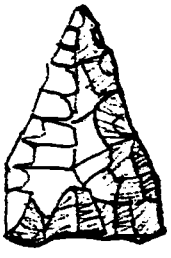

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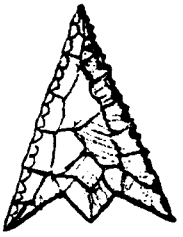

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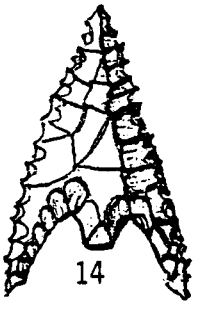

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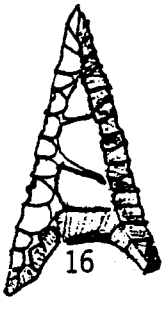

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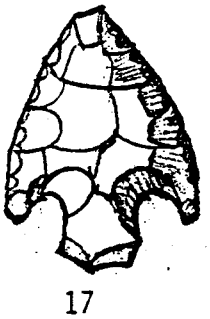

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CHAPTER VI

MAJOR PROJECTILE POINT TYPES

The projectile points used as the basis for this study were initially segregated into 17 distinctive types, devised by combining several classification systems previously developed for Oregon and California. Some types also reflected functional differences verified by ethnographic data.

After completing the cataloguing of projectile points from all of the collected sites, it became apparent that direct comparisons between sites would be difficult, if not impossible. Most sites are represented by a relatively small sample of projectile points, and these might be divided into ten or twelve types of only one or two individuals. Under such circumstances, it was impossible to establish any meaningful patterns from the data.

Strictly defined classification systems utilizing one or two attributes for each type have customarily been employed by archaeologists in Oregon and California. When they have attempted to compare assemblages between sites, however, they have usually resorted to more general definitions. While it may be desirable to establish minute differences among projectile points when analyzing materials from within one site, combining types is necessary if meaningful patterns are to be established over a large area.

The following terms are often used when comparing projectile points on a regional basis. Utilizing these classes allows the investigator to easily compare materials from site to site.

Leaf-shaped	-	Types 1-3
Expanding Stem	-	Type 4
Contracting Stem	-	Type 5
Broad Stem	-	Types 6-7
Side-notched	-	Type 8
Concave Base	-	Types 9-11
Triangular	-	Type 12
Tanged	-	Types 13-15

The function and chronological relationship of each major type of projectile point will be addressed in the following chapter. This will provide the basis for determining the relative period of occupation for all of the collected and excavated sites included in this study.

LEAF-SHAPED PROJECTILE POINTS (TYPES 1-3, FIGURE 4)

Leaf-shaped projectile points have been previously identified at many southwestern Oregon/northwestern California coastal and interior sites, including Point St. George (Gould 1966), Lone Ranch (Berreman 1944), Indian Sands (Berreman 1935), Port Orford Heads (Ross 1976), The Blunden site (Minor, Beckham and Greenspan 1980), Blacklock (Ross & Snyder 1980), The Schwenn site (Leatherman & Krieger 1940), The Looney site (Pettigrew 1978), Umpqua-Eden (Ross & Snyder 1979), and Camas Valley (Hanes 1977).

Sites containing this type of projectile points are generally considered to be the oldest along the coast (Pettigrew 1978; Minor & Beckham 1980). However, there is a great deal of uncertainty regarding the chronological position of leaf-shaped points. As Richard Hanes has observed:

> A generalized leaf-shaped point has in the past represented an index type for early occupation of Western North America. Hopefully, more precise

> definitions of the temporally significant forms will result in a better understanding of which leaf-shaped points are indicating what temporal period. At present, this point form, which appears frequently in surface lithic scatters along the Umpqua River Basin, presents a confusing aspect for estimating dates of Southwest Oregon sites (Hanes 1977:19).

Much of this confusion has resulted from repeated attempts to associate all leaf-shaped points with the Old Cordilleran Culture Concept, which was formulated by B. Robert Butler to define artifact assemblages and cultures dating from 9000-5000 B.C. along the Columbia River. This tradition is characterized by people who had a generalized hunting, fishing and gathering economy and used leaf-shaped projectile points and knives (Butler 1958:11). These points, termed Cascade, were described as:

> Generally long, narrow leaf-shaped or bi-pointed items which tend to be quite thick in proportion to their width and are usually thickest above the butt end; none show evidence of basal thinning. A number have a fairly predominant bulb of percussion at or near the butt end, which may indicate that these have been made from a flake struck from a prepared core. Most of the points are diamond-shaped in cross section... (Butler 1961:28).

Butler has been heavily criticized for the far-reaching nature of his concept, which attempts to link sites containing leaf-shaped projectile points from throughout western North America to sites on the Columbia River, where the culture was first defined. Charles Nelson has pointed out that, while the idea of making projectile points with a leaf-shaped outline may have diffused throughout the Northwest at an early date, the term Cascade should be applied only to assemblages from the Southern Columbia Plateau and adjacent areas of Idaho (Nelson 1969:23).

While the Old Cordilleran Culture Concept has been strongly criticized in recent years, archaeologists have continued to term leaf-shaped points as "Cascade-like." There may, however, be several distinct types of leaf-shaped points, each associated with a different time period. A recent study by Robert Nesbit comparing large leaf-shaped or lanceolate projectile points from the Applegate River in southwest Oregon with classic assemblages of Cascade points from Columbia River sites has served to illustrate great differences between the two assemblages (Nesbit 1981). After completing the study, Nesbit observed that:

> While exhibiting similarity in outline, the two types differ in technology, serration, thickness, and probably weight. Both populations probably functioned as spear tips with or without use of the atlatl, but differences in the projectiles reflect subtle differences in the weapon system of which they were a part or local variation in reduction technology (Nesbit 1981:66).

Nesbit also attempted to compare Applegate lanceolate projectile points with other identified lanceolate assemblages from southwest Oregon, including the Gold Hill variety, which is found in many sites along the upper Rogue River. This form, first discovered by Luther Cressman (1933), and later defined by Wilbur Davis (1968), is much smaller than the classic Cascade point, but Davis considered the two forms very similar (Davis 1968). Nesbit developed a typology which separated leaf-shaped points into two types, one large and heavily serrated, the other small with no lateral edge serration. Large heavily serrated lanceolate points were found at Applegate River sites estimated to date from 4000-6000 B.P., but persisted in small numbers until 2000

B.P. This early occupation reflected a land mammal hunting adaptation with secondary reliance upon vegetal resources. The smaller non-serrated points (Gold Hill) were found in deposits estimated to date from 3000-2000 B.P., and persisted until 1000 B.P. (Nesbit 1981:70).

The Applegate assemblages were compared with several from the southern Oregon coast. Lanceolate points from the Blacklock and Blunden sites were found to resemble early large and heavily serrated types from Applegate River sites, while the types found in shell middens at Lone Ranch and Umpqua-Eden were more closely related to the Gold Hill type (Nesbit 1991(?):70). Nesbit concluded that the large serrated leaf-shaped types represented an early development along the Rogue River and adjacent drainages such as the Coquille and Pistol Rivers, while the smaller non-serrated Gold Hill type may be more closely related to similar types from the Willamette Valley (Nesbit 1981:71).

The Umpqua-Eden site (35DO83), located on a high terrace a short distance upstream from the mouth of the Umpqua River, has provided good evidence for the early development of leaf-shaped points on the Oregon coast. Two distinct midden deposits have been identified at Umpqua-Eden, with the earliest level radiocarbon dated at 1000 B.C. (DIC-1174). This level contained barbed antler harpoon points, baked clay objects, knife fragments, and two broad stem and one small leaf-shaped projectile points. Leaf-shaped points were not found in the upper deposit. Umpqua-Eden is important because it provides evidence of an early maritime adaptation on the coast (Ross & Snyder 1979).

The Schwenn site (35CS-16), located five miles upstream from the mouth of the Coquille River, has also provided evidence of the

development of leaf-shaped points in association with a marine adaptation. Eight crudely flaked stemless leaf-shaped points and three stemmed, lozenge-shaped points were the only forms identified at this shell midden (Leatherman & Krieger 1940:27). Rick Minor has observed that projectile points from the Schwenn Site are similar to artifacts associated with the Early Horizon in the Sacramento Valley of California, dated at 2000 B.C. (Minor & Toepel 1981).

Leaf-shaped points occur in small numbers at the Blacklock (35CU75) site, located on a high bluff overlooking the Pacific Ocean and three miles north of the mouth of Sixes River. Blacklock differs from most other coastal sites in that no evidence for shellfish utilization is present at the site. Rather, the midden deposit is characterized by a thin 20-30 centimeters deposit of lithic detritus and fire-cracked rock resting on top of a consolidated marine terrace. Test excavations at Blacklock in 1980 produced a large amount of lithic debitage, utilized and worked flakes, and one ground stone mortar fragment, but no diagnostic projectile points. Charcoal samples removed from the edge of the cultural deposit provided a date of 800 B.C. (DIC-1911). Amateur collections from Blacklock contain large leaf-shaped and serrated projectile points, as well as contracting and expanding stem types. This site probably served as a lithic workshop, since cobbles of chert are available in gravels at the base of the bluff and struck and worked cobbles are common in the cultural deposit (Ross & Snyder 1979).

The Blunden (35CU106) site is also located on a high bluff overlooking the Pacific Ocean, near the town of Port Orford. Excavations

conducted during 1979 revealed the presence of two distinct components at Blunden, including a lower component containing only lithic detritus and fire-cracked rock, and an upper component containing marine shell, fire-cracked rock, and bone fragments. The lower deposit, which was radiocarbon dated at 50 B.C. (DIC-1777), also produced one large leaf-shaped and serrated projectile point. The upper deposit, which is reflective of a marine adaptation, has been radiocarbon dated at 1300 A.D. (Minor, Beckham & Greenspan 1980).

An adjacent site, at Port Orford Heads (35CU9), has produced several large leaf-shaped and serrated projectile points. Midden deposits at this site are mainly comprised of shellfish remains covering an area of about eight acres, with a maximum depth of one to two meters. Much of this midden was disturbed during construction of a U.S. Coast Guard Lifesaving Station, so it was impossible to determine if the leaf-shaped points came from the same kind of stratigraphic contexts as those from Blunden (Ross 1976).

Evidence for the early development of coastal leaf-shaped projectile points is present at the Myers Creek site (35CU62), located on a bluff north of the mouth of Pistol River. Salvage excavations in 1961 prior to total destruction of the site by highway construction revealed the presence of a housepit and associated burned wooden beams, later radiocarbon dated at 1000 B.C. (Cressman 1977:194). One broad stemmed and one large leaf-shaped and serrated projectile point were found near the housepit (Cressman 1977).

The Lone Ranch Site (35CU37), a large shell midden located on a coastal bay near the Chetco River, has produced a small collection of

leaf-shaped projectile points. The shell midden at Lone Ranch reached a maximum depth of 10 feet; leaf-shaped points were the only form identified in the lowest one third of this deposit (Berreman 1944).

The nearby Indian Sands site (35CU34), identified by Joel Berreman during a coastal survey in 1935, contains an assemblage dominated by large leaf-shaped and serrated projectile points. Indian Sands is located on a high promontory overlooking the Pacific Ocean a short distance north of Lone Ranch. Most of this bluff site has been eroded away by the strong winds that sweep across it. Berreman surface collected 46 leaf-shaped specimens from Indian Sands, as well as one tanged specimen. Richard Ross has noted the similarities between Blacklock and Indian Sands, both in terms of environmental position and lithic technologies (Ross 1976: personal communication).

Some of the best evidence for early occupation along the southern Oregon coast has been obtained at Point St. George (4DN011), a prominent coastal headland located about 20 miles south of the Oregon-California border. Richard Gould recognized the potential value of this site after examining several amateur collections from the adjacent area. Only the Point St. George site contained all of the types of projectile points that he identified in local collections, which included leaf-shaped, contracting stem, tanged and concave base types. Excavations revealed two distinct horizons at Point St. George. The most recent occupation represents a late prehistoric occupation by a group fully adapted to a marine environment, as indicated by the presence of dense deposits of shellfish and sea mammal remains. Tanged and concave base projectile points were utilized during this period. The lower horizon was mainly

comprised of lithic debris and fire-cracked rock, and contained leaf-shaped and contracting stem projectile points. Radiocarbon dating indicated initial occupation at 300 B.C. (I-4006). It has been hypothesized that the early inhabitants of Point St. George were migrants from the interior who were unfamiliar with the techniques required to subsist in a marine environment. The presence of an abundance of chert cobbles in nearby gravel deposits encouraged lithic manufacturing activities, reflected by an abundance of lithic debitage in the early horizon. Subsistence activities presumably took place in the interior (Gould 1966).

Interior sites in this region containing leaf-shaped projectile points include the Looney (35DO13) and Camas Valley (35DO46-48) sites, located near the upper reaches of the Middle Fork of the Coquille River. Two small leaf-shaped points were found at the Looney site. Based on the comparison of projectile point types from the Looney site with those from 24 other sites in southwest Oregon and northwest California, occupation was estimated at between 1-500 A.D. (Pettigrew 1978). Six leaf-shaped points were identified at the Camas Valley site, most very similar in form with the Gold Hill variety. Comparisons of projectile point types from Camas Valley with those from other regional sites indicated occupancy sometime between 4000-1000 B.P. (Hanes 1978:26).

Leaf-shaped projectile points are clearly associated with the earliest known period of occupation in southwest Oregon and northwest California. This type is common in deposits dated at between 1000 B.C. and 50 B.C. There are some indications that the large, heavily serrated leaf-shaped types common in sites between Blacklock Point and the Chetco River are much older than 1000 B.C. Future excavations associating leaf-shaped points and radiocarbon dates will more firmly establish the chronological development of this point style. At the present time, the presence of leaf-shaped points in archaeological deposits is suggestive of occupation between 3000-2000 B.P.

EXPANDING STEM PROJECTILE POINTS (TYPE 4, FIGURE 4)

Expanding stem projectile points have been identified at only a few of the previously excavated sites in southwest Oregon. These include the Looney Site (Pettigrew 1978), Camas Valley (Hanes 1978), Port Orford Heads (Ross 1976), Point St. George (Gould 1966), and the Philpot Site (Draper 1980).

One expanding stem type was identified within the assemblage at the Looney site (35DO13), estimated to date between 1-500 A.D. Richard Pettigrew, after completing a seriation of projectile points from regional sites, concluded that expanding stem types belong to the earliest known period of occupation in southwest Oregon (Pettigrew 1978).

Richard Hanes recovered one expanding stem projectile point from Camas Valley (35DO46-48), but noted the presence of 12 such specimens in the collection of a local landowner. This type exhibited a wide range

in size and configuration, and was much thicker in cross section than contracting stem and leaf-shaped types from the same site. Hanes considered the Camas Valley sites to be between 1,000 and 4,000 years old (Hanes 1978:20).

The Point St. George site (40NO11) produced expanding stem projectile points from the lower horizon, dated at 300 B.C. (I-4006). Gould did observe, however, that expanding stem types developed somewhat after the contracting stem and leaf-shaped types (Gould 1966:86). Tolowa informants indicated that expanding stem points were used as the tips for large thrusting spears used to take salmon at upriver falls (Gould 1966:57-58).

John Draper identified one expanding stem projectile point at the Philpot Site (35CS1), radiocarbon dated at between A.D. 1380-1700 (DIC-1395; DIC-1396). Such points occur mainly at sites along the southern Oregon coast between the Coquille River and Oregon-California border, according to Draper, and may represent a regional technological development which originated in this area (Draper 1980:79).

One expanding stem projectile point was recovered from the Port Orford Heads site (35CU9), by Richard Ross. No dates are associated with this point, but it was located in the same area as several large leaf-shaped and serrated projectile points (Ross 1976). The Blacklock site (35CU75), located a few miles north of Port Orford Heads, has also produced expanding stem points in association with leaf-shaped varieties, and a radiocarbon date of 800 B.C. (Ross & Snyder 1980).

Expanding stem types appear to be contemporaneous with leaf-shaped projectile points for this region. Thus, their presence in archaeological deposits can be viewed as indicative of early occupation.

CONTRACTING STEM PROJECTILE POINTS (TYPE 5, FIGURE 4)

Contracting stem projectile points have been previously reported from the Point St. George site (Gould 1966), Schwenn Site (Leatherman & Kreiger 1940), Looney site (Pettigrew 1978), and Camas Valley sites (Hanes 1978). This type is usually found in association with leaf-shaped points in deposits dated at between 3000-2000 B.P.

The Point St. George site (4DNO11) in northwest California provides some of the best evidence for the early development of contracting stem points. This type, termed "pointed stem" by Richard Gould, was found only in the oldest deposit, dated at 300 B.C. (I-4006), where it was contemporaneous with leaf-shaped types (Gould 1966:53). Gould provided no numerical data relating to the frequency of contracting stem points within the site, only that it was found in the earliest portions of the site and disappeared before the late prehistoric period (Gould 1966:53). Contracting stem points from Point St. George were greatly variable in size, often assymetrical in shape, and most were pressure flaked only along lateral edges (Gould 1966:51).

The Blacklock site (35CU75), radiocarbon dated at 800 B.C. (DIC-1911), contains an assemblage very similar to that of the early horizon at Point St. George. Contracting stem types are very irregular in shape and size, and exhibit uneven surface pressure flaking.

The Gold Hill Site on the Upper Rogue River, excavated by Luther Cressman in 1933, produced contracting stem points in the lowest levels of the site, along with leaf-shaped types. Cressman estimated the age of this cultural deposit at between 2000-4000 B.P. (Cressman 1933:22).

Contracting stem types were also very popular at Camas Valley sites (35DO46-48). They appeared in large numbers both in excavated deposits

and amateur surface collections. Hanes observed many similarities with Point St. George types, including the characteristic assymetrical shape with one shoulder being much more pronounced than the other (Hanes 1978:17). Based on comparisons with Point St. George and other early sites, Hanes hypothesized that Camas Valley was occupied at between 4000-1000 B.P. (Hanes 1978:18).

Richard Pettigrew encountered a similar situation at the Looney site (35DO13), a few miles downstream from Camas Valley. Through the seriation of points from the Looney site with those from 24 other regional sites, Pettigrew determined that contracting stem points were among the earliest known forms in the region, and occurred at the Looney site sometime between 1-500 A.D. (Pettigrew 1978:29).

Three contracting stem points were recovered at the Schwenn site (35CS16), located on the Lower Coquille River. They were found in association with eight leaf-shaped points, in a shell midden deposit. Projectile points from the Schwenn site have recently been examined by Rick Minor, who feels that they exhibit similarities with artifacts from the Early Horizon in the Sacramento Valley of California (Minor & Toepel 1981:21).

The relationship of materials from southwest Oregon with central Californian coastal and valley sites would seem to be very hard to substantiate. However, it may be useful to include at least one site from that region in this discussion. The West Berkeley Site (CA-ALA-307)is a large shell midden located on the east shore of San Francisco Bay. This site was first occupied at 2000 B.C. by a group of people who were fully adapted to the resources available in the San Francisco estuary, although upland resources were utilized to a lesser

degree (Wallace & Lathrop 1975:52). Contracting stem projectile points were the most frequently occurring type at this site, with expanding stem and leaf-shaped types present in smaller numbers (Wallace & Lathrop 1975:12).

All of the available evidence indicates that contracting stem projectile points were utilized during the initial period of aboriginal occupation of southwest Oregon, presently dated at 1000 B.C. They are often found in association with leaf-shaped and expanding stem types, and may have evolved at the same time. Further excavations and radiocarbon dates will be necessary to determine the proper sequence of development.

BROAD STEM PROJECTILE POINTS (TYPES 6 & 7, FIGURE 4)

Broad stem projectile points have been identified in coastal sites at Umpqua-Eden (Ross & Snyder 1979). At Umpqua-Eden, two were found in the lowest portion of the midden, dated at 1000 B.C. Also found in the same level were materials suggesting an early maritime adaptation (Nesbit 1981:58). One broad stem and one leaf-shaped and serrated projectile point were recovered from the Myers Creek site (35CU-61), radiocarbon dated at 1000 B.C. (Cressman 1977). Broad stem points are also found at the Blacklock site, which has yielded a radiocarbon date of 800 B.C. (Ross & Snyder 1979).

Two sites on the Applegate River have produced broad stem projectile points. Several broad stem points were found in the same stratigraphic levels as large serrated leaf-shaped specimens, with an estimated date of 4000-6000 B.P. (Nesbit 1981:43). These types were also found in deposits estimated to date from 4000-2000 B.P. (Nesbit 1981:43).

Broad stem projectile points have been found in several Willamette Valley sites. According to John White, who developed a typology for this region, points with square stems and square shoulders are one of the identifying features of the period between 4000-250 B.C. They are much broader and thicker than points found in later time periods (White 1975:58).

SIDE-NOTCHED PROJECTILE POINTS (TYPE 8, FIGURE 4)

Side-notched projectile points are very infrequently found in southwest Oregon coastal sites. They have been reported from only one excavated site, Umpqua-Eden, where they were found in the upper portions of the deposit (Ross, personal communication). However, several excavated sites in the interior, particularly along the Upper Rogue River, contain this point type. Richard Hanes identified nine side-notched points in a surface collection from several Camas Valley sites (Hanes 1978:60). In Applegate River sites, thick, stubby side-notched points were found in deposits with large leaf-shaped and serrated types, which were much more frequent. The estimated date for this occupation is 6000-4000 B.P. (Nesbit 1981:43). Wilbur Davis has also reported the occurrence of large side-notched projectile points in several Upper Rogue River sites in the vicinity of Lost Creek (Davis 1974:49).

CONCAVE BASE PROJECTILE POINTS (TYPES 9-11, FIGURE 5)

Concave base projectile points have been recovered from numerous coastal sites, including the Philpot Site (Draper 1980), Bullards Beach (Ross 1976), Bandon Lighthouse (Cressman 1952), The Strain Site (Newman

1959), Port Orford Heads (Ross 1977), Pistol River (Heflin 1966), Lone Ranch (Berreman 1944), Point St. George (Gould 1966), Tsurai (Elsasser & Heizer 1966), Patrick's Point (Elsasser & Heizer 1966), and Gunther Island (Loud 1918; Elsasser & Heizer 1964).

This point type is generally felt to be indicative of late prehistoric cultures in the Northwest Californian Culture Subarea. The earliest date for this period of occupation was provided by the Gunther Island Shellmound (4HUM67), in Humboldt Bay, radiocarbon dated at 900 A.D. (M-938). According to Robert Heizer, the "matrix" items of this culture include large concave base projectile points used as the tip of antler harpoon foreshafts (Elsasser & Heizer 1966:100). Concave base points continued as a dominant style throughout the late prehistoric period, and were used well into the Twentieth Century, when most were made out of glass or metal (Gould 1964:56).

The presence of concave base projectile points in southern Oregon coastal sites is often seen as an indication of close ties with cultures in northwest California (Newman 1959:45; Gould 1966:63). They are common at sites from the mouth of the Coquille River to Humboldt Bay, but are infrequent outside this region, serving to confirm the boundaries of the Northwest California Culture Subarea (Draper 1980:80). Their distribution suggests a regional technological development largely confined to the coast. Concave base points are found in small numbers in interior sites along the Rogue and Umpqua Rivers, perhaps the result of the diffusion of technological traits into the interior from the coast during the late prehistoric period (Hanes 1976:5; Draper 1980:78).

The use of concave base projectile points throughout the historic period has enabled anthropologists to obtain good ethnographic data

regarding their function. A good example is provided at Point St. George (4DNO11), where members of the Tolowa tribe interpreted the function of artifacts recovered from the late prehistoric/historic periods of occupation. In general, small, finely made concave base points were classified as arrowpoints, large triangular points were knives, and large concave base and small triangular points were used as the tips for composite harpoon foreshafts (Gould 1964:94).

The Coquille River is usually considered to be the northern boundary of Californian traits along the Oregon coast. Small numbers of concave base points were found at the Philpot site (35CS1), a seasonal fishing camp located along the lower Coquille River and radiocarbon dated at between 1380-1700 A.D. (DIC-1395, DIC-1396). The absence of large concave base points indicates that sea mammal hunting was not important at this site (Draper 1980:60). Small parallel-sided concave base points comprised almost 50% of the assemblage recovered at Bullards Beach (35CS3), a late prehistoric/historic village site located a mile downstream from the Philpot Site (Ross 1976). At 35CS5, near the mouth of the river, large concave base projectile points were found in association with composite harpoon foreshafts, indicating the importance of sea mammal hunting (Cressman 1952:257). CS-5 was occupied during the late prehistoric/historic period.

Small parallel-sided concave base points were the only type of projectile point found at the Strain Site (35CU47), adjacent to Floras Lake. Occupation is estimated at between 1800-1850 A.D., based on the presence of trade items. Some shell was present at the site, but the primary occupation of the inhabitants was the hunting of large land mammals (Newman 1959).

Two sites at Port Orford Heads have produced concave base projectile points. 35CU9 contained both small parallel-sided types and the larger type used to tip harpoons. The occupants of this site were adapted to maritime resources, and were present during the late prehistoric/historic period (Ross 1976). The nearby Blunden Site (35CU106) contains an upper deposit of molluscan remains intermixed with sea mammal bone, radiocarbon dated at 1300 A.D. (Minor & Toepel 1981:16). A local collector, Elmer Bens, has obtained several large expanding edge concave base projectile points from this midden (Bens 1974).

A large shell midden located near the mouth of Pistol River (35CU61) has yielded considerable numbers of both expanding and parallel edged concave base projectile points. The most frequent type recovered during excavations was described as a "thin, well-made basically triangular point with indented concave or square base" (Heflin 1966:166). The inhabitants of Pistol River were adapted to marine resources, including shellfish, fish and sea mammals (Heflin 1966:166). The abundance of sea mammal remains and antler harpoon foreshafts in the midden may reflect intensive hunting at nearby offshore reefs (Crook, personal communication). Occupation of Pistol River began during the late prehistoric period and extended into the historic period (Heflin 1966:176).

Lone Ranch (35CU37), contained a small number of parallel-sided concave base projectile points. These were recovered from the upper levels of the site, which was occupied during the late prehistoric period but abandoned sometime prior to white contact (Berreman 1944:33). The midden deposit at Lone Ranch was comprised largely of mussel shell, but also contained the bones of both land and sea mammals (Berreman 1944).

At Point St. George (4DNO11), concave base points were confined entirely to the late prehistoric and historic periods of occupation. Both small parallel-sided and large expanding edge concave base types were recovered during the excavation. The concave base points exhibited little size range, and were pressure flaked over the entire surface of the point, a characteristic not found in projectile points from earlier periods of occupation at the site. The inhabitants of Point St. George were largely dependent on marine resources, although short periods of time were spent in the interior during the fall. A specialized sea mammal hunting adaptation featuring antler harpoon forshafts tipped with large concave base points is indicated by the artifact and faunal assemblages (Gould 1966).

Three concave base points with side notches were also recovered from the upper levels of Point St. George. They may reflect either random experimentation or introduction from outside of the general area (Gould 1964:88). This type has been identified more frequently in late prehistoric interior sites than in late coastal sites (Pettigrew 1978:25).

Concave base projectile points were the most common type at the historic Yurok village of Tsurai (4HUM169), at Trinidad Bay. Large expanding edge types used to tip composite harpoons were more prevalent than small parallel-sided types (Elsasser & Heizer 1966:100). Tsurai was first occupied about 1620 A.D., with occupation lasting well into the Twentieth Century (Elsasser & Heizer 1966:102). Fish, shellfish, and marine mammals were the major resources utilized at Tsurai, although there was a secondary emphasis on the hunting of land mammals (Elsasser & Heizer 1966:59).

Patrick's Point (4HUM118), an intensively utilized but seasonal campsite located on a coastal headland in northern California, also contained concave base points in large numbers. Large expanding edge types predominate, and serve to illustrate the importance of marine mammal hunting (Elsasser & Heizer 1966:55). Radiocarbon dating established occupation beginning at 1310 A.D. (Elsasser & Heizer 1966).

A large shellmound on Gunther Island in Humboldt Bay, radiocarbon dated at 900 A.D., has also yielded concave base projectile points. They were, however, a relatively infrequent type (Loud 1918).

Based on available radiocarbon dates, concave base projectile points became popular around 900 A.D., and were utilized through the historic contact period. They are the dominant type in most large prehistoric northwest Californian coastal sites, where they may have first developed. They also occur in large numbers at many sites along the southern Oregon coast, but became infrequent in sites north of the Coquille River.

TRIANGULAR PROJECTILE POINTS (TYPE 12, FIGURE 5)

Projectile points with a flat base and triangular outline are almost as frequent as concave base types in northwest Californian artifact assemblages from Point St. George (Gould 1966), Tsurai (Elsasser & Heizer 1966), Patrick's Point (Elsasser & Heizer 1966) and Gunther Island (Loud 1918; Elsasser & Heizer 1964). They have also been reported in small numbers at the southwestern Oregon sites of Lone Ranch (Berreman 1944) and the Philpot site (Draper 1980).

In northwest Californian sites, triangular projectile points occur in the same contexts as large concave base types, and served the same function, as tips for slotted harpoon foreshafts (Gould 1966:55; Elsasser & Heizer 1966:55). At Patrick's Point (4HUM118), triangular types were almost as common as concave base types, and appeared at the same time, around 1300 A.D. (Elsasser & Heizer 1966). Triangular types were also contemporaneous with concave base types at Tsurai (4HUM169), in deposits estimated to date from 1620 A.D. (Elsasser & Heizer 1966).

Few southwest Oregon excavated sites have produced triangular projectile points. Two triangular types were recovered at Lone Ranch (35CU37), in the upper portion of the deposit estimated to date from the late prehistoric period (Berreman 1944). One triangular type was present in the excavated assemblage from the Philpot site (35CS1), radiocarbon dated at between 1350-1700 A.D. (Draper 1980). Draper considered this type to be an example of technological innovations at 35CS1, since triangular types had not previously been identified at other sites in this area.

Triangular projectile points appear to be very similar to concave base types in terms of chronological development, function and distribution. They are a relatively late development along the southwest Oregon/northwest California coast, and the center of distribution is northwest California.

TANGED PROJECTILE POINTS (TYPES 13-15, FIGURE 5)

Tanged or basally notched projectile points have been reported at the following coastal sites: Umpqua-Eden (Ross & Snyder 1979), The Philpot site (Draper 1980), Port Orford Heads (Ross 1976), Bullards Beach (Ross 1976), Lone Ranch (Berreman 1944), Pistol River (Heflin 1966), Point St. George (Gould 1966), Tsurai (Elsasser & Heizer 1966), Patrick's Point (Elsasser & Heizer 1966), and Gunther Island (Loud 1918; Elsasser & Heizer 1966).

The most distinctive regional form of this point type has barbs that extend well below the stem, and is termed the Gunther Barbed Variety (Treganza 1958). The mouth of the Klamath River has often been cited as the center of distribution for this type (Leonhardy 1967:36). Their presence in southwest Oregon coastal and interior sites is likely the result of a diffusion of technology radiating from the center of Northwest Californian Coastal Cultures (Draper 1980:78). However, they do have a wide distribution in Oregon and northwest California and could have developed elsewhere than the coast (Elsasser 1978:51).

The other prominent type of tanged projectile point has well-defined barbs that do not extend below the base of the stem. The Lower Klamath River is also considered to be the distributional center of this type (Draper 1980:78).

Tanged projectile points are considered to be indicative of late prehistoric cultures. They probably reflect the introduction of the bow and arrow into southwest Oregon, sometime around 500 A.D. (Minor &

Toepel 1981:20). The earliest coastal site where this type has been reported is Gunther Island (4HUM67), radiocarbon dated at 900 A.D. (Crane & Griffin 1961). At Point St. George (4DNO11), all the tanged points occurred in the late prehistoric/historic horizon (Gould 1966:53). Several metal and glass projectile points of the tanged type were also recovered at this site (Gould 1966:52).

Gould has also documented the evolution of tanged projectile points at Point St. George. The earliest types had only slight tangs or barbs, but through time became increasingly more tanged until the tangs extended well below the stem (Gould 1964:42). The tendency for less size variation and finer pressure flaking is also apparent in the Point St. George collection (Gould 1964:43). Several metal arrowheads made by a Tolowa Indian in 1920 are extremely barbed, as is a large collection of metal-tipped arrows made by historic Yurok Indians, suggesting that the evolution of tanged points continued into the Twentieth Century (Gould 1966:52).

This tendency toward larger barbs apparently did not take place at interior sites in southwest Oregon. Richard Pettigrew observed that points with tangs equal to or less than the stem were more common than extremely tanged types in the interior during the late prehistoric period (Pettigrew 1978:28).

TANGED, STEMLESS PROJECTILE POINTS (TYPE 16, FIGURE 5)

This type was identified as a subtradition by Gould (1964), at the Point St. George site. However, it has not been identified from

assemblages at any other excavated coastal sites. Type 16 is most likely the result of the accidental breaking of the stem during the final stages of manufacturing.

STEMMED, SLIGHT TANGS (TYPE 17, FIGURE 5)

Richard Gould attempted to show the relationship of early cultures and projectile point forms with late cultures and forms at Point St. George (4DNO11), by defining a transitional period when contracting stem projectile points were modified so that the shoulders began to be replaced with slight tangs (Gould 1964:41). The tendency for larger and more pronounced tangs then continued throughout the late prehistoric and historic periods. This tendency was allegedly documented with stratigraphic relationships (Gould 1964:86).

However, no other sites in the region have shown any evidence of this transition, or the historic relationships between early and late projectile point types. Occasional specimens of this style do appear, but not in numbers that would support their importance as a transitional style. It is more likely that they are preforms or that the tangs were broken during manufacture.

FIGURE 6
Chronological Data Associated With Major Projectile Point Types

	Leaf-shaped (Types 1-3)	Expanding (Type 4)	Contracting (Type 5)	Broad Stem (Types 6-7)	Side-notched (Type 8)	Concave Base (Types 9-11)	Triangular (Type 12)	Tanged (Types 13-15)	Chronological Data
Myer's Creek	X			X					1000 B.C.
Blacklock	X	X	X	X	P			P	800 B.C.
Point St. George Early	X	X	X						300 B.C.
Blunden, Early	X								50 B.C.
Gunther Island	P	P	P		P	P	P	X	900 A.D.
Patrick's Point	P				P	X	X	P	1310 A.D.
Blunden, Late						X			1300 A.D.
Philpot	P	P				X	X	X	1380 A.D.
Point St. George Late						X	X	X	Trade Goods
Tsurai	P					X	X	X	Trade Goods
Strain						X			Trade Goods
Bullards	P		P			X	X	X	Trade Goods

P = Present in numbers of less than 5%

X = Present in numbers of more than 5%

Summary

There are two distinct periods of occupation in southwest Oregon, each represented by several distinct types of projectile points. It is very likely that other periods are also represented but the absence of radiocarbon dates from most sites prevents their identification at this time.

Leaf-shaped (Types 1-3), expanding stem (Type 4), contracting stem (Type 5), broad stem (Types 6-7), and side-notched (Type 8) projectile points have been recovered from deposits radiocarbon dated at between 1000 B.C. - 50 B.C. With the exception of broad stemmed projectile points (Types 6-7), all of the above types have also been identified in small numbers at deposits with more recent radiocarbon dates.

Concave base (Types 9-11), triangular (Type 12), and tanged (Types 13-15) projectile points are associated with deposits radiocarbon dated at between 900 A.D. - 1380 A.D. They are also found in association with trade materials such as glass beads that were brought into southwest Oregon after 1792 (Toepel & Minor 1981). There does not appear to be a significant change in projectile point styles from about 900 A.D. to 1856 A.D., when all of the native populations in southwest Oregon were removed to reservations.

The lack of radiocarbon dates from 50 B.C. to 900 A.D. makes it difficult to determine when early types of projectile points were replaced by later types. The introduction of the bow and arrow into southwest Oregon, which has been estimated to have taken place around 500 A.D., probably resulted in the change from large leaf-shaped and broad stem to smaller concave base and triangular projectile point types (Heizer & Hester 1978:10; Minor & Toepel 1981).

Two periods of occupation can thus be defined for southwest Oregon. The "Early" period is characterized by leaf-shaped (Types 1-3), expanding stem (Type 4), contracting stem (Type 5), broad stemmed (Types 6-7), and side-notched (Type 8) projectile points. This period is tentatively dated at between 1000 B.C. - 500 A.D. The "Late" period, dating from 500 A.D. - 1856 A.D., is characterized by concave base (Types 9-11), triangular (Type 12) and tanged (Types 13-15) projectile points.

It is probable that the "Early" period of occupation in southwest Oregon began considerably before 1000 B.C. Several archaeologists have observed similarities between projectile point assemblages from southwest Oregon and assemblages from other regions that date from 4000-6000 B.P. (Pettigrew 1978; Hanes 1978; Nesbit 1981; Minor & Toepel 1981). At the present time, however, there are no radiocarbon dates earlier than 1000 B.C. for southern Oregon coastal sites, and any earlier occupation is hypothetical.

The "Late" period includes both late prehistoric and historic cultures. This is based on the premise that native cultures, and projectile point styles, did not change greatly after initial white contact. The first contact between Euro-American and native cultures in southwest Oregon took place during the latter part of the 17th Century, when trading vessels worked the coast in search of Sea otter pelts. While European diseases such as smallpox were introduced, there is little evidence that the overall aboriginal culture was greatly altered until 1851, when American settlers began occupying this region (Beckham & Minor 1980).

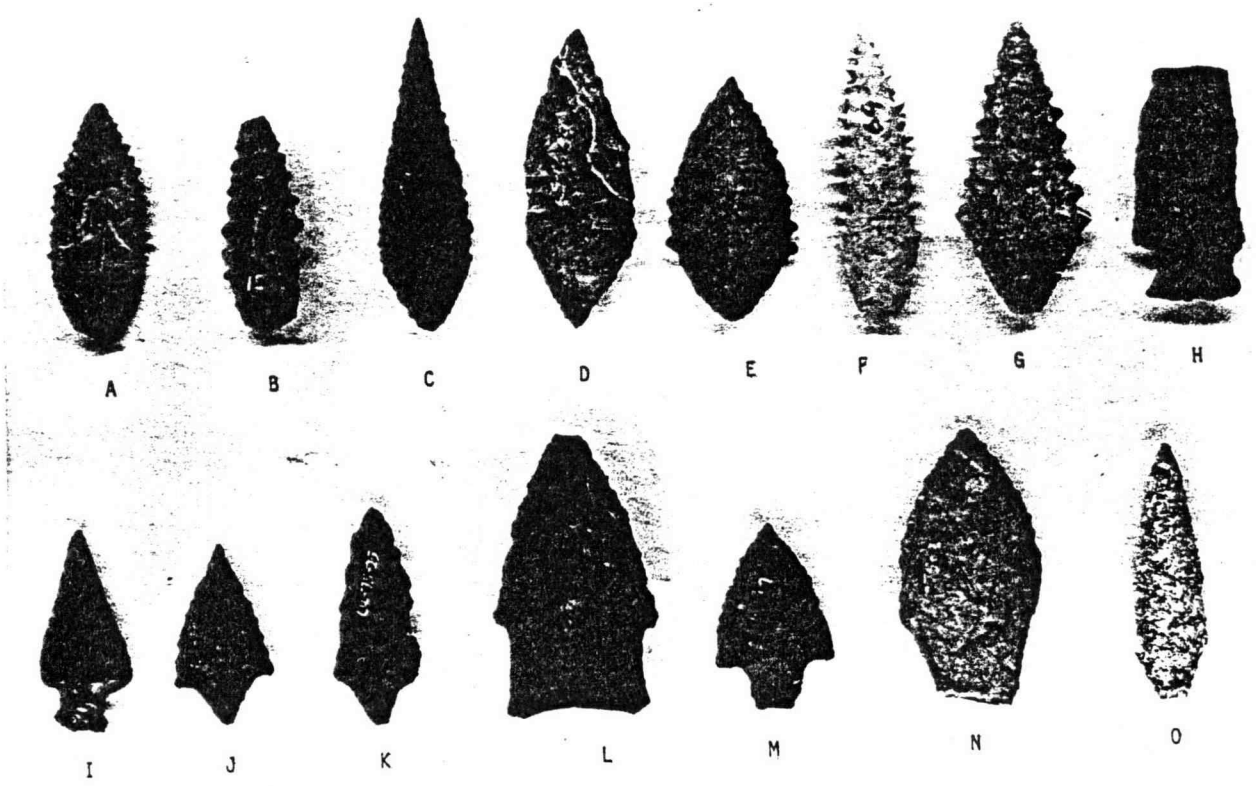


Figure 7

Projectile Point Forms from the Early Period

A-B	Group 1	Leaf-shaped
C-E	Group 2	Leaf-shaped
F-G	Group 3	Leaf-shaped
H-I	Group 4	Expanding Stem
J-K	Group 5	Contracting Stem
L-M	Group 6	Broad Stem
N-O	Group 7	Broad Stem

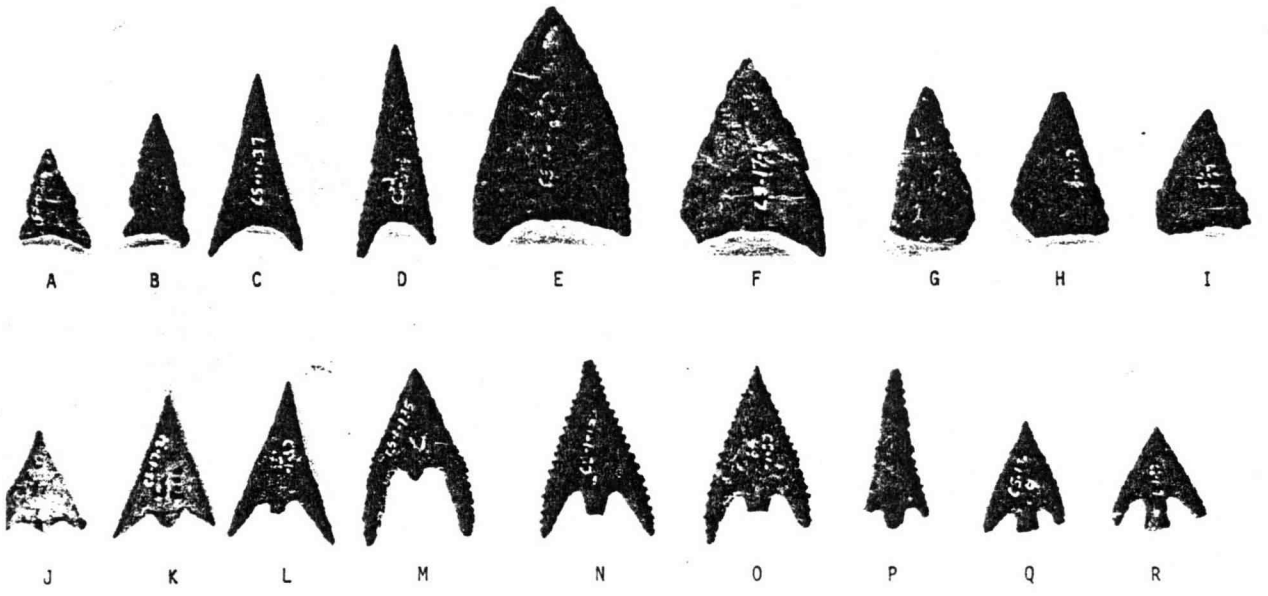


Figure 8

Projectile Point Forms from the Late Period

A-B	Group 9	Concave Base
C-D	Group 10	Concave Base
E-F	Group 11	Concave Base
G-I	Group 12	Triangular
J-L	Group 13	Tanged
M-O	Group 14	Tanged
P-R	Group 15	Tanged

CHAPTER VII

RESULTS

In the preceding chapter, the body of available published data was summarized regarding projectile point chronologies. This provided some basis for determining the time period during which each major style of projectile point was being utilized. In the Early period, from 1000 B.C. to 500 A.D., leaf-shaped, contracting stem, expanding stem, broad stem, and side-notched projectile points were predominant. In the Late period, from 500 A.D. to 1856 A.D., concave base, triangular, and tanged types were predominant. Based on this information, projectile point assemblages can serve as general indicators of the period during which a particular site was being occupied.

After a general typology had been developed, projectile point assemblages from both excavated and surface-collected sites were examined. The frequencies of major projectile point types were recorded for each site. This information could then be used to establish the relative age of all of the sites included in the study (see Figures 8, 9, & 10).

Two other factors were also considered for each of the sites, the environmental setting and site function. Once this information was compiled, it would be possible to determine if settlement patterns changed through time in southwest Oregon.

The environment was divided into five catagories, based on geographic features and paralleling the divisions utilized by Rick Minor and Kathryn Toepel (1981) in a previous study of settlement patterns along the southern Oregon coast. The divisions include:

Figure 9 - PROJECTILE POINT FREQUENCIES FROM EARLY SITES

Site	TYPE																		Chronological Information
	Leaf-Shaped			Expanding Stem	Contracting Stem	Broad Stem		Side-Notched	Concave Base			Triangular	Tanged			Stemless Tanged	Stemmed, Slight Tangs		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
Barrows (CS-61)	27	29	6	15	47	7	5	-	-	-	-	2	-	-	-	-	-		
Schwenn (CS-16)	10	*	*	1	7	1	-	-	-	-	-	-	-	-	1	-	1		
Lescom (CS-63)	7	3	2	7	-	-	-	-	-	-	-	-	-	-	-	-	-		
Shorb (CS-82)	8	10	6	19	13	3	7	-	-	-	-	-	-	-	1	-	-		
Dement (CU-93)	21	10	7	25	8	-	-	-	-	-	-	-	-	-	-	-	-		
Camas Valley (DO-46-48)	6	*	*	13	20	-	-	9	-	-	-	-	-	-	2	-	-		
Looney (DO-13)	-	-	2	1	6	-	-	-	-	-	-	-	-	-	1	-	-		
Blacklock (CU-75)	12	14	3	21	38	16	1	1	-	-	-	-	-	-	1	-	-		300 B.C.
Indian Sands (CU-34)	7	18	5	-	-	-	-	-	-	-	-	-	-	1	-	-	-		

*Indicates that the Investigator's description of projectile points was too general to allow for a breakdown into specific types.

Figure 10 - Projectile Point Frequencies From Late Sites

Sites	Type																	Chronological Information
	Leaf-Shaped			Expanding Stem	Contracting Stem	Broad Stem		Side-Notched	Concave Base			Triangular	Tanged			Stemless Tanged	Stemmed Slight Tangs	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Whiskey Run (CS-62)	-	-	-	-	-	-	-	-	3	18	-	3	-	-	-	-	-	
Bullards (CS-3)	1	-	-	-	1	-	-	-	2	8	-	3	2	5	6	3	-	Trade Goods
Philpots (CS-1)	2	1	1	1	-	-	-	-	7	98	21	26	4	190	293	11	18	1350-1700A.D.
Carlson's Island (CS-17)	2	-	-	-	-	-	-	-	1	17	7	3	6	8	27	5	0	Trade Goods
New Lake (CS-56)	-	-	-	2	-	-	-	1	-	22	2	1	-	6	7	-	-	Trade Goods
Strain (CU-47)	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	Trade Goods
McKenzie (CU-4)	-	-	1	-	-	-	-	1	-	8	1	-	2	-	3	-	-	Trade Goods
Knapp (CU-5)	-	-	-	-	-	1	-	-	-	18	1	-	-	-	-	-	-	Trade Goods
Pistol River School (CU-92)	-	1	-	1	-	1	-	1	1	52	5	16	2	4	4	5	0	
Tsurai (HUM-169)	6	4	-	-	1	-	-	-	2	37	*	18	-	15	9	-	-	1620 A.D., Trade Goods
Patrick's Point (HUM-118)	24	-	-	-	-	-	-	1	4	74	*	67	-	10	-	-	-	1300 A.D., Trade Goods

Figure 11 - Projectile Point Frequencies From Sites Occupied During Both Periods

Sites	Type																	Chronological Information
	Leaf-Shaped			Expanding Stem	Contracting Stem	Broad Stem		Side-Notched	Concave Base		Triangular	Tanged			Stemless Tanged	Stemmed Slight Tangs	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Port Orford Heads (CU-9)	9	*	*	1	-	-	-	-	-	2	1	-	-	*	6	-	-	
Blunden (CU-106)	-	1	-	-	-	-	-	-	-	13	9	-	-	-	-	-	-	50 B.C. to 1320 A.D.
Bagnell's Ferry (CU-25)	172	23	49	26	5	8	2	13	-	1	-	-	11	-	11	7	4	
McGinnis (CU-59)	5	11	2	2	10	-	-	-	-	2	-	5	39	5	6	1	24	
Lone Ranch (CU-37)	13	*	*	-	-	-	-	-	-	*	5	2	*	*	10	-	-	

*Indicates that the Investigator's description of projectile points was too general to allow for a breakdown into specific types.

Headland - The environment immediately adjacent to the Pacific Ocean on the many promontories found along the southern Oregon coastline.

River Mouth - Large terraces are typically located on both sides of the mouths of coastal rivers.

Estuary - Within the study area, the only significant estuary is formed by the Coquille River. However, there is a small estuary along the lower portion of the Rogue River.

Coastal Lakes - There are several coastal lakes located between the mouth of the Coquille River and Port Orford Heads. None of these is more than a mile from the ocean.

Interior - This portion of the environment is located along river courses 15-30 miles upriver from estuaries. Within the study area, rivers include the Coquille and its tributaries, Sixes River, Elk River, the lower Rogue and Illinois Rivers, and Pistol River. All of the interior sites discussed in this paper are located on the west side of the Coast Range.

Sites were also classified according to their function as either villages or camps, based on definitions provided by Minor and Toepel (1981). Villages are sites occupied by a sizable number of people during a significant portion of the year. Villages contain deep cultural deposits covering a large area, and artifact assemblages with a variety of tool types indicating varied economic pursuits. Villages also often contain housepits. Camps are defined as sites with shallow cultural deposits covering a small area, indicating occupation by small groups of people for very short periods of time. Most camps contain

only a small number of artifact types, indicating their use for specific rather than general functions.

The following list provides a summary of dominant projectile point types, environmental settings, and functions of the sites included in this study. A more detailed description of each site is provided in Appendix A. Sites are listed as belonging to the Early period, Late period, or both the Early and Late periods of time.

Late Period

A. Carlson's Island (CS-17) Fishing camp located on the Coquille River Estuary. Tanged (53.9%) and concave base (32.8%) projectile point types dominate the assemblage. The presence of trade materials indicates occupation after historic contact.

B. Philpot (CS-1) Fishing camp located on the Coquille River Estuary. Tanged (72.2%) and concave base (19.0%) projectile points are the most frequent types in amateur collections. Tanged types (76.1%) dominate within the excavated assemblage (Draper 1980). Radiocarbon dates indicate occupation between 1380 A.D. - 1700 A.D.

C. Bullards (CS-3) Village site located on the Coquille River Estuary. Tanged (36.8%), concave base (26.3%), and triangular (15.7%) projectile points are the most frequent in amateur collections, while tanged (50%) and concave base (41.6%) types are most frequent in the excavated assemblages (Ross 1976). Trade materials dated at between 1800-1825 A.D. are indicative of occupation after historic contact.

D. Bandon Lighthouse (CS-5) Village site located on the Coquille River Estuary near the mouth of the river. Concave base and tanged projectile points are the most frequently occurring types (Minor & Toepel 1981). Occupation began during the late prehistoric period and lasted into historic contact (Cressman 1952).

E. Coquille Mill (CS-23) Campsite located approximately 20 miles upstream from the mouth of the Coquille River, but still under tidal influence. No projectile points were found at the site. Radiocarbon dating indicated occupation at between 1500 - 1650 A.D. (Cressman 1952).

F. Whiskey Run (CS-62) Village site located on Five Mile Point, a prominent headland north of the mouth of the Coquille River. Concave base (87.5%) and triangular (12.5%) projectile points

were the only types found in amateur collections from this site. No trade materials were included in the collection.

G. New Lake (CS-56) Village site located at the edge of New Lake, a shallow marsh located half a mile east of the coastline. Concave base (61.5%) and tanged (33.3%) projectile points are the most frequently occurring types. The presence of trade materials indicates that occupation lasted through historic contact.

H. Strain (CU-47) Village site located at the northern edge of Floras Lake, one mile east of the coastline. Concave base projectile points were the only type identified. The presence of trade materials indicates occupancy during historic contact (Newman 1959).

I. McKenzie (CU-4) Village site located on the north side of Elk River, near the mouth of the river. Concave base (56.2%) and tanged (31.2%) projectile point types dominate the assemblage. The presence of trade materials indicates habitation during historic contact.

J. Knapp (CU-5) Village site located on the south side of Elk River, near the mouth. Concave base projectile points comprise 95% of the total assemblage. The presence of trade materials indicates habitation during historic contact.

K. Pistol River (CU-61) Village site located on the north side of the mouth of Pistol River. Concave base projectile points were the most common type at the site. The presence of trade materials indicates occupation during historic contact (Heflin 1966).

L. Pistol River School (CU-92) Village site located approximately seven miles upstream from the mouth of Pistol River. Concave base (61.2%), triangular (17.2%), and tanged (10.7%) projectile point types dominate the assemblage. No trade materials have been found at the site.

M. Tsurai (HUM-169) Village site overlooking Trinidad Bay in northern California. Concave base (41.1%), tanged (26.6%), and triangular (20.0%) types predominate. This site has been estimated to date from 1620 A.D. Associated trade goods indicates occupation during historic contact (Elsasser & Heizer 1966).

N. Patrick's Point (HUM-118) Campsite located on a prominent headland in northern California. Concave base (42.0%) and triangular (38.0%) projectile point types are predominant. The initial occupation of the site has been established by radiocarbon dating at 1300 A.D. (Elsasser & Heizer 1966).

O. Gunther Island (HUM-67) Village site located on an island in Humboldt Bay, northern California. Tanged projectile points were the most frequently occurring type. Radiocarbon dating has established initial occupation at 900 A.D. (Heizer & Elsasser 1964).

Early Period

A. Barrows (CS-61) Village site located on a knoll overlooking the upper portion of the Coquille River Estuary. Leaf-shaped (43.9%), contracting stem (33.3%), and expanding stem (10.6%) types predominate within the projectile point assemblage.

B. Schwenn (CS-16) Village site located on a knoll overlooking the upper portion of the Coquille River Estuary. Contracting stem (40%) and leaf-shaped (20%) projectile point types are most frequent in amateur collections, while leaf-shaped (72.7%) and contracting stem (36.6%) types comprise the excavated assemblage (Leatherman & Kreiger 1940).

C. Lescom (CS-63) Village site located in a valley formed by the South Fork of the Coquille River. Leaf-shaped (63.1%) and expanding stem (36.8%) projectile points are the only types present in amateur collections from the site.

D. Shorb (CS-82) Village site located in a valley formed by the South Fork of the Coquille River. Leaf-shaped (35.8%), expanding stem (28.3%), and contracting stem (19.4%) projectile points comprise the bulk of the assemblage.

E. Dement (CU-93) Village site located in a valley formed by the North and Middle Forks of Sixes River. Leaf-shaped (53.5%), expanding stem (35.2%) and contracting stem (11.2%) projectile points are the only types found at this site.

F. Camas Valley (DO-46, DO-47, DO-48) Two village sites and one campsite located in a broad valley formed by the upper reaches of the Middle Fork of the Coquille River. Contracting stem projectile points are the most common types from these three sites (Hanes 1978).

G. Looney (DO-13) Campsite located on a terrace in the canyon of the Middle Fork Coquille River. Contracting stem (60%) and leaf-shaped (20%) projectile points were the most common types in the excavated assemblage (Pettigrew 1978).

H. Blacklock (CU-75) Campsite located on a prominent headland a few miles north of the mouth of Sixes River. Contracting stem (35.5%), leaf-shaped (27.1%), expanding stem (19.6%) and broad stem (15.8%) projectile points are the major types collected at this site. Radiocarbon dating has established occupation at 800 B.C. (Ross 1980).

I. Myers Creek (CU-61) Campsite located on a headland north of the mouth of Pistol River. One broad stem and one leaf-shaped projectile point have been recovered from a deposit radiocarbon dated at 1000 B.C. (Cressman 1978).

J. Indian Sands (CU-34) Campsite located on a headland north of the mouth of the Chetco River. Leaf-shaped projectile points comprised over 95% of the assemblage from this site.

Both Early and Late

A. Port Orford Heads (CU-9) Campsite located on a prominent headland south of the mouth of Elk River. Major projectile point types include leaf-shaped (47.3%), tanged (31.5%), and concave base (15.7%) (Ross 1977).

B. Blunden (CU-106) Campsite located on Port Orford Heads, a prominent headland south of the mouth of Elk River and adjacent to CU-9. The lower portion of the site was radiocarbon dated at 50 B.C. The only projectile point from this level was leaf-shaped and serrated. The upper portion of the site, radiocarbon dated at 1320 A.D., contained only concave base projectile points.

C. Bagnell's Ferry (CU-25) Village site located on a terrace bordering the upper portion of the Rogue River Estuary. Major projectile point types include leaf-shaped (73.4%), expanding stem (7.8%), and tanged (6.6%) specimens.

D. McGinnis (CU-59) Village site located in a large valley near the confluence of the Roque and Illinois Rivers. Major projectile point types include tanged (44.6%), leaf-shaped (16.0%), and contracting stem (8.9%) specimens.

E. Lone Ranch (CU-37) This site was first used as a camp, and later was the location of a major village. It is located at the edge of a coastal bay a few miles north of the Chetco River. Only leaf-shaped projectile points were found in association with the lowest portion of the site. Later deposits contained assemblages dominated by tanged and concave base projectile point types (Berreman 1944).

F. Point St. George (DNO-11) Located on a prominent headland south of the mouth of Smith River in northern California, this site was first used as a camp, and later as a village. Initial occupation has been radiocarbon dated at 300 B.C., and is characterized by contracting stem and leaf-shaped projectile point types. The late occupation contained tanged and concave base projectile points, as well as items of Euro-American manufacture (Gould 1964, 1966).

CHAPTER VIII

CONCLUSIONS

Based on the distribution of major types of projectile points, it is apparent that at least two distinct periods of occupation occurred in southwest Oregon. The Early period is tentatively dated between 1000 B.C. and 500 A.D., and the Late period between 500 A.D. and 1856 A.D. The Early period was characterized by reliance upon upland resources, and the focus of attention was along the upper reaches of coastal rivers. The Late period was characterized by reliance upon riverine and maritime resources, and the focus of occupation was on coastal bays and estuaries. Three sites located along the upper Coquille and Rogue estuaries may reflect a transition period, when the adaptation from upland to maritime resources took place.

During the Early period, most of the villages were located either upriver and away from the coast, or along the upper reaches of coastal estuaries (see Figure 13). No villages were located on coastal headlands or at the mouths of coastal rivers. Most of the Early camps were located on coastal promontories. Only two upriver campsites dating from the Early period were identified during the study.

This pattern changed dramatically during the Late period (Figure 14). Ten of the 12 villages identified for this period were located adjacent to the coast, while only two were upriver. The focus of occupation during the Late period was equally divided between headland, river mouth, and estuary. Campsites from the Late period were also predominantly located in the coastal environment.

Figure 12 - Environmental Position and Function of Sites from the Early and Late Periods in Southwest Oregon

	COASTAL				INTERIOR
	Headland	River Mouth	Estuary	Coastal Lake	Up River Interior
EARLY CAMPS	Lone Ranch Indian Sands Myers Creek Port Orford Heads Blunden Blacklock	(None Identified)	(None Identified)	(None Identified)	Looney
EARLY VILLAGES	(None Identified)	(None Identified)	Schwenn Barrows Bagnell's Ferry	(None Identified)	Camas Valley Dement Shorb Lescom McGinnis
LATE CAMPS	Blunden Port Orford Heads	(None Identified)	Carlson's Island Philpot	(None Identified)	Coquille Mill
LATE VILLAGES	Whiskey Run Lone Ranch	McKenzie Knapp Pistol River	Bagnell's Ferry Bullards Bandon Lighthouse	New Lake Strain	McGinnis Pistol River School

Figure 13
Site Distribution from the Early Period

1. Barrows - 35CS61
2. Schwenn - 35CS16
3. Looney - 35D013
4. Camas Valley - 35D046-48
5. Lescom - 35CS63
6. Shorb - 35CS82
7. Blacklock - 35CU75
8. Dement - 35CU93
9. Port Orford Heads - 35CU9
10. Blunden - 35CU106
11. Bagnell's Ferry - 35CU25
12. McGinnis - 35CU59
13. Myer's Creek - 35CU63
14. Indian Sands - 35CU34
15. Lone Ranch - 35CU37
16. Point St. George - 4DN011

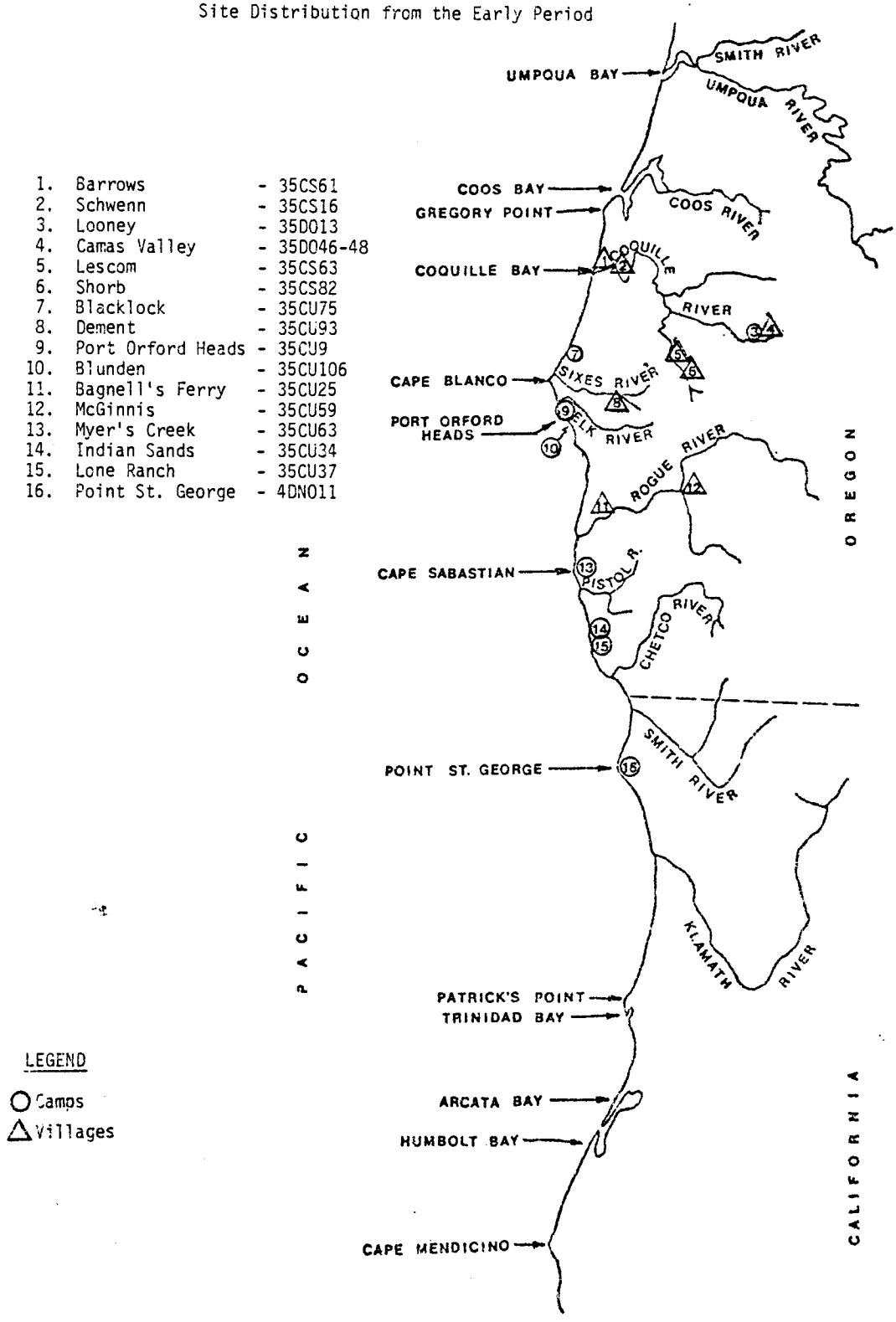
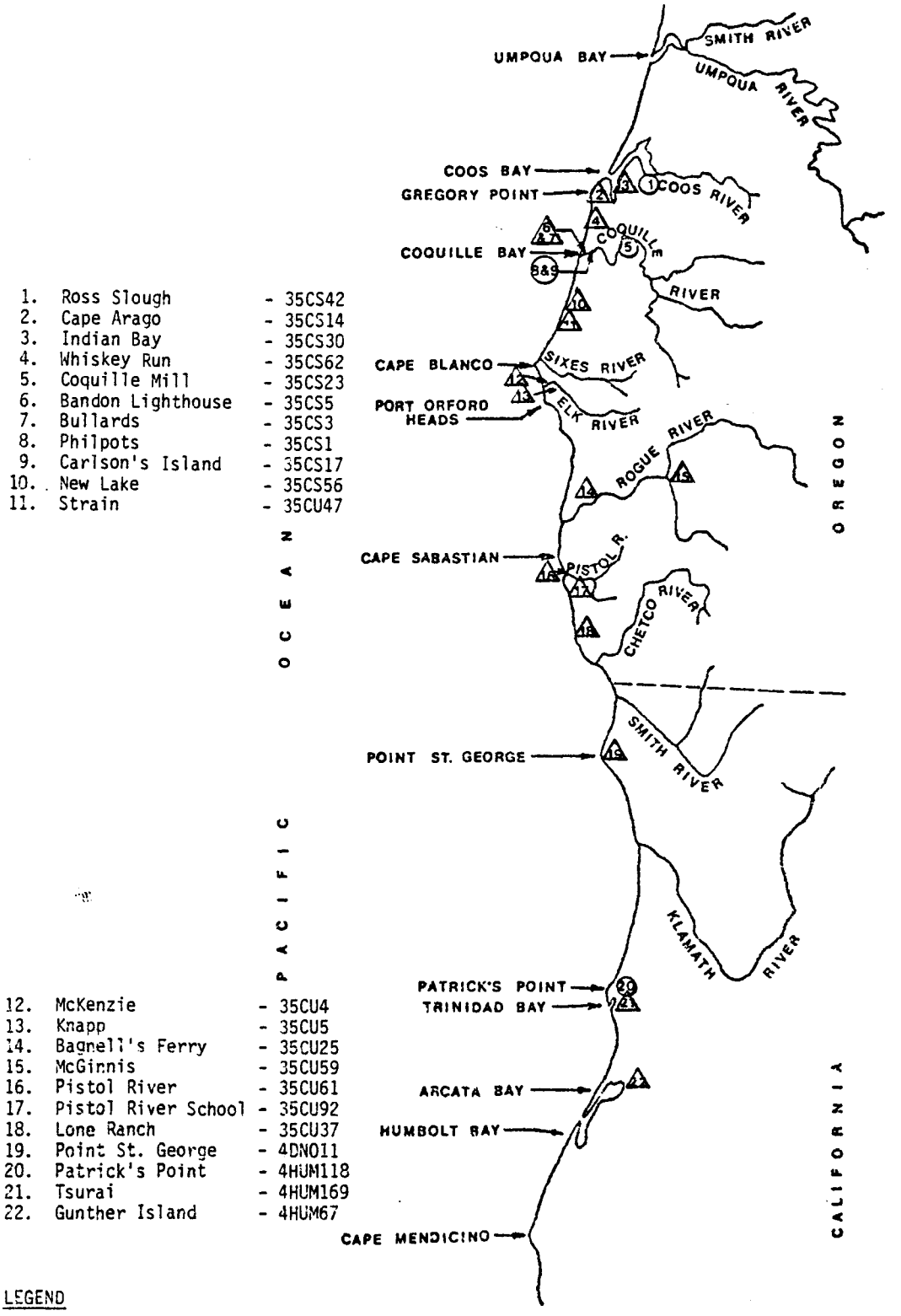


Figure 14

Site Distribution from the Late Period



1. Ross Slough - 35CS42
2. Cape Arago - 35CS14
3. Indian Bay - 35CS30
4. Whiskey Run - 35CS62
5. Coquille Mill - 35CS23
6. Bandon Lighthouse - 35CS5
7. Bullards - 35CS3
8. Philpots - 35CS1
9. Carlson's Island - 35CS17
10. New Lake - 35CS56
11. Strain - 35CU47
12. McKenzie - 35CU4
13. Knapp - 35CU5
14. Bagnell's Ferry - 35CU25
15. McGinnis - 35CU59
16. Pistol River - 35CU61
17. Pistol River School - 35CU92
18. Lone Ranch - 35CU37
19. Point St. George - 4DNO11
20. Patrick's Point - 4HUM118
21. Tsurai - 4HUM169
22. Gunther Island - 4HUM67

LEGEND

○ Camps

△ Villages

Minor and Toepel (1981) arrived at a considerably different conclusion about coastal settlement patterns. They found that 69% of recorded sites within the coastal region were located within one kilometer of the ocean, while 31% were found in the interior of southwest Oregon. Of the interior sites, only six were considered to be villages, while the majority were classified as temporary camps. Most of the large villages were located adjacent to the ocean, or along large estuaries. They saw this pattern as indicative of the heavy reliance of aboriginal populations on marine resources (Minor & Toepel 1981).

Several factors may be responsible for the differing results of the two studies. Minor & Toepel defined a study area using the interior boundaries of tribes inhabiting the coast during historic times, rather than using physiographic boundaries. They made no differentiation between the settlement patterns of Early and Late cultures. Most of their data was taken from site report forms, which contain a minimal amount of information. In addition, very little archaeological survey work has been done in the interior of coastal Oregon, creating a fair amount of bias in the record.

Ethnographic information regarding tribal distribution in southwest Oregon is notably sketchy. The work of Joel Berreman (1937) has been revised several times, and major discrepancies still exist. For example, the journals of Alexander McLeod, a Hudson's Bay trapper who explored the Coquille River in 1826, indicate a freedom of movement of native populations up and down the Coquille River, rather than a division into an Upper and Lower Coquille Tribe (Davies 1961). The rapid extermination of coastal tribes after white contact has made it very difficult to determine the territories claimed by each group.

Tribal boundaries during the Late period may have been considerably different from those of the Early period. Very few sites were occupied during both periods of time, and there is little available evidence indicating that the people inhabiting the coast during the Early period were ancestral to the groups encountered during the historic contact period (Elsasser 1978). Most of the groups occupying the southern Oregon coast at the time of historic contact spoke the Athapascan language, which is considered to be a Late arrival to this region (Jacobs 1937). The Penutian language, which reached the coast at a much earlier date, was spoken only at the mouths of the Coos and Coquille rivers at the time of historic contact (Jacobs 1937). This suggests a steady encroachment on Penutian territory by the Athapascan speakers (Jacobs 1937).

Minor & Toepel based much of their study on information provided by site report forms filed with the State Historic Preservation Office. These reports contain only a minimal amount of information about each site, in most cases making it impossible to determine site function. For example, artifact assemblages are rarely described in site report forms.

There may be a considerable amount of bias in both Minor & Toepel's study and this one. Minor & Toepel have observed that much more is known about sites located along the coastline than those in the interior. However, they did include all of the known sites in their study. This study has used only sites previously excavated or collected by amateurs, and many of the recorded but unexcavated sites are not included.

The presence of large village sites 15 to 30 miles inland raises some serious questions about the validity of the settlement pattern proposed by Minor & Toepel for coastal tribes. They have attempted to classify several of these vilages as favorable fishing locations utilized repeatedly over a long period of time. Yet three of the four large villages located on the upper reaches of the Coquille and Sixes Rivers, including the Camas Valley (35DO46 & 48), Shorb (35CS82), and Dement (35CU93) sites, are above natural barriers that either restricted or totally blocked anadromous fish runs.

The large areal extent, depth, and density of lithic detritus are seen as indicators of the function of these interior sites as villages. The evidence for permanency provided by housepits is usually lacking, but this is probably because of leveling and plowing of interior valleys during the historic period. Artifact assemblages from these sites typically include adze blades and handles, cobble tools, end scrapers, side scrapers, small stone vessels used to mix pigments, ground stone tools, and large numbers of projectile points. It thus becomes apparent that they were more than temporarily occupied hunting camps.

All of the large interior villages with Early projectile point types appear to reflect an adaptation to upland resources. Large stone bowls, pestles and grinding slabs are common in all of these sites, indicating the importance of floral resources to the inhabitants. Projectile points are also abundant, revealing the importance of hunting activities. Implements relating to fishing are absent or only present in very small numbers.

Most of the sites dating from the Early period that are located on coastal headlands appear to have served a different function, since they contain only thin accumulations of lithic detritus and fire-cracked rock. These include the Blacklock (35CU75), Blunden (35CU105), Port Orford Heads (35CU9), Myers Creek (35CU61), and Indian Sands (35CU34) sites. Such sites probably served as lithic manufacturing stations that took advantage of an abundance of chert cobbles in headland gravel deposits. The evidence for anything other than the hunting of large game is almost totally lacking in headland sites.

Three village sites with Early ties are found on the upper reaches of coastal estuaries, including the Schwenn (35CS16), Barrows (35CS61), and Bagnell's Ferry (35CU25) sites. All three sites are reflective of an adaptation to both marine and upland resources, but upland resources are still dominant. Most of the faunal remains consist of large land mammals; shellfish were a very minor part of the diet. The lack of fish remains or implements associated with fishing is in marked contrast with nearby village sites dating from the Late period. Ground stone implements associated with the processing of vegetal resources are present in significant numbers, again in marked contrast with nearby sites dating from the Late period.

The Barrows (35CS61), Schwenn (35CS16), and Bagnell's Ferry (35CU25) sites may be transitional sites occupied by people who were more familiar with interior and riverine resources, but who were beginning to adapt to a marine environment. Luther Cressman has speculated that the Oregon coast was first inhabited by small groups of people who followed major rivers from the interior to the coast and who

gradually adapted to an unfamiliar environment (Cressman 1977:206). A similar view has been expressed by A.L. Kroeber, who observed that Northwest Coast cultures were "originally a river or river-mouth culture, later a beach culture, and only finally and in part a seagoing one." (Kroeber 1939:28). The probable route of migration was down river valleys rather than up or down the coastline, which is extremely rugged. The technology of early migrants would have been based on the utilization of upland resources, and a period of adjustment would have been necessary before marine resources could be successfully exploited (Hogg and Honey 1980).

Early sites with maritime adaptations have been identified both to the north and south of the study area. The Umpqua-Eden site (35DO83), on the upper edge of the Umpqua River Estuary, was occupied at 1000 B.C. by a group adapted to a marine environment (Ross & Snyder 1980). The West Berkeley Shellmound, located on upper San Francisco Bay, was first occupied by a group utilizing both estuarine and upland resources at 2000 B.C.

It is not clear if the Schwenn (35CS16), Barrows (35CS61), and Bagnell's Ferry (35CU25) sites are transitional sites occupied by the same groups of people who later spent most of their time along the open coastline. The evidence for such a transition is generally lacking in this region. Of the 27 sites included in this study, only five contain both Early and Late types of projectile points. Three of these are situated on headlands, and contain very thin deposits from the Early period, followed by an abundance of cultural debris from the Late period. The only sites utilized extensively during both periods are

found along the lower Rogue River, at the Bagnell's Ferry (35CU25) and McGinnis (35CU59) sites. The wide canyon of the Rogue, which provided both an abundance of upland resources and a travel corridor between the coast and interior, may have been desirable for settlement throughout the aboriginal occupation of southwest Oregon.

The historical relationship between Early and Late cultures has been supported by Richard Gould, who attempted to show the evolution of projectile point types at Point St. George (4DN011). Rounded base and contracting stem types developed into concave base and tanged types at this site, according to Gould. Transitional types, including a group with contracting stems and shoulders curving downward to form "incipient" tangs, were identified in intermediate stratigraphic levels at the site. However, the transitional types defined by Gould are found in very small numbers in southwest Oregon. There are no indications of ties between Early styles, which are either leaf-shaped or have broad, contracting or expanding stems; and later tanged, triangular, and concave base types. Carefully controlled excavation of sites with both Early and Late horizons is seen as the only way to document ties between the two periods. Radiocarbon dates associated with major stratigraphic units may reveal a process of change, or a hiatus between Early and Late periods of occupation.

Projectile points may be useful in answering some types of problems, but many more solid radiocarbon dates need to be associated with the various types. Several statements can be made, however, based on the relative frequency of projectile points in sites throughout the region.

At the present time, leaf-shaped, contracting, and expanding and broad stemmed projectile points appear to be contemporaneous. They generally appear in sites dated at between 1000 B.C.-50 B.C. in southwest Oregon. In many cases, these types are associated with much older dates in sites throughout the interior of Oregon and California. It is unclear at the present time if sites occupied before 1000 B.C. are present in southwest Oregon or if point types popular in other regions were introduced at a later date. Considering the geographic barriers that restricted movement into this region, the latter hypothesis may be correct.

The only part of southwest Oregon experiencing frequent contact with the interior was the lower Rogue River. Obsidian, which had to be imported from east of the Cascade Mountains, was one of the most popular materials used for making projectile points along the Lower Rogue, while it was but infrequently utilized elsewhere in the region. Side-notched projectile points, common at sites on the upper Rogue River, are found in southwest Oregon only at sites on the lower Rogue River.

The Lower Klamath River is generally considered to be the center of Late Prehistoric cultures between the Coquille River and Humboldt Bay. Most archaeologists have felt that concave base and tanged projectile points were developed first on the lower Klamath River (Leonhardy 1967; Cressman 1977; Draper 1980). This may be true for concave base types, but must seriously be questioned in regards to tanged types.

Tanged types are infrequent in Late Prehistoric northwest Californian sites, and form a very small percentage of the total projectile point assemblage at most southern Oregon coastal sites. Only

on the Lower Coquille River do tanged projectile points become the dominant type. As Albert Elsasser has observed (1980), it is probable that tanged projectile points did not develop on the Lower Klamath River. On the other hand, concave base type, which are infrequent on the Lower Coquille River, are the dominant type at most Late Prehistoric sites from Floras Lake to Humboldt Bay.

The lack of Late Prehistoric projectile point types in collections from the Upper Coquille River is another observable trend. This area has traditionally been considered the territory of the Athapascan-speaking Upper Coquille tribe. Phillip Drucker (1937) identified several village sites located on the South Fork of the Coquille River, based on information provided by Upper Coquille informants living at the Siletz Reservation. However, Late Prehistoric projectile point types are almost completely absent from collections made at sites on the South Fork of the Coquille River.

There are several possible explanations for this. The large leaf-shaped, expanding and contracting stem projectile points are undoubtedly easier to find in plowed fields than are the smaller concave base and tanged types. Collectors may also possess biases that precluded the discovery of these types. It may be that early types of projectile points were also used throughout the Late Prehistoric Period. However, this does not seem likely given the clear indications of change after 500 A.D. for the rest of the area.

The ethnographic data for the Coquille River may also be in error. Information on tribal distribution was gathered from informants who were elderly and had been removed from southwest Oregon at an early age and

held at the Siletz Reservation. As previously noted, Alexander McLeod observed a freedom of movement between the groups living on the Lower and Upper Coquille that raises serious questions about the division of these two groups. Based on the evidence at hand, it does not appear that the Upper Coquille River was heavily utilized during the Late Prehistoric period.

All of the above statements have been based on the premise that amateur artifact collections are a valid source of information about the prehistory of southwest Oregon. During the course of this study, both the weaknesses and strengths of such an approach became apparent.

Most amateur artifact collectors do not keep good records, and the provenience of the artifacts in their collections is highly questionable. There is a definite tendency to mix materials from different sites, and to forget through time where materials were obtained. This problem is compounded by the desire of many collectors to display the finest examples from each site in a large glass case.

Biases are also evident in many of the collections. Imperfect or broken specimens are usually discarded in the field. Certain forms of artifacts are highly prized, while others are ignored. Most collectors place a higher value on finely flaked tanged projectile points, and often ignore the sometimes more roughly fashioned leaf-shaped types.

The relative value of amateur collections is dependent upon the amount of professional archaeological work that has been completed within a region. If a large body of scientific data is available, amateur collections will be of little use to the professional archaeologist. In the case of southwest Oregon, however, very little is

known about prehistoric cultures. This greatly increases the importance of amateur collections. Many sites have been completely destroyed, and the only record of their existence is available in amateur collections.

Well-documented collections in which the owner knows precisely where the artifacts originated are available in southwest Oregon. Most of the collectors contacted during this study were reasonably precise about the provenience of the artifacts in their collections. It usually becomes apparent during the interview whether the collector has mixed materials from several sites or not.

This study has attempted to provide a broad view of prehistoric cultures in southwest Oregon. The use of a large number of artifacts from many sites should have mitigated the effects of biases and incorrect provenience. A definite pattern in regards to the distribution of projectile point types has been revealed. Future excavations of some of the sites identified by amateur collectors will help to determine how settlement patterns changed through time in southwest Oregon.

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APPENDIX A

Site Descriptions and Projectile Point Frequencies

CAMAS VALLEY SITES

Three sites located along the southern edge of Camas Valley were test excavated by Richard Hanes in 1977. All were on terraces near the confluence of Day and Mill Creeks with the Middle Fork of the Coquille River. Camas Valley is several miles wide and the floor of the valley is relatively flat. Ridges several hundred feet in height border the north and west edges. The vegetation is savannah-like, with an abundance of oak groves and grassland. Moist meadows scattered through the valley support populations of camas.

Two of the three sites tested by Hanes, 35DO46 and 35DO48, appear to be major campsites or semi-permanent villages. Local residents reported the presence of semi-circular depressions in the vacinity before the surface was altered by plowing. Most of the sites in the uplands surrounding Camas Valley display traits indicative of hunting camps, including projectile points, small uniface scrapers, utilized flakes, and secondary flaking debris. DO-46 and DO-48 were utilized for a variety of activities, judging from the artifacts found there. One portion of DO-48 was used as a lithic workshop, with associated hammerstones and bifacially worked cores. Grooved net weights are suggestive of fishing; adze blades and handles and a grooved maul point to woodworking activities; and food processing is revealed by the presence of pestles, bowls, and slab mortars. The areal extent of each of these sites is also considerable.

No radiocarbon dates were obtained from any of the cultural deposits. Based on the presence of leaf-shaped, contracting and expanding stem projectile points, and the absence of tanged types, Hanes suggested a date of between 1,000 and 4,000 B.P.

MAJOR PROJECTILE POINT TYPES

1.	Leaf-shaped	6
2.	Expanding Stem	13
3.	Contracting Stem	20
4.	Broad Stem	0
5.	Side-notched	9
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	2

DO-13 LOONEY SITE

The Looney site is located on a terrace bordering the Middle Fork of the Coquille River a few miles west of Camas Valley. Dense stands of myrtle, Douglas-fir, and Tanbark oak cover the area of habitation. Floral and faunal resources that might have been used by the inhabitants of DO-13 include deer and elk, acorns and camas roots, and anadromous fish. However, large falls downstream from the site probably blocked or greatly curtailed fish runs.

Richard Pettigrew conducted salvage excavations at the Looney Site in 1976. He determined that it was a small base camp used for activities largely related to hunting. This conclusion was suppported by a tool assemblage consisting primarily of projectile points, steep end scrapers, and crudely flaked bifaces. The presence of a mortar and pestle, several grinding slabs, and edge-ground cobbles served to demonstrate the importance of floral resources to the inhabitants of the Looney site.

The discovery of microblades and microblade cores in the tool assemblage has added considerable importance to the Looney site and adjacent sites in Camas Valley. Microblades have never before been identified south of the Columbia River. These distinctive blades, which were inserted into a wooden handle and used for butchering game, are seen by Pettigrew as evidence for an early Athapascan migration into southwest Oregon from southern British Columbia (Pettigrew 1978).

No radiocarbon dates were obtained, but comparisons of projectile points from the Looney Site with those from 24 other sites in southwest Oregon and northwest California led Pettigrew to hypothesize that occupation was between 1-500 A.D. (Pettigrew 1978:29). Recently, microblades have been found at the Standly Site in nearby Camas Valley by Pettigrew. Radiocarbon dates obtained from two hearths in that site have provided evidence of occupation between 350 B.C. to 470 A.D. (Pettigrew 1981).

PROJECTILE POINT TYPES

Type 1		
Type 2		
Type 3	Groups 1-3 are defined as Type 6 by Pettigrew	2
Type 4	Type 2	1
Type 5	Type 5	6
Type 6		0
Type 7		0
Type 8		0
Type 9		0
Type 10		0
Type 11		0
Type 12		0
Type 13		0
Type 14		0
Type 15	Type 9	1
Type 16		0
Type 17		0

MAJOR TYPES

1.	Leaf-shaped	2
2.	Expanding Stem	1
3.	Contracting Stem	6
4.	Broad Stem	0
5.	Side-notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	1

CU-93 DEMENT SITE

CU-93 is located on a wide terrace near the confluence of the North and South Forks of the Sixes River, and about 20 miles upstream from the mouth. The Sixes River has carved a narrow canyon through the Coast Range along most of its course, but broadens into a considerable valley several miles in length at the confluence of the two rivers. CU-93 is on the west side of this valley, about 50 feet above the river.

Cultural deposits were first revealed when the local landowner, Sam Dement, began removing large old-growth stumps so that he could plow the terrace. Through bulldozing and blasting, most of the stumps were removed, leaving only deep depressions. Local collectors began finding large numbers of projectile points in these depressions after winter rains compacted the soil. Subsequent plowing has leveled the terrace, but large quantities of lithic detritus can still be seen. The site appears to be about 400 feet in length, extending north-south, and 200 feet in width. Cultural deposits may be up to a meter in depth.

Materials collected from CU93 include mortars and pestles, mauls, adze blades, projectile points, large bifacially flaked knives, and a profusion of steep end scrapers. Worked cores and large percussion

flakes with cortex remaining are also frequently encountered. An outcropping of chert can be found on a hillside a few hundred feet northwest of the site, and the gravels of the Sixes River contain numerous chert cobbles, suggesting the importance of CU-93 as a lithic manufacturing station.

The vegetation within the Upper Sixes river is savannah-like, with large groves of White oak covering the valley floor. Myrtle borders the stream, and almost impenetrable stands of Tanbark oak cover hills to the west of the site. The abundance of milling tools at CU-93 is indicative of the importance of acorns to the diet of its inhabitants. Camas also grows near the river, and may have been an important floral resource.

Hunting of large land mammals must have been very popular, based on the presence of large quantities of projectile points. The early white inhabitants of the valley subsisted largely from the hunting of herds of elk that frequented this region (Peterson & Powers 1952). Fishing was not important, since anadromous fish passage is blocked by impassable falls several miles below the site.

PROJECTILE POINT TYPES

Type 1	21
Type 2	10
Type 3	7
Type 4	25
Type 5	8
Type 6	0
Type 7	0
Type 8	0
Type 9	0
Type 10	0
Type 11	0
Type 12	0
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	38
2.	Expanding Stem	25
3.	Contracting Stem	8
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	0

CS-82 SHORB SITE

The Shorb site is situated along the edge of a large terrace bordering the South Fork of the Coquille River, near the northwest edge of a valley that is approximately two miles long and one mile in width. Cultural debris has been identified over an area of about 400 square feet, with an estimated depth of 50 centimeters. Lithic detritus and fire-cracked rock are very dense in most portions of the site. Bulldozing and plowing have revealed considerable subsurface deposits, but have also obliterated any possible evidence of housepits.

Subsistence activities at the Shorb site appear to have centered on the exploitation of upland game and floral resources. The abundance of projectile points and large bifacially worked knives in the deposits suggests the importance of hunting. Historically, large herds of deer and elk utilized the lush grasslands of the valley surrounding CS-82 (Peterson & Powers 1952). Large ground stone mortars and flanged pestles were probably used for the processing of acorns, which are found in abundance locally in groves of Tanbark oak, White oak, and Myrtle. Major falls downstream preclude large fish runs, but some steelhead and Lampreys were probably available during late winter and early spring. Camas bulbs can be gathered in large numbers from moist meadows along the valley floor, and were undoubtedly an important resource.

It seems probable the CS-82 was occupied for long periods of time throughout the year. The overall size of the site, depth and density of cultural debris, and presence of a tool assemblage related to the utilization of both floral and faunal resources supports this assessment. Adze blades and handles are suggestive of woodworking, another indication of permanency.

PROJECTILE POINT TYPES

Type 1	8
Type 2	10
Type 3	6
Type 4	19
Type 5	13
Type 6	3
Type 7	7
Type 8	0
Type 9	0
Type 10	0
Type 11	0
Type 12	0
Type 13	0
Type 14	0
Type 15	1
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	24
2.	Expanding Stem	19
3.	Contracting Stem	13
4.	Broad Stem	10
5.	Side-Notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	1

CS-63 LESCOM SITE

One of the largest sites along the Upper Coquille River is located on a broad terrace opposite the confluence of Rowland Creek with the South Fork of the Coquille River. The river canyon widens near Rowland Creek into a broad valley with large flat terraces bordering both sides of the river. CS-63 is on the east side of the valley, on the first major terrace above the river. The site extends from the edge of this terrace towards the east for about 500 feet, and in a north-south line for about 300 feet. Additional sites, or extensions of CS-63, have been identified on the opposite side of the river near Rowland Creek.

Periodic plowing has revealed the presence of dense concentrations of lithic debris and large quantities of finished artifacts. The soil is silty, but does contain small quantities of charcoal. During the 1964 flood, several burials were exposed through bank erosion. Depth of the site is difficult to ascertain, but is probably at least 30 centimeters.

Artifacts recovered by collecters from CS-63 include flanged pestles, large sandstone mortars, several types of projectile points, large bifacially worked knives, and a profusion of small steep end scrapers. The variety of cultural materials within the site and its large size are reflective of utilization as a semi-permanent village.

A wide variety of resources is available within a short distance of the site. Large runs of anadromous fishes, including salmon, steelhead, and Lampreys are available from late fall through early spring. A large falls is located a few hundred feet upstream, and would have been an ideal place to take fish. Groves of Tanbark oak, White oak, and Myrtle cover the edges of the valley and would have provided an abundant crop of acorns during late fall. Deer and elk would have been attracted to the open meadows bordering the river. Camas bulbs could have been gathered during the early spring at many nearby meadows.

PROJECTILE POINT TYPES

Type 1	7
Type 2	3
Type 3	2
Type 4	7
Type 5	0
Type 6	0
Type 7	0
Type 8	0
Type 9	0
Type 10	0
Type 11	0
Type 12	0
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	12
2.	Expanding Stem	7
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	

CS-17 CARLSON'S ISLAND

CS-17 occupies the lower end of Carlson's Island, which is approximately five miles upstream from the mouth of the Coquille River. The island is bordered on the south by the Coquille River and on the north by Randolph Slough. Much of this area is flooded during the winter, since the island is only a few feet higher than the tidelands that surround it.

The site is about 300 feet in length, extending from east to west, and 200 feet in width. Much of the original site has been destroyed by erosion in recent years, leaving only a shallow midden no more than 30 centimeters in depth. However, dense quantities of lithic detritus and fire-cracked rock cover the shoreline.

Lloyd Collins was the first to record this site, in 1951. He considered it to be only a surface deposit, but did note the presence of basket fragments in the mud bordering the site. Perishable wooden items such as wedges and basketry fish traps woven from cedar strips are still eroding from the bank, primarily along the western tip of the island. Several fragments of fish weirs are also visible at low tide.

Occupation of CS-17 appears to have been during the Late Prehistoric/Historic period. Many items of Euro-American manufacture, including glass and ceramic beads and copper fragments, have been found by local collectors. Many of these trade items were in association with burials, which frequently eroded from the site during the early years of the Twentieth Century. Surviving members of the Lower Coquille Tribe camped here repeatedly after their return from the Siletz Reservation.

The function of CS-17 was probably as a seasonally occupied fishing camp. It appears to be very similar to CS-1, located a few miles downstream. Fragments of fish weirs and basketry traps serve to illustrate the importance of fishing at both sites. Salmon customarily follow the channel along the edge of Carlson's Island during the fall migration, and sometimes congregate in large numbers during late summer. The presence of grooved net weights in considerable numbers suggest that nets as well as weirs were employed in fishing activities. Woodworking appears to have been an important activity of the inhabitants of CS-17. Schist adze blades, most battered or broken by use, are frequently found along the shores of Carlson's Island.

The hunting of elk may also have been an important economic activity. Historically, large herds of elk were found on the lush floodplains of the lower Coquille River (Peterson & Powers 1952). Deep pits used to trap elk are still observable on ridges to the north of CS-17, and several large fragments of elkhorn have been observed in the site.

PROJECTILE POINT TYPES

Type 1	2
Type 2	0
Type 3	0
Type 4	0
Type 5	0
Type 6	0
Type 7	0
Type 8	0
Type 9	1
Type 10	17
Type 11	7
Type 12	3
Type 13	6
Type 14	8
Type 15	27
Type 16	5
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	2
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	25
7.	Triangular	0
8.	Tanged	41

CS-16 SCHWENN SITE

One of the first sites to be identified by professional archaeologists in southwest Oregon was the Schwenn Site, excavated in 1939 by Kenneth Leatherman and Alex Kreiger of the University of Oregon. This site is located on a low knoll on the north edge of the lower Coquille River valley, about 100 yards away from the present river channel. Lowe Creek is 200 feet to the east of the site, and the mouth of the Coquille River is 10 miles downstream.

The site extends approximately 100 feet north-south and 50 feet east-west, and reaches a maximum depth of about four feet near the center. The midden is comprised of large quantities of fire-cracked rock, lithic detritus, scattered lenses of Gaper clamshell, and fragments of bird and mammal bone. A considerable amount of damage has occurred here since the work of Leatherman and Krieger in 1939. Portions of the site have been removed and used as fertilizer, amateurs have dug shallow pits in some areas, roads have been built through the center and along the edge, and corrals and barns have been constructed on or adjacent to the deposit.

Leatherman and Krieger excavated only a few shallow test pits, but recovered more than 30 artifacts, including eight leaf-shaped and three large contracting stem projectile points, crude quartzite choppers, fragments of stone bowls, and several antler chisels or wedges. They concluded that the Schwenn Site was considerably older than the site at Bullards Beach on the lower river, which they also tested (Leatherman & Krieger 1940).

The location of this site in relation to the present river channel is also suggestive of considerable age. It would be difficult for people living at the site to exploit riverine resources under present conditions. Most prehistoric sites are located within 50-75 feet of the riverbank. Thus, it is reasonable to hypothesize that the Coquille River once flowed along the edge of the knoll upon which CS-16 is located.

Some reliance upon estuarine resources is suggested by the concentrations of Gaper clamshell found in the deposit. However, most of the midden is comprised of other materials than shell. Large land mammal hunting is suggested by the presence of numerous fragments of elk bone, and large lanceolate projectile points. Avian remains are also common, and reflect the abundance of waterfowl in salt marshes along the lower Coquille River. Fragments of stone bowls have been recovered by both professional and amateur archaeologists, suggesting some use of acorns or myrtle nuts.

PROJECTILE POINT TYPES (EXCAVATED ASSEMBLAGE)

Type 1	
Type 2	Leatherman & Krieger described
Type 3	8 leaf-shaped points
Type 4	
Type 5	3
Type 6	0
Type 7	0
Type 8	0
Type 9	0
Type 10	0
Type 11	0
Type 12	0
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	8
2.	Expanding Stem	0
3.	Contracting Stem	3
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	0

PROJECTILE POINT TYPES (COLLECTED ASSEMBLAGE)

Type 1	2
Type 2	0
Type 3	0
Type 4	1
Type 5	4
Type 6	1
Type 7	0
Type 8	0
Type 9	0
Type 10	0
Type 11	0
Type 12	0
Type 13	0
Type 14	0
Type 15	1
Type 16	0
Type 17	1

MAJOR TYPES

1.	Leaf-Shaped	2
2.	Expanding Stem	1
3.	Contracting Stem	4
4.	Broad Stem	1
5.	Side-Notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	2

CS-61 BARROWS SITE

CS-61 is located on a low knoll overlooking the estuary of the lower Coquille River about three miles upstream from the mouth. It is bordered by Clear Creek on the east and the floodplain of the river on the south. The Coquille River, which now is located several hundred feet south of the site, may have flowed along the northern edge of the valley during the occupation of CS-61. The site borders the edge of the valley for approximately 200 feet, with a maximum width of 100 feet.

The zone of occupation is marked by a dense deposit of lithic detritus, fire-cracked rock, charcoal, fragments of mammal bone, and small concentrations of shell. Two roads have been bulldozed through the site, revealing a depth of between 30 centimeters and one meter for the cultural debris.

Lithic manufacturing activities appear to have been very important at CS-61 judging from the presence of numerous broken chert nodules and large percussion flakes, many with portions of the cortex remaining. Projectile points, bifacially worked knives and sidescrapers are also present in large numbers, suggesting the importance of hunting. There are no indications that the inhabitants engaged in fishing, with a complete absence of fish vertebrae, grooved net weights, or composite harpoon barbs in the cultural deposits. It should be noted that all of these items are present at CS-1, located one mile southwest of CS-61. Sandstone mortar fragments are indicative of the use of floral resources. Camas is available at nearby praries, and large groves of myrtle cover adjacent hillsides. Schist adze blades and rude mauls are also present in small numbers, suggesting the practice of woodworking.

This site was probably occupied for a considerable length of time each year. The overall areal extent and depth of the deposit, density of cultural debris, and evidence for varied economic activities are indicative of intensive utiliztion. Burials have also been encountered during plowing and leveling.

PROJECTILE POINT TYPES

Type 1	27
Type 2	29
Type 3	6
Type 4	15
Type 5	7
Type 6	5
Type 7	0
Type 8	0
Type 9	0
Type 10	0
Type 11	0
Type 12	2
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	62
2.	Expanding Stem	15
3.	Contracting Stem	47
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	0

CS-1 PHILPOT SITE

The Philpot Site is located approximately four miles upstream from the mouth of the Coquille river, on a low island that was surrounded by salt marsh and tideflats before diking of the riverbank. Cultural deposits extend for approximately 200 feet along the bank of the river, with a maximum width of 50 feet. Much of the original deposit has been destroyed by erosion, leaving a midden that is about 50 centimeters in depth.

The deposit is comprised of dense quantities of fire-cracked rock, lithic detritus, fish, mammal and bird bone, and scattered lenses of shell. Occasional deposits of gravel and silt indicate periodic flooding of the site. Fragments of fish weirs are eroding from the bank and tideflats near CS-1.

CS-1 was excavated by John Draper and Isaac Barner of Oregon State University in 1976. They recovered over 4200 lithic items from ten test pits, as well as a small sample of badly decomposed faunal remains. Radiocarbon dating indicates that the site was occupied from A.D. 1350 to A.D. 1700. A large number and variety of artifacts was recovered from the deposit, including projectile points, scrapers, adze blades, and hammerstones. Draper concluded that CS-1 was a fishing camp occupied during the early fall. This conclusion was supported by the presence of fish weirs and the environmental setting of the site. Large numbers of scrapers and utilized flakes in the artifact assemblage served to suggest that salmon were scaled, filleted, and dried on racks at CS-1. They were then packed in burden baskets to semi-permanent winter villages located in areas that were more protected and not subject to flooding. Lithic manufacturing was also of some importance

at CS-1, because of the abundance of chert cobbles in adjacent gravel deposits (Draper 1980).

Faunal remains at CS-1 included those of both marine and land mammals. The most popular land mammal species was elk, but deer and beaver were also taken. Avian remains were present, and would have been easy to obtain in nearby marshes. Lenses of Gaper clamshell indicated some utilization of shellfish by the inhabitants. Marine mammal remains included those of whales and Harbor seals. Seals are abundant in the Coquille River during the fall salmon run, and probably were taken in fish weirs or speared from canoes (Draper 1980).

PROJECTILE POINT TYPES (EXCAVATED ASSEMBLAGE)

Type 1	01-04A	1
Type 2		0
Type 3		0
Type 4	01-031	1
Type 5		0
Type 6		0
Type 7		0
Type 8		0
Type 9		0
Type 10	01-06A	2
Type 11		0
Type 12	01-05A	1
Type 13		0
Type 14	01-02B	7
Type 15	01-02B & 01-02A	9
Type 16		0
Type 17		0

MAJOR TYPES

1.	Leaf-Shaped	1
2.	Expanding Stem	1
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	2
7.	Triangular	1
8.	Tanged	16

PROJECTILE POINT TYPES (COLLECTED ASSEMBLAGE)

Type 1	1
Type 2	1
Type 3	1
Type 4	0
Type 5	0
Type 6	0
Type 7	0
Type 8	0
Type 9	7
Type 10	96
Type 11	21
Type 12	25
Type 13	4
Type 14	183
Type 15	284
Type 16	11
Type 17	18

MAJOR TYPES

1.	Leaf-Shaped	1
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	124
7.	Triangular	25
8.	Tanged	471

CS-3 BULLARDS BEACH

CS-3 is located on the north bank of the Coquille River near the mouth. The site is bordered on the south by a considerable estuary, and on the north by a broad terrace several miles in length that is covered with sand dunes and groves of Shore pine. Deposits of shell are scattered along the riverbank for more than a mile, and the shoreline is covered with lithic detritus and fire-cracked rock.

The first excavation of CS-3 took place during the field seasons of 1938 and 1939. Two small semi-subterranean plank houses and three burials were discovered during this project. Bone artifacts were recovered in large numbers, but no stone projectile points were identified. Trade materials associated with the burials indicated occupation during the Early Historic period. Seventy-five pine-nut beads, which probably came from the Pit River Valley, were discovered with one of the burials (Leatherman & Krieger 1940).

CS-3 was again excavated in 1974, in order to salvage several burials that were eroding from the riverbank. Three burials and more than 1200 associated glass trade beads were removed from the site. Other artifacts included stone projectile points, scrapers, pebble choppers, one adze blade, antler wedges and flakers, bone buttons, and a bone spatula. Based on the presence of trade materials, the shell deposit at CS-3 was estimated to date from the early 1800s. A lower horizon containing an abundance of lithic detritus and fire-cracked rock but little shell was also encountered, but time did not allow for proper evaluation of this deposit.

Subsistence activities at Bullards Beach were clearly oriented toward estuarine resources. Gaper clams, cockles, and mussels made up much of the midden deposit. Sea mammal remains were also present in fair numbers. Fishing was important, judging from the presence of fish weirs along the riverbank, grooved sandstone net weights in the site, and an abundance of fish bone. Land mammal hunting was suggested by fair amounts of elk and deer bone, as well as numerous artifacts made from deer or elk horn.

The function of CS-3 is interpreted as a village occupied for considerable periods of time during the year. Housefloors and burials are good indications of sustained periods of occupation, probably during the late fall and winter. This area is not subject to flooding, and is in a sheltered location. Alexander McLeod, who trapped along the Coquille River in 1826, observed considerable numbers of natives near the mouth of the river during the month of December (Davies 1961).

PROJECTILE POINT TYPES (EXCAVATED ASSEMBLAGE)

Type 1	0
Type 2	0
Type 3	0
Type 4	0
Type 5	0
Type 6	0
Type 7	0
Type 8	0
Type 9	0
Type 10	0
Type 11	0
Type 12	0
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	1
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	5
7.	Triangular	0
8.	Tanged	6

PROJECTILE POINT TYPES (COLLECTED ASSEMBLAGE)

Type 1	0
Type 2	0
Type 3	0
Type 4	0
Type 5	1
Type 6	0
Type 7	0
Type 8	0
Type 9	2
Type 10	3
Type 11	0
Type 12	3
Type 13	2
Type 14	1
Type 15	4
Type 16	3
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	0
2.	Expanding Stem	0
3.	Contracting Stem	1
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	5
7.	Triangular	3
8.	Tanged	7

CS-62 WHISKEY RUN

CS-62 is a large village site located at the top of a bluff overlooking Five Mile Point. The mouth of the Coquille River is five miles south of CS-62. An area of approximately 400 feet north-south, 100 feet east-west is covered with a shell midden of up to one meter in depth. The midden is comprised largely of Blue mussel shell, but also contains Rock oyster, Razor clam, and Littleneck clam shells. Other faunal remains include an abundance of fish vertebrae, occasional remains of sea mammals, deer and elk bone, and several unidentified avian species.

Economic pursuits undoubtedly centered upon the reefs of Five Mile Point. Shellfish are relatively easy to gather in tidepools during much of the year. Large numbers of rockfish are available in the spring and summer. Sea mammals utilize several of the rocky islands of the reef as hauling out places. Large meadows immediately to the east of the site may have attracted deer and elk, and once were an abundant source of camas. According to Coos informant Daisy Wassen, the Miluk band traveled to Five Mile Point each summer to gather camas and lupine roots (Peterson & Powers 1952:29).

Bone artifacts appear to dominate the artifact assemblage from CS-62 and include elkhorn wedges, composite fishhook parts, composite harpoon barbs, awls and needles. The projectile point assemblage is dominated by concave base types, but triangular specimens are also present. No trade materials have been recovered from this site.

PROJECTILE POINT TYPES

Type 1	0
Type 2	0
Type 3	0
Type 4	0
Type 5	0
Type 6	0
Type 7	0
Type 8	0
Type 9	3
Type 10	18
Type 11	0
Type 12	3
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	0
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	21
7.	Triangular	3
8.	Tanged	0

CS-56 NEW LAKE SITE

CS-56 is a large village site located near the southwest shore of New Lake. At least two large housepit depressions are visible in an area of consolidated dunes bordering the lake. The outlet of New Lake into New River is approximately one mile to the north, while a large marsh extends about two miles to the north and south along the east edge of the site. The site is about 20 feet above the average level of New Lake, but winter flooding inundates most of the adjacent area and a fair portion of the site.

The area of occupation is about 300 feet north-south, 100 feet east-west, with an estimated depth of 30 centimeters. Both visible housepits have been trenched with bulldozers by amateurs seeking artifacts. Small lenses of mussel shell and occasional mammal bone fragments are eroding from the edges of the trenches, while the floors of the housepits are covered with mussel shell and fire-cracked rock.

Early explorers encountered groups of natives along the shores of New Lake in 1826 (Davies 1961). Groups of Tututni camped along New River during the fall to catch salmon in shallow riffles and gather blueberries in adjacent marshes (Peterson & Powers 1952).

Bill Woodruff, a local artifact collector, gathered a large collection of material from CS-56 during the 1950s. Projectile points, bifacial knives, end and side scrapers, flanged pestles, shallow hopper mortar bases, adze blades and handles, bone composite fishhook parts, awls, needles, glass beads and copper ornaments were recovered from the site.

Occupation of CS-56 would probably have taken place during late fall, when salmon were entering the nearby New River system, but the occupants would have left before midwinter, when heavy flooding inundates most of this area. Shellfish were carried a considerable distance to the site, since the nearest rock reefs are several miles to the south. New Lake and adjacent marshes would have provided an abundance of waterfowl and small game.

PROJECTILE POINT TYPES

Type 1	0
Type 2	0
Type 3	0
Type 4	2
Type 5	0
Type 6	0
Type 7	0
Type 8	1
Type 9	0
Type 10	22
Type 11	2
Type 12	1
Type 13	0
Type 14	6
Type 15	7
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	0
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	1
6.	Concave Base	24
7.	Triangular	13

CU-47 STRAIN SITE

The Strain Site is situated on a knoll overlooking Floras Lake, and is approximately one half mile inland from the coast. The outlet of Floras Lake flows past the site into New River, about one mile to the north. Five housepit depressions and a shallow shell midden originally covered the top of the knoll.

Excavations were carried out by Thomas Newman in 1959. He discovered that while the midden contained relatively little shell, there was an abundance of large land mammal remains, primarily of deer and elk. Other resources that would have been readily available include salmon and steelhead in New River and the outlet of Floras Lake, and ducks and geese in wide marshes north of CU-47.

Artifacts recovered from CU-47 included both those of aboriginal and Euro-American manufacture. All of the projectile points were small concave base forms with straight lateral edges.

The shallowness of the midden has been interpreted as indicative of only a short period of occupation for CU-47. The presence of historic trade items has served to establish the time of occupation at between A.D. 1800-1850, probably by the historic Athapascan-speaking Kwatami band of the Tututni (Newman 1959:77-78).

CU-75 BLACKLOCK

CU-75 is located at the top of a coastal promontory 75 feet above the Pacific Ocean and overlooking both the mouth of Sixes River and Cape Blanco. The top of Blacklock Point is relatively flat and open, but a dense stand of Sitka spruce borders the east side of the point.

Cultural materials occur across the top of the point, in an area of approximately five acres. The north, south, and west edges of Blacklock are eroding at a rapid rate, exposing a cultural material-bearing stratum that is between 20 and 30 centimeters in depth. Cultural material can also be observed in rodent burrows across the top of and extending into the spruce forest at the eastern edge of Blacklock.

The cultural deposit at Blacklock contains lithic debitage, stone tools, and fire-cracked rock. Areas of concentration on the north and west sides may be hearths, but little charcoal can be found in the deposit. A considerable quantity of projectile points, large bifacially worked knives, and side scrapers have been recovered from CU-75 by local collectors in recent years. Occasional ground stone tools, including poorly formed pestles and rude sandstone mortars have also been found in the deposit.

This site was tested in August, 1980 by Richard Ross and Sandy Snyder of Oregon State University. Two adjacent two by two-meter test units were excavated, revealing a concentration of chert debitage between 20 and 30 centimeters in thickness. Utilized and worked flakes and one fragment of a sandstone mortar were recovered during the excavation, but no diagnostic projectile points were encountered. A charcoal sample removed from the edge of the bluff near the bottom of the cultural deposit was radiocarbon dated at 800 B.C. (Ross and Snyder 1980).

The most important function of this site may have been as a manufacturing workshop. Cobbles of chert and agate occur in gravels along the base of the point, and many shattered nodules or large flakes with cortex remaining are present within the deposit. The site would also seem to be ideal for the taking of mollusks and rockfish that are present in tidepools at the edge of the point. However, no faunal remains are present on top of the point. A large shell midden comprised primarily of the shells of Blue mussel is located on a terrace below the point and about 200 feet to the south, but it is impossible to ascertain the temporal relationship of the two deposits without radiocarbon dates. Land mammal hunting would not seem to have been particularly rewarding near CU-75, due to the rugged nature of the coastline, the abundance of deep ravines to the north and east, and the dense cover of coastal Sitka spruce.

PROJECTILE POINT TYPES

Type 1	12
Type 2	14
Type 3	3
Type 4	21
Type 5	38
Type 6	16
Type 7	1
Type 8	1
Type 9	0
Type 10	0
Type 11	0
Type 12	0
Type 13	0
Type 14	0
Type 15	1
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	29
2.	Expanding Stem	21
3.	Contracting Stem	38
4.	Broad Stem	17
5.	Side-Notched	1
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	1

CU-4 McKENZIE SITE

The McKenzie site is located on the edge of a wide terrace bordering the northeast side of Elk River near the mouth. The site overlooks a broad valley and the Pacific Ocean, and is adjacent to an old river channel. CU-4 was first recorded by Joel Berreman in 1935. He observed it to be about 100 feet long and 30 feet in width, with a depth of two to three feet. Most of the site has since been destroyed by erosion, construction, and amateur activity. A large ranchhouse occupies most of the northern portion of the original site.

The midden appears to be comprised mainly of shellfish remains, especially those of Blue mussel. Small amounts of mammal bone were also observed in the deposit. Although no fish vertebrae were observed, CU-4 would have been an excellent place to take salmon as they moved through nearby shallow riffles. Historically, the wide terraces bordering Elk River were covered with lush grasses and supported considerable herds of deer and elk (Peterson and Power 1952). Sea mammals could sometimes be taken in the river as they followed salmon upstream. The absence of any nearby reefs suggests that mussels were obtained elsewhere and transported whole to the site for processing.

Bone artifacts are quite common within the midden, and include harpoon foreshafts, composite fishhook parts, awls and needles. Ground stone implements including adze blades, mauls and pestles have also been recovered. The presence of trade materials indicates occupation during the Historic Period.

PROJECTILE POINT TYPES

Type 1	0
Type 2	0
Type 3	1
Type 4	0
Type 5	0
Type 6	0
Type 7	0
Type 8	1
Type 9	0
Type 10	8
Type 11	1
Type 12	0
Type 13	2
Type 14	0
Type 15	3
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	1
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	9
7.	Triangular	0
8.	Tanged	5

CU-5 KNAPP SITE

CU-5 occupies a low knoll about 100 feet south of Elk River near its confluence with the ocean. The river makes a sharp bend directly across from the site and flows in a northerly direction just inside the seawall for about two miles before entering the Pacific Ocean. This area is very unstable and the river has periodically breached the seawall adjacent to the site.

The exact extent of CU-5 is difficult to ascertain since it has largely been destroyed by plowing and removal of gravel from the base of the knoll. According to local collectors, the site was originally approximately 100 feet in diameter and the midden was comprised largely of mussel shell. Amateurs have collected a large quantity of concave base projectile points, trade beads and large stone pestles from this site during various phases of disturbance.

Subsistence activities probably centered on the abundant runs of anadromous fish in adjacent Elk River. Some sea mammals could have been taken in the river as they followed the fish runs upstream. Large herds of elk historically used the lush bottomlands of the Lower Elk River. Swampy areas adjacent to the site attract flocks of waterfowl during late fall and winter. Mussels and other edible shellfish were not readily available, requiring trips to rocky headlands to the south at Port Orford and the north at Cape Blanco.

PROJECTILE POINT TYPES

Type 1	0
Type 2	0
Type 3	0
Type 4	0
Type 5	0
Type 6	1
Type 7	0
Type 8	0
Type 9	0
Type 10	18
Type 11	1
Type 12	0
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	0
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	1
5.	Side-Notched	0
6.	Concave Base	19
7.	Triangular	0
8.	Tanged	0

BLUNDEN SITE

The Blunden Site, located on a high bluff bordering the southwest side of Port Orford Heads and the Pacific Ocean, was tested by Rick Minor in 1979. The site was found to cover a large area of 140 meters north-south by 120 meters east-west, with a maximum depth of 127 centimeters.

Two distinct components were identified during the excavation. The lowest stratum, which contained only lithic debitage and stone tools, has provided a radiocarbon date of 50 B.C. One serrated lanceolate projectile point and a utilized flake were found in association with the concentration of charcoal from which the radiocarbon date was obtained.

The upper stratum consists of a thick layer of shellfish refuse, radiocarbon dated at 1300 A.D. Most of the shellfish remains are of mussel, with Littleneck clam and Gaper clam also present. Sea mammal remains, primarily those of Stellar and California sea lions, comprise the bulk of non-molluskan species within the midden; elk and birds were of secondary importance. Some fishing is suggested by the presence of surf fish remains (Minor, Beckham and Greenspan 1980).

Seasonal occupation for a limited range of activities is suggested for the Blunden Site. There is no evidence for the presence of a seasonal village site. The most significant aspect of this site is the change from a non-marine to a marine adaptation. The projectile point associated with the lower deposit was leaf-shaped and serrated. Minor encountered no projectile points in the upper stratum, but a local collector, Elmer Bens, has recoverd a number of concave base points from the Blunden Site (Bens 1974: personal communication).

PROJECTILE POINT TYPES
(Bens Collection)

Type 1	0
Type 2	0
Type 3	0
Type 4	0
Type 5	0
Type 6	0
Type 7	0
Type 8	0
Type 9	0
Type 10	13
Type 11	9
Type 12	0
Type 13	0
Type 14	0
Type 15	0
Type 16	0
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	0
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	22
7.	Triangular	0
8.	Tanged	0

PORT ORFORD HEADS

The Port Orford Heads site, located on the coast near Port Orford, was excavated by Richard Ross of Oregon State University in 1976. 35CU9 covers an area of more than eight acres in extent on the hillside above Nellies Cove. The midden is more than two meters in depth along the western edge, but much shallower in other portions of the site. Most of the midden is comprised of shellfish remains, chiefly of mussel. The bones of both land and sea mammals were also found in the midden (Ross 1976).

No evidence of structures was found during the excavation, but the distribution of artifacts suggests some specialized activity areas. The site was probably a seasonal campsite occupied when favorable resources were available at the numerous tidepools and offshore reefs along Port Orford Heads (Ross 1976).

The age of cultural deposits at Port Orford Heads is not known, since no radiocarbon dates were obtained. The lack of trade goods suggests abandonment prior to European contact. Some of the projectile points from CU-9 were leaf-shaped and serrated, similar in form to those from sites dating in the 3000-2000 B.P. time frame in southwest Oregon.

PROJECTILE POINT TYPES

Type 1		
Type 2		
Type 3	Types 1-3 were defined as Type 1 by Ross	9
Type 4	Type 4	1
Type 5		0
Type 6		0
Type 7		0
Type 8		0
Type 9		0
Type 10	Type 3	2
Type 11	Type 3	1
Type 12		0
Type 13		0
Type 14		
Type 15	Types 14-15 were defined as Type 2 by Ross	6
Type 16		0
Type 17		0

MAJOR TYPES

1.	Leaf-Shaped	9
2.	Expanding Stem	1
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	3
7.	Triangular	0
8.	Tanged	6

CU-25 BAGNELL'S FERRY

CU-25 is located approximately five miles upstream from the mouth of the Rogue River, on a wide terrace bordering the north side of the river between Edson and Squaw Creeks. It was first recorded by Paul Schumacher in 1875, who described it as a large shell midden some eight feet in depth. Joel Berreman also recorded this site during a survey of coastal sites in 1935, and observed that it was rapidly being destroyed by erosion.

Only a small remnant of the site recorded by Schumacher and Berreman still exists. Cultural debris is eroding from a deposit of clay and silt at the base of a bank that is approximately eight feet in height. There is no evidence of any deposits of shell. Several large hearth areas, with dense clusters of fire-cracked rock, large waste spalls of chert, numerous split cobbles, cobble choppers, and fragments of ground stone implements mark the zone of occupation, which is approximately 100 yards in length.

This was an important village site during the historic period, judging from the number of references made about it by early explorers and soldiers. It is mentioned in the journals of Alexander McLeod (1826), and its inhabitants were involved in treaty negotiations with Anson Dart, Superintendent of Indian Affairs for the Oregon Territory in 1855 (Beckham 1971). This is the probable site of "Tututun", described as an important village divided into downriver and upriver segments by Tolowa informants (Drucker 1937:271).

The upriver portion of the site may well have been an important fishing station, for it is adjacent to the first major riffle on the river, immediately above the head of tidewater. This would have been an ideal place to either spear or net salmon. Shellfish also may have been an important source of food, judging from the site descriptions provided by Schumacher and Berreman. However, the most plentiful artifacts at this site are large serrated leaf-shaped projectile points, which are generally felt to have been used in the hunting of land mammals. Ground stone tools used for the milling of acorns, including mortars and pestles, are also present in small numbers.

PROJECTILE POINT TYPES

Type 1	172
Type 2	23
Type 3	49
Type 4	26
Type 5	5
Type 6	8
Type 7	2
Type 8	13
Type 9	0
Type 10	1
Type 11	0
Type 12	0
Type 13	11
Type 14	0
Type 15	11
Type 16	7
Type 17	4

MAJOR TYPES

1.	Leaf-Shaped	244
2.	Expanding Stem	26
3.	Contracting Stem	5
4.	Broad Stem	10
5.	Side-Notched	13
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	22

CU-59 McGINNIS SITE

One of the largest sites along the lower Rogue River, CU-59, is located in a large valley near the confluence of the Rogue and Illinois Rivers. It was an important Late Prehistoric/Historic village site occupied by the Shasta Costa band of Athapascans (Dorsey 1890; Waterman 1925; Berreman 1937:29).

Originally, this site occupied an area of several acres on the wide terrace bordering the east side of the Illinois River. According to

Joel Berreman (1935), who first recorded the site, it once contained numerous housepits. All of the housepits have since been obliterated by cultivation, and much of the site has been destroyed by the 1964 flood. Cultural debris is still visible along the east bank of the Illinois, and consists of fire-cracked rock, lithic detritus, and bands of deeply discolored soil that extend at least a meter below the surface.

A great number of artifacts have been found at CU-59, both as the result of digging and through the continued erosion of the site by annual flooding. Projectile points form one of the largest groups of recovered artifacts. Large stone mortars, flanged pestles, hopper mortar bases, and adze handles and blades are also common. Bone artifacts are not present, nor are any items of Euro-American manufacture.

CU-59 is in an ideal location for a variety of economic pursuits. Anadromous fish customarily congregate at the mouth of the Illinois River, and could have easily been speared or netted in nearby shallow riffles. Groves of Tanbark oak and White oak would have provided an abundance of acorns, and camas roots could be gathered at nearby praries. Deer and elk would also have been attracted to open praries where grass was abundant.

PROJECTILE POINT TYPES

Type 1	5
Type 2	11
Type 3	2
Type 4	2
Type 5	10
Type 6	0
Type 7	0
Type 8	0
Type 9	0
Type 10	2
Type 11	0
Type 12	5
Type 13	39
Type 14	5
Type 15	6
Type 16	1
Type 17	24

MAJOR TYPES

1.	Leaf-Shaped	18
2.	Expanding Stem	2
3.	Contracting Stem	10
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	2
7.	Triangular	5
8.	Tanged	50

CU-62 PISTOL RIVER

A large site near the mouth of Pistol River, 35CU62, was partially excavated by Eugene Heflin in 1961 and 1962. This was once the location of an historic Tututni village called Chetleshin, which was burned in 1856 during the Rogue River Indian War. The site covers an area of several acres with a midden of shell up to seven feet in depth. More than 30 housepit depressions were identified before highway construction destroyed most of the site.

The inhabitants of Chetleshin depended heavily upon maritime resources for subsistence. Numerous offshore islands were ideal for the taking of large marine mammals. Nearby reefs also provided an abundance of Blue mussels, which made up the bulk of midden refuse at CU-62. Deer and elk remains were also common, suggesting frequent forays into the interior. Broad ridges and gently sloping hillsides covered with groves of Tanbark and White oak are located a few miles inland along Pistol River, providing an ideal place to gather acorns as well as to hunt for land mammals. Salmon and surf fishes were also utilized, judging from the presence of fish bone, net weights, and simple and composite fishhooks within the midden (Heflin 1966).

A large variety of items of Euro-American manufacture were recovered from housepits or were found in association with the 20 aboriginal burials removed by Heflin. Although no radiocarbon dates were obtained, Heflin felt that CU-62 was occupied during the Late Prehistoric/Historic Period. This assumption was based on the depth of midden deposits and presence of trade materials in the upper portions of the site (Heflin 1966:176).

All of the major types of projectile points found in southwest Oregon were identified at Pistol River. Heflin made no effort to control provenience during excavation, so it is impossible to determine the evolution of point styles at the site. He did observe that triangular, concave base points were the most common type. Several large leaf-shaped points with serrated edges were encountered by Heflin during the course of the excavation. However, materials from both CU-62 and nearby CU-61, which has been radiocarbon dated at 1000 B.C., were mixed together by Heflin.

CU-92 PISTOL RIVER SCHOOL

A large stratified site is located on the north bank of Pistol River approximately one mile above the confluence of Deep Creek and seven miles upstream from the mouth. Two small streams enter the river on both sides of the site. The area of occupation reaches for approximately one-half mile along the river, with a maximum width of about 200 feet, and a depth of up to three feet. The narrow canyon of Pistol River widens near CU-92 into a considerable valley covered with Tanbark oak, Bigleaf maple, and Red alder.

The midden is comprised primarily of mammal and fish bone. Pistol River is noted for large runs of anadromous fish, and this site appears to have been primarily oriented to riverine resources. Large numbers of notched pebble net weights are indicative of the importance of fishing. Sea mammals followed the fish upstream and were taken in fair numbers in a large pool at the base of a low falls below the site. Large land mammals are also represented in the faunal assemblage.

Floral resources were also important at the site, as indicated by the presence of numerous hopper mortar bases, flanged pestles, and large stone bowls. Tanbark oak, White oak, and myrtle acorns were undoubtedly available in large numbers during the late fall.

PROJECTILE POINT TYPES

Type 1	0
Type 2	1
Type 3	0
Type 4	1
Type 5	0
Type 6	1
Type 7	0
Type 8	1
Type 9	1
Type 10	52
Type 11	5
Type 12	16
Type 13	2
Type 14	4
Type 15	4
Type 16	5
Type 17	0

MAJOR TYPES

1.	Leaf-Shaped	1
2.	Expanding Stem	1
3.	Contracting Stem	0
4.	Broad Stem	1
5.	Side-Notched	1
6.	Concave Base	57
7.	Triangular	16
8.	Tanged	10

LONE RANCH

The Lone Ranch Site, excavated by Joel Berreman in 1937, is located at the edge of a small bay along the southern Oregon coastline. The midden, chiefly comprised of mussel shell, covers an area of several hundred feet with a maximum depth of 10 feet. Two distinct stratigraphic units were observed within the midden. The lower portion was comprised of about 60% shell, with charcoal and fire-cracked rock making up the rest of the volume. The upper stratum was about 95% shell, with only a small amount of fire-cracked rock and charcoal.

Subsistence activities at Lone Ranch centered around marine resources. Many varieties of shellfish were utilized, with mussel, Littleneck clam, and Rock oyster the most important. Sea mammals, including Stellar sea lion, Harbor seal, and Sea otter were an important part of the diet. Deer and elk remains were also plentiful at Lone Ranch. The presence of hopper mortars and pestles points to utilization of acorns as well.

This site appears to have been an important village occupied throughout the year. Five housepit floors and 34 burials were encountered during the excavation. No items of Euro-American manufacture were discovered, suggesting abandonment prior to white contact. Berreman speculated that occupation took place during the Late Prehistoric Period, since traits typical of Northwest Californian cultures occurred in the earliest levels of the site (Berreman 1944:33).

Lone Ranch was probably first used as a temporary campsite, while it later became a semi-permanent village site. Several hearth areas and only one housefloor were encountered in the lower stratum, while four housefloors were in the upper stratum (Berreman 1944:33).

Projectile points from Lone Ranch are reflective of types ordinarily found in coastal sites. However, only leaf-shaped forms were recovered from the lowest stratum (Berreman 1944).

PROJECTILE POINT TYPES

1.	Leaf-Shaped	NAb1 and NAB3	13
2.	Expanding Stem		0
3.	Contracting Stem		0
4.	Broad Stem		0
5.	Side-Notched		0
6.	Concave Base	NBb	5
7.	Triangular	NBa	2
8.	Tanged	SAb and SBb	10

CU-34 INDIAN SANDS

Indian Sands is located on a high promontory one mile north of the mouth of Whaleshead Creek, and a few miles north of the Chetco River. While overlooking the ocean there is no direct access to the shoreline, and the surrounding terrain is extremely rugged.

The site extends for approximately one quarter mile along the edge of the bluff, and is about 100 yards in width. The depth of deposit is uncertain due to the highly eroded condition of this area. Fire-cracked rock and lithic debris cover the site and in some areas are extremely dense. A small shell midden is also located on top of the bluff, but it is uncertain if the two cultural deposits are contemporaneous.

Joel Berreman obtained a large number of artifacts from Indian Sands during his survey of the southern Oregon coast in 1937. Those artifacts included large serrated leaf-shaped projectile points, large bifacially flaked and leaf-shaped knives, and side and end scrapers. All of this material was gathered from the surface, and had presumably been exposed by erosion. Many projectile points have been found at CU-34, hence the name Indian Sands.

This site was not in a good location for the exploitation of marine resources. The coastline is rocky and broken and there is no easy access from Indian Sands down to the beach. There is easy access to several large praries covered with scattered groves of oak a short distance east of the site. Indian Sands probably served as a lithic manufacturing workshop, since chert nodules are abundant in nearby gravel deposits. The profusion of lithic detritus within the deposit is also suggestive of manufacturing activites.

MAJOR TYPES

1.	Leaf-Shaped	30
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	0
7.	Triangular	0
8.	Tanged	1

DNO-11 POINT ST. GEORGE

Point St. George is a prominent headland located on the northwest coast of California a few miles south of the Oregon border. A large historic Tolowa settlement is located near the northwest edge of the Point, adjacent to numerous tidepools and rocky islands.

Richard Gould conducted excavations at Point St. George in 1964. While he was interested in the Late Prehistoric/Historic Tolowa occupation, one of the major objectives of his project was to determine if earlier periods of occupation were present. Early habitation was suggested by the presence of crudely flaked leaf-shaped and contracting stem projectile points in amateur collections from the point.

Gould encountered two distinct horizons at Point St. George. The upper deposit consisted of the typical shell midden deposit characteristic of Late Prehistoric/Historic sites along the coast. During this period, DNO-11 was utilized as a village and was occupied during most of the year. The presence of several housefloors served to indicate the intensive nature of late settlement. Subsistence centered on the gathering of shellfish and hunting of sea mammals. Rockfish were taken at nearby tidepools, and cormorants were obtained from rookeries on several adjacent rocky islands. The presence of pestles and hopper mortars is indicative of the use of acorns, gathered during trips to the interior in the fall.

Underlying the shell midden was a deposit of fire-cracked rock and lithic detritus that was suggestive of an entirely different period of occupation. Faunal remains were almost entirely lacking from this deposit. The only structure was a possible windbreak constructed of driftwood around a lithic manufacturing workshop. Radiocarbon dating of hearths in this horizon established the initial occupation of Point St. George at 300 B.C. The primary function of DNO-11 during the early period was as a lithic manufacturing center, to take advantage of the chert nodules found in gravels along the base of the Point. Gould hypothesized that all of the large campsites from this period were located in the interior.

Projectile points were reflective of the cultural changes throughout time at Point St. George. Early types were leaf-shaped or had contracting stems. These forms were poorly flaked and varied greatly in size. Late Prehistoric/Historic Period projectile point

types were either concave base or tanged, carefully flaked over the entire surface of the point and exhibited little variation in size. Unfortunately, the relative frequency of point types in the upper and lower horizons of Point St. George was not detailed in Gould's report, preventing the development of a comparative chart.

HUM-169 TSURAI

The historic Yurok village of Tsurai is located on the north shore of Trinidad Bay in northwest California. The site is bordered by a rocky shoreline interspersed with sandy beaches and a sharply rising headland which once was covered with a dense stand of redwood, fir, hemlock, and spruce. HUM-169 is sheltered from inclement weather, and fresh water is available in two small nearby streams.

Archaeologists from the University of California partially excavated the site of Tsurai in 1949. They encountered midden deposits up to eight feet in depth that covered an area of several acres. The faunal assemblage was dominated by mussels, clams, and oysters. Fishbone, primarily of rockfish and salmon was abundant. Remains of Roosevelt elk, seals, and sea lions were common while White-tailed deer and raccoon were also utilized. Acorns were an important source of food, as evidenced by the presence of stone mortars and pestles (Elsasser & Heizer 1966).

This site has been interpreted as a village site occupied on a more or less permanent basis. The gentle slope upon which the site rests was ideal for the construction of semi-subterranean plank houses. An abundance of resources in the adjacent environment, protection from inclement weather, and availability of fresh water were conducive to year-long settlement.

Occupation at Tsurai began about 1620 A.D., and continued throughout the Historic Period, as evidenced by the abundance of items of Euro-American manufacture in the upper levels of the site (Elsasser & Heizer 1966).

PROJECTILE POINT TYPES

Type 1	Type 1	6
Type 2	Type 2	4
Type 3		0
Type 4		0
Type 5	Type 7	1
Type 6		0
Type 7		0
Type 8		0
Type 9		0
Type 10	Types 10-11 are defined as Type 4	
Type 11	by Elsasser & Heizer	37
Type 12	Type 3	18
Type 13		0
Type 14	Type 6	15
Type 15	Type 5	9
Type 16		0
Type 17		0

MAJOR TYPES

1.	Leaf-Shaped	10
2.	Expanding Stem	0
3.	Contracting Stem	1
4.	Broad Stem	0
5.	Side-Notched	0
6.	Concave Base	37
7.	Triangular	18
8.	Tanged	24

HUM-118 PATRICK'S POINT

Patrick's Point is situated on a rocky headland along the northern California coastline, in the territory held historically by the Yurok Indians. The site offers little protection from inclement weather, and there is no immediate source of fresh water. However, the midden deposits at Patrick's Point are more than 12 feet in depth, indicating a considerable amount of use.

Excavation took place in 1948, under the direction of Robert Heizer of the University of California. The site was interpreted as an intensively utilized but seasonal campsite. The primary activity of the inhabitants was the gathering of clams, mussels, and oysters from nearby tidepools. Fish bone was scarce within midden deposits, but the presence of net weights and large chipped knives and scrapers that were probably used to scale fish indicated the importance of this pursuit. Sea mammal remains, especially those of Stellar sea lion and Sea otter, were present in fair numbers. Although land mammal hunting was not of great importance, Roosevelt elk and deer remains were recovered in small numbers. Acorn utilization was demonstrated by the presence of pestles and hopper mortars.

Occupation of Patrick's Point began about 1310 A.D., based on radiocarbon dating, and continued throughout the Historic Period. Trade materials were found in fair numbers in the upper portions of the midden, intermixed with aboriginal artifacts.

PROJECTILE POINT TYPES

Type 1	Type 1	24
Type 2		0
Type 3		0
Type 4		0
Type 5		0
Type 6		0
Type 7		0
Type 8	Type 8	1
Type 9		0
Type 10	Types 10-11 were defined as	
Type 11	Type 4 by Elsasser & Heizer	74
Type 12	Type 3	67
Type 13		0
Type 14	Type 6	10
Type 15		0
Type 16		0
Type 17		0

MAJOR TYPES

*1.	Leaf-Shaped	24
2.	Expanding Stem	0
3.	Contracting Stem	0
4.	Broad Stem	0
5.	Side-Notched	1
6.	Concave Base	74
7.	Triangular	67
8.	Tanged	10

*Heizer classifies leaf-shaped types as knives, not projectile points.

HUM-167 GUNTHER ISLAND

A large prehistoric village site is located on Gunther Island, at the northern end of Humboldt Bay. The shell midden was originally 600 feet long, 400 feet wide, and 14 feet high. Much of the deposit consisted of sand and small residue; only 17.5% of the midden was comprised of mollusk shell (Loud 1918).

Gunther Island was first excavated by L.L. Loud in 1918. He discovered 22 burials and a large number of ornamental and utilitarian forms of artifacts. H.H. Stuart, a local collector, later removed 382 burials from the midden, indicating its use as a cemetery.

Subsistence activities at Gunther Island centered on the gathering of shellfish and fishing in Humboldt Bay. Ground stone implements customarily utilized in the milling of acorns and harpoons used for the hunting of sea mammals were also present. Woodworking was an important activity, judging from the abundance of schist adze blades, adze handles, large mauls, and elkhorn wedges within the site.

Radiocarbon dating of the lower portion of the midden has provided a date of 900 A.D. for initial occupation of HUM-167. The major function of this site was as a cemetery, although it was also utilized as a village site.

No information is available on the frequency of projectile point types within the deposit. All of the various types present in northwest California, including leaf-shaped, contracting and expanding stem types were present. However, the assemblage was dominated by deeply barbed types, described as having "a short stem, deep corner notches, and long

barbs with an elongated pinched penetrating tip" (Elsasser & Heizer 1966). This type has traditionally been termed "Gunther Barbed" based on the abundance of such types in the assemblage recovered by Loud in 1918.