The Economy and Archaeology of European-made Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington

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19th century glass bead necklace (personal collection).

This restrung necklace contains bugle beads, pony beads, chevrons and a Russian bead. The long white tubes are the bugles, which replaced the native's use of dentalia. The pony beads are both wound and drawn varieties, in the colors of dark and light green; dark, medium and light blue; amber; white; clear; dark yellow with red painted interior cores; and iridescent white. The Russian bead is large, multifaceted and dark blue over a medium blue core. The specialty beads include a light green with red stripes, bordered with yellow stripes; a red, white and blue striped bead over a gray-blue core; a black bead with white and brick red alternating stripes; a white bead with yellow stripes bordered with red stripes over a gray-blue core; a white bead with green stripes; a white bead with light red stripes over a gray-blue core; a Cobalt blue bead with white stripes; a Chevron bead with blue stripes on white over red over a white core.

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SUMMARY

The Economy and Archaeology of European-made Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington

Donald Scott Crull

This thesis examines the role played by European-made glass beads and other manufactured goods in first contact of Europeans with Native American Indian populations in Oregon, California and Washington. Utilising both the historical and archaeological record, the activities of the Spanish in Alta California, the Russians in Northern California, the Lewis and Clark expedition and the Pacific Northwest Coast companies are examined, highlighting their use of beads in gift giving and exchange with the Indians.

The sources of the large volume of glass beads are presented and their method of manufacture discussed. The way in which different European nationalities and organisations progressed geographically and in the intensity of their interactions with the native populations is reflected in the archaeological assemblages, whilst processes of exchange and the use of trinkets such as beads in subjugation and pacification are clarified by study of the historical sources. Different European groups used such materials through the mission system, by pacification of groups to ensure access and safe passage and by the fur companies use of the beads as items of exchange for pelts of otters and other animals. The native Indian groups showed different preferences for specific coloured beads which then became part of their own wealth base and exchange system.

The effects of such transactions, whether used deliberately as a form of subjugation or inadvertently as barter items, was to transform the economic systems of the native populations and specifically the way in which conspicuous consumption was carried out in potlatch ceremonies. The effect of both the introduction of new material items and the novel form of economic transactions bolstered other effects of the Europeans which transformed Native American cosmology and society permanently.

1.0 Introduction

The aims of this thesis concern two main questions regarding first contact situations along the Pacific West Coast of the United States. The first question explores the journal entries of the Spanish in California and the fur company agents in Oregon and Washington. These journals are being used specifically to ascertain what types of European-made goods were given to the Native Americans. While the journals speak to initial confrontations with the indigenous populations, it must be from the archaeological record that we receive the accumulation of these foreign goods. It has been noted that there was a preference among Indians for glass beads. Of all the color schemes available, the blue glass bead seems to have been prized. Why was this? What archaeological evidence is there for glass beads? Does the archaeological evidence support the journal evidence that the "blue" bead was given more often than any other color?

Secondly, as the European culture was, essentially, being over-printed on the Pacific West Coast Native American, European-made goods started to replace native-made goods. This was due, in part, to more advanced construction techniques and the use of metal over stone. Why were these goods given to the Indian? How did the use of these goods change the economical base of the Pre-Contact Period? What were the end-results of this economical shift through to the Post-Contact Period?

It is not my intention to state that all glass beads were traded, hence the term "trade beads." What is being shown are the processes involved in the use of the beads and what economical ramifications occurred as a result of the use of the beads, as well as the other European-made goods.

The thesis is divided into eight chapters, beginning with this introduction and the following with the chapter on "Methodology, Literature Review, and Source Verification." Chapter Two presents a possible sequence for the availability of glass beads. It is important for later discussion of the archaeological sites to understand the temporal span of site occupation. Furthermore, to

understand the connection with glass beads described throughout this work, it is important to introduce the following two relevant chapters. Chapter Three deals with the manufacturing centers of Venice, Bohemia, and Holland. It is from these three areas that the majority of the Pacific West Coast beads were obtained. Other countries made beads too. The Spanish frequently used Venetian beads, although Goggin and Frothingham (1941) feel that northern Spanish territories may have produced some beads which the Spanish explorers used in their New World expeditions. Unfortunately, no other researcher has confirmed this and it appears that Venice was the source. The fur companies used glass beads made in both Bohemia and Holland. While there are other regions where glass beads were made, such as France, the Low Countries, Germany, and possibly England, the beads did not appear to have entered the Pacific West Coast area. Even the so-called "Russian" bead is a product of Bohemian technology. There is mention of "Canton"-style beads. Some researchers have tried to find a connection between some artifactual glass beads found in the Pacific Northwest and Asia. The minutes of the Hudson's Bay Company records indicate that these "Canton"-style beads, or those imported from Canton, China, were sent from a British company warehouse and that the origins of the beads were British or European. Chapter Four describes the various processes used to form the major glass bead techniques found within the archaeological sites in California, Oregon and Washington. These techniques are described as drawn, wound, mold-pressed, blown, and millefiori.

After the initial descriptive chapters, the study ofhe Pacific West Coast contact history (Map 1.1) begins with Chapter Five. This chapter is divided into four major sections. The first section deals with the Spanish in southern and central, coastal California. Here, a history of the early explorers and their journal entries of initial contact are examined. Two-hundred years later, the Spanish moved from New Spain (Mexico) to Alta (New) California. Three

major expeditions were undertaken to establish relations with the California Indians. Gaspar de Portola's journals (and those of the priests with him) are examined first, followed by a section on the Spanish missions, and then the two expeditions led by Juan Bautista de Anza. The next section details the American venture into the Pacific Northwest, with the journal entries of the Lewis and Clark Expedition of 1804-1806. Included with the journal investigations are the reasons for the American government-backed expedition and what happened as a result of the journey. Lastly, the fur companies, doing business in Oregon and Washington, are divided into the three most important companies to operate in the area: the (1) American-Pacific Fur Company; the (2) Northwest Fur Company; and the (3) Hudson's Bay Company. This latter company became the most noted of the three companies to deal with the area Indians. This section concludes with an account of why the fur trade was abandoned, in Oregon and Washington.

Chapter Six investigates Indian exchange systems. First, the pre-contact exchange system of California is given, followed by that of Oregon and Washington, including the Potlatch Ceremony. This leads into the European exchange items and the importance and usage of glass beads, with a look into the color schemes which the Indians adopted into their own cosmology. A section on beadwork and ornamentation follows. This chapter concludes with the economics of post-contact and the detailing of how the exchange system changed. For Oregon and Washington, the changes in the Potlatch Ceremony and the valuation of the European-made items are included.

Chapter Seven investigates the archaeological site data for the three states. Dating of the particular site. based on when the excavated bead types were available is the only criteria set forth. It is only necessary to show this data to evaluate where a particular site fits into the historical time frame. A discussion of where each site fits may be found at the end of each states' respective section.

Lastly, the conclusions deal with the archaeological evidence of why glass beads were important and how they helped change the Indian way of exchange, along with the other European-made goods. This is then followed by the bibliography.

Volume Two deals with the various maps, illustrations, photographs, and tables referred to within the various chapters.

2.0 Methodology, Literature Review, and Source Verification

2.1 Paradigms and Models

For the purpose of this study, the concept of "historical particularism," as defined by Franz Boas in the early twentieth century, has been used. In order to explain why this method was chosen for this work, it must be understood how the paradigm came into being and how its use is appropriate to this study.

Carr (1967: 3-35) reminds us that the interpretation of data in historical studies (such as journal entries), whether relevant or not, implies that the interpretation is, in and of itself, a theoretical framework for further inquiry.

Early anthropological inquiry into the Indian was spurred on by a form of scientific racism commonplace in the late nineteenth century. This inquiry believed that the European conqueror of the Americas was more human than the Indian. This practice continued into the early twentieth century (Hoover 1976: 279-301). Empirical research followed in 1915, based upon the work of Boas. In the 1930s, Alfred Kroeber replaced the racist anthropological theory with relativism, pluralism, and functionalism borne out of Boas' work. The new approach emphasised detailed field notes. With this approach, came the study of the relationship of the "wholeness" of any particular culture. Functionally, this approach replaced speculation and kept research within its boundaries (Stocking 1968: 133-233; Harris 1968: 250-372; Cravens 1978: 89-120; Dippie 1982: 231-236, 281-284). This new approach recognized the Indian as a person and allowed applied anthropological thought to operate within the boundaries of the time. It also forced the researcher to conclude that the Indian is not just a creature less worthy of empirical research, but a person whose societal structure requires intellectual thought and knowledge to understand. Boas suggested that historical particularism sought the uniqueness of each culture and the sequential development that was brought about by diffusion

(after Trigger 1989: 152). Harris (1968: 250-289) accepts Boas' historical particularism idea as the only way to explain the "diffusionary episodes" which enhance a culture's development. Boas further notes that within the historical particularism framework, cultures may be viewed as individuals which come together by historical accident (Trigger 1989: 190). For the Indian cultures involved, both the Spanish intrusion into the southern part of California and the fur-trappers to the North represent these historical accidents. This happened with their expansion and economic intrusions into the lifeways of the local cultures. With this intensified "Boasian Approach," Boas concentrated on the Northwest Coast tribes while Kroeber worked with the California Indians (Berkhofer 1988: 542-544).

Trigger (1989: 154) states that most of the cultural change noted from the archaeological record, may have been caused by the diffusion of ideas (as in the case of the Hudson's Bay Company and the other trappers to the Northwest). This would mean that a culture's change should be attributed to diffusion rather than any migratory theory.

Therefore, diffusion and historical particularism go hand-in-hand in explaining the changes in the Indians' culture and ultimately provided the tools for acculturation into each other's society. An example of this theory is that the Indians of California learned the Spanish ways, while the northwest Indians became more acculturated through the use of European-made goods from the fur companies.

Returning to the diffusionary approach and interjecting a prerequisite of the cultural-historical approach, it may be said that this latter view leads into the chronologies of the former process. That being true, then the diffusionary approach leads to an even broader-based methodology for determining the relativism necessary to understand the complexities within the Euro-American Indian cultural exchange processes.

Childe (1958: 70) dismisses the cultural-historical approach as old fashioned. However, Childe forgets that if a method works well in explaining cultural change, then that

is not an old fashion concept but one of expanding the parameters of that particular paradigm. Childe preferred diffusion to the total exclusion of the cultural-historical approach (Trigger 1989: 250), but the two terms are interlinked. Childe (1928: 221) based his model on a modern industrialized society and that of a Third-World country. His example is little different from the Spanish or the Hudson's Bay Company, as the modern society versus the American Indian, as the Third-World society. The economic activities of both cultures were enhanced. The Europeans gained from this new migration; the Spanish found a new area for colonization; the fur-trappers found a new economically based area in which to prosper; and later, the United States was able to expand to the Northwest.

Trigger (1989: 332) recognizes that the diffusionary method may be employed when the inherent mobility of items is not limited to either goods or persons, but may also include ideas and institutions. Carr (1967: 117) states, "Every historical argument revolves around the question of the priority of causes."

The diffusionary method, as well as the cultural-historical approach recognizes acculturation in the historical sequence. According to Wolf (1982) and Flannery (1983), acculturation becomes clear only when both societies are examined in detail. Trigger (1989: 338) points out that a combination of archaeology and history, as documented in the journals of the Hudson's Bay Company trappers and the Spanish explorers, provides the evidence necessary to gaining the required insight into the historical background for past cultural development and to analyze such data in the concepts of a multi-disciplinary focus such as the social sciences.

While the contextual approach to archaeology (Trigger 1989: 348, 350) needs to be explained through all aspects of a culture, the historical particularist, as well as the cultural-historicist, contends that the mere recording of events in the historical chronology of places, events and times justify the

interpretative verification of sources - seemingly far better than later ethnologists have done.

Gellner (1985: 134) comments that "the past was once present as 'the present,' and it was real." From the journal entries, focused on elsewhere in this thesis, it is plainly evident that the past, indeed, unfolded in more or less a logical way. It is through these journals that archaeological historians (such as myself) may suggest significant aspects for future archaeologists to record and study.

While the previous section deals with the journals, it is necessary to mention the ramifications of the economical standpoint of this thesis.

In evaluating Mauss' *The Gift* (1925), Durkeim (in Evans-Pritchard 1954: vii) points out that the keyword is "total." By this, Durkeim states that Mauss means that the entire social concept must be seen from all its aspects totality in which, as in the focus of this thesis, the pre-contact Pacific West Coast Indian's exchange mechanism encompasses its complete societal interaction. This totality may then predispose that any individual social, tribal unit is regulated by all of the conditions, such as economic, moral, judicial, cosmological, mythical, and/or social, inherent within it. This also assumes that the tribal unit is content with its own uniqueness, seemingly knowing no other way. This may only be addressed in a pre-contact scenario. Once contact, as in the case of the Europeans, has been made, the uniqueness of "oneness" vanishes, as the increase in European-made goods becomes commonplace, thus upsetting the balance of these tribal regulatory presences.

Additionally, and perhaps as a consequence of the initial contact phase, although seen at the end of the Post-Contact Era, was the introduction of the more coveted items, such as guns, to replace bows, arrows, and lances; metal axes, to replace stone axes; and horses. These material items are then integrated with European belief systems, such as Christianity. Old World diseases, such as smallpox and venereal disease, are a direct result of European interaction

with the Indian. The end result is the systematic demise of the Indian as the ruler of his own land.

When speak ing of a methodology for investigating exchange, it becomes necessary to attempt a definition of the process. Webster's defines exchange as "a reciprocal giving; [a] giving and receiving." This denotes that anything, whether a material object or a non-material object, may be exchanged between two or more participants in an interaction. Sahlins (1965) denotes two types of primitive exchange mechanisms: redistribution and reciprocity. Redistribution is where goods are gathered at a central point and then redivided within a group. Reciprocity is where social units exchange items between each other for specific reasons. These reasons may include the establishing of relations, as were the cases between the Native Americans and the Europeans. Gift-exchange (or reciprocity) promotes an absolute means for societal links (Firth 1936).

For the purpose of this work, it may be suggested that the economical response of the Indians and the fur companies, coupled with their relationships in trade, were symbolic of a political alliance (Berndt 1964: 183-203), between the Europeans and the Native Americans.

It must be remembered that exchange is an ongoing process (Earle & Ericson 1977: 11), whereby cultural adaptation occurs between different cultures. In short, exchange is an interaction with specific links between people and societies.

In regard to California, and most of the Pacific Northwest Coast, the Native Americans did not have a centralized form of organization (Ericson 1977: 111). They were simply loosely configured bands, which were unified or integrated under either the Spanish mission system or the European-based trade systems, and became independent (after first contact) as their own socio-political units. The Pacific Northwest Coast tribes which participated in the Potlatch Ceremony had a more centralized form of tribal organization. However, potlatches did not exist where central governments were established (Dalton 1977: 207).

The tribal unit was not loosely based, but relied on a redistribution theme for its base. This form of tribal organization still allowed for its participants to benefit from the contact with the Europeans.

I hesitate to use the term trade when referring to pre-contact Indian economics. The documented language barriers, between the tribes of California, made it necessary for the tribes to have a "professional trader" (Eargle 1986: 8-9). This person had a form of diplomatic immunity between the tribes. In order to facilitate this type of economical system, the phrase intertribal exchange system will replace the word "trade." For this thesis, the term exchange will be used to denote when items were given and received in a reciprocal way.

Lastly, how is it possible to interpret the archaeological data on which this work focuses? It is my belief that a linear approach is necessary to accomplish this form of examination. Generally, archaeologists - making a field examination - would be more interested in using a descriptive approach, because they would be concerned with the way a particular site was established (Plog 1977: 128-130). This thesis, on the other hand, focuses on the data recovered from existing sites, as described in Chapter Seven, and uses the known bead availability dates to project where a site fits into the chronology of historical events.

To accomplish this with any degree of success, it becomes necessary to establish this linear approach with a set of characteristics to be examined. Loosely borrowing descriptive terminology from Plog (1977: 129), Irwin-Williams (1977: 145), and Dalton (1977: 205), the following framework of characteristics is modeled into an understanding and explanation for this linear approach.

(1) What is the content and diversity which the archaeological sites address? The "content," although a listing of excavated sites within a defined area, such as California, Oregon, or Washington, determines what types of artifacts were listed in the archaeological

record. It further predisposes what types (diversity) of material goods that the Indians were given and used. Source identification and distribution (Renfrew et al. 1966 and Irwin-Williams 1977: 141) are not specifics to this inquiry, although Sahlins' (1965) use of social interactive patterns in symbolic exchange could be implied.

(2) What is the magnitude of the sites? Here, Plog (1977: 129) states that this concept refers to quantity. By examining the archaeological data for glass beads, for example, the focus may be on which colors were prominent in a local region or within a specific grave site. It may also be used to ascertain which colors were available as well as preferred.

(3) What was the spatial-time focus of the site? In this case, when did a particular site occur in time - based on the excavation of the beads found within it?

(4) Does the ceremonial function of the Potlatch change the content and magnitude of a given site? This is based on the quantity of the material goods found in the site.

The aforementioned section explains the use of this linear approach and what it means to my focus in this work.

2.2 Literature Review

The strategy of historical archaeology, according to Langhorne and Babits (1988: 132-133), as well as Rouse (1972: 4), requires that the researcher "recover the kinds of remains needed to learn about people." This holds true with the historical accounts of the early and later explorers and their journal records. It is with this approach that the pertinent data is collected and channeled into a concise reference of the particular people and their lives.

Deetz (1991: 6) states that historical archaeology puts you face-to-face with the physical past, while Deagan (1991: 101-102) states that archaeology discloses American history. The combination of these researcher's approaches determines the very nature of a blending between history and archaeology. It must be remembered that historical archaeology is a multi-disciplinary approach with an integration of the material culture in the past-historical context as well as the present-historical context (Deagan 1991: 102).

It is through the use of either historical particularism or processualism, the basis of the Boasian Approach, that we may understand the impacts and results of the colonization processes. These colonization processes are most noted in the Spanish acquisitions in Florida and California. Deagan (1991: 105) is correct to suggest that in Spanish colonization, the American Indian's customs were assimilated into those of the Spanish and vice versa.

Acculturation starts with the first explorers and appears to have ended by the mid-1800s. As Crosby (1986) and Cronon (1983) state in their books, the impact of environmental changes on the Northwest landscape altered dramatically with these initial European explorations. This alteration was not for the better. Exploitation and depletion of the natural resources changed so much that the Native American was squeezed into accepting the European New World Order.

Fitzhugh (1985: 8-9) states that this European expansion proved to be a relentless and belligerent relationship for the American Indian. This often arose out of the European ethnocentric attitude that viewed the American Indian as not the romantic "noble savage," but an uncivilized creature to be exploited or annihilated. Either the Indian had to submit to this New World Order of face extinction.

Because this work deals directly with ancient journal records, how do we know that the writings are accurate? The following section gives some clues as to validation.

2.3 Source Verification

The journal records for the early explorers, as well as for the westward journey of Lewis and Clark, have been identified by date and location, within the journals themselves. This holds true for the trappers and traders associated with the Hudson's Bay Company. According to Binford (1964: 168), Deetz and Dethlefsen (1967: 83), and Babits (1988: 120), this record-keeping establishes a tight control in time and space for historical analysis. In other words, there cannot be any denial of the explorers' thoughts at the moment that the words were written in the relevant journals. The spatial record stands as proof of the day and time of these writings unless there comes to light further augmentation which refutes the initial document. The journals of first contact must be viewed from the standpoint that the writer was making a value judgement based on what he was observing at that particular time in history.

Lastly, there should be a predictable focus for analyzing the date for which a site may have been in existence. It would be helpful if glass beads would provide that analytical source. In section 2.4, such a possibility is discussed.

2.4 Glass Bead Sequences

Glass beads have been around since ancient times, but this thesis is only concerned with their usage for the relatively brief time span between 1500 and 1850. This thesis concentrates on the area of the Pacific West Coast where the present-day states of California, Oregon and Washington are located. Some educated guesses may be made when finding glass beads in archaeological sites. If glass beads are recovered from a site, it may be supposed when that site was in use, based somewhat on the types of beads represented in the assemblages. This is by no means an exact representation of the occupation, but it would give a fair estimate of when a site may have been occupied. This, of course, is mitigated by several factors and, perhaps, for

this reason alone, most bead researchers tend to avoid committing themselves to a chronology, based solely on the recovery of glass beads. However, by knowing when types of beads were made, it is then possible - except for sites which have become abandoned and then reused - to have a starting point from which to set certain time frames (Table 2.1).

3.0 History of the Bead Manufacturing Centers

3.1 Introduction

The people of several geographical areas have been responsible for producing glass beads since the Middle Ages. These major bead producing areas, contributing to artifacts found in California, Oregon and Washington, were Venice and the Island of Murano, in the Bay of Venice, northern Italy; Amsterdam, The Netherlands; and the area occupied by Bohemia, in present-day Czechoslovakia. This chapter will deal primarily with the history of bead production in the aforementioned countries, during the sixteenth to mid-nineteenth centuries. This information is necessary to determine when certain bead types were available during the course of European exploration and colonization of the New World.

3.2 Venice and Murano

Trading expeditions, by Venetian merchants, had travelled to the Black Sea and the Muslim territories and were firmly established by the fourteenth century (Kidd 1979: 18). In 1528, Andrec Vidaore was probably responsible for developing the process for wire-wound beads. Cristoforo Briani may have been the first to develop aventurine glass and colored glasses which imitated precious stones in 1530 (Kidd 1979: 28), although Morrazoni and Pasquato (1953: 23) assert that this was not developed until 1677. Julian Henderson suggests that this process occurred over one-thousand years earlier and was then recreated during this period (personal communication 1994).

Aventurine (Italian for "by accident") is clear or light-colored glass containing many metallic fragments (usually copper) or filings, which give the glass a golden sheen. This form is used as the base material for beads and decorative elements on beads. Additionally, when aventurine is worked by lapidary techniques, it is called "goldstone" (Kidd 1979: 57). By the end of the sixteenth century, topaz-colored glass had made its debut and Gerolamo Magagnati

produced hyacinth-colored glass by 1604 (Kidd 1979: 28; Pholien 1889: 72; Morrazoni & Pasquato 1953: 23). Throughout the European glass bead industry, it was the Venetians who produced beads and devised new ways to mass produce during the Age of European Exploration. During this period, Venetian glass beads found their way to Africa, Asia, and the Americas (Anon. 1991: 8).

During the early sixteenth century, Leandro Alberti recorded twenty-four glass works on the Island of Murano. In 1606, Venice had 251 bead producing outlets, but by 1675 there were only eleven remaining first class operations. This decrease may have been due to business failures or individual firms consolidating, but the records are unclear (Morrazoni & Pasquato 1953: 7).

By the first half of the eighteenth century, the wire-wound bead industry required eight-hundred pounds of oil daily to keep the lamps, used for bead manufacturing, lit. Close to the end of the century, the industry employed almost one-thousand workers (Nesbitt 1878: 93). The number of bead producing businesses differed over the course of the succeeding one-hundred years, so that by 1836 Murano only had twelve operating firms. This was mainly due to the fall of the republic after Napoleon's army conquered Venice. During this time span, the operational bead factories were producing between 44,000 pounds (in weight) per week to more than 3.9 million pounds per year (Zanetti 1866: 254-256; Nesbitt 1878: 85; Eisen 1927: 720). These amounts show that there should be many millions of beads accounted for worldwide, when in reality only a relatively small number have been accounted for in archaeological sites and museums. The different varieties of beads is unknown, but during the 1700s there were 562 kinds of beads being produced (Kidd 1979: 20). Exportation of glass beads heightened after recovery from the Napoleonic Wars, so much so that by the 1860s Venice was manufacturing six-million pounds per year (Weeks 1883: 70).

During the nineteenth century, the Giacomuzzi Brothers manufactured and sold small glass beads, necklaces, lamp-worked beads, and other items. They were awarded gold medals for their products in the years 1837, 1838, 1846, and 1852 (Karklins 1984: 6).

Although Venetian glass makers dominated the industry, their major competitor was Bohemia (Karklins 1990: 76). Millions of pounds, in weight, of beads were eventually produced in the Venice area, but scarcely any are found on public display and virtually no reference is made to them in museum collections (Kidd 1979: 28).

Even though the Venetians tried to hold a tight rein on the making of glass, other nations soon became aware of the formula. As stated above, and found in Section 3.4, Bohemia was Venice's chief rival. However, Holland was to supply the New World with many glass beads as well. The following section gives the history of Holland's contribution to New World exploration.

3.3 Holland

Glass beads have been a major industry in western Europe (Kidd 1983: 2) and a few firms established themselves over the course of approximately two-hundred years. Official records are limited as to the extent of bead making, but it is generally acknowledged by the Director of History of Business Archives, located at The Hague, that beads were produced in Dutch factories (Kidd 1979: 36). Indeed, Jan Baart and Wiard Krook have spent their lives proving that Dutch beads were manufactured at several sites (Map 3.1) in the Greater Amsterdam area (personal communication with Baart & Krook 1994). Morrazoni and Pasquato (1953: 42) wrote that the secret of glass bead making was brought to the area in 1730 by Zuanne Gedolin and Pietro Sicca, both of Venice. (The authors' statement was, "...nel 1730 Zuanne Gedolin e Pietro Sicca portano l'Arte del Margarietero ad Amsterdam.")

Only one glass house was chartered by the government at any one time, in Holland. The charter would

be annulled at the owner's death, although a son, or any other person, could apply for its continued use (personal communication with Baart & Krook 1994).

Even though the glass industry was started by the sixteenth century, it did not achieve fame until skilled workers were brought from Venice and Murano after 1550. The bead industry probably started during the 1590s in the region of Zealand (Baart 1987: 67), known as Middleburg, situated on the west coast approximately seventy-seven kilometers southwest of The Hague. This documented glass house was worked by Govaert van der Haghe in 1597. Van der Haghe, a native of Antwerp, enlarged his glass making firm to include the manufacture of long, colored glass tubes for bead making. After his death in 1605, Antonio Miotti succeeded him. In 1623, Miotti abandoned the Middleburg works and set up factories in Namur and Brussels (Hudig 1923: 24-25, 27).

Although beads were probably produced about 1597, the earliest documented Amsterdam factory was founded in 1602 by Jan Jansz Carel, part-owner in the United East India Company (Hudig 1923: 33). It is stated by van Dillen (1933: 330) that the first known reference to Amsterdam bead making was in 1619, although a Mr. Obizzo was permitted to build a glass house in 1597, according to Baart (1987: 67). There is no real evidence that Obizzo produced glass beads in this year. This factory achieved success until 1622 when Claes Rochusz built a factory on the Keizergracht Canal, which became the "greatest glassworks in Amsterdam" (Hudig 1923: 33, 35-36). In approximately 1603, Jan Hendriks Schryver Soop produced paternosterwerke-style glass beads, employing craftsmen from Antwerp, Venice, and Murano. Soop's glass house at the Klovenierburgwal operated between 1601 and about 1629. He was the son-in-law of the factory's owner, Jan Jansz Carel (Baart 1987: 69). Ten years later, more than eighty families were involved in bead production (Hudig 1923: 33-35 & Karklins 1974: 65). In 1613, Abraham van Tongerloo had set up a shop producing mirrors, but he may have been making beads as

well. In 1621, Claes Rochusz Jacquet built a factory on the Keizergracht, known as the "Two Roses." A year later, Jacquet and Soop filed suit against van Tongerloo, stating that he was producing more than mirrors - a reference to probable bead making (Baart 1987: 69). Another factory was founded in 1656 by Nicholas Jaques, but there are no details of its tenure (Hudig 1923: 45).

Jacquet moved his glass making facilities to the Rozengracht in 1657 and told his customers that he had "a new glass and bead factory" (Baart 1987: 69). This statement further indicates that Jacquet had made beads at the first location as well (van Dillen 1974: 516).

During the 1660s, the Keizergracht factory belonging to Rochusz moved its location to the Rozengracht, opposite Rembrandt's apartment. Artisans from Venice and Leige worked there (Hudig 1923: 46). In 1676, Fredericq Rihel and Anthony Le Maire bought the business which was, by this time, owned by Jacquet (Baart 1987: 69) and was the only working glass factory in Amsterdam. Le Maire was obtaining beads from a Haarlem source in 1679 (Hudig 1923: 56). This factory was eventually sold to Juane and Giacomo Pallada in 1686 and produced, among other items, tubular beads until 1697 (Hudig 1923: 81; Karklins 1974: 66). Tubular beads are produced from round tubes.

There are three known eighteenth century glass houses, each located near Amsterdam's seventeenth century walls, but it is unknown if any of them produced glass beads. Two of the factories have been dated between 1697 and 1722, while the third appears to have been producing glass between 1722 and 1750 (Baart 1987: 69).

Rotterdam was another bead production center. Hendrick van den Heuvel and Cretentius Thomer founded a factory in 1615 on the Hoogstraat (Karklins 1974: 66). Between 1689 and 1692, Matthieu Simony de Tourney operated a factory in Zutphen, seventy-two kilometers east of Utrecht. He produced beads strictly for exportation (Hudig 1923: 86, 88, 95).

While glass houses began to appear in Amsterdam after 1567 (Coenen 1907: 17), glass beads were probably produced only from 1597 to 1698, although they may have been manufactured as late as 1750 (Karklins 1985b: 111). This was possibly due to the Dutch not being able to compete with the lower prices offered by other glass bead producing countries (Hudig 1923: 104-117; Karklins 1974: 66). Baart (1984: 4; 1987: 70) disagrees with both Coenen and Karklins as to when bead production began in the Amsterdam area, as is noted by the next two sites.

Two of the important sites in Amsterdam have produced various bead varieties from the late sixteenth century. The first site has two loci and is located at the Waterlooplein (Wlo/D-370). It dates to approximately 1580. The archaeological evidence for the early glass house indicates that this site was initially filled in around 1593, when new housing construction was begun (Baart 1987: 70). This part of the ditch site yielded "two segments of translucent white glass tubing decorated with three redwood and three dark green stripes, as well as a fragment of a redwood glass rod" (Baart 1984: 4).

The second locus (Wlo/D-155) dates between 1593 and 1596. Archaeologists have recovered "a fist-sized chunk of black glass; five multi-layered rods; two segments of transparent bright navy blue tubing used in making tubular, or heat-rounded, beads; and a large, round, gooseberry bead of translucent light gray glass, decorated with ten white bubble stripes" (Baart 1984: 4). Refuse was used to raise the volume of the land between 1592 and 1596, because the canal levels were rising, and the beads were found in stratigraphic layers used to raise the surface of the land. It is this second site which produces the evidence to indicate that beads were being produced by Obizzo prior to the seventeenth century (Baart 1987: 70).

The Waterlooplein sites have produced increased quantities of wire-wound varieties, with the following type and color schemes: round in light grey, pale blue, amber, ultramarine, and bright navy; oval in pale blue, ultramarine,

light grey, and bright navy; doughnut-shaped in amber, maple, black, pale blue, dark green, and bright navy; faceted/five-sided in light grey and amber; raspberry-style in light grey; and melon beads in light grey, teal green, and black (Baart 1987: 73).

The second site is located in the western section of the Keizergracht Canal and is also in two loci. The first section (Kg 9) was discovered when bridge construction was undertaken at the Wolvenstraat (Baart 1987: 70) and yielded "two chevron bead-production tubes," perhaps dating between 1590 and 1596 (Karklins 1985a: 37). The second part of the site (Kg 10) is located a few meters north. Several pounds of tube fragments and more than fifty-thousand items, including "finished beads, malformed rejects, and tube fragments," (Karklins 1985b: 37) were found. This site was found in 1981 when a sewer line was being installed in an area dated to pre-1610, at about four-meters down. The date was confirmed by the analysis of associated ceramic and glass drinking vessel fragments (Baart et al. 1986: 66). This site was most likely a dump deposit because no structural features were found in association (Baart 1987: 70).

The physical properties of Dutch glass do distinguish it from Venetian glass. The Venetian glass used soda, from the Orient, whereas the Dutch used potash. Some Dutch beads contain upwards of twenty-two percent potash, which was made from the burning of wood and peat. Wound beads, produced in the seventeenth and eighteenth centuries, were entirely composed of a silica-potash-lime mixture (van der Sleen 1967: 108, 116). This signifies that Dutch beads may be distinguished from Venetian beads during the period of approximately 1600 to 1799, by the potash in Dutch beads and the soda in Venetian beads.

Dutch beads are found in Canada, the Americas, the Antilles, Africa, and Indonesia, as well as in Holland (van der Sleen 1967: 112). The first English record is from the London Port Books which only state values of the beads in their customs records. In the year 1697 to 1698, London

received approximately £439 worth of bugle beads. These beads are made of small, colored, tubular glass and are used for sewing on dresses (Kidd 1979: 57). During the period of twelve months commencing in December 1609, Dutch beads accounted for forty-two gross of imitation amber beads. Likewise, during a ten month period starting in 1625 and ending in 1626, fifty-nine gross found their way to London. The Netherlands decreased shipments between Christmas of 1633 and Christmas of 1642 to 42.5 gross probably due to customs regulations, which is unclear, or possibly because of the Thirty Years' War (Kidd 1979: 37).

Additional evidence for the Dutch trade in beads is found in the "Husbandry & Trade Improved" - one of England's first newspapers. In volume nine (2 May 1696) the editor, John Houghton, indicated that "77 l. of *smaltz* and 5,626 l. of bugle were brought in from Holland" (Kidd 1979: 37). Kidd (1979: 59) states that *smalt* (not smaltz) is colored, or dark, glass for the fabrication of beads. Furthermore, Kidd states that this type of glass has been fused with cobalt that has been calcined, then mixed with potash and sand prior to being ground by hard stones.

On 10 October 1720, an advertisement in the "Amsterdam Courant," stated that "Duyts en Veneets Corael" were for sale. This meant that Holland Dutch-style beads were, indeed, being made in Holland! A later article, dated 12 October 1723, suggests that great amounts of glass beads were available (Schipper-van Lottum 1984: 456).

James Logan, a Philadelphia merchant, in a letter to John Askew dated 18 January 1717 (or 1718) states, "I have them [beads] from Holl'd at 6 or 8 Stivers ye highest ye pound" (Kidd 1979: 38). About thirty days later, Logan again contacts Askew and states (after Kidd 1979: 38):

> I sent thee by Capt. Wayles 3 or 4 beads in a small box for a Sample. I wish thou would Search for Such and Send me about 100 lbs. weight of each of the lesser and 50 lbs. of ye greater. We had by Crawford from Holland at 6 Stivers the other I had from New York but be

> Sure to have them with ye Drawback
> otherwise they will not answer.

Logan contacted Askew in 1727 and once again requests that he order beads for him by stating (after Kidd 1979: 38):

> Beads according to ye Samples, 100 lbs.
> of ye angular blue, but rather larger
> than less, & 50 lbs. of ye Small white if
> possible to be procured. The larger ones
> must be of deeper blue mostly. These
> come from Holland under 4 Stivers the
> lb.

Logan apparently liked the Holland bead market because he wrote the following (after Kidd 1979: 38):

> Beads are another Article of great
> [impor-] tance in the trade...I have been
> sometimes well supplied from Holland
> at 3 or 4 Stivers or less p lb.

Unfortunately, even though Logan states that the beads are from Holland, he does not know if the beads are Dutch beads or imported from other countries and simply sold through the Holland markets. Likewise, Askew has not stated that he purchased the beads in Holland or that they were Dutch beads he sent.

Archaeological evidence is plentiful for a glass and glass bead industry in Holland. Van Tongerloo had two glass houses and beads have been found in association with both of these sites. During the early twentieth century, the original 1613-1619 factory was uncovered and contained many specimens. It appears that Soop's accusation against van Tongerloo had some merit (Baart 1987: 71).

Glass bead artifacts from the Rochusz factory, originally operated by the Jacquet family, comprised white/red/white/red chevron tubes of the compound

variety, in addition to plain redwood, blue, and white tubes and one compound bead (Baart 1987: 71-72).

The 1630-1650 Horizon, as stated by Jan Baart (personal communication 1995), is seen in the artifacts excavated from the Passeerdersgracht. The importance of this horizon is that a new color change, from red and white to blue and white, became more preferable. Blue and white slag in association with drawn glass in colors of simple bright navy and white were found. Additionally, multi-layered, round blue beads with white stripes were found (Verschure 1981: 261-263). This find probably belongs to the Two Roses factory, as it post-dates both the Soop and van Tongerloo facilities (Baart 1987: 72).

Within a 1647 embankment, along the Amstel River, several circular beads were found in the varieties of blue, white, and black. Additionally found with these beads were a number of tubes in varieties of either compound or spiral stripes. It is most likely that these artifacts may be attributed to Jacquet's second factory site, on the Rozengracht, and are similar to bead contexts found in Amsterdam sites dating from 1650 to 1675 (Baart 1987: 72).

Eighteenth century bead deposits have also been discovered in the Amstel embankment. These deposits have produced tubular beads in color schemes of white and blue. It was not until after 1700 that wire-wound beads were produced in quantities greater than that of the drawn variety. The last of the Amsterdam glass houses, located near the town's wall, was excavated in 1983. The excavation produced blue and white opaque glass slag and green Waldglas. Waldglas (Wald Glass) is of German origin because it is made in the forests of western Europe where the use of beech ash was used (Kidd 1979: 60). This type of glass is similar to the French Verre de Fougere and the Italian Vetro di Foresta, which is glass made from fern ash. All three names denote substances which produce a milky-green glass which is semi-opaque and has a rough texture

(Kidd 1979: 60). No evidence of glass bead making was found at this last site (Baart 1987: 69, 72).

It has been assumed in previous North American archaeological sites of the eighteenth century that wire-wound beads had been produced in Great Britain, but the preceding evidence suggests that those beads may be the product of Amsterdam glass factories (Baart 1987: 73).

As previously mentioned, Bohemia rivalled Venice for the Old World glass trade. Bohemian glass beads are found in Pacific West Coast archaeological sites, as are those of Holland and Venice. The following section investigates the history of the Bohemian glass works and the expanse of their trade networks.

3.4 Bohemia

Bohemia has long been famous for glassware, including crystal and beads. During this rise in fame, Bohemia had abundant amounts of hardwoods for fuel. Glass has been manufactured here since the Middle Ages (Kidd 1979: 39). After 1500, there were dozens of bead making factories in the Bohemian Forest area (Jargstorf 1995: 42, 90). In Hirschschlag, the industry started approximately 1545, while in Bischofsmais, beads, for rosaries, started being made in 1585 (Blau 1941: 90; Jargstorf 1995: 42). Philipp Appian (1531-1589), a mathematician and geographer reported that any one of these few bead shops were producing many beads by the 1550s. His statement was (after Sellner 1988: 18):

> They produce the little globes that are meant for counting prayers in a great variety of sizes and shapes. A single worker produces per day many thousands of such vitreous globules - even up to 30,000 and more.

Jargstorf (1995: 42) states that the Bavarian bead makers could easily produce 6,000 to 18,000 wound-style beads per day or between 4,000 and 6,000 blown beads in a

single day. Unfortunately, Jargstorf does not record how long the bead maker would have needed to work in order to produce those amounts of beads.

The Gablonz area produced about twelve glass houses, all started within the late 1500s. These houses were owned by members of three important area families: Schurer, Wander, and Preussler. Unfortunately, except for the Schurer family, there is virtually nothing known about these early sites and they apparently did not last past 1750. The Schurer's began the bead making process early in the 16th century, but the factory was closed by the end of the following century. Archaeological records reveal that glass beads were excavated at the Krombach glass works, (Fischer 1924: 26; Jargstorf 1995: 90). In 1680, Michael Mull(n)er (1639-1709) is suppose to have fashioned the first Bohemian crystal bead. From his glass works, he delivered finished products to Italy, Spain, Turkey, and The Netherlands, from where these products were then sent worldwide (Jargstorf 1995: 43). The seventeenth and eighteenth centuries also saw the making of wound beads at Witowitz, lasting from 1606 to 1795 (Zenkner 1968: 42; Jargstorf 1993: 65; 1995: 90). By 1740, black beads were being produced by the Grunwald glass works near Gablonz. In 1750, a German, named Johann Leopold Riedel (1726-1800) opened his first factory producing vessels (Jargstorf 1993: 27). The Riedel family produced drawn beads from their factories at Neuwiese between 1756 and 1817 and Christiansthal between 1775 and 1887 (Jargstorf 1995: 91). Ruby red beads were being produced in 1781 and followed in 1783 with beads of other colors (Francis 1979: 4). The Riedel family produced drawn beads from their Unger works, in Tiefenbach, between 1787 and 1830, as well as selling glass tubes between 1790 and 1800. His descendants would become the best known glass makers in the area until all German craftsmen were expelled near the mid-twentieth century (Jargstorf 1993: 27 & 1995: 91).

The Fichtel Mountain area, in northern Bohemia, has some of the oldest traditions beginning prior to the sixteenth

century. This area offers lush forests offset by rich volcanic residue, which was made into black beads without the addition of any foreign substance. This black glass was most likely obsidian and it is equally likely that the substance was polished into bead-style shapes and then drilled to produce the hole. The Fichtel Mountain region is also close to Nuremberg which was a trading center. The routes from Prague, Venice, the Baltic lands, and Bruges crossed in Nuremberg. Ancillary routes from Leipzig and Paris filtered into the area, as well. By the 1800s, all of the basic bead colors were being produced in the area (Jargstorf 1991: 37).

Cut beads, also called Sprengperlen, essentially were the drawn variety and date to the mid-eighteenth century. Initially, the earliest of this type were produced in black. In order to distinguish these cut beads from the blown variety by name, the German word "Korallen" was used (Jargstorf 1993: 65).

The earliest drawn beads were cut from round tubes, but by the 1800s the tubes were six-to-eight sided. These faceted beads are most commonly referred to as Russian trade beads (Jargstorf 1993: 66). These early Bohemian styles included simple wound beads in the light-blue color and oblate style. These were usually made into bracelets. The Russian bead was large, blue and multi-faceted with six, seven or eight sides marvered to a drawn bead gather. The marvering procedure was used in the shaping of the bead. In order to produce the shape and to consolidate the heat, the glass is rolled on a flat surface, consisting of marble, cast-iron or stone. This surface is called the marver or marvering board (Beck 1928: 17; van der Sleen 1967: 25, 42, 103; Kidd 1979: 58; Harris 1985: 1-3, 6, 912; Nicholson 1993: 73; Jargstorf 1993: 65; Francis 1994: 120). The lapidary wheel used to facet the beads is a vestige from garnet bead making, which is also a Bohemian manufacturing tradition. The lapidary technique, also known as the "stonecutter" technique, has been employed since ancient times. Drawn glass beads, including the sub-

variety of the Russian bead, have had their facets ground and polished with the use of this device (Francis 1982: 202).

The Bohemian glass industry was financially hurt by the Napoleonic War, which took away its European cliental. This disaster reversed itself with the signing of the "Peace of Vienna" in 1815 (Francis 1979: 5). During the 1829 Prague Trade Fair, Bernard Unger displayed 410 bead types. The resulting trade exportation centered on beads going to Europe, the United States, and Latin America (Francis 1979: 5; Jargstorf 1993: 66-67). These bead types of Unger's are unknown.

The Bohemians gained the monopoly of bead production from the Venetians in the mid-nineteenth century, as stated by van der Sleen (1967: 114); Kidd (1979: 40-41); Sprague (1985: 41); and Jargstorf (1993: 67).

During this period of uncertainty between which area had the monopoly on the trade, it is difficult-to-almost impossible to distinguish any difference between Venetian and Bohemian beads. This is because of the exchange of glass canes between the two regions. Possibly, though, Bohemian beads are sometimes brighter in color than those produced in the Venice-Murano area; the white color may have a bluish cast to it; and the beads may appear more uniform in design (van der Sleen 1967: 114; Kidd 1979: 40-41; Sprague 1985: 41). Francis (1979: 16) and van der Sleen (1963: 144) state that it must be understood that the early beads were either wound and/or drawn styles. Later, the preponderance of beads were made either in a molded form or in two-part molds. These last styles, while continuing to employ the former attributes, were gradually phased into blown beads, which had hollow centers. The earlier beads imitated stones and were usually translucent, such as (but not limited to) red, amethyst, topaz, and milky glass. There were also opaques produced.

International trade routes were established during the late - 1600s, according to Hetts (1958: 20), but Jargstorf (1991: 37) stated that these international routes were established prior to the sixteenth century. Hetts (1958: 20)

states that these routes began in the town of Ceska Lipa, in the Bohemian region, and "ventured to Poland, the Baltic lands, [and] penetrated even as far as Russia, Denmark, Sweden and The Netherlands, [and] crossed Germany to France, England, Spain and Portugal, [in addition to having] crossed through Moravia to Hungry, Transylvania and Constantinople." Jargstorf (1991: 37) states roughly the same western and northern expanse, plus adds the Venice area and states that this started over a century earlier. By the end of the 1700s, Bohemia had export and import agents located in fifty-four cities within Europe and six overseas offices, including Mexico (Schebek 1878; Vavra 1954: 154; Kidd 1979: 41).

3.5 Overview

Of all the countries to produce glass beads, during the time of European exploration on the Pacific West Coast of America, it is mainly from glass houses in Venice, Bohemia, and Holland that glass beads are found in the respective archaeological records of California, Oregon, and Washington. Further confirmation of the bead types may be found in Table 2.1.

4.0 Glass Bead Manufacturing Techniques

4.1 Introduction

Several types of beads have been produced through the ages. This thesis is concerned with those types manufactured in Europe since the 1500s and exported to the New World by various countries during early explorations and colonization. Sites located in the Pacific West Coast states of California, Oregon, and Washington contain various samples of these known types and include drawn, wound, mold-pressed, blown, and millefiori.

4.2 Bead Types and Manufacturing Techniques

4.2.1 Drawn Beads

Drawn beads (Photograph 4.1) are the most numerous beads found in American sites. They have been designated as an embroidery type (Sprague 1985: 91) and have been classified as being produced essentially by an industrial technology. Sprague's use of the term "embroidery" bead signifies that this type of the drawn variety was used by aboriginals to sew this type of bead onto their dresses (for both males and females) and to create beaded purses and headbands. Almost all of the Indians in North America used drawn beads for their particular form of beadwork (Miller 1971: 2).

These beads are cut from a tube, stretched out and then cut down (Illustration 4.1). Enamelled beads are a form of the drawn variety. They are chopped (cut), incised, and snapped from hexagonal canes, with additional facets ground on the ends. Enamelled beads are made from opaque glass with the addition of colored matter added to it (Beck 1928: 56, 59, 69; Kidd 1979: 58; Francis 1994: 33, 87-89).

4.2.2 Wound Beads

Wound beads (Photograph 4.2) are the second most common bead type found in American sites. This type of bead is also known by such names as wire-wound, wire-wrapped, mandrel-wound, turned (Anon. 1884: 819), scooped, and coiled (Cleland 1972: 184). Wire-wound, as well as wire-wrapped, mandrel-wound, turned and coiled, beads are made from molten glass which is wound around a metallic rod, or wire. This is similar to the way thread is wound around a spool. By using this method, there is no need to drill, or perforate, the bead in an additional step, because when the rod is removed, the hole is left (Kidd 1979: 60). The scooped-wound bead is created by drawing the glass out in the scoop and then dripping the mixture over a rotating mandrel (Sprague 1985: 93-94).

The wound bead is the basic type used for many styles of inlaid beads or applique-formed beads. These latter two styles may be known as fancy or polychrome beads. Poly-chrome (fancy), also called "lamp," beads typically have more than one color to them. When describing glass beads, polychrome means individually creating beads, decorated by hand through the application of molten, colored glass. "Lamp" beads were created by bead makers who sat at a fueled lamp (such as a gas burner) and created these beads through the process of heating preformed rods of glass (Sprague 1985: 94).

Ross (1989a: 89) indicates that these lamp beads are produced using a kaiserol jet flame. This kaiserol is a rectified petroleum-based fuel which has a flash point of between 90-degrees to about 140-degrees. The bead maker, sitting in front of this flame on the lamp table, controls the output of the flame by working bellows attached to the underside of the table. The beads were usually produced as export material and as such were decorated with gold and silver.

Francis (1982: 193-202) indicates that in addition to Sprague's method of scoop-wound bead technology, the bead maker may "dip their rod into the glass and twirl it to build

up the bead." This method is called furnace-winding. Furthermore, Francis (1981: 39) states that while bead makers are heating their glass rods, they may twirl the rod "around a fixed wire in a stand or a wire which they hold in their hands."

An example of a mandrel-wound bead would be the type called the "Lewis and Clark" (Illustration 4.2). This bead was a tubular variety with white glass which was "combed," or tracked, around the bead from end to end. This combing produced a broad leaf pattern when manipulated. Another style of the mandrel-wound method produced a bead called the "Ambassador," or "Padre," bead. This was usually a black-based bead with brightly colored spots of glass added. The larger variety had the addition of a leaf pattern added to the spots (Byrd et al. 1992: 22). I have found no beads like these two types, except in the record cited.

4.2.3 Mold-Pressed Beads

These beads (Photograph 4.3) involve innovative processes and specialized labor. They appear to have the characteristics of the Bohemian style of production. These types may be found in various sites throughout the American West, including the Hudson's Bay Company's Fort Vancouver site in southern Washington (Francis 1982: 193-202).

The terms molded (moulded) and pressed are essentially interchangeable. Mold can mean "to give shape to [a] malleable substance; to form by pouring or pressing into a mold; [or] blown in a mold" (Gove 1976:1454). Pressed is defined as "compacted or molded by pressure; squeezed together in some form" and when the term pressed glass is used, it is defined as being manufactured "by being pressed into a mold while still plastic" (Gove 1976: 1795). Molded glass is used in the process of making molded beads (mold-pressed). In this process, a pre-formed cane of glass is heated to a softened state and is then used to fill a two-part mold. This technique was used by Bohemian

glass industries (Beck 1928: 16, 62; van der Sleen 1967: 26, 38, 74, 114; Francis 1979: 16).

The mold-pressed beads manufactured in Bohemia during the 1850s initially were pressed in iron molds, also known as "tong molds" (Ross 1989a: 82, 91).

Pressed and ground beads have been identified as having been produced in the Jablonec region, near Rejdice, Czechoslovakia, by I. Hedjova (1981) of the Industrial Arts Museum in Prague. These beads have been assigned a manufacturing date somewhere between the late sixteenth to early seventeenth centuries (Pesatova 1965: 25).

4.2.4 Blown Beads

Blown beads (Photograph 4.4) are also known as hollow-blown, hollow-sphere, and hollow-bubble. They are made of hollow glass with thin walls and are likened to small Christmas tree bulbs (Sprague 1982: 97). The shape of the bead is produced by a "blowing iron." This tool, which in Italian is "canna da soffio" from which it was first made, is about five feet long, hollow and with the near end encased in wood for safe handling by the bead maker (Beck 1928: 62; van der Sleen 1967: 26; Kidd 1979: 57; Cole & Darling 1990: 24; Jargstorf 1991: 18, 20, 39, 45, 63-65; Francis 1994: 6, 59, 81). This type of glass bead is very fragile and rarely are they excavated intact from archaeological sites. Although these beads were manufactured in various places, the Bohemians were the largest manufacturer in the early 1800s (Francis 1982: 193-202).

Even though these beads are infrequently found in an archaeological context, two exceptions may be noted. The *Great White Arabia* site near Kansas City, Missouri was rediscovered after 130 years. The ship had come to rest at the bottom of the Missouri River and over the years the river meandered to the point that the wreck was covered by over forty-feet of earth. Over one-thousand blown glass beads were removed, still within their original bundles (Karklins 1993: 14). Another cache of blown beads was discovered during the Fort Vancouver excavations carried

out in southern Washington. The Fort Vancouver collection produced several different styles (Ross 1976a: 766-777).

4.2.5 Millefiori Beads

Millefiori (Photograph 4.5) is from Medieval Italian meaning "thousand flowers." This complex mosaic design was first developed 3,000 years ago. The glass bead maker takes a piece of copper wire in one hand and twists it. In the other hand, the craftsman holds a glass rod in front of a small furnace. When the temperature of the glass attains the correct level, approximately 1100-degrees Celcius, the artist attaches the molten mass to the copper wire and removes the rod to one side, leaving the raw bead on the wire. Using pliers or tweezers, the bead maker places slices of colored glass cane onto the molten base bead. While continuing to turn the base bead, with the glass attachments applied, the different canes melt together while being held in front of the furnace. After the bead is removed from the heat, it is placed in a mold. This mold presses and shapes it. Lastly, the bead is put into an annealing oven, for a period of twenty-four hours, to cool the mixture. At the end of that time, the bead is soaked in an acid bath. This bath frees the copper wire, allowing the hole to be formed (van der Sleen 1967: 47, 103; Kidd 1979: 59; Coles & Budwig 1981: 14-15; observations of Murano glass makers during 1994 & 1995).

5.0 Pacific West Coast Contact History

5.1 Introduction

There were several explorations, to the Pacific Northwest Coast areas, by countries other than Spain. Since shortly before the mid-1500s, the British, French, and Portuguese governments had sent seafarers into the area. In difference to these other nations, it is with the Spanish that the journal entries have the most significance, with respect to how the Indians fared after the initial contacts. While the aforementioned national explorers have found their place in history, this record will focus only on how the Spanish interacted with the local populations, from first contact through the missionization process.

5.2 The Spanish in Southern and Central, Coastal California

5.2.1 Early Explorers

Hernando de Alarcon and Melchor Diaz may have been the first Europeans to set foot in Alta (New) California in 1540 (Castillo 1978: 99), but it is Juan Rodriguez Cabrillo who is credited with the first landing. Cabrillo commanded a fleet of ships which had sailed north from Puerto de Navidad, on the west coast of Mexico, on June 27, 1542. Cabrillo entered San Diego Bay, in southern California, on October 7th (in September, according to Milner et al. 1994: 50) and claimed the whole of the land for the Spanish Sovereign (Heizer & Elsasser 1980: 221). During this first expedition, Cabrillo recorded several encounters with the local Indians during his one-week stay in the area (after Bolton 1926: 23):

> ...they went ashore where there were people. Three of them waited, but all the rest fled. To these three they gave some presents...They gave signs of great fear. On the night of this day they went ashore from the ships to fish with a net, and it appears that

there were some Indians, and that they wounded three men...Next day in the morning they went with the boat farther into the port, which was large, and brought two boys, who understood nothing by [but-?] signs. They gave them both shirts and sent them away immediately.

These Indians may have been the Ipai. Although the Ipai Indians of southern California had never seen Spanish soldiers prior to 1542, they had heard of them from their Pueblo brothers to the east. As Cabrillo entered San Diego that October (or September), he was met by hostility from the Ipai band. From this encounter, Cabrillo later recounted that the Indians told him (according to Milner et al. 1994: 20):

> ...men like us were traveling about, bearded, clothed and armed...killing many native Indians, and...for this reason they were afraid.

It was to be more than fifty years before another coastal incident occurred. In 1595, a Spanish ship, under the command of Sebastian Rodriguez Cermeno, landed at Drake's Bay, on his way to Acapulco, from the Philippines. His log indicated that he "lost his cargo of Chinese silks and Ming porcelain to Coastal Miwok Indians" (Heizer & Elsasser 1980: 224). None of the porcelain has survived.

The Spanish navigator Sebastian Vizcaino sailed up the California coast between 1602 and 1603. Vizcaino chronicled his journey in his diary. Along with him on this peregrination were three Carmelite brothers, one of whom - Fray Antonio de la Ascension - wrote letters of their encounters with the Indians (O'Neil 1992: unpublished manuscript). Antonio de la Ascension reported that during a landing party excursion, two days after anchoring in San Diego Bay, on November 10, 1602, they were confronted by hostile natives (after Wagner 1969: 233):

One of the sentinels gave notice that many Indians were coming along the beach in a troop, all with bows and arrows, naked and painted black and white. The General ordered some soldiers to get their arms ready, and when the Indians saw them with arms, they did not come up to the place where the Spaniards were, but retired instead to a slope on the side of the hill. In order to bring them to peace and to quiet them, Father Antonio went to them. Following him to safeguard his person, but somewhat apart, was Ensign Juan Francisco with six harquebusiers. Before reaching the place where the Indians were, Father Antonio made signs of peace with a white cloth and by throwing sand in the air with his hands. At this the Indians kept still and Father Antonio came up to them with those accompanying him. The first thing the Indians did was to deliver their bows and arrows to the Father and the soldiers. He embraced them with many caresses and signs of love and gave them some bead necklaces of colored glass, cords and ribbons to put around the neck for ornament. With this they came peaceably towards the General and the others, but before reaching them, they saw so many people that they did not dare to come up and retired to a little hill, sending forward with the Father and the soldiers two very old wrinkled women who had more folds on their abdomens than the empty bag of a muleteer. There, with the company conducting them, came up to the General and the others without embarrassment or suspicion. The General, the friars and soldiers entertained them, giving them some strings of glass beads and biscuits,

> and with these sent them away
> contented and happy.

On November 15th, Vizcaino encountered more Indians while exploring the bay. He reported (after Pourade 1960: 67):

> ...a number of Indians appeared with
> their bows and arrows, and although
> signs of peace were made to them,
> they did not approach, excepting a
> very old Indian woman who
> appeared to be more than 150 years
> old and who approached weeping.
> The General cajoled her and gave her
> some beads and something to
> eat...Seeing this kind of treatment the
> Indians came peaceably and took us
> to their rancherias, where they were
> gathering their crops and where they
> made their paresos of seeds like flax.

Fray Antonio de la Ascension recommended to the Crown that certain provisions should be supplied to the soldiers and missionaries for future trips. Bolton (1926: 125-126) translates the letter as follows:

> Likewise, there should be taken on
> board at the cost of his Majesty, a
> quantity of trifles, Flemish trinkets,
> such as beads of colored glass,
> artificial garnets, hawks bells,
> mirrors, knives, cheap scissors,
> Parisian tops, and some articles of
> clothing. These things should be
> divided among the religious and
> soldiers, so that in places where they
> may go on shore or where they may
> choose sites for settlements in the
> lands of the heathen, they may
> distribute them, with signs of love
> and affection for the Christians, and
> may understand that they are
> seeking the good of their souls. This

> is a measure of great importance to the end and obey the Spaniards without opposition or repugnance, and receive with pleasure those who preach to them the Holy Gospel and the mysteries of our Holy Catholic faith; to the end, moreover, that the Indians may be grateful and thankful, and, in recompense and pay for what is given them, may assist with whatever of value that they may have in their land, things to eat as well as other articles, as they did with us.

As will be seen in the journal writings, the Spanish gave away the glass beads to everyone, regardless of who they were. It was just to be another step in the Spanish role of pacification prior to colonization and missionization. The Spanish began their missionization process, of the local inhabitants, in 1769. These initial, seventeenth century, land excursions were the precursor to the more detailed surveys to be undertaken late in the 1700s. They only touched on a very few coastal tribes in their pre-conquest survey. As of the 1760s, Spain was set on establishing its presence in Alta (New) California.

Re-contacting the natives, after nearly 170 years, would suggest that a first-contact relationship would be established, again, from this point. There were three major expeditions during the time when Spain decided to colonize Alta California. The first expedition was led by Gaspar de Portola and the next two were under the command of Juan Bautista de Anza (the Elder). The following sections relate how these various expeditions dealt with the Indians their parties encountered. Between these three expeditions, a history of Spanish missionization is given.

5.2.2 The Gaspar de Portola Expedition to Alta California

Not until 1769 did the Spanish decide to conquer and colonize California. Prior to 1769, the Spanish were active in the continued formation of the government in New Spain (Mexico). It is estimated that there were between 300,000 (Castillo 1978: 99) and 310,000 Indians present at that time (Heizer & Elsasser 1980: 224), although not all California Indians made initial contact. The colonization and missionization of Alta California (Map 5.1) occurred during the reign of Carlos III (1759 to 1788). The Spanish conquest of California, and those areas of the Pacific Coast, were largely designed by Jose de Galvez, who was a royal inspector of New Spain (Mexico) between 1765 and 1770. Jose de Galvez ordered Fray Junipero Serra and soldiers under the command of Captain Gaspar de Portola into the Monterey Bay area upon hearing that Russian settlers were moving into the northern Alta California area (Milner et al. 1994: 65).

The process of incursion was two-fold: by land and by sea. The combined thrust was under the command of Gaspar de Portola, the governor of Baja California. He personally took charge of the larger of the two land expeditions, while Lieutenant Pedro Fages led the invasion by sea. The second land force was under the direction of Captain Fernando Rivera y Moncado. The Franciscan missionaries were under the leadership of Fray Junipero Serra and included two of his former students, Fray Francisco Palou and Fray Juan Crespi. Fray Crespi had been directed by Serra to record the events of the first overland expedition commanded by Rivera y Moncado. Serra and Gaspar de Portola followed behind with the second expeditionary force (O'Neil 1992: 9).

In early July of 1769, de Portola established a small settlement at Presidio Hill in what is now San Diego. Serra elected to remain behind while de Portola continued on with most of his soldiers. Today, Fray (or Father) Serra is regarded as a saint by the Catholic church and California's

Patron Saint. The California Indian holds him to be nothing more than a white-slaver who held the Indian in bondage, rather than converting him to Christianity (Milner et al. 1994: 20).

In the party with Gaspar de Portola was an engineer and map maker by the name of Miguel Costanso. Costanso, together with Lieutenant Fages and Fray Crespi, constructed detail accounts of their travels. The Indians they encountered were of Ipai and Luiseno descent (O'Neil 1992: 9). Costanso reported on the "Village of the Springs of Rinconada de San Diego" (Bolton 1926: 110), which was northwest of San Diego Harbor, that his group encountered some Indians on July 14th (O'Neil 1992: 9). Costanso's journal (1970: 85) relates:

> At last it was contrived to attract them by sending towards them one soldier, who, depositing his arms on the earth, and using gestures and signs of peace, they consented to let him near. He distributed some gifts to them while the others were coming up, who finished assuring these Gentiles with some more considerable presents of ribbons, glass beads, and baubles.

On the evening of July 14th, the de Portola party camped in Rose Canyon (O'Neil 1992: 10). According to Fray Palou (after Bolton 1926: 110), the encampment was visited by Indians bringing gifts. He recorded:

> ...they brought some very large sardines, and one of them made a long speech, after which the governor and the captain accepted the sardines, reciprocating with beads and some clothing, with which they left in great good humor.

The next day, the group came to the Indian settlement, which Richard Carrico (1977: 34) identifies as the ethno-

graphically recorded Ipai village of Ystagua, in the Sorrento Valley. According to Palou (after Bolton 1926: 111), the party distributed "some beads among the heathen of this village." Later that same day, the party identified a large village to the north in the San Dieguito Valley. Costanso (1911: 167) stated in his journal "...upon being presented strings of beads..." the Indians were "...quieted down and became so familiar with us that they occasioned annoyance." Evidently, Fages (1927: 7-8) described the same situation as:

> ...some Indians of a village on the coast appeared, and, though showed great hesitancy to approach our men, they soon dismissed their fears and remained paying attentions to our men to the point of importunity and annoyance. They are inordinately gratified by our attentions and by the presents we made them, such as strings of glass beads and other trinkets which they greatly admired...

Another village was located, this time at San Elijo Lagoon (O'Neil 1992: 12), on Sunday July 16th. Palou (after Bolton 1926: 113) stated, "The commander gave some beads to the chiefs." Later that same day, the expedition encountered a group of fifteen Indians, including eight men, three women, and four children, near Batiquitos Lagoon (Bolton 1926: 114).

On Monday, July 17th, Gaspar de Portola's band camped near Buena Vista Lagoon, after travelling by Agua Hedionda Lagoon earlier in the day. While at Buena Vista, another group of Indians came (O'Neil 1992: 12). Costanso's record (1911: 169) indicates:

> ...there must have been as many as forty men, well built and good looking. The leader or chief soon afterwards began his harangue with loud cries and grimaces, but without

> giving him time to finish, we made
> presents to him and his people of
> some glass beads and sent him away.

The San Luis Rey River Valley was the next stopping point for the group. On July 18th, presents were dispersed to Luiseno Indians from what appeared to be two separate villages (O'Neil 1992: 13). Carrico (1977: 36) identified these villages as being Keish and Ikalmal. Palou (after Bolton 1926: 116-117) gave this description of the event:

> Soon after our arrival the heathen
> came to visit us. There were more
> than forty Indians, naked and
> painted from head to foot in several
> colors, which is their usual custom
> when they go visiting or to war. They
> all came armed with bows and
> arrows, and their chief made the
> accustomed harangue. When it was
> concluded they threw their arms on
> the ground and sat down near us.
> The governor took out some beads,
> and, giving half of them to me,
> requested that we two should
> distribute them among the Indians.
> They gave the governor a present of
> a few fish nets made of thread that
> they make out of some fiber which,
> when it is spun, looks like raw hemp.
> Behind the men followed the women
> and children, who numbered more
> than fifty, but they did not dare to
> come near. We made signs to them
> not to be afraid, and after one of the
> heathen spoke to them they came at
> once, and we gave them also presents
> of beads.

Costanso (1911: 173) reports that on July 20th, when the group stopped at the Santa Margarita River Valley, "...we gave the women some glass beads and sent them away." A similar incident occurred the following day, when the group

travelled along Las Pulgas Creek (O'Neil 1992: 14). Palou relates (after Bolton 1926: 121):

> Very near there we found a small village from which three men immediately came to visit us, with eleven women and children. We entertained them, and the captain gave them some beads.

Once again, on July 22nd, the Spaniards camped at another site. This time it was at Christianitos Canyon, where they were met by Indians again. According to Palou (after Bolton 1926: 122):

> ...about fourteen heathen, and as many women, with boys and girls came and showed themselves to be very friendly; we entertained them and made them gifts.

Palou, who had up to now made an entry for each stop that the expedition had made, chose not to describe any further encounters on Sunday, July 23rd, whilst the group was at the San Juan River Valley (Bolton 1926: 123-124 & O'Neil 1992: 14).

In order to unde rstand what the Indians were experiencing with the Spanish, it is necessary to explain the ramifications of the Spanish mission process.

5.2.3 Spanish Missionization

The Franciscan Order of missionaries was given the authority to convert the Indians of Alta California in 1769. This was just two years after the Jesuit Order had been ejected from Baja California for speaking out against the treatment given to the natives of New Spain (Mexico) under Spanish military rule (Heizer 1978: 6).

Spain's colonization process, in respect to Alta California, was a different approach than the history of its military approaches in the New World. The "conquer-by-

the-sword" approach that its military had used in South and Central America and indeed, in Mexico (New Spain) was not the approach taken in Alta California. Instead of the military going in first, with the missions being established after the native populations were somewhat subdued, was accomplished in reverse. The military did not go into this new area and force the Indians to capitulate to the Spanish. Instead of flexing their military might, the Spanish sent only a small armed party with a few missionaries to speak with the Indians. By using this approach, it was hoped that the Indians would accept the Spanish and give Spain what they wanted most - treasures such as the gold, silver and gems that their native counterparts in Central and South America had done.

Notwithstanding this new approach to colonization and missionization, Spain's Indian polices still had a mixture of economic, military, political, and religious motives (Castillo 1978: 100). While the military was still putting down the occasional Indian uprisings, it was the strict Catholic morality codes which were provoking the native Indians to insurrection. The "gentle yoke of Catholicism" (Castillo 1978: 101), ascribed to by the missionaries meant whipping with a barbed lash; solitary confinement; mutilation; stocks and hobbles; branding; and even death for even the smallest of offenses, such as missing prayer time; staying out (of the mission grounds) all night; or fleeing back to the Indian's village. In 1799, Padre Antonio de la Concepcion Horra of Mission San Miguel, charged that "the treatment shown to the Indians is the most cruel I have ever read in history" (Bancroft 1890: 593). Because Horra denounced the cruelties of the mission system - and in reality the Spanish Manifesto in Alta California - he was isolated, lest his opinions spread to the other missionaries; declared insane by the Viceroy of Mexico; then taken under armed guard and escorted out of Alta California. The ultimate purpose of missionization in Alta California was Indian control (Castillo 1978: 102).

Not all Indians within southern California were made docile by the Spanish. The Ipai and Tipai (both names meaning "people") Indians of the Mission San Diego area resisted missionization. These groups mounted an attack against the Mission and succeeded in killing the priest, Padre Luis Jayme and two soldiers. The native groups involved in the melee, in addition to the Ipai and Tipai, were their close cousins, the Diegueno and Kamia. These Mission Indians, or Diegueno as they are known by in southern California, were made up of tribal units from Ipai villages in the north, northwest, and coastal areas of the San Diego area, plus parts of Western Diegueno and Mountain Diegueno. The Tipai contingent came from villages in the southeast, south, east, and southern parts of the Western and Mountain Diegueno, and included the Kamia and Bajeno, or Mexican, tribes. Even though the Indian leaders who were responsible for the attack were eventually caught and executed, the Spanish military summarily executed an additional 800 men, women, and children in an attempt to curb future uprisings by the native populations (Luomala 1978: 592, 594-595; Milner et al. 1994: 20).

In the early 1790s, Jose Martinez traveled through Baja and Alta California recording the plants, animals, and minerals as part of a royal botanical expedition (O'Neil 1992: 17). While in northern Baja California, he met up with a band of possible Tipai Indians. He noted, according to Simpson (1961: 37), that these Indians placed a high value on glass beads:

> Parents willingly give up their children to the missions and have them converted; this they do without reluctance for some slight gift, such as food, glass beads, and thread. With gifts such as these I obtained seven girls in different gentile rancherias and left them in the adjacent missions.

Martinez traveled north and in the vicinity of the San Gabriel Mission encountered other Indians. He was given minerals and shells from Catalina Island, off the coast of Alta California. In response to this, Martinez reciprocated [per his journal], and according to Simpson (1961: 61):

> I thanked him and sent him [the Indian] by his messengers several varas of striped cloth, some strings of beads, and several cheeses and pieces of the tobacco in paste which they esteem so highly. The soldiers of my escort informed me that these goods of ours are what they most appreciate. Thereupon the Indians departed very contentedly, after a hearty meal. I was assured [later] on the coast that the chief of the island had made many fine expressions of thanks and affection for our Great Chief. The news traveled very quickly among the rancherias all along the coast, and I was everywhere well received.

The Indian Rebellion of 1824 destroyed Mission Santa Ynez. During this conflict, the Indians took over the Mission La Purisima Concepcion, but were defeated in their bid to take over Mission Santa Barbara (Milner et al. 1994: 20).

The Roman Catholic missions were constructed between 1769 and 1832 (Map 5.2), which is important to put the process of first contact into perspective. The missionaries may have been the first Europeans to contact the Indians by going directly to their encampments. The small company of Spanish soldiers would have only escorted the priests and their provisions to a site, thereafter moving to another site along their advancement of the California Coastline and while establishing the El Camino Real, or "Royal Highway."

Following the initial re-investigation of the Alta California Indians, and the establishment of the early

missions, Spain sent Juan Bautista de Anza into Alta California, on two expeditions, to establish more missions and a better link with New Spain. The following section deals with his travels.

5.2.4 The Juan Bautista de Anza Expeditions

There were two expeditions to Alta California during the 1770s, from the area later to be called Arizona. The military officer in charge was Juan Bautista de Anza (the Elder). He was ordered to "establish a secure land link with New Spain (Mexico) to facilitate colonization" (O'Neil 1992: 15). However, this secured link was only part of the Spanish Manifesto. The other part was concerned with seeking out and saving what the Spanish priests termed as "lost souls" in the New World (Trimble 1989: 54). On January 8, 1774, Bautista de Anza's first force left Tubac and passed probably through Tipai and possibly Ipai territories, in eastern San Diego County. On Monday, March 14th, they met Indians at the headlands of Coyote Canyon, in Borrego Valley (O'Neil 1992: 15). Bautista de Anza (1966a: 87), reporting in his diary, states:

> By means of the efforts which I have customarily made to communicate with the heathen whom I have encountered and to relieve them of the fear which they have of us, I was able to attract some of those who lived in this place but had abandoned it. I gave them the customary presents of glass beads and tobacco...

By March 22, 1774, Bautista de Anza's party had reached Mission San Gabriel and turned northward towards Monterey. In late May, Bautista de Anza returned to Tubac (O'Neil 1992: 16). Journals kept by two Franciscan missionaries, Fray Francisco Garces and Fray Juan Diaz, add to Bautista de Anza's descriptions that glass beads and tobacco were made as gifts to the heathen encountered (Bowman & Heizer 1967: 37).

Bautista de Anza's first trip to Alta California had been so successful that he was commanded to escort colonists to Monterey and to establish Spanish rule. In a series of written communications with the Viceroy of New Spain, Antonio Maria Bucareli (O'Neil 1992: 16), Bautista de Anza (1966b: 213) requests to have specific colors of glass beads supplied prior to the trip:

> The magnanimity and piety of your Excellency has wished to benefit the heathen tribes wherever I may go, as is shown by the orders which you have sent to the governor of the provinces of Sonora, who in turn has transmitted them to the presidios, to the effect that they shall be given presents whenever they may come to them. But since this rarely happens, and only in the case of five or six villages of Captain Palma, I am making this known to your Excellency, in order that you may design to furnish me a small supply of tobacco, and of blue, red, green, and yellow glass beads, so that in your name I may give presents to all of them, for in this way I think that we shall best win their affection and attach them to ourselves for any purpose we may have in view.

Bucareli was later supplied with a list of what was projected as gifts, as outlined in a detailed memorandum and follow-up letter, dated December 5, 1774, and written by Jose de Echeveste and Bautista de Anza (1966c: 225-232).

Juan Bautista de Anza's second journey to Alta California followed the secured route that had been established and mapped on the first expedition. The military contingent consisted of Bautista de Anza; one lieutenant; one sergeant; and thirty-eight soldiers, together with their families. The colonists included two priests,

thirty-one cowboys and servants, and 136 settlers. In addition, there were 165 pack animals, 340 saddle horses, and 302 beef cattle for food. The group left Tubac on October 23, 1775 and passed through San Gabriel Mission on January 4, 1776. Bautista de Anza and his militia returned to Tubac early in June 1776 (Bowman & Heizer 1967: 39-41).

Fray Francisco Garces, along with another missionary left Bautista de Anza's party at the confluence of the Colorado and Gila Rivers so as to minister to the Yuma Indians. In Bautista de Anza's letter to Bucareli for December 8, 1775, he lists what provisions he has left for the Fray's use (after Bautista de Anza 1966d: 313):

> Memorandum of the goods which the undersigned lieutenant-colonel has delivered for the subsistence and maintenance of the Reverend Father Fray Francisco Garces, and the other father who is with him. It is as follows: 2 boxes of glass beads; 1 tierce of tobacco, 1 pack load of ground flour containing thirteen almuds net, with 4 more of the same ground very fine; 1 pack load of beans containing twenty-four almuds; 1 pack load of pinole containing thirty-two almuds; 3 tierces of jerked beef, containing eighteen almuds net; 1 large box of biscuits containing four almuds; 1 box of chocolates for presents, and 1 box of sugar; 5 beeves on foot; 6 medium-sized cheeses; 12 wax candles; 12 cakes of soap; 3 hams; 1 bottle of wine; 1 bottle of brandy; 1 arroba of lard; 1 ax and 1 earthenware griddle [comal]; 13 riding animals for the service of those fathers and the servants who are with them...

Bautista de Anza and Fray Pedro Font recorded in their diaries detailed logs of this second expedition. One such entry was when the party was travelling through Coyote Canyon, in eastern San Diego County, on December 24, 1775. Font (1966: 148) reported:

> ...near the spring by the road we saw a village of Indians perched in the crags, from which they watched us pass. The commander called them and showed them glass beads but only one woman had the courage to come near. The commander gave her a string of beads.

With this entry, most of the coastal area between San Diego and just south of Buena Yerba (San Francisco) had been explored. The interior valleys and eastern mountain areas were largely unexplored. The Indians residing there may have known about the Spanish, but were somewhat fortunate not to have come under direct control of them. Additionally, these natives may have known about the foreigners during the Mexican Period (1824-1848), although their excavated, archaeological sites do not suggest that occurred. It would have been with the American Period (after 1848), that most of the remaining Indians of California would be contacted, first-hand (Table 5.1). Unfortunately, most of these contacts were met by violence, because the Americans, at this point, were searching for gold ore and the Indian was seen as being in the way. Those Indians who did not willingly leave their tribal lands were either evicted, at the point of a rifle, or killed outright.

Well after the Spanish had settled in Alta California, the area north of San Francisco was briefly held by Russian fishermen. They limited their scope of occupation to this one area. The next section deals with this Russian venture and the Indians they encountered.

5.3 The Russians at Fort Ross, California

It is unclear whether the Russians should actually be included in first-contact Indian situations in California. They organized a farming village with the local (Coastal) Pomo, but these Indians probably had contact with either Spanish missionaries or seafarers from Spain, England or from the East Coast of America prior to the Russian venture in 1811. In any event, the Russian venture did promote a cultural exchange with the Pomo Indians and, for that reason, they are included in this section.

The Russian-American Fur Company was started by Czar Paul I, in 1799 (Karamanski 1983: 24). Although the company operated mainly in the area of Alaska, it did have one outpost in northern California. The company operated a coastal fort, called Fort Ross, about ninety miles north of present-day San Francisco, although this was not the first site selected. The first site was at the, then abandoned, Spanish settlement of Bodega Bay. The Russians operated this first site between 1809 and 1811. The reason why the Russian's moved from this site is unclear, but perhaps it was because the bay is relatively shallow and is filled with large rocks, in addition to strong winds and strong currents outside the bay. These aspectss would have been problems for the ships coming into the fort. The second site, at Fort Ross, proved to be a better base from which to collect and ship furs to Russia. The Fort Ross site began in 1812 and was abandoned in 1841 (Schuyler 1978: 75).

The Russians, while at Fort Ross, operated a tri-culture community by employing Aleut Indians, from Alaska, to hunt the sea mammals and by using the local Pomo Indians as laborers and farmers. When the otters were depleted, the agricultural-based subsistence structure collapsed as well. Together with these two ventures, seemingly ending at once, came a political upheaval in California which provoked the Russians to withdraw to Alaska (Schuyler 1978: 75). The political problem occurred when the Mexican rulers of California (1824-1848) decided to halt the otter killings by enacting laws to prevent the year-around kills

and to allow only mature animals to be taken (Ellsberg 1974: 18-19).

Fort Ross had been the only non-Hispanic settlement in early California when it was sold to John Sutter. He was the operator of Sutter's Fort, in Sacramento. The Pomo Indians appeared to have benefitted from the Russian exposure to their culture. The Indians took pieces of broken glass and porcelain, turning them into cultural artifacts, such as earrings, beads and other items of personal adornment. Some of these articles are on display at the Pomo Indian museum in Lakeport, California.

From the records of probable first contact in California, chronologically, Lewis and Clark's Expedition to the Pacific Ocean, from the east, should follow. Their journal entries spoke of the fur-rich areas near the Pacific coast, so that fur companies decided to become the first Europeans to settle in the areas of Washington and Oregon.

5.4 The Lewis and Clark Expedition of 1804 to 1806

5.4.1 Thomas Jefferson and Manifest Destiny

In the age of Thomas Jefferson, the American concept of Manifest Destiny, was at its threshold. Thomas Jefferson decided to explore the length and breadth of the Missouri River Valley in 1801. His grand scale would lead those that he chose to the Pacific Ocean. On January 18, 1803, Jefferson asked Congress for $2,500 to cover the cost of the exploratory journey from the headwaters of the Missouri River to the Pacific Ocean. In so doing, Jefferson made the request "for the purpose of extending the external commerce of the United States" (DeVoto 1953: xvii). He believed that by acquiring a transcontinental route, essentially for inter-oceanic trade, the United States, commercially, would be superior to any thus far established. It would also give the United States' traders and merchants a chance to monopolize the biggest business - that of furs -

in Canada (DeVoto 1953: xv, xvii-xix). President Jefferson stated in his address to Congress:

> ...in leading them [Indians]...to agriculture, to manufacturers, and civilization...in preparing them ultimately to participate in the benefits of our Government, I trust and believe we are acting for their greatest good (after Prucha 1984: 139).

Jefferson was also familiar with the explorations of Alexander MacKenzie. MacKenzie, an employee of the Hudson's Bay Company, had explored the Pacific Wilderness in 1793. His final analysis of the Pacific Northwest reads, according to DeVoto (1953: xvi, xxxi-xxxii):

> By opening this intercourse between the Atlantic and Pacific Oceans, and forming regular establishments through the interior and at both extremes, as well as along the coasts and islands, the entire command of the fur trade of North America might be obtained from forty-eight degrees north to the pole, except that portion of it which the Russians have in the Pacific. To this may be added the fishing in both seas and the markets of the four quarters of the globe. Such would be the field for commercial enterprise and incalculable would be the produce of it, when supported by the operations of that credit and capital which Great Britain so preeminently possesses. Then would this country begin to be renumerated for the expenses it has sustained in discovering and surveying the coast of the Pacific Ocean, which is at present left to American adventurers...Such adventurers, and many of them, as I

> have been informed, have been very successful, would instantly disappear before a well-regulated trade...Many political reasons, which it is not necessary here to enumerate, must present themselves to the mind of every man acquainted with the enlarged system and capacities of British commerce in support of the Measure which I have very briefly suggested, as promising the most important advantages of the trade of the united kingdoms.

Jefferson chose an infantry captain by the name of Meriwether Lewis to command the expedition. At the time, Lewis was serving as the President's secretary. Captain Lewis had participated in the Whisky Rebellion of 1803, while in the militia, prior to attachment with the regular army (DeVoto 1953: xxvi, xliii). Lewis became the exploration's businessman, diplomat, and scientific specialist (Schwantes 1989: 50). He undertook specialized training, in Philadelphia, for botany, zoology, as well as celestial navigation (DeVoto 1953: xliii).

The President's choice for second-in-command was William Clark. Clark, who was Lewis' friend and former rifle company commander, was to share the expeditionary command. Although Clark, who had resigned his rank of captain in 1796, was re-commissioned as a second lieutenant by the War Department, Lewis referred to him as "Captain" Clark (DeVoto 1953: xliii).

William Clark was the son of George Rogers Clark, who had "saved the trans-Alleghany West for the United States during the Revolutionary War" (DeVoto 1953: xliii). He was the expedition's engineer and geographer, as well as a master of frontier crafts and stories (Schwantes 1989: 50). He also proved to be more diplomatic than Lewis with the Indians (Schwantes 1989: 50; DeVoto 1953: xliii).

In addition to the force's commanders, there were twenty-seven soldiers, all young and unmarried, a hunter of

mixed ancestry by the name of George Drouillard (spelled "Drewyer" by DeVoto 1953: 1, 6), and Clark's slave, York (Schwantes 1989: 50). DeVoto (1953: 1) states that the party consisted of nine men from Kentucky and fourteen soldiers, in addition to two French boatmen, the hunter, and the black slave.

The expeditionary force took items for exchange with the Indians that they hoped to encounter, to the value of $676, (Table 5.2) (Ronda 1984: 8-9).

5.4.2 The Journal Entries of Lewis and Clark

The expedition's journal (Photograph 5.1), written by William Clark, starts on Monday, May 14, 1804. As this thesis is only concerned with what transpired with the group during their journey through the Pacific Northwest, the focus and direction of the group picks up with the entry for Wednesday, October 16, 1805. This was the day that the group became the first White men to view the eastern side of the Cascade Mountains (DeVoto 1953: 3, 250). The records indicate that beads were distributed among the Pacific Northwest Indians.

On Friday, October 18, 1805, the force was ready to leave the Sokulk Indian village. The Sokulk were probably the Yakima Indians, who are closely related to the Nez Perce Indians (DeVoto 1953: 251-255). Clark's entry states (after DeVoto 1953: 254):

> We purchased forty dogs for which we gave articles of little value, such as beads, bells and thimbles, of which they appeared verry fond.
>
> (The dogs were probably used for food.)

On Friday, November 1, 1805, Clark relates that the group descended into the rapids of the Columbia River. From the Indians accompanying the explorers, he learns that the fur merchants are also trading for "Pounded fish,

Beargrass, and roots" (DeVoto 1953: 271). Clark further states (after DeVoto 1953: 271-272):

> ...however they git in return for those articles Blue and white beeds, copper Kettles, brass arm bands, some scarlet and blue robes and a few articles of old clothes, they prefer beeds to any thing, and will part with the last mouthfull or articles of clothing they have for a fiew if those beeds, those beeds the[y] trafick with Indians. Still higher up this river for roabs, Skins, cha-pel-el [biscuitroot] bread, beargrass &c...

Cape Disappointment was at the entrance of what Clark believed to be either the Great South Sea or the Pacific Ocean (DeVoto 1953: 287-289). After the rainy night of Tuesday, November 20, 1805, Clark records an encounter with the Chinnook [Chinook] (after DeVoto 1953: 289):

> One of the Indians had on a roab made of two Sea Otter Skins...the fur of them were more butifull than any fur I had ever Seen...both Captain Lewis and my self endeavored to purchase the roab with different articles...at length we precured it for a belt of blue beeds...

As the group was spending the night at Fort Clatsop, on the northwest coast of what became the state of Oregon, several Indians approached. Clark states on Saturday, November 23, 1805 (after DeVoto 1953: 292-293):

> In the evening Seven Indians of the Clot so Nation came over in a canoe, they brought with them two Sea otter Skins for which they asked blue beads &c. and Such high prices that we were unable to purchase them without reducing our Small stock of

> Merchendize, on which we depended for Subcistance on our return up this river. Mearly to try the Indian who had one of those Skins, I offered him my Watch, handkerchief, a bunch of red beads and a dollar of the American coin, all of which he refused and demanded "ti-a-co-mo-shack" which is chief beads and the most common blue beads, but fiew of which we have at this time.

Continuing to camp at Fort Clatsop (Photograph 5.2), so-named for a tribe of Chinooks, Chief Comowooll and the Clatsops visited on Saturday, January 4, 1806. The chief brought with him a poor-quality otter skin (DeVoto 1953: 297-299). Clark relates (after DeVoto 1953: 299):

> ...I once offered...my watch, two knives and a considerable quantity of beads... which I did not much want, he immediately conceived it of great value, and refused to barter except I would double the quantity of beads; the next day with a great deal of importunity on his part I received the skin in exchange for a few strans of the same beads he had refused the day before.

On Monday, January 6, 1806, Clark related that "the Chinnook womin are Lude" (DeVoto 1953: 301), classifying all women of the Clatsop, Chinook, and Killamuck tribes as being whores. He further states that the men "will even prostitute their wives and daughters for a fishing-hook or a stran of beads" (DeVoto 1953: 301).

One of the other items which Lewis and Clark used to gain the trust and friendship of the Indian tribes that they encountered was called the "Peace," or "Friendship," medal. These medals (Photographs 5.3 & 5.4) came in two sizes: a 1-1/2 inch copper medal, which was given to perhaps an underchief, while the larger three inch medal, in either

copper or silver, would be given to a chief (personal communication with the National Park Service employees at Fort Clatsop, Oregon, 1996).

Lewis also wrote in the journal, although not as often as Clark. While still in the vicinity of Fort Clatsop, Lewis had the chance to speculate that the British may be intending to erect a post for the purpose of making a claim to the Columbia region. On Thursday, January 9, 1806, Lewis reports (after DeVoto 1953: 307-308):

> This traffic on the part of the whites consists in vending, guns, (principally old British or American musquits)... beads and tobacco...The natives are extremely fond of the most common cheap blue and white beads, of moderate size, or such that from 50. to 70. will weigh one penny-weight. The blue is usually preferred to the white; these beads constitute the principal circulating medium with all the Indian tribes on this river; for these beads they will dispose [of] any article they possess. The beads are strung on strans of a fathom in length and in that manner sold by the bredth or yard.

On the way back towards the Missouri River, Lewis indicated that he uses the term wampum to mean glass. On April 1, 1806, Lewis bought a canoe stating (after DeVoto 1953: 338):

> I purchased a canoe from an Indian to day for which I gave him six fathoms of wampum beads; he seemed satisfyed with his bargain and departed in another canoe but shortly after returned and canceled the bargain, took his canoe and returned the beads. This is frequently the case in their method of trading and is deemed fair by them.

This last entry signified that the Indian probably felt cheated by the amount he received. Lewis does not elaborate on this occurrence, but leads the reader to conclude that this was not the first time that this type of behavior had happened.

Clark related a conversation he had with the chief of the Skillute village, on Wednesday, April 16, 1806, concerning other White traders to the area, by stating (after DeVoto 1953: 352-353):

> ...the Indians on the Columbia and Lewis's river quite to the Chopunnish Nation visit them for the purpose of tradeing horses, buffalow robes for beeds...The Skillutes precure the most of their cloth, knivs, axes & beeds from the Indians from the North of them who trade with white people...

On Sunday, April 20, 1806, Clark attempted to buy horses, as he had tried to do with each tribe or village encountered since leaving the river and coast areas. Even though his offer was more than that which he had offered in the past, he could not purchase any horses. His journal reads (after DeVoto 1953: 359):

> My offer was a blue robe, a calleco Shirt, a Silk handkerchief, five parcels of paint, a knife, a Wampam moon, eight yards of ribon, several pieces of Brass, a Mockerson awl and six braces of yellow beeds...

On Saturday, April 26, 1806, travel is exclusively by land and the need for pack and saddle horses increased. Also, the need to sell, or destroy, the canoes prompted Clark to write, "We sold our canoes for a fiew strands of beeds" (DeVoto 1953: 363-364). This shows that the trade in beads went both ways - at least with the Lewis and Clark

Expedition. This is the only reference that has indicated this type of behavior. Perhaps, it was all the Indians had to trade, but the record is unclear as to whether the beads were glass or shell.

While camped on the Upper Kooskooske River, in what is today northern Washington, Clark wrote on Tuesday, May 13, 1806, of the Chopunnish Indians, (after DeVoto 1953: 384):

> They do not appear to be so much devoted to baubles as most of the nations we have met with... blue beeds however may form an exception to this remark; This article among all the nations of this country may be justly compared to gold and silver among civilized nations.

During one of the last days when the group was still in the vicinity of the territory which would later be Washington state, and prior to crossing over into the area later to be named Idaho, the party had sent out scouts to track down an Indian who had stolen two tomahawks. On Monday, June 2, 1806, the hunter named Drewyer found one of the tomahawks, but encountered difficulty in securing its return. Clark's entry stated (after DeVoto 1953: 397-398):

> The man who had this tomahawk had purchased it from the man who had stolen it, and was himself at the moment of their arrival just expireing. His relations were unwilling to give up the tomahawk as they intended to bury it with the deceased owner, but were at length [induced] to do so for the consideration of a hankerchief, two strands of beeds, which Drewyer gave them...

During this return trip, the team stopped at a campsite just east of present-day Billings, Montana. At this site was

an unique sandstone rock formation containing animal figures, drawn there by the indigenous peoples who had lived in the area. Additionally, the rock had acquired the names of travellers, explorers, traders, and trappers who had used the site for hunting and rendezvous. It was here that on Friday, 25 July 1806, Clark carved his name into the rock and named the site Pompy's Tower. Clark chose the name from the nickname of his interpreter's son, Bapiste Charbonneau. Pompy, in the Shoshone Indian language, means "little chief." This inscription showed proof that Clark travelled through this area.

Although the Lewis and Clark Trail may possibly be traced through the explorer's journal, Clark's inscription remains the only surviving physical remains of the 1804-1806 expedition. When the journal was first published in 1814, the landmark was re-named Pompeys Pillar Appleman 1975: 228).

As a result of the first American exploration into the present-day Pacific northwest states of Oregon and Washington, the infant United States was determined to have access to the area. Unfortunately, as noted in the following section, this did not happen immediately, as Jefferson had envisioned it would.

5.4.3 Aftermath of the Lewis and Clark Journey

Jefferson's idea that the Lewis and Clark Expedition would bring commerce to the United States and increase both science and agriculture was not fully realized. Manual Lisa, however, who had been one of the expedition's suppliers, profited by the journey in that he was able to establish trade with the tribes along the Upper Missouri River, in Montana (Milner et al. 1994: 159).

What the Lewis and Clark trip did accomplish, through its twenty-eight months and four-thousand miles, was to set a precedent for the United States Government to financially support explorations of The Wilderness. It was thought that the express intention of such enterprise would benefit the

United States in commerce, diplomacy, and political advantage (Milner et al. 1994: 159).

Meriwether Lewis, wrote in 1814 on the trade relationship with the Indians on the Columbia River area, stating (after Woodward 1965: 15-16):

> ...the object of foreign trade which is most desired are the common cheap, blue or white beads, of about 50 or 70 to the pennyweight, which are strung on strands a fathom in length, or sold by the length of both arms: of these blue beads, which are called tia commashuck, or "chief beads," hold the first rank in their ideas of relative value. The most inferior kind are esteemed beyond the finest wampum, and are temptations which can always seduce them to part with their most valuable effects.

The term tia commashuck was of the Chinook language and was usually spelled phonetically as tyee, tai, tye tyeyea, or tyhee. The word kamosuk (commashuck) meant "bead." The tia may mean either "chief" or "superior." The phrase did not mean an exclusive bead for the tribal ruler, but denoted that "the beads [were] superior to all others" (Shaw 1909: 28), or that they were "the tyee or chief among the beads" (Shaw 1909: 43). The Lewis and Clark journal entries, for 1805, spoke of the "power" of the blue bead and that the Indians would, in some cases, refuse all other colors.

As a direct result of the Lewis and Clark journey, it allowed John Jacob Astor, a German immigrant and a citizen of America, to become the first American to build a permanent settlement in the Pacific Northwest.

Almost as quickly as the Lewis and Clark journals had been published, the reigning Canadian fur companies - the Northwest Fur Company and the Hudson's Bay Company - took notice of the fur-riches which Lewis and Clark wrote about. These companies, as well as John J. Astor - one of the chief Hudson's Bay Company stockholders - quickly set up

operations in, what was then known as, the Oregon Country. Apparently neither these companies nor Lewis and Clark knew that the Spanish had been in the coastal areas during the latter part of the eighteenth century. The following section traces the history of these fur companies in Oregon and Washington.

5.5 The Fur Companies in Oregon and Washington

5.5.1 Introduction

There were three major fur companies, one of which was short-lived, which operated in the areas of northern California, Oregon and Washington. These companies were the Hudson's Bay Company (California, Oregon and Washington); the Northwest Company; and the American-Pacific Fur Company (Oregon and Washington borderlands). Only the Hudson's Bay Company made a sizeable profit in the Pacific Northwest. There were the occasional privateer outfits, but most of these men moved into the Rocky Mountain areas of Colorado, Idaho and Montana, where they trapped fur-bearing animals and hunted deer. The Spanish ran a short-lived, coastal operation between 1774 and 1786 also. This ended almost twenty years before Lewis and Clark's journey and about forty years before the Hudson's Bay Company's post, Fort Vancouver, was established.

The otter pelt was prized because the coat was soft, thick and usually had a silky, glossy shimmer to it. The fur was used to make hats, gloves, cloaks, scarves and boot liners. Even the paws and tails were used, often trimmed with pearls. The Spanish, in 1774, were the first to enlist the local Indians to hunt for the otter off the coast of California. The Spanish exchanged the pelts, for which the Indians had killed, for abalone shells. Between 1775 and 1779, the Spanish were exchanging abalone shells, knives, clothes, beads and pieces of iron for the pelts. In 1784, Vicente Vasadre y Vega found that the Chinese were willing to exchange quicksilver for pelts. The Spanish miners in

New Spain (Mexico) needed the quicksilver to extract the silver ore from the parent-rock. Vasadre y Vega was placed in-charge of the operation in 1786, shipping over 1,000 skins to China in the first season. The second season was to be Vasadre y Vega's last, as he fell from grace within the Spanish Court, although he sent more than 1,700 pelts that year (Ellsberg 1974: 15-17).

5.5.2 American-Pacific Fur Company

John Jacob Astor, a German immigrant and a citizen of America, was the first American to build a permanent settlement in the Pacific Northwest, at the entrance of the Columbia River where it meets the Pacific Ocean. He had used the Lewis and Clark journal as a blueprint for penetrating the rich fur-bearing coastline, after having built up a successful whaling fleet in his home area of Boston, Massachusetts. Astor's first company, the American Fur Company, was mainly in the American Plains dealing with buffalo hunters and the Rocky Mountain trappers. The company only briefly made excursions into Central Canada and to the Pacific Northwest Coast. John Astor's second commercial venture was the brief Pacific Fur Company enterprise. The American Fur Company was reportedly the most wealthy fur firm in the Plains' region of the United States during the peak period of the early nineteenth century. Fort Astoria (now Astoria, Washington), was founded in 1811 as the terminus for Astor's Pacific Fur Company. This company, a subsidiary of the American Fur Company, of New York, founded in 1808, was created to exploit the animal resources of the Oregon Country and to defy the British claims to the area. The company traders founded the first American structure in future Washington state, by building Fort Okanogan. Then Fort Spokane was built on the northeast side of the territory (Schwantes 1989: 56-59; Karamanski 1983: 28).

"The empire of Astoria," is what John Quincy Adams, the United States Secretary of State, called John J. Astor's Fort Astoria project. The project was seen as an American

foothold into the vastness of the Pacific West Coast (Ronda 1990: xii).

The Pacific Fur Company never realized a profit in its attempt to dominate the Pacific West Coast's fur market. Astor lost the company stores, including Fort Astoria, during the War of 1812, to the captain of a British warship. In December 1813, the British renamed Fort Astoria as Fort George (Schwantes 1989: 58).

The War of 1812, between America and Great Britain, resulted in the Treaty of Ghent in 1814. The terms of the treaty restored all the territory that the United States had lost, including Fort Astoria. This left the United States and England to settle their disputes and the claims to the Oregon Country. The Pacific Northwest remained "free and open" (Schwantes 1989: 59), to residents of both countries until the Oregon Treaty of 1846.

Astor regained his fort with the signing of the Treaty of Ghent. It is unclear whether Astor ever sent any furs anywhere, prior to being shut down by the British fleet. Equally unclear, is whether the Pacific Fur Company ever made first-contact with any local Indian tribes.

5.5.3 The Northwest Fur Company

The Northwest Fur Company, based in Montreal, Ottawa, Canada, competed with the Hudson's Bay Company for furs in Central and Western Canada. This company briefly held Astor's Fort Astoria during the War of 1812. Even though The Northwest Company was in the Oregon and Washington area for a few short years, it would always be a loosely organized company of independent traders. Although never chartered by the English government, like the Hudson's Bay Company was, it did last for 38 years. In the end, however, the company over-reached itself and became under-capitalized. Its trade routes were longer, causing transportation costs to become higher. This was mainly due to the fact that the Hudson's Bay Company would not let the Northwest Company sail ships in and out of Hudson's Bay. The Northwest Company had to take the

slower route through the Saint Lawrence River to reach the Atlantic Ocean and the British ports (Newman 1995: 210). In the end, the Northwest Company merged with the Hudson's Bay Company and continued to be the mainstay of the fur companies in the Pacific Northwest.

5.5.4 The Hudson's Bay Company

5.5.4.1 Early History

Just over one-hundred years after the Dutch had bought Manhattan Island, on America's East Coast, for a nominal amount of European trinkets, the Dutch explorer, Henry Hudson, discovered the inland passage into Canada from the north, by entering what is today Hudson's Bay (Newman 1995: 211).

The French, who were already living along the Saint Lawrence River to the east, were the first to tap the resources of this newly found area. Three men, Medard Chouart, Sieur des Groeilliers (Newman 1987: 1), and Pierre Esprit Radisson, had been caught illegally trapping north of the Great Lakes during 1659. The French Governor heavily fined the trio for their activities. In response, des Groeilliers appealed to the French king, but failed to have the fine overturned. During 1665, together with Pierre Radisson, des Groeilliers presented the British King Charles II with an idea that the Canadian fur trade could be exploited from the north. Progress on this adventure was slowed due to the plague and the Great Fire of London. It was to be two years later that the king's cousin, Prince Rupert, undertook the project (Hudson's Bay Company 1989: 1).

After Prince Rupert became involved with the initial idea of reaping the riches of this new land, two ships were made ready for the trans-Atlantic crossing. The Eaglet and the Nonsuch left England on 3 June 1668. Josephy (1972: 6) states that both ships, actually ketches, were loaned from the Royal Navy. Hudson's Bay Company records (1976: 4-5) indicate that the Eaglet had been loaned and was commanded by Captain William Stannard. Pierre Radisson

was accompanying Stannard. The Nonsuch was bought in 1668 from Sir William Warren for the sum of £290. It is thought that Sir William possibly bought the ketch from the Royal Navy in 1667. The vessel was approximately twenty years old, having been built by a Mr. Page in 1650. The Eaglet had to return to England after being damaged in a storm. The Nonsuch was under the command of Captain Zachariah Gillam, with des Groseilliers aboard. The ship's company arrived at James Bay on 29 September 1668 and they established Charles Fort. This fort was later re-named Rupert's House, and later Fort Rupert (Hudson's Bay Company 1989: 1-2). This ship's crew was the first to actively exchange items with the Indians in and around Hudson's Bay (Josephy 1972: 6).

Each ship carried a shipment of trading wares. The initial items sent to trade and for survival of the crew, consisted of "tar, compasses, medicines, axes, saws, shot, hammers, blunder-busses, muskets, pistols, powder, paper, quills, and eel nets" (Hudson's Bay Company 1976: 5). Their initial food staples included "salt pork, beef,...raisins, prunes, sugar, spice, lemon juice, beer and brandy" (Hudson's Bay Company 1976: 5). Des Groseilliers had brought a quantity of beads as an exchange medium. These were carried in both strings and woven in belts (Hudson's Bay Company 1976: 5-6).

After this initial voyage to Hudson's Bay, the "Company of Adventurers" (Newman 1987: 1), as the Hudson's Bay Company was originally called, was granted a Royal Charter on May 2, 1670. In making the Charter, Charles II wrote (Newman 1995: 43 & Josephy 1972: 5):

> Wee Doe Grant - unto the said Governor and Company and theire successors the sole Trade and Commerce of all the Leas Streights Bayes Rivers Lakes Creekes and Soundes - that lie within the entrance of - Hudsons Streights - and make create and constitute (them) -

the true and absolute Lordes and
Proprietors of the same Territory.

In granting the Royal Charter, King Charles II appointed Prince Rupert as the first Governor of the Hudson's Bay Company. The Charter gave the Company 1,486,000 square miles, or over thirty-eight percent of present-day Canada (Hudson's Bay Company 1989: 2). Even though this huge area was unexplored and unknown, the Company's backers and principal stockholders surmised that the land was inhabited by native peoples who would be able to provide the newly formed company with an abundance of furs, for a pittance of a price (Josephy 1972: 5). In the early days, the Company confined its activities to the James Bay area. When the Montreal-based Northwest Company proved to be a stiff competitor, the Hudson's Bay Company started to build posts farther west. The land area of the Company would eventually stretch from the Arctic Ocean to San Francisco, California and from the Sandwich Islands (Hawaii) to Labrador, encompassing over eight percent of the world's land mass (Newman 1995: front end-leaf). The Hudson's Bay Company would eventually be responsible for surveying much of the area from the Mississippi River, northwest to the Pacific Ocean, and for establishing a system of trade routes to the Pacific Northwest Coast (Ray 1988: 335).

While the American Government was pursuing a war with the Indians, the Hudson's Bay Company and its rival company, the Northwest Company, were recognizing the Indians as people and forming a relationship which would be directed by mutual cooperation (Newman 1987: xxi).

The Company had not come to conquer the Indians of the north or to move them from their lands. The Company was controlled by businessmen, not landlords, as in the case of other New World settlements, such as the Spanish in Florida, California and South America. As businessmen, they wanted to secure the most advantage, for as little outlay as possible. To that end, they neither coveted, nor wanted to disrupt the natural way of the land, hunting grounds, or fishing areas. In no way did these men want to disrupt the

native people, undermine their beliefs, or destroy their means of existence. Neither had they come to change their ways of life, or change them into being White men. The Hudson's Bay Company did not use threats of death, or pit one tribe against another, in the beginning. Unfortunately, this latter case happened when guns were introduced to the Indians. The use of rifles actually changed the balance of power between the fur companies and the Indians. This change occurred when private trappers (also called "privateers") gave rifles to Indians that they employed to hunt the fur-bearing animals. For the Hudson's Bay Company, it was strictly a commercial enterprise to purchase furs profitably, and peaceably, at prices which would satisfy the Company's stockholders. In 1705, the London Committee wrote to its field agents with this notice, "It is not the intention or the interest of the Company to create contentions with the Indians" (Josephy 1972: 7-8 & Newman 1987: 250). The Company preferred to use "fayre and gentle" treatment of the Indians. So, in keeping with the wishes of the London Committee, as Company men reached out to each tribe, they tried to bring peace to the region and for the sake of business (Josephy 1972: 7-8, 11). At the end of the fur venture, however, the world of the Oregon and Washington Indian was as devastated by this European contact, as was the California Indian by the Spanish mission system (noted in the following sections).

The exchange of furs for goods in the beginning of the 1800s was a non-religious business practiced far from the civilized world. Pro pelle cutem - "risk one's skin for a skin" - was the maxim of the Europeans who worked for the Hudson's Bay Company. It typified the men who braved The Wilderness for the price of a pelt. It meant their survival if the price was right and their death if the Indian felt he was being cheated (Ames 1973a: 28). The Canadian historian, E. E. Rich, interprets the Company's motto as "it wanted the skin, cutem, for the sake of the fleece, pro pelle" (Hudson's Bay Company 1989: 2).

Many times, the Hudson's Bay Company traders were the first White people the Indians had ever seen. In the best interests of the Company, traders were encouraged to keep diaries and journals of their travels. These articles bear witness to both friendship and hostilities from the Indians. Initial contacts, almost without exception, were quite friendly (Josephy 1972: 11, 61).

The Hudson's Bay Company, before and after the merger with the Northwest Fur Company, had used exchange items from warehouses owned by the London Committee stockholders. It was from these vast storehouses that the exchange goods are seen in the archaeological sites near the Hudson's Bay Company posts. The next section describes some of these items.

5.5.4.2 Early Exchange Items

In the early days of trading, the London Committee - actually the Hudson's Bay Company stockholders - decided on what goods would be the basis for exchange with the Indians. Many of the items would come from the stockholder's own merchandise then re-sold to the Company. The members directed the purchasing of Brazilian tobacco, through Portugal, because it was favored by the natives. English merchants supplied high quality cloth and other manufactured goods, including beads imported from various Old World manufacturing centers, such as Amsterdam, Bohemia, and Venice (Josephy 1972: 10). In later years, the American financier John Astor supplied glass beads to the Company from his London warehouses. Red and white beads, used by the Company, were known as "Hudson's Bay Beads" in western Canada, along the Northwest Coast, and into the Yukon (Woodward 1965: 9). During the seventeenth century, glass beads were traded to the Indians via the Hudson's Bay Company. Most of the beads had been produced in either Venice or Bohemia. Venetian polychrome beads were popular because they were decorated with leaves and flowers (Erikson 1969: 46).

Unfortunately, not many of these beads have been found within archaeological contexts.

Bead values differed between tribes and between articles being exchanged. Primarily, the value was placed on a bead judged by its color, size, and decoration. Indians trading with the Hudson's Bay Company agents received six pea-sized green or yellow beads for each beaver skin. The color "blue," however, commanded a somewhat higher exchange rate: three medium, light blue beads had a value of one skin, whereas one large, opaque, light blue bead commanded two skins. Later, during the nineteenth century, the Crow Indians exchanged horses with the Shoshone. The Shoshone had traded with the Spanish for the beads and now were buying horses at a rate of one-hundred beads for one horse (Erikson 1969: 46-48).

The standard rate of exchange in 1733 was that one beaver pelt equalled a brass kettle, two pounds of Brazilian tobacco, or twenty steel fishhooks. After 1780, the most popular items exchanged for were "point" blankets. The blanket, with its distinctive stripes, was introduced so that the Indians could literally give the pelts they wore for an equally warm item (Newman 1995: 60-62). Even today, the Hudson's Bay Company blanket has end-stripes equaling the number of beaver pelts that the blanket would be worth if it was still an exchange commodity. The blankets are related by "points." Each point is worth one beaver pelt, thus a twin-sized blanket is considered a 3.5 point, or worth 3.5 beaver skins, while a large blanket was called an eight-point blanket and was worth eight beaver pelts. At times, even alcohol was used as a exchange commodity. The London Committee tolerated its use by turning a blind-eye, which really made the Company's motto of "fayre and gentle" treatment more of a mockery (Josephy 1972: 10-11).

Newman (1987: 122-123) states that the supplies were, in many ways, not good quality and even dangerous. Tobacco, for example, was supposedly of good quality, but it was not always usable despite having small amounts of molasses added to it. The molasses was used to keep the

tobacco from drying out. Some of the weapons used by the hunters, both Indian and Company men, would explode in their hands.

Guns, which were introduced to obtain greater quantities of furs over the previous method of snares and traps, played a part in the hostilities and Indian tribes were often pitted against one another in fur-rich areas. The tribe called Gros Ventres raided the Hudson's Bay Company's Manchester House, in central Canada, in 1793, taking all the rifles. The raid was caused by the London market devaluating the tribe's wolf skins by half (Newman 1987: 119).

When the Hudson's Bay Company made the move to Oregon Country, it set up its first fort along the banks of the Columbia River. The following section deals briefly with Fort Vancouver.

5.5.4.3 Fort Vancouver

The fort was established in 1824, according to Hussey (1977: 12) as the main headquarters and primary fur depot for the Hudson's Bay Company's Western Department. The more probable date comes from the Hudson's Bay Company (1989: 9), which states that the fort was built in 1825. It eventually serviced thirty-eight other forts, stores, houses, and warehouses throughout the present-day states of Oregon, Idaho, Washington, and in British Columbia, Canada. The post was built along the mighty and powerful Columbia River, about one-hundred miles east of the Pacific Ocean (Hussey 1977: 12-19; Ross 1976b: 29).

In the Indian shop, the natives exchanged furs, salmon, venison, Indian-made blankets, and canoes for necessities and trinkets like wool blankets, guns, rings, ammunition, tobacco and glass beads (Hussey 1977: 68-69).

The equivalences were established by each post and were not necessarily the same between each post or at all times. Perhaps it would be described more correctly as the Europeans exchanged the least for the most. This means that the post would give the least amount in value for the

most furs, and other items, which the Indian had to exchange. Supply orders were sent to the London Committee on a yearly basis (Tables 5.3 & 5.4).

With the approaching United States military wanting to rid Oregon Country of the British, Fort Vancouver officials established the Williamette Falls Colony. It was hoped that those Hudson's Bay Company employees, who wished to settle in the area, would be among the Colony's settlers. This idea did not have the desired outcome, as noted in the next section.

5.5.4.4 The Williamette Falls Colony

The Williamette Falls Colony was initially set up under the auspices of John McLoughlin and Fort Vancouver, but after the Champoeg Meeting of May 2, 1843, the Colony was run by American settlers. The Americans wanted the British out of the region. The settlers decided to end their allegiance with the Hudson's Bay Company, and Fort Vancouver, and support an independent move for statehood with the United States. The newspapers of the day were stating, "The American Eagle is flapping its wings. There must be no arbitration but the cannon's mouth" (Morrison 1979: 128). The Hudson's Bay Company fell victim to "yellow journalism" when it was said to have killed "hundreds of defenseless Indians" (Morrison 1979: 128) and mistreated the settlers. The articles were lies, but was intended to incite the settlers into calling for the United States to intervene in the area. The people rose up and demanded "Fifty-four to Forty or Fight" (Morrison 1979: 128). This signified a demand for all of the territory from the border between California and Oregon Territory to Alaska. The Oregon Territory was established on June 15, 1846 and took in the present-day states of Oregon, Washington, Idaho, and parts of Montana and Wyoming. The Hudson's Bay Company posts in Washington and Oregon, as well as the other areas mentioned under the treaty's provisions, were abandoned and the United States took control of the area. This was the first step to statehood for

the American settlers living in the area covered by the treaty.

In November 1847, the territory was shaken by the Whitman Massacre, which was fueled by a smallpox scare. A family of new settlers to the Whitman Mission came with German measles. A few Indians caught the disease and a war-party was organized. On November 24, 1847 the Reverend Doctor Marcus Whitman was killed by a toma-hawk to the back of the head. Within the following hour, thirteen Whites were dead and forty-seven others were taken prisoner. It would be a week before Fort Vancouver's superintendent, Peter Skein Ogden, was notified (Newman 1987: 296-297).

At this time, the Whitman Mission was part of the United States and although the Hudson's Bay Company had no official standing in the situation, Ogden journeyed to Walla Walla (now in the state of Washington) and spoke with the chiefs of the Nez Perce and Cayuse Indians (Newman 1987: 297). Ogden's statement, given to the Indians in their own language, was (Newman 1987: 297-298):

> The Hudson's Bay Company has been with you more than thirty years without bloodshed. We are traders, and of a different nation than the American. But we are of the same colour, speak the same language, and worship the same God. Their cruel fate causes our hearts to bleed. Besides this massacre, you have robbed the Americans passing through your country, and you have insulted their women. We have made you chiefs, but you say that you cannot control your young men. They are cowards, and you are responsible for their deeds. If the Americans begin war, you will have cause to regret, for you will be exterminated. I know that many Indians have died; so have White people. Dr. Whitman

> did not poison those Indians who died. You now have the opportunity to make some reparation. I advise you, but I promise you nothing should war be declared against you. The Hudson's Bay Company has nothing to do with your actions in this trouble. Deliver to me these captives and I will give you a ransom. That is all.

Chief Tiloukaikt, of the Cayuses, replied with the following (Newman 1987: 298):

> Your words are weighty. Your hairs are grey. We have known you a long time. You have had an unpleasant journey to this place. I cannot therefore keep the captives back. I make them over to you, which I would not do to another than yourself.

Ogden pacified the Indians by ransoming the captives six days later, paying the Indians with sixty-two blankets, sixty-three shirts, twelve rifles, six-hundred bullets, thirty-seven pounds of tobacco, and twelve flints. Afterwards, Fort Vancouver, now a United States Army fort, but still with a Hudson's Bay Company presence (personal communication with Ann Morton at the Hudson's Bay Company Archives in 1996), took control of the situation and eventually captured five of the suspected Indian raiders. Joe Meek, a former mountain man-turned-United States Marshall, summarily hung the five Cayuse Indians. This brought Fort Vancouver's "Company town" image to a abrupt and gruesome end (Newman 1987: 298).

With the rapid expansion of United States territories on the Pacific Coast, the Hudson's Bay Company and the independent fur men were unwelcome. The Hudson's Bay Company chose to keep a portion of the Oregon Country for

England. The following section reveals what they tried to do in order to save some of their former territory.

5.5.4.5 The Demise of the Hudson's Bay Company and the End of the Fur Trade in Oregon and Washington

The Pacific Northwest fur trade lasted about sixty years. The causes of the demise of the industry were many fold. Not only did the area become part of America's Oregon Territory in 1846, but the continued advance of settlers and over-trapping for furs pushed the area into a new frontier. Settlers and commerce in furs did not mix (Schwantes 1989: 66). This latter statement refers to the fact that the fur-bearing animals had almost been wiped out, by the Hudson's Bay Company and the other independent trappers, in their quest for the pelts. In deference to the fur companies, the settlers were basically farmers and did not want the trappers to be hunting on their land.

In an effort to keep Britain's claims to the area of Oregon Country, the Company formed a subsidiary in 1839. This venture was called the Puget Sound Agricultural Company. It operated out of Fort Nisqually, south of Tacoma, Washington. Between the fort; the Cowlitz Farm, some sixty miles to the south; and Fort Colvile on the Columbia River, the Company raised sheep, cattle, wheat, oats, barley, peas, potatoes, and grain (Schwantes 1989: 63).

The Company's monopoly was at an end when the Canadian Populist Movement stirred up settlers, calling the Hudson's Bay Company a "foreign, feudal, and forbidding enterprise" (Newman 1987: 320), started by early Canadian capitalists. This eventually helped lead to the demise of the (then) two-hundred year old company (Newman 1987: 321).

After the Oregon Treaty was in place, seventeen Company posts, south of the forty-ninth parallel, found themselves within the territory of the United States. The military of America told the Company outposts that they were, basically, out of business in Oregon Territory. The

United States Government took over the posts and made Fort Vancouver its military garrison (Hussey 1977: 70).

In the wake of the Whitman Massacre, bitter warfare erupted over the newly arrived settlers who had crossed the, now famous, Oregon Trail to the new promised land. James Douglas, a leader in the nearly defunct Hudson's Bay Company, wrote (after Josephy 1972: 62):

> I am of the opinion that there must have been some great mismanagement on the part of the American authorities or it is hardly credible that the natives of Oregon, whose character has been softened and improved by fifty years of commercial intercourse with the establishments of the Hudson's Bay Company would otherwise exhibit so determined a Spirit of hostility against any white people.

Back in England, the sentiment of the government had turned against the Company as well, Henry Labouchere, Secretary of State for the Colonies, requested a House of Commons inquiry into the trading practices and monopoly of the Company. This was the first attempt at getting the Hudson's Bay Company to relinquish its landholdings to the British government. The most damaging testimony, in the 450 transcript pages, came from two sources. The first was from Doctor John Rae, who had worked for the Company as a medical doctor, trader, and explorer. He told of the tariffs placed on both the employee and the Indian who bought from the fort. Employees were charged a fifty-percent markup, while the Indian was forced to pay a three-hundred percent increase (Newman 1987: 347-349). This charge by Rae was only one person's estimation of the situation. The Hudson's Bay Company had been in business for more than 200 years and several high-ranking people, in both the government and in the public sector, may have wanted to shut down the Hudson's Bay Company's monopoly

which it held reign over in Canada. The second charge was levied by the Aborigine's Protection Society, who stated that the Hudson's Bay Company had been (after Newman 1987: 349):

> ...given unlimited scope to the cupidity of a Company of traders, placing no stint upon their profits, or limits to their power...[with the result that] the un-happy race we have consigned to their keeping, and from whose toil their profits are wrung, are perishing miserably by famine, while not a vestige of an attempt has been made on the part of their rulers to imbue them with the commonest arts of civilized life, or to induce them to change the pre-carious livelihood obtained by the chase for a certain subsistence derived from cultivation of the soil.

Other testimony revealed that the London Committee had received dividends of £20 million from the venture (Newman 1987: 351).

Alexander Kennedy Isbister, the son of a former Company clerk and a Cree Indian mother, had tried to persuade the British Legislature, during the mid-nineteenth century, to grant "free trade" access to the Red River Metis. While he was dean of a British teacher's college and a practicing attorney, Isbister addressed Westminster with a speech which summed up the government's duplicity and the Company's treatment of the Indians under their control (Newman 1987: 250-251):

> When we assert that they are steeped in ignorance, debased in mind, and crushed in spirit, that by the exercise of an illegal claim over the country of their fore-fathers, they are deprived of the natural rights and privileges of free born men, that they are virtually slaves, as absolutely as the

> unredeemed negro population of the slave states of America - that by a barbarous and selfish policy, founded on a love of lucre, their affections are alienated from the British name and government, and they them-selves shut out from civilisation, and debarred from every incentive thereto - that the same heinous system is gradually effacing whole tribes from the soil on which they were born and nurtured, so that a few years hence not one man among them will be left to point out where the bones of his ancestors repose - when we assert all this in honest, simple truth, does it not behoove every Christian man to demand that the British legislature should not continue to incur the fearful responsibility of permitting the extinction of these helpless, forlorn thousands of their fellow creatures, by lending its countenance to a monopoly engendered so huge a mountain of human misery? For the honour of this great country, we pray it will not be; and, sincerely trust we, some few voices will respond earnestly, Amen.

The Hudson's Bay Company had reigned over its territories, without public accountability, but without the slaughter that the Indians saw at the hands of the Americans. The Court ruled that the Company was to sell off all its holdings. This it did, to the tune of approximately £1.4 million, but it negotiated a deal with the Canadian government which allowed it to move operations to Canada's Far North. The Canadian Indians were left in a state of dependence, upon the British Government, when the Company left the area, and never fully recovered from it (Newman 1987: 352-353, 379).

The admission of Rupert's Land, wholly owned by the Hudson's Bay Company, and the Northwest Territories,

owned by the Crown, into the Canadian Confederation was made possible by the British North America Act of 1867 (clause 146). The Company's lands were bought by the Crown under the Act of 1867 and Rupert's Land Act of 1868. The Company was paid £300,000 for its land holdings and guaranteed five-percent of the land in any of the "fertile-belt" townships where settlements would grow. This area extended north from the United States Border, west of the Rocky Mountains, east of Lake Winnipeg, and south of the North Saskatchewan River. The Company was permitted to keep its Royal Charter under the Deed of Surrender of 1869 and upheld in 1870 by Queen Victoria. The lands held by the Company were not officially transferred over to the Confederation until 1925. At this point, the Company was allowed to operate as a private trading company (Hudson's Bay Company 1989: 11).

Gustavus Meyers wrote the following statement in 1914 (according to Newman 1987: 351-352):

> For nearly two centuries the Hudson's Bay Company has represented itself in England as the grand evangel of religion, colonization, and civilization among the Indians; for nearly two centuries it had assiduously spread abroad its pretended reputation; and by insisting long enough upon its assumed virtues had been credited with them by the large mass of the unknowing. Now the truth was revealed, and bad as it was, yet it was regarded as undoubtedly only part of the whole. Imminently threatened, as the Hudson's Bay Company now was, with judicial and legislative extinction, it had to adopt some hurried expedient to save itself.

5.6 Overview

In this chapter, the Pacific West Coast history has been shown through the initial and subsequent contact sequences. It was through the explorations of the early English and Spanish seafarers that the riches of the Pacific Northwest Coast were found. It was also with these early explorers that the New World Indians were contacted. In southern Alta California, the Indians would become controlled through the use of the Spanish mission system. The Spanish ideology gradually gave way to the Mexican Period, after 1824, which is replaced with the American Period in 1848, allowing for California to become an American state in 1850. Earlier in the nineteenth century, the Russians settled north of San Francisco and engaged in the collecting of fur from sea-mammals. The Russians taught the Pomo and Coastal Miwok Indians to rely on farming for their subsistence.

At the height of the Spanish Period, in California, and prior to the fur companies entering the Northwest Coast areas of Washington and Oregon, the first American expedition to the Pacific Ocean was led by Lewis and Clark. Their main purpose was to find an overland route to the coast, in order to improve trade. Although the outcome of their journey, through the publication of the Lewis and Clark journals, proved more of a benefit to the Canadian fur companies, initially, this expedition opened up the far west as a future source for American expansion, after 1846. Lewis and Clark had recorded many Native American groups; provided detailed accounts of plants, animals, and natural resources; and essentially opened the interior of the United States for migration.

The Hudson's Bay Company, after the merger with the Northwest Fur Company, became the dominant enterprise in the Pacific Northwest, until 1846. While the fur companies may not have had initial contact with all of the tribes of Oregon and Washington (Table 5.5), they certainly enhanced the economic subsistence of these tribes. This economic upheaval has been followed through, as with the Potlatch Ceremony, into the mid-twentieth century.

In the end, however, the fur companies were forced from the territory, which allowed the citizens of the United States to enter the Pacific Northwest, along the now famous Oregon Trail, which followed very closely that of the Lewis and Clark Trail.

6.0 Pre- and Post-Contact Exchange Systems

6.1 Introduction

By the mid-sixteenth century, Spanish explorers were contacting the Indians of America's West Coast. The East Coast of North America had already been introduced to the European acculturation process. By the time that the Spanish decided to colonize the American West (1760s), the East Coast was gradually approaching the advent of the Revolutionary War. In so doing, the Spanish were to remove the freedom of the Indians and also remove them from familiar events. Many of these events centered around the way in which the Indians dealt with their neighbors in respect to economics.

6.2 Pre-Contact Exchange System

6.2.1 California

Prior to the Proto-Historical Era, the primary exchange system centered on obsidian and marine shell items. This type of exchange system paralleled those operating in the areas of Washington and Oregon. California has sixteen obsidian sources, concentrated mainly along the present California-Nevada border (Jackson & Ericson 1994: 386).

The California Indians developed an extensive trade network within the Proto-Historical Era prior to the Spanish colonization process of 1769. This era begins roughly at the time of Cabrillo's 1542 landing in San Diego Bay and ends in 1769. Kroeber (1925: vi) states that there were about fifty separate prehistoric Indian groups which lived within the borders of present-day California. Of these, the most significant groups have an ethnographically recorded history of exchanging articles with their neighbors.

The main trouble with this network was the fact that the California Indians were so linguistically different that they generally stayed within their own territories. The language barrier, unfortunately, caused some hostilities with neighboring tribes. In order to reduce the number of

incidents between the tribes who spoke different dialects, each tribe had a professional trader. This person would learn the dialect(s) of the tribe(s) he would need to contact. By doing this, the economy of the respective tribes could be enhanced without violence. Each of these professionals had diplomatic immunity and passed safely between territories (Eargle 1986: 8-9). Aikens (1978: 162) states that the Indians of California participated in tribal fairs, but that is unlikely if such a hostility existed over language. The main objects of the Indian trader's kit were shell-bead money (mostly olivella shells), hides, obsidian and ornaments (Eargle 1986:9). Some of the mainline trade routes still exist through the desert areas and have been extensively recorded by archaeologists.

The Olivella biplicata shells, as well as clamshells, were used to make beads in both prehistoric and historic times. These shells were used as the medium of exchange (and adornment) throughout California. Disk beads, made from stones and the thicker walls of shells, such as the clams, had no exchange value, although they were usually quite decorative. These decorative bead types were perhaps used for those Indian tribes whose members held inherited rank (King 1978: 60-61).

The records for pre-contact, intertribal exchange systems are somewhat obscure, but the principal Indian groups are detailed below. Heizer (1978b: 690-691) suggests that the exchange system, during this period, was on a one-to-one basis.

The Yurok, of northwestern California, exchanged hunting, fishing and woodworking tools with the Wiyot, to the south, as well as the Tolowa, to the north. The Yurok also exchanged fish nets, made from vines, stone net-sinkers and canoes with the Karok of northwestern California. The Yurok were visited briefly by the Hudson's Bay Company trappers in 1827 (Table 5.1), but these men did not return. Jedediah Smith, the famous mountain-man, visited in 1828 and apparently gave the Yurok gifts of beads, knives and iron arrow points (Emanuels 1991: 4-6).

The Atsugewi Indians usually buried their deceased males with shell beads being used as a sign of wealth. Those beads which were not buried with their owner were distributed among his relatives, so that the family's wealth would be increased. Additionally, these Indians made clam-shell beads more valuable than dentalia (Garth 1978: 238-239).

The Karok maintained their tribal lifestyle until the 1850s, with the advent of the miners. Their exchange network is somewhat obscure, although they exchanged salmon for canoes with the Yurok (Emanuels 1991: 5).

The Hupa, of northern California, were a fiercely powerful tribe who subjugated their six neighboring tribes. Instead of maintaining an exchange system, between these tribes, the Hupa took tribute, in the form of skins and shell money (Emanuels 1991: 25,30). Dentalia was used by the Hupa Indians for both decoration and exchange, with tribes other than those they subjugated (Wallace 1978b: 168).

The Maidu occupied the northeastern end of the Sacramento Valley. They would occasionally exchange bows with their Wintun and Patwin neighbors (Emanuels 1991: 35), although Kroeber (1925: 399) insists that the Maidu exchanged shell beads, salmon, salt and digger pine nuts for bows, arrows, deer skins, and sugar pine nuts with the Wintun Indians. Additionally, the Maidu exchanged the same items for obsidian and green pigment with the Achumawi. They also exchanged their aforementioned items for wild tobacco, from the Honey Lake District, with the Modoc Indians, somewhat northeast of the Maidu territory. These Indians used clamshell disk beads and magnesite cylinder beads, in addition to the items mentioned above, in their exchange system. Dentalia, too, was used, but not in standard exchanges (Dixon 1905: 201-202; Kroeber 1925: 399, 421; Riddle 1978: 380). They (the Maidu) were first contacted by Hudson's Bay Company trappers in 1833 (Emanuels 1991: 35, 40, 45).

The Wintun, and their cousins the Patwin, occupied the northern and western part of the Sacramento Valley. They

exchanged dried salmon, for bows, with the Maidu. The Wintun (or Wintu) Indians used clamshell disks, dentalia and magnesite cylinders for exchange, but the main medium of this group's exchange system were their baskets (Lapena 1978: 330). The Wintun did not have first contact until 1821 with the advent of the last Spanish expedition in America. The Patwin, however, had contact with Europeans prior to the Sonoma Mission being built in 1823. The Hudson's Bay Company contacted both groups approximately 1827 (Emanuels 1991: 43, 46-47).

The Pomo Indians lived on the northwest coast, about halfway between present-day San Francisco and the California-Oregon border. Their chief intertribal exchange item was the clamshell bead (Emanuels 1991: 55), although Kroeber (1925: 257) states that the Pomo exchanged fish, acorns, skins and magnesite for iris fiber cord (for deer snares), arrows, sinew-backed yew bows and mahogany-backed bows with tribes to the north. He further states that the Pomo exchanged these items for clam shells (presumably to make beads for further exchanges) from the southern tribes and mussels, seaweed, haliotis shells and seal or otter furs from western tribes. They were also noted for their coiled and twined baskets. The coastal tribes were probably contacted by European seafarers between the sixteenth and eighteenth centuries, but the Inland Pomos did not have first contact until the Spanish built the Sonoma Mission in 1823 (Emanuels 1991: 55-56, 66).

The northeastern Pomo Indians used salt as a form of exchange and it was considered rude not to bring the substance to any type of gathering, both formal and informal (Barrett 1908: 239-244; Kroeber 1925: 236; McLendon & Oswalt 1978: 286). The eastern and southeastern Pomo Indians used clamshell beads, in addition to magnesite cylinders ("Indian Gold"), as exchange and wealth mediums (McLendon & Oswalt 1978: 309-311).

The Yuki occupied land north of Pomo territory and somewhat inland from the coast. They rarely travelled outside their territory, but did participate in an intertribal

exchange system with the Northern Pomo, who supplied the Yuki with shell beads and ocean foods in exchange for furs (Kroeber 1925: 160, 166-167). First contact may have occurred during the time that the Sonoma Mission was built in 1823.

The Shasta Indians held territory between the Modoc Indians, in the northeast, the Klamath Indians, to the northwest, the Karok, to the west, and the Wintun, in the south. The Shasta exchange system included obsidian, deerskins and sugar-pine nuts in exchange for dentalia, salt (or seaweed), baskets and tan-oak acorns (Kroeber 1925: 285, 287). The Shasta were first contacted by the 1850s, with the coming of the Americans seeking gold (Johnson 1992: 133).

The Coastal Miwok probably participated in an intertribal exchange system, prior to first contact, but it is unknown, according to Emanuels (1991: 71), as to how it functioned. Kelly (1978: 418) disagrees with Emanuels by stating that these Indians used clamshell disk beads and magnesite cylinders in their exchange system. The cylinders had an equivalency of being worth two-yards of clamshell disks. This group was first contacted by Sir Francis Drake in 1579. Drake apparently lived with this tribe for about five weeks. The Spanish were the next to contacted the Miwok, in 1775. The Spanish missionized them by 1783 (Emanuels 1991: 71, 79).

The Interior Miwok Indians live d in an area of the central Sacramento Valley which was bordered on three sides by the Wintun and Patwin tribes. They exchanged salmon, trout and lampreys with the Maidu for bows and arrows (Emanuels 1991: 99). The Mono Indians, of eastern California, exchanged pine nuts, Pandora moth larvae, red and white paint, salt, pumice, buffalo robes and rabbit skin blankets, with these Miwoks, for shell beads, acorns, squaw berries, elderberries, manzanita berries, baskets, sea shells and a fungus. First contact seems to have been made about 1811 by Spanish missionaries (Emanuels 1991: 99, 100-101, 106).

The Southern Sierra Miwok lived in the Sierra Nevada Mountains, to the east of the Great Central Valley. They exchanged obsidian with the Mono Indians for the same plant products which the Interior Miwoks were given. First contact was by the Americans during the Gold Rush of 1849 (Emanuels 1991: 109, 111, 116).

The Yokuts lived in the Great Central Valley, from present-day Sacramento to Bakersfield. They exchanged food products for bows and arrows with the mountain tribes and obsidian arrow points with the tribes to the east. Mission Indians, from the coastal areas, would seek refuge from the Spanish in the Yokut lands. These coastal peoples were apparently welcomed. The Yokuts knew of the Spanish, who would try to return the mission deserters, but the Yokuts had no real contact with non-Indians until the Americans claimed the area in the 1850s (Emanuels 1991: 119, 121, 127).

The Chumash lived in the Santa Barbara area, just north of Los Angeles. Exchanges were extensively made with their Indian neighbors. The Santa Catalina Indians exchanged steatite (soapstone) for the Chumash's sardines, while their southern California neighbors accepted exchanges of paddles, bows and arrows, flutes, war clubs, shell beads, animal skins and plant products. First contact was made in 1775 by Father Pedro Font, of the Bautista de Anza Expedition. The Chumash were missionized by 1785 (Emanuels 1991: 129, 134-136, 138).

The Coastal Gabrieleno, one of the Mis sion Indian groups, had no apparent intertribal exchange system recorded (Emanuels 1991: 141), although Kroeber (1925: 630) states that they exchanged shell beads, dried fish, sea-otter furs and soapstone (steatite) vessels with their inland neighbors for deerskins, seeds and acorns. They were first contacted in 1542 by Juan Cabrillo, the founder of Alta California, and were missionized in 1771 (Emanuels 1991: 141-142).

Nearer to the southern part of California, the Luiseno Indians (another of the Mission Indians) occupied an area

extending from the coast to the interior mountains. It is unclear as to whether this group actively participated in an intertribal exchange system (Emanuels 1991: 147), although personal research in 1988 to 1989 suggests that they did, in fact, exchange animal hides, for fish, with coastal Indians, as well as some type of exchange system with the Cupeno, Pala, Kamia and Cahuilla Indians to the north and east. First contact appears to have been made by the Gaspar de Portola Expedition of 1769 (Emanuels 1991: 147).

The Cahuilla occupy the central section of southern California. They practiced an intertribal exchange system with the Gabrieleno Indians, to the northwest, and other coastal tribes. Their exchange items appeared to have been furs, hides, obsidian and salt for steatite, asphaltum and shell beads. The Bautista de Anza Expedition first contacted them in 1774 (Emanuels 1991: 159, 164).

The Diegueno, or Ipai, Indians inhabited the southwestern corner of California. There are no records of an inter-tribal exchange system, but they were first contacted by the de Portola Expedition of 1769 (Emanuels 1991: 153).

The Costanoans lived on the coast, just south of present-day San Francisco. Their only exchange item apparently was the acorn. First contact appears to have been in 1769, with the coming of the de Portola Expedition (Emanuels 1991: 83, 98).

A small, and largely unknown prehistoric Indian group. the Nomlaki, used clamshell disk beads for their exchange system (Goldschmidt 1978: 345).

By the time that the Spanish rule was displaced by the Mexican Era, in 1824, and the missions were finally de-secularized (1834), the Native American population had been decreased by ninety percent. Additionally, the Indian pre-contact culture had been virtually destroyed (Bamforth 1993: 53).

Although California Indians suffered under the Spanish mission system, they were somewhat liberated when the Mexicans came to power. Unfortunately, their

pre-contact economic system had been displaced and never really returned to prosperity, even after 1824. On the other hand, Oregon and Washington Indians fared much better under the fur companies.

6.2.2 Oregon and Washington

Pre-contact exchange rates used dentalia shells as the economic standard. This medium was obtained from Vancouver Island, British Columbia (Ray 1938: 100-101). These shells were strung in lengths of six feet, but it was the number of shells within the string which determined the wealth, with the larger shells being more valuable (Ross 1849: 95). Market fluctuations determined the exchange rate, but most of these strands were worn as adornment until needed (Lee & Frost 1844: 101; Coues 1897: 753).

According to Galm (1994: 275), the prehistoric Northwest Coast Indian exchange system dealt primarily with obsidian and marine shell items, from as early as about 10,000 years B. P., down to about 250 years B. P. (roughly A. D. 1750). There were twenty obsidian sources south of the Columbia River, in present-day Oregon, and three sources located in present-day Washington. The most frequent marine shells were those belonging to the genera Dentalium, as stated above, and Olivella. The specific sub-genera consisted of O. biplicata, O. baetica, O. pedroana and D. pretiosum (Galm 1994: 281, 288).

Ethnographic records denote that the Northwest Coast Indians collected the dentalia, in deep water areas, using long rakes in a dredging fashion from their canoes. By the time of early European contact, dentalia had replaced the other shells as the principal exchange item (Swan 1857: 159; Weld 1959: 4-18; Galm 1994: 288-289).

After initial contact, with the Lewis and Clark Expedition, blue, and perhaps white, beads were used as another form of exchange and ornamentation, together with the dentalia (Thwaites 1904-1905: 182, 244-245, 278-279, 286, 328; 1904-1907: 326). Bishop (1967: 128) states that beaver and sea otter skins were valuable prior to European

contact, while Ross (1849: 101) states that the pelts were used as a method of exchange until approximately the time that Fort Astoria was founded in 1811. Hajda (1984: 348-352) indicates that pre-contact Indians used furs, dentalia and canoes in exchange for food, in emergency situations, but that practice appears to have ended with European contact.

Agriculture was not practiced along the Northwest Coast. A sexual division of labor was practiced whereby the males hunted game and fished while the females gathered food nearby (White & Cronon 1988: 417). An intertribal exchange system was practiced. A few tribes practiced a gift-giving ceremony called the "Potlatch."

Early, pre-contact, Indian exchange systems dealt in handmade natural articles. These goods included seashells, obsidian, and turquoise. Several Indian tribes, along the Pacific Northwest Coast, used the idea of the rendezvous as an annual, or semi-annual, trade fair. It was only after contact with the Spanish, French, Russian, and English did the European-made goods arrive at these festivals. In present-day Oregon, the main center for trade was The Dalles. Here, the Wasco-Wishram Indians, together with the Tenino tribe known as the Wayam, from Celilo Falls, acted as the middlemen in the organized pre-contact exchange system. These groups processed dried and smoked fish which were then traded or sold to the Indian groups identified as the Yakima, Klikitat, Umatilla, and Nez Perce (Anastasio 1972: 161; Swagerty 1988: 351, 353).

In the Lower Colum bia River Valley, the Chinook Indians were the central group for such items as shells, bones from whales and seals, whale and fish oils for cooking and cosmetics, shellfish, and baskets. These items were traded annually at The Dalles (Wood 1980: 103; Swagerty 1988: 353).

The warlike Modoc Indians of northeastern California brought slaves captured in battle, to trade for supplies for the long, cold winters which lay ahead. The Coastal Salish had exchanged their capes with tribes north of Puget Sound,

and were adding dentalia and canoes to their exchange items. The Chinooks brought their own great surplus of salmon to the event (Ames 1973b: 17).

Prior to the European traders, the Indians of North America exchanged their goods with other Indians of the West and the Southwest. Obsidian tools were exchanged with the Great Basin tribes. The Plains Indians exchanged beads made from buffalo bones, in addition to feather headdresses, and robes of buffalo hides with the Indians of the Columbian Plateau. These Plateau Indians made reed baskets and bark canoes, in addition to paints made from plants and minerals. Animal hides were also processed by the Plateau people (Swagerty 1988: 353). The Great Basin included the greater areas of present-day Nevada, southern Idaho, western Utah, and the southeastern desert area of California, most of which is outside the focus of this thesis. The Columbian Plateau includes those areas of present-day eastern Oregon, central Idaho, parts of southern Washington, and parts of northern California. The Plains area would be all of the area east of the Rocky Mountains from the present area of Denver, Colorado to the Mississippi River and from the Black Hills, of the Dakotas, to the Panhandle area of Oklahoma and northern Texas, all of which is outside the scope of this thesis.

In addition to the complexity of long distance trading networks, some of the Northwest Coast Indians of Oregon and Washington also participated in a tribal function known as the "Potlatch." The following section records how this ceremony functioned in the Pre-Contact Period.

6.2.2.1 Pre-Contact Potlatch Ceremony

The Potlatch (Potlach) was the basis for inherited wealth among the Pacific Northwest Coast tribes who participated in this ritual (Heizer 1974: 203). The Potlatch was unique to the Pacific Northwest Coast tribes from the Tlingit in northern British Columbia, Canada to southern Oregon's Chastacosta Indians, but the prehistoric origins of the ceremony are obscure (Freed 1978: 290).

The word "Potlatch" comes from the Chinook Indian language and means "to give." Although several tribes used this form of wealth redistribution, it is with the Kwakiutl, of Canada, that it has been best described. This instance of giving away presents made those that received the gifts to bear formal witness to the giver of the presents. This person, a tribal nobleman, would be attaining special privileges and titles by giving away a sizeable amount of his personal fortune. The Potlatch was not used to gain a higher social status, by itself, but it was also used to celebrate a marriage; pay homage to a birth of an heir; celebrate a new chief; or to redistribute a ransom for a war captive (Heizer 1974: 227; Opitz 1994: 1-4; Freed 1978: 295, 321-327).

In the pre-contact Potlatch, Piddocke (1965), Drucker and Heizer (1967), Rosman and Rubel (1971), and Dalton (1977), list several instances when a Potlatch would occur: (1) a festive celebration, such as rites of passage, birth, puberty, marriage, and death; (2) successionary rights, as in the case of titles, names, and property rights; (3) rivalry, and non-rivalry, contests; and (4) the host-patron Potlatch, as discussed later in this chapter. These aforementioned instances were usually held infrequently. This changed greatly in the European Contact and Post-Contact Periods, because the European-made goods were almost free-flowing to the Indians. This enabled the various ceremonies to be held more frequently.

Prior to first contact, it may have taken several years to organize the necessary items for a large Potlatch. These pre-contact gifts would have included fur blankets, canoes and copper ornaments (Heizer 1974: 228). An ethnographically recorded, pre-contact Potlatch, of the Nootka tribe, indicates that the following items were distributed: 50 seals, 10 blankets made from sea otter pelts, 20 blankets made from black bear hides, and some slaves (Opitz 1994: 3). With the arrival of the Hudson's Bay Company, as well as other fur companies and early explorers, less expensive goods became part of the "giver's" items. These included trinkets, such as glass beads, barrels

of flour, clothing, the famed Hudson's Bay Company blankets, rum and guns (Heizer 1974: 230). Different tribes used the Potlatch for various reasons. The Nootka held them to honor individuals and their children, while the Tsimshian honored the lineage of their father. The Southern Kwakiutl, as well as the Lekwiltok Kwakiutl, celebrated with a major Potlatch which honored the dead. This special ceremony, called the "Khatashi" - meaning "to raise the dead" - was held by the wealthiest of the chiefs. This type of Potlatch has not been given since 1828. The Kwakiutl also participated in "credit" potlatches. This type was created because there were never enough items within the local area to satisfy the terms of the ceremony. In committing one's self to this form of loan, the interest rates were based on the ability to repay and the amount of time it took to repay those who gave the items for a person's Potlatch. Normally, these interest rates were a minimum of 20% (in goods) for repayment under six months. If the repayment time ran between six months and one year, the rate would double to 40%, while at one year, the rate was 100%. If the individual went over the one year period, or was known to have a bad repayment history, the loan rate could be as high as 233% (Opitz 1994: 3-4).

There are several forms of the Potlatch ceremony, which may be viewed as the "classic" Potlatch; the "rivalry" Potlatch; and the "egotistical destructive" Potlatch.

The general sequence of the "classic" Potlatch begins in the order that the guests were seated. Those with a higher individual rank, in hereditary order, were seated first, with the lower-status noblemen being seated next. At the conclusion of the seating ritual, the introductory, or business, phase of the ceremony began. During this "show and tell" section, the host's immediate family members would perform the songs and dances of the host's status. During this introduction, the speaker would introduce each of his kinsmen who were permitted to use the "giver's" privileges. These kinsmen had also brought gifts to the Potlatch Ceremony and were being thanked for that effort.

Following the introductory phase came the gift-giving ceremony. The custom was to give the largest and most expensive gift to the highest ranking visitor, which could be the tribal chief, and so on down the line. Each recipient would then be responsible for lavishing praise upon the donor of the gift. The glory attained from the gift-giving, and the praise was equally shared by all who had brought items to the Potlatch, but it was the host who attained the status (Heizer 1974: 238).

Another form of this ceremony may be called the "rivalry" Potlatch. In this case, two or more individuals who are powerful may elect to outdo each other by combining the aspects of the more traditional "classic" Potlatch with that of destroying their wealth. This would eventually lead to the conclusion that the rightful heir to the particular status would be the individual who would give, or destroy, the largest and most expensive of the articles (Schwantes 1989: 30).

One final type of Potlatch may be called the "egotistical destructive" type. In this scenario, an individual who is not concerned by the amount of material wealth he owns, because he already had the required status of power and wealth, would go on a path of wanton destruction - destroying, rather than giving away, the material wealth of his status (Schwantes 1989: 30). For this type of person, the destruction, of the Potlatch material, signifies that he is so powerful and rich that he does not need to attain more power and riches by organizing a "classic" Potlatch.

Although the Potlatch was celebrated, by the Pacific Northwest Coast tribes, long before the Europeans brought first contact articles, it has not been totally diminished in historic times. The ultimate goal of this ceremony, beyond the status it bestows on the "giver" and his kinsmen, is that it serves to unite people.

During the time of European contact with the Native Americans, European-made items began to be introduced into their economy. This led to increased prestige among the tribes and some individuals. Before seeing how these

new, and more durable, items were used, it is necessary to view what types of articles were being given to the Indians.

6.3 European Exchange Items

The Industrial Age revolutionized the European-Indian exchange process by allowing more European-made items to be used by the Europeans when exchanging for furs in the Pacific Northwest. These exchange items were used to bond male relationships between the Indians and the Europeans by giving the Indian what he thought would benefit his lifestyle in exchange for the furs that the Europeans wanted (Lohse 1988: 396).

Traditional ornamentation, such as small and large glass beads; paints and dyes; and bangles of tin were used by nearly all Indians in the early contact period. Later, cloth items such as shirts, skirts, pants, and jackets found their way out of the prestige class and became an item used by all Indians (Lohse 1988: 397).

Trade goods changed through time. Prior to 1774, the Haida and Nootkans had acquired copper and iron from both the Russians and the Hudson's Bay Company. The copper was used for personal adornment and the iron was used for making arrow points. By the mid-1780s, the demand was for iron, copper, and glass beads. During the latter part of the 1780s, textiles were in demand, but by 1788, several tribes already had firearms (Howay 1941: 62). During the end of 1792, ammunition was a bigger demand than the weapon itself (Wilk 1951: 41). Guns replaced the bow and arrow, but it was the ammunition which was needed to kill the animal.

By approximately 1800, alcohol was on the rise as a trade commodity. "Indian rum" was a mixture of fifty-percent rum and fifty-percent water. In the late 1820s, rum and guns were the principal Indian demands. In the 1830s, molasses, rice, bread, and "Indian sugar" were introduced. This latter item was fifty-percent sugar and fifty-percent bran (Walker 1982: 187). Bread, molasses, and

frequently glass beads were given as gifts rather than used for exchange (D'Wolf 1968: 19-20).

Not all of the aforementioned articles continued to be popular with the Indians. In 1780, there were approximately 125,000 Indians. By 1825, the population had been reduced to less than one-hundred thousand. The main causes were a unhealthy diet consisting of alcohol, sweets, and bread; venereal disease; and deaths caused by guns (Roe 1967: 83; Green 1915: 39). Old World diseases further reduced the native populations between 1776 and 1802 (Thwaites 1904: 50-51, 241).

Steel axes and knives were more durable than their stone counterparts. Clay pots gave way to metal kettles, pots, and pans. The use of scissors and files changed the processing time for pelts and hides. Fashion was heightened by the use of glass beads, hawk's bells, and tin cones. The musket provided instant success, but it never really replaced the bow and arrow for hunting. This, though, changed with the procurement of the lever-action, repeating rifles during the late-1800s (Lohse 1988: 396).

Wilk (1951: 52) indicates that exchange values increased between 1801 and 1812. A prime pelt of the sea otter, for example, initially brought the value of any one group of the following articles: one cloth item; two or three muskets; or one cask of black powder. By 1812, the value had risen to all of the following: four blankets, four kegs of molasses, a bucket of rice, twenty-four loaves of bread, and an axe. Other trinkets may also have been included in the deal (Cole & Darling 1990: 124). The Indians found that they could demand more valued items because the depletion of the fur-bearing animals had diminished over the years and the Europeans were willing to pay more for the few pelts that were left.

While these exchanges were the most demanded, the following items show the extent to which a variety of goods flowed into the Northwest Coast: wire, buttons, nails, paint, spoons, fishhooks, Chinese coins, mirrors, combs, handker-

chief's, abalone, dentalia shells [original wampum], ermine skins, elk hides, and eulachon oil (after Cowdin 1846: 534).

Slaves were also a part of the exchange network. The majority of these slave-captives were either from California or from the Northwest Coast Salish. The Salish, of British Columbia, were regularly raided by the Haida and Kwakiutl, also of British Columbia. By the 1830s, the Tlingit, another tribe of Canada who were located north of the Salish territory, were exchanging slaves for two sea otter skins or twenty-five beaver skins each (Wrangell 1980: 32). Slavery was particularly devastating, in the areas around the Lower Fraser Valley, British Columbia, and Puget Sound, in present-day Washington, from where most of the Indians were taken (Averkieva 1971: 331).

While the Potlatches were the most extravagant Indian festivals since the Contact Period, the original European-made gift was the small, globular glass bead.

6.4 Importance and Usage of Glass Beads

First of all, the Indians had not seen glass before, so that these trinkets which the early Europeans were freely giving seemed to appease the Indians. Secondly, the colors of the glass beads were instantly given special meaning, by the Indians, diffusing the color scheme within their own cosmology. The Lewis and Clark journal entries of 1805 show that the "power" of the blue bead would be, in some cases, the only color that the Indians would be willing to take. The Indians would refuse all other colors offered.

6.4.1 Colors

According to Woodward (1965: 17), color symbolism of the beads was important, but the colors and their meanings were not indicative to all tribes. White meant peace, or purity; while black was universal for death. While I was reading through the literature and speaking with Indian leaders, it appeared apparent that blue meant heaven, sky, or purity; red was for blood or war; and green and/or brown stood for earth or trees (Table 6.1).

Blue beads apparently were valued highly by the Indians of the American West. Dubin (1987) suggests that the color blue was rare in Indian dye sources. Bernfeld (1989: 52) states that certain colors had been associated with specific values and were thought to have therapeutic benefits: yellow was used to cure jaundice, while blue represented a combination of truth, purity and the heavens. The blue bead was unique in that there was no available natural dye source for "blue" in the Indian world. It appears that Bernfeld, Woodward, and other Indians, in general, agree on a meaning for the blue color scheme. Sprague (1985: 38) asserts that the market may have been flooded with white beads and the blue bead then became popular.

During the early nineteenth century, the Shoshone Indians would trade their horses for beads from the Spanish soldiers in the Southwest and California. The Shoshone would then take their beads to the Crow Indians and buy horses at the rate of 100 blue beads for one horse (Erikson 1969: 46-48). The Shoshone were receiving more beads from the sale of the horses than they were from buying the horses from the Crow.

Not only were glass beads used as purchasing power, but they were used for ornamentation, as well. The following section details some of the decorative uses for the European-made item.

6.4.2 Ornamentation and Beadwork

Another reason why the beads became an instant success was that they were used for ornamentation and beadwork. Miller (1971: 2) states that the Flathead Indians used "seed" beads to sew on their buckskins, which they probably received from fur trappers in the early 1800s (Johnson 1992: 27). As the tradition grew, the designs were fairly recognizable. Most patterns were either geometric, in design, or were in the shape of floral patterns. One thing was clear, however, all symbols had a meaning to the person who designed the garment. Usually the symbolism was

what was popular at the time that the beads were sewn onto the hide (Miller 1971: 2). Unfortunately, according to Miller, anthropologists have tried to place special meanings on all designs that they encounter. Miller thinks that they (the anthropologists) try too hard to interpret the Indian's own thought processes, as to why the Indian chose a particular design or color scheme. Likewise, it is plausible that Miller is confused about anthropologists. It is in the very nature of anthropology to try to find a meaning for every detail of a culture's identity, but that is often an unattainable goal. In this way, anthropologists continually make in-roads into the complexities of human lives and cultural traits.

On the other hand, Karklins (1992) has detailed the ornamentation of the Native Americans in Canada, and to some extent, those Indians in Washington. Karklins (1992: 173-187) speaks about the Nootka Indians, who occupy the area of Vancouver, British Columbia. Their tribal area also extends to the upper northwest corner of Washington, along America's Pacific Northwest Coast. The occurrences of first contact with these people dates from the Spanish in 1774, but it is with John Meares' 1788 disembarkation that we have knowledge of glass beads being used by the Nootka. According to Meares' journal (1790: 253), he stated:

> ...They [the Nootka males] apply the same kind of ornament to their ancles; but with a greater number of thongs, and a proportionable encrease in the size of the beads or other decorations.

Marchand (1801: 490) wrote about some of the natives that he encountered, by stating:

> ...[they] wore necklaces of glass-beads, ear-pendants, and bracelets of plaited brass wire, from which hung some bobs of the same metal.

While the Spanish botanist-naturalist Jose Mariano Mozino was living on Nootka Sound, he recorded the following in 1792 (after Mozino 1970: 11-12):

> As a necklace around their throats, they string together various fish bones, spines of the Venus shell and frequently some glass beads which have become available through trade with Europeans.

Mozino stated that the Venus shell spines are dentalia (wampum to other Indians), and he indicated that the glass beads were procured through trade.

Early in 1803, John R. Jewitt was held captive by the Nootka, after the Indians had attacked the ship he was on. In his diary, Jewitt wrote of the women (after Jewitt 1824: 82-83):

> The nose-jewel is usually a small white shell, or bead, suspended to a thread.

Jewitt may have indicated that the shell is in the shape of a bead, but it appears unlikely that he was referring to dentalia, because later in this entry, he wrote of "Ife-waw," which he indicated to be dentalia.

Beaglehole (1967: 297, 302) and Cutter (1969: 237) seem to think that the Nootka, as well as the Canadian Pacific Northwest Coast tribes, held glass beads "in little esteem." Karklins (1992: 188) believes that glass beads were not as popular with the Nootka, as they were for the other tribes in the area, although the beads were used for decoration - primarily in necklaces. Karklins' belief is in opposition to what Arima and Dewhirst (1990: 407) believe. They state that the Nootkans used glass beads as a badge of rank and wealth. Puberty rites for girls included an elaborate dressing gown and hair ornaments. The hair adornments included wool bands covered with glass beads.

Bead usage is not widely known among the Northwest Coast tribes of Oregon and Washington. Perhaps this is due to the other items used within the various cultures, such as wooden masks, non-glass adornments and textiles. Glass beaded articles are few in number. What evidence there is, is noted below.

The Makah Indian females, of northern Washington, wore nose, neck, ear and hair ornaments made from glass beads (Renker & Gunther 1990: 428).

The Chinookans, whose territory was in the vicinity of the Lower Columbia River (and had first been contacted prior to 1800 by fur trappers), used glass beads in their burial rites (Johnson 1992: 13-14). An example of the use of glass beads is seen in the burial of a chief's daughter. Her body was wrapped in grass mats and decorated with dentalia, glass beads and rings, then placed in a canoe for burial (Bushnell 1938: 5; Harper 1971: 98; Silverstein 1990: 542).

The Alseans, of the Oregon coast, used glass beads in their headdresses and as necklaces. The Coosans, whose territory was on the shores of Coos Bay, Oregon, used glass beads for their necklaces and as ornamentation for female dresses. Such ornamentation was mainly on the collars (Zenk 1990: 570, 574).

The Athapaskan tribes of southwestern Oregon used glass beads to decorate their basketry hats and buckskin aprons (Miller & Seaburg 1990: 582). The females of the Takelma tribe, in the Grants Pass area of Oregon, used glass beads to adorn their burial garments (Kendall 1990: 590).

Glass bead usage among the Indian tribes of California, like those of Oregon and Washington, are equally low in recorded occurrences. When glass beads became available, they probably replaced the need for making beads out of shells, dentalia, stone, steatite, animal bones and other material. Unfortunately, this was not always the case and tribes would, at times, revert back to making shell beads. It is unknown why this change back would occur. Perhaps the fascination of the glass bead wore off or possibly there were

not enough glass beads to completely change the economy, of a particular tribe, from shell beads. Additional recorded uses of glass beads are noted below.

As the Mission Indians became more incorporated into the Spanish mission system, especially in the Malibu area, the original uses for glass beads dissipated and the use of the shell bead made a comeback (King 1981: 17).

The females of the Cayuse tribe used glass beads to sew onto their deerskin clothes and also to decorate their cornhusk bags. Occasionally, beads were strung together and sewn to make bags [similar to purses of today]. The pre-contact decoration was in the form of geometric patterns, but after first contact by the Hudson's Bay Company, in the 1800s, floral patterns were added (Freed 1978: 286; Johnson 1992: 87).

The Central Pomo used glass beads, strung together with wire, to decorate their fur headdresses (Bean & Theodoratus 1978: 293). The Wintun (Wintu) used glass beads to make beaded tobacco, or shot, pouches (Lapena 1978: 335).

The Southern Valley Yokuts, in California's Great Central Valley, used glass beads, along with golden eagle beaks, abalone and bear claws to make necklaces. Cordage was twisted with eagle down to create strength in the necklace (Wallace 1978a: 453).

The Luiseno, of northern San Diego County, used glass beads for personal adornment (Bean & Shipek 1978: 554).

Whatever the reason for the use of glass beads, either by the first-contact (and later) Europeans and American explorers, or by the Indians themselves, it must be evident that the glass beads themselves offered some rather good advantages. They came in a variety of shapes, sizes and colors. The color scheme did not fade over time. Perhaps, more importantly for the explorers and fur companies, the cost of these beads was very inexpensive, but would often pave the way for friendly negotiations with the Native Americans.

The effects of all the European contact did change the makeup of the Indian's economy well into the present day. It is ironic in that most of the early nineteenth century Europeans tried, at least in part, to manage the Indians under their control. This is best seen through the exchange systems in place during the Post-Contact Period.

6.5 Post-Contact Exchange System

6.5.1 Introduction

After initial contacts had been made, the Indians of the Pacific West Coast became accustomed to the Old World manufactured items. This largely changed their way of life. No longer did the Indians have to rely on making the necessary item from the world around them. This did not always happen with every item that the Europeans handed out. The following sections deal with the Post-Contact Period exchange mechanism in California, Oregon and Washington.

6.5.2 California

6.5.2.1 Exchange System

Post-contact exchangein California never really happened - at least not to the extent that it occurred in Oregon and Washington. The coastal Indians of California were confined either to the Spanish mission system-proper, or within a short distance of a particular mission. The Spanish Period ended about 1824. At this time, the missions were desecularized, as the Mexican Period began. The, so-called, Mission Indians (also called Digger Indians, because they were taught farming techniques by the missionaries) retreated back into their previous ecosystem. Some Indians became laborers on the Mexican rancherias, but most re-formed tribal living units within their previous territories.

The interior Indians, and those farther east, were becoming more aware of the Mexican influence - even if they had not been aware of the Spanish beforehand.

By the middle of the 1840s, the American presence was being felt from the Great Central Valley southwards. The Americans had set up a provisional government, at the Spanish presidio of Monterey. After a few skirmishes, between the Spanish/Mexican milita and the American-backed "Bear Flag Republic," the Americans took charge of California. The main reason for this overthrow of the Mexican rule (in 1848) was to take advantage of the gold found in the central California foothills. This led to the Gold Rush of 1849.

After California gained statehood in 1850, the Indian did not fare any better under American rule. While the gold had been elusive to the Spanish, the Americans capitalized on both its importance and popularity. The Indian lands were taken over, without payment, and the Indian was, usually, summarily exterminated if they fought to keep their lands and possessions. The United States Government did little to help the native populations. Instead, the Government sent in troops to quash any Indian resistance. Eventually, most of the Indians were relocated on reservations, so that they could be managed, while the wealth of gold and silver was being mined from their homelands.

The California Indian was finally resigned to living on inhospitable lands, usually far from the areas of their tribal homes. They learned to survive on the meager handouts that the United States Government handed out to them.

During the Post-Contact Period, the California Indian never regained an intertribal exchange system and fared worse than those Indians in Oregon and Washington, as noted in the following section.

6.5.3 Oregon and Washington

6.5.3.1 Introduction

Unlike California, the Indians of Oregon and Washington were not subjected to a mission system to control them. It is unknown why the Spanish chose not to extend their domination there after the initial eighteenth century visits. However, it is with the fur companies that most of the Indians prospered. The Hudson's Bay Company, in particular, did much to influence the exchange systems of these Indians. The following sections deal with the aftermath of first contact and how the Indians, of this region, learned to integrate the European-made goods into their world.

6.5.3.2 Exchange System

The Northwest Coast Indians initially exchanged sea otter pelts, for trinkets, with the Russians and the Spanish in the 1730s. After the 1770s the Indians exchanged the pelts almost exclusively with the Spanish, who had introduced the pelts to the Orient after their initial contacts (Swagerty 1988: 356). Jean-Francois de Galaup de La Perouse wrote of the Yakutat Tlingit in 1786, stating that these Indians were "well accustomed [to] bargain[ing] with as much skill as any trades-man of Europe" (De Laguna 1972: 116; Cole & Darling 1990: 119). Meriwether Lewis' 1804 to 1805 journals depicted the Chinook Indians as "great hagglers in trade" (Thwaites 1904: 311). Later, the Indians would be trading with the Hudson's Bay Company, but this would occur in the early 1820s (Swagerty 1988: 356).

George Simpson, who was the governor of the Hudson's Bay Company's Columbia Department, wrote about the Chinook Indians in 1824, stating, "In short, they are quite a Nation of Traders and not of Hunters" (Merk 1968: 98). The Chinooks had been the main Columbia River traders prior to the Europeans. When the Hudson's Bay Company established Forts Vancouver, Nisqually, and Longley, their position as mainline exchangers was diminished (Cole &

Darling 1990: 125). This occurrence was caused because the Hudson's Bay Company paid the Indians for the furs directly and thus took the Chinooks out of the loop, so-to-speak, making the Chinooks redundant in the dealings with the other Indian tribes.

The Hudson's Bay Company had a difficult time getting the warring tribes to settle their differences in the early 1820s. An 1818 incident between Iroquois and Cowlitz Indians effectively shut down trade on the Lower Columbia River until 1825. This was the year in which Fort Vancouver took over as headquarters for the Columbia Department (Ross 1956: 129-134; Ruby & Brown 1976: 165-166; 1981: 30-31, 42, 50-51; Swagerty 1988: 365).

In general, the impact of the fur trappers to the Pacific Northwest destroyed the Indians way of life by replacing the Indians' exchange system. Prior to the Europeans, the Indian hunted, gathered and practiced in an intertribal exchange system for their subsistence and economics. The Europeans made the Indians dependent on them by exchanging European-made goods for what the Europeans wanted - namely, pelts and skins to transport to Europe, manufacture into fur-garments and sell to the citizens of Europe, albeit at a huge profit. The Indians were seemingly overwhelmed by the European items and sacrificed their subsistence strategy by giving the Europeans what they wanted. This exchange of furs for European goods greatly diminished the Indians natural food producing resources. The European-made items were more durable than what the Indian could make out of the natural surroundings. It became easier to give the requested pelts and receive goods in exchange without any physical labor outlay. As will be seen later, these European-made goods gave way to the Indian-made items once again.

The European-made goods enhanced the Potlatch Ceremony for those tribes which participated in this ritual. The following records some of the more exotic ceremonies, from prior to 1849 through 1950.

6.5.3.3 Post-Contact Potlatch Ceremony

The largest Potlatch, prior to 1849, was said to have been valued at 320 blankets - this value is determined by the cost of a Chilkat blanket, made by the Tlingit tribe. Each blanket was designed with the owner's crest on it (Opitz 1994: 5, 8).

The Canadian Government outlawed the Potlatch in 1885, but it continued as an "underground" ceremony. The government had heard that some of the ceremonies were being used for initiation rites. One of these rites apparently was called the "dog-eating" rite. The details are sketchy, but it was believed that dogs, as well as humans, were used to mutilate the arms and legs of the initiates and may have included dogs, and humans, eating corpses. While there was never any direct evidence that flesh was being ingested, the thought that the ceremony could have been possible was enough for the government to react to end the Potlatch process. The Indians had stated that the ceremony was their "method [of] showing [their] good will toward one another, and [they] believe[d] that it [was their] right as much as it [was] the right of [their] white brethren to make presents to each other" (Opitz 1994: 6). The law was difficult, if not impossible, to enforce during the next decade. In 1890, using the same value system as previously mentioned, a Potlatch was given which was worth 18,000 blankets. The government created an amendment, in 1895, which allowed the Royal Canadian Mounted Police to "use circumspection, exhausting every means of bringing the Indians to abandon the custom, through moral suasion, before instituting prosecution" (Opitz 1994: 6-7). Again, even with this softening of the law, the Potlatches still continued. A number of young girls were sold, for $300 to $1200 each, at a Potlatch in 1906. Most were used as prostitutes (Opitz 1994: 5-6).

In the early 1920s, the ceremony became greatly reduced and began to fade. The last large ceremony, prior to government intervention once again, occurred on Village Island, in 1922. Emma and Dan Cranmer held a

"repurchase" Potlatch. They paid off all their outstanding loans, mainly to their families, with copper changing hands several times. Next, the couple handed out an additional "24 canoes, three pool tables, four gas boats, dresses, shawls, bracelets, sweaters, shirts, blankets, gas lights, violins, guitars, basins, glasses, washtubs, teapots, boxes, 300 oak trunks, sewing machines, gramophones, bedsteads, bureaus, and between 400 and 1,000 sacks of flour" (Opitz 1994: 7). The Royal Canadian Mounted Police arrested the Cranmer family and their guests. As a result, the Indians signed another agreement to end the Potlatch and turned in all their coppers - a source of personal wealth - and dance costumes. In 1933 and 1936, 33,000-blanket ceremonies were held. In Alert Bay, during 1950, $15,000 changed hands during a local Potlatch. The Canadian government abolished the law in 1951, once again allowing the Potlatch Ceremony to legally take place (Opitz 1994: 7).

The values for the Potlatch items are noted in the following section.

6.5.3.4 Potlatch Item Values

As previously mentioned, the Tlingit's Chilkat blankets, also known as ceremonial robes, were the items of most value in both pre-contact and later Potlatch ceremonies. Not only was the owner's crest on it, but is was made from the wool of three mountain goat skins. It was stated as being worth the furs of two black foxes - a rare breed, thought to have died out at, or prior to, initial European contact. Four of these blankets would have bought a slave. These blankets were also used as a mark of personal wealth, which may have been converted to a monetary value after the appearance of Europeans. In post-contact times, cheaper wool blankets, which were white in color, were valued, by the Kwakiutl, at fifty-cents each (Opitz 1994: 8-10). Taxay (1970, in Opitz 1994: 10) stated that the Hudson's Bay Company purchased 200 square miles of Canada, between 1849 and 1850, for 950 blankets. Two of these blankets would buy a gun, while three blankets

were equal to one double-sized blanket. A sea-otter skin was worth twelve blankets. The value of the Hudson's Bay Company blanket decreased over time. In 1849, a single-size blanket was worth fifty-cents and a double-size one was worth $1.50. By 1888, the double-size blanket was worth $2.50, but could only be used for $1.50 in trade. As a result, the blankets were gradually replaced by hard currency, when dealing with non-Indians, although the blankets were still being used in Potlatch ceremonies. After 1859, a single-size blanket was worth either one bearskin or a land-otter skin. For two blankets, a person could receive one beaver skin. Three blankets could be exchanged for either one fox or lynx fur, while thirty blankets could be exchanged for a mink fur (Opitz 1994: 9-10).

Prior to the early twentieth century, glass beads were normally used in these rituals. However, by this time, the "blue" color appears not to have been in the majority, as it may have been earlier in the Contact Period. In addition to blankets and furs, or hides, canoes were initially used in Potlatches, and then as an exchange item with Europeans. A large canoe could have been worth as much as $150 or between ten and twenty slaves. As previously mentioned, coppers were used as a source of personal wealth, as well as being a source for Potlatch exchange. These native-made copper shields, also known as "Chief's coppers," "tinneh," or "tinnah" (Photograph 6.1), when given as ceremonial items, demanded that a premium of 100% be returned to their initial owner. It was considered a sign of being poor, and thus shameful, not to accept a shield. The value increased with every exchange of it. On the other hand, should the shield be spent, its value would decrease by 50%. These coppers were in use as late as the 1930s, after being initially outlawed in 1898. Values, and weights, of these copper items fluctuated through time. Native coppers, or those shields made from local minerals found around the Copper River and White River Valleys, were valued higher than those which were made by Europeans. These latter items were often devalued by more than 95% when used in

association with the native-made shields. Ethnographic evidence suggests that some early coppers may have been valued at 7,500 blankets, worth approximately $3,750, and may have weighed as much as ninety pounds, while another copper had a monetary value of $20,000. During 1866, a copper shield bought fifteen slaves and 200 blankets, while another one was worth twenty slaves. Two years prior to the shield's demise, one accounted for 25,000 blankets and yet another shield brought 33,000 blankets. Additionally, as has been stated in what may be deem to be the "egotistical-destructive" Potlatch, a person who disregarded wealth may cut up, or otherwise destroy, a shield. With the shield's destruction, the value of it is also destroyed. Wealthy tribal chiefs had been known to have owned as many as thirty-six shields at a single time, with each shield being worth approximately 14,500 blankets. This made the chief the owner of about 522,000 blankets, or about $261,000, and did not account for the other items of value in his family. Not all shields were heavy and clumberous, however. The Kwakiutl wore smaller ones, those that were three to four inches long, on their costumes, while larger ones, from five to seven inches in length, were worn on fur headdresses. Currently, there are about 135 copper shields on display in museums. However, it is estimated that none of these are native-made (Opitz 1994: 10-12).

Slaves were an important Potlatch item given out in pre-contact, as well as post-contact ceremonies. As late as the 1840s, it was estimated that a full third of the Indians in the local Tlingit area were slaves (Opitz 1994: 13). Kirk (1986, in Opitz 1994: 12-13) states that a high-ranking slave, or a person who was once either an opposing tribal chief or a member of a ranking clan, could be ransomed. Kirk further indicates that ethnographic accounts have stated that slaves, while usually treated fairly well, could be sold, ransomed, given away (as in Potlatches), or killed by their owners. At times, upon the death of a slave owner, all of his human-property were killed so that they could attend him in the afterlife. The usual, pre-contact, exchange

amounted to 140 feet of dentalia and ten sea-otter skins. The ten skins could be replaced by 100, or more, wool blankets. As with copper shields, slaves had various values placed on them through time. Most of the intertribal warfare was created just to obtain slaves for later Potlatches. The Tongass tribe gave twenty slaves to the Stikine tribe as the result of one of these tribal conflicts. Generally, a slave was based on the supply and demand, the person's age and sex, and the ability to perform the desired task. As a result, in one tribal area, a man may have been valued at twenty pounds of copper or six-quality furs from the sea-otter, while a woman was valued at half as much copper or five regular sea-otter furs. In another tribe, the man might have been worth one Chilkat blanket, thirty fox skins, or ten moose hides. In 1860, a male slave was valued at 40 blankets, or $200, and twenty slaves would be worth a medium-size copper shield, while forty slaves would have been equivalent to a large shield. Twenty years later, the slave would have been worth between thirty and sixty blankets and most chiefs had as many as 100 slaves (Opitz 1994: 12-13).

6.6 Overview

This chapter has dealt with the Indian economics from Pre-Contact through the mid-twentieth century. While the Spanish controlled the California Indian's economy, by placing them under the mission's control, the fur companies treated the Oregon and Washington Indians as partners in trade. It has been demonstrated how certain groups of Indians fared through the different periods and how their respective economies were enhanced. Accordingly, the Potlatch Ceremony has been used to understand the dynamics of European contact on this ritual and how it, too, was enhanced. So, too, was the way in which glass beads were used, primarily, by the tribes of the Pacific Northwest. In the end, however, the Indians of the Pacific West Coast were displaced by their captors, in California, and by their business partners in Oregon and Washington. When the

Americans took control of California, in 1848, the Indians were herded onto reservations so that the Americans could possess their lands for no payment and to remove the gold ores from the earth. Oregon and Washington Indians had seen the influx of American settlers two years earlier. Like their California neighbors, the Oregon and Washington Indians were placed on reservations so that their presence would not interfere with the American expansion to the Pacific Ocean. Although some Indian tribes flourished by European contact, the end result was that all Indians eventually lost everything - their lands, rights, and cultural identity - because of those first European contacts.

7.0 Archaeological Site Data

7.1 Introduction

This chapter deals directly with the dating of archaeological sites in California, Oregon and Washington, by the use of when types of beads were known to have been available.

Unfortunately, not all the sites have had extensive laboratory analysis carried out on glass beads which may have been found. As the Oregon State Preservation Officer indicated (personal communication with the Oregon State Preservation Officer in 1995), "Glass beads are not normally recorded and no information is to be found in our (computer) records." This lack of data has produced only those site records shown in this chapter, which contain evidence of glass beads, as well as other European-made items.

At the end of each respective state is a discussion which attempts to place each site into a frame work, based on Table 2.1, for which the site probably was in use.

7.2 California

7.2.1 Introduction

Records of European conquests of California, especially those of Spanish origin, suggest that hundreds of thousands - if not millions - of glass beads were brought into the area and given to the indigenous populations in an effort to maintain control and effect trade. But, where are these beads today? One reason for this lack of archaeological data is that in the screening process prior to the 1970s, only one-quarter inch mesh, or larger, was used on most sites. Many of the beads brought to California were smaller than one-quarter inch and simply fell through the screens and into the dirt pile, which was eventually used to backfill the site. This is not to say that no beads were found during the years preceding the

1970s. Quite the contrary, but only since the 1970s has one-eighth inch screening been used with any significant results in the quantity of beads recovered (Table 7.42). How many beads were lost in early screening processes cannot be determined accurately.

There are many sites in California that have been excavated and several of those sites are connected with the missions. These missions, for the most part, had large contingents of native peoples in attendance. In northern California, trade was likely between the tribes and traders from Oregon and Washington, but the southern part of Alta California, and especially those areas connected with the mission system, prove that the Spanish were giving glass beads as a prelude to colonization and missionization, thus using the beads as objects of pacification. The Indian-European-American interaction is recorded in the archaeological record in sites ranging from middle to high-southern, coastal California as well.

7.2.2 California Sites

7.2.2.1 Clear Lake Burial Complex

As the literature points out, glass beads were found at the Clear Lake burial complex (Men-500), located in Mendocino County, northern California. There is no clear date for the site or an indication as to the types of glass beads by which to indicate a possible date for the burials which are in association with those beads. The exhumed burials appear to have been of the Christian-style, with the body loosely flexed. In addition to the beads, the grave goods consisted of large chert blades, magnesite beads, slab mortars, small, triangular, side-notched points, and the desert side-notched variety (Elsasser 1978: 49).

7.2.2.2 Mission San Buenaventura

At the Mission San Buenaventura, in Ventura County, glass beads were found associated with burials belonging to the prehistoric Chumash Indians. Evidence of Indian

occupation is not substancial at this site, but there are enough artifacts and midden deposits to suggest that the Spanish and Indians used asphaltum as an adhesive and as a waterproofing material. The asphaltum was used for building and basketry. In addition to the glass beads, there were a number of large, crude shell beads of an unknown type (Greenwood & Browne 1968: 17-18, 40; Schuyler 1978: 70). Gibson (1976) analyzed the 4,302 glass beads (Tables 7.1 & 7.2) found at this site.

7.2.2.3 Mission San Luis Rey de Francia

Father Anthony Soto (1960 and 1961) excavated sites at the Mission, in San Luis Rey, north of San Diego. Between 1956 and 1960, glass beads were found in the wash area and in the area where the soldier's barracks had been located. Additional artifacts included bone gambling sticks, pottery, shell beads and arrow straighteners (Schuyler 1978: 72-73). The type these beads is unknown.

At the San Luis Rey chapel, at Temeku, artifacts included crude fire hearths, a pit house, 754 whole or fragmented stone projectile points, a crucifix, four glass beads of unknown type, a painted clay bead, a glass projectile point and mission tiles (McCown 1955: 15, 32).

7.2.2.4 Deer Springs

In northern San Diego County, Dennis O'Neil had been in charge of excavating the Deer Springs site from the early 1980s until 1991. Operating the site as part of the archaeological field training course for Palomar College (Map 7.1), numerous glass beads have been found. The site, located on a southern, sloping hillside face, is part of an extended, inland Luiseno habitation and cremation burial area, with an associated rock art monolith. Most of the beads (Table 7.3), found to date, have been in the range of light blue to turquoise in color and between one-eighth inch to one-quarter inch in size (Photograph 7.1). A few other colors are also recorded. A few of them have

been fused by extreme temperatures, such as through cremation or simply dropped in a fire hearth.

The site was excavated from the early 1970s through the early 1990s. As a result, the excavated portion of this very large Luiseno habitation site has been approximately fifty-percent completed.

The glass beads, found at Deer Springs, would have probably been obtained through the Spanish mission at San Luis Rey. In addition to the beads and crematory evidence found, the other artifactual material consisted of a rock monolith, covered with pictographs and petroglyphs; bone beads; steatite disk beads; olivella shell beads; flakes of obsidian, chert, and basalt, andesite, quartzite - both milky and clear or crystal - chalcedony, jasper and shale; Tizon brownware pottery; bone awls; faunal remains; lithics consisting of scrapers, manos, groundstones, bifaces, and hammerstones; metate fragments and fire-cracked rocks; a steatite pipe; an arrow-shaft straightener; and many various types of arrow points. Out of almost fifty excavated units, 31 units (62%) contained a total of 116 glass beads (Table 7.4).

7.2.2.5 Palomar College Site #3 (PC-3)

This site is one of three which have been located on the campus of Palomar College, in San Marcos, California (Map 7.2). Of the three sites, this is the only one to have produced a quantity of glass beads. These beads were, for the most part, found within the vicinity of human burial remains. The site consisted of an area of midden covering approximately 320 square feet at the southeast corner of the campus. It was characterized as being at the crest of a small ridge, with associated bedrock milling features. Approximately 64% of the area was excavated with the exposure of 102 units (Map 7.3). Within these units, 113,056 artifacts were collected. Of this total, 65,476 (57.9%) were prehistoric and early historic artifacts, in addition to manufacturing waste (O'Neil 1982: 1, 21).

The Prehistoric Phase artifacts suggest an occupation beginning as early as approximately 8,000 BC, while the Historic Era begins with the Spanish missionization in 1770 (O'Neil 1982: 21). Non-historic artifacts included flakes of basalt, andesite, quartzite - both milky and clear or crystal - chert, chalcedony, jasper, shale and obsidian; hammer-stones; utilized flakes; scrapers; choppers; projectile points; knives; a crescentic; manos; metate fragments; bowl or mortar fragments; pestles; a shaman's sucking tube; a steatite bead; pottery sherds; smoking pipe fragments; figurine fragments; spent cores and cobbles; and bone artifacts consisting of hair pin fragments, awl fragments, tube beads, from the Historical Period, and antler tip flaking tools. In addition to the 66 glass beads found at the site, there was a fossilized shark's tooth and miscellaneous modern historical trash (O'Neil 1982: 23-24).

Of the 102 units excavated, the 66 glass beads were found in nine (8.8%) of the units (Tables 7.5 & 7.6). Of these nine units, only unit South 31/West 6 had the majority of those beads, with 38 (60%), and were associated with a burial.

One of the beads found was red. This bead (Photograph 7.2) is an unique specimen insofar as it is much larger than the rest of the beads and because of its color. While the majority of the beads are of the seed-size variety, the bright red bead is a "pony" or "Padre"-sized bead, in a doughnut-shape. In this case, a "Padre" bead, although large and red, is not necessarily a rosary bead. Personal experience shows that the typical missionary rosary bead would have been faceted and perhaps larger still than the bead found at this site. The bead, itself, is unique, as is the yellow specimen found. While the yellow bead seems to have been associated with the burial site, the red specimen was found a substantial distance from the burial and in a unit where it was the only bead recovered. It is unlikely that this red variation was moved by rodents from the burial site to its excavated unit, approximately fourteen meters north and six meters east.

7.2.2.6 Santa Ines (Ynes) Mission

Ross (1989b: 149-161) provides the analysis of glass beads from the excavation site, located north of Santa Barbara and approximately twenty miles inland from the Pacific Ocean. The excavations, under the supervision of Julia Costello, were completed between 1986 and 1988. A total of 961 glass beads, representing twenty-eight types and eleven styles, were found to have been manufactured by four methods.

Drawn beads accounted for 936 beads. Of this total, nine beads were of single facet and layered, ranging from short to long, and six-sided. Bead colors were represented by transparent gray and transparent dark purple. Additionally, 916 beads were undecorated, short, single-layered, and hot-tumbled. These beads are often referred to as seed, pound, or embroidery beads. This category represented the following color schemes: transparent clear, which were fragile due to deterioration; translucents in the colors of brownish-yellow, green, bluish-green, and purple; while opaques were in colors of white, black, and bluish-green. Seven beads were typed as being single-faceted, multi-layered, short to long in size, and six-sided. These beads are more commonly known as "Russian" beads, but are thought to have a central European origin. One color scheme for these beads was transparent purple/opaque light-purple/transparent purple. The other color scheme was transparent gray/transparent white/gray. One final drawn bead was classified as being undecorated, double-layered, short, and hot-tumbled. Historically, this type of bead is referred to as seed, pound, or embroidery. The example here was opaque yellow/opaque light-yellow (Ross 1989b: 149-153).

There were twenty wound beads, commonly noted as necklace beads. Several types and classes were analyzed. Fifteen beads were undecorated, single-layered, and spheroidal. These beads were found in the following colors: transparent light yellowish-green; non-decorated of

white, stained light yellowish, green, blue, purple with a white surface deposit deteriorating the bead, dark purple; and a quite deteriorated opaque black bead. Several of the wound bead types were found to be too deteriorated and broken to be analyzed. Another class was undecorated, single-layered, and oval. There was one bead color: opaque blue. Two beads were classified as being undecorated, single-layered, and conical. These were represented by two translucent colors: dark red, with surface deterioration showing a brownish color, and blue with a surface deterioration composed of a brownish-white color. The final class of wound beads were represented by two undecorated, double-layered, spheroidal types which were a composition of wound glass/wound glass. The colors were translucent red/opaque white, with the red having deteriorated to a brownish color; and possibly an opaque red/opaque yellow. Again, the red surface had deteriorated to a brownish color (Ross 1989b: 154-155).

Two specimens of mold-pressed beads provided one class with two color schemes. Each bead was faceted, single-layered, and spherical, with colors of opaque black and translucent red (Ross 1989b: 156).

The final three beads were of the blown variety with three different classes, each with its own color. The first was a faceted and spheroidal type which was opaque to slightly translucent red with seventeen faceted surfaces. These surfaces formed nine faces ground around the circumference. The second class was faceted and oval, or olive-shaped. It was a translucent purplish-red color with eighteen faceted surfaces, which formed six triple-faceted faces. These faces were ground around the circumference of the bead. The final class was decorated and oval. The color consisted of a transparent purple with translucent white stripes on the exterior surface (Ross 1989b: 157).

7.2.2.7 Malaga Cove

This site is located near the Santa Monica Bay, in southern California. More accurately, Malaga Cove is located in Torrance, which is between Redondo Beach and Palos Verdes. The site was found and surveyed in 1930 and consisted of a sand dune bluff, at an elevation of 223 feet above sea level. Excavation was completed in 1937 and produced a stratified site. This stratification was two-fold. The top layer, covering three levels, consisted of eight feet of sterile sand forming the dune. Level four was the beginning of a gray sand layer, fifteen feet deep. The only beads found in the site were a few nineteenth century Spanish glass beads, located at the very top of this gray level (Walker 1963: 30, 32, 68).

7.2.2.8 Mission San Diego de Alcala

The mission was constructed in 1774, although an earlier compound had been erected in 1769 closer to the heart of the Spanish settlement. The new mission was located in the Ipai-Tipai community of Nipaguay (Moriarty & Weyland 1971: 124-126). This Yuman Indian group was formerly known as Diegueno. Archaeological evidence included European artifacts such as glass beads, although the types and colors were not recorded in the site data, and floor tiles with Indian "graffiti" (Moriarty 1971: 22).

7.2.2.9 Mission La Purisima Concepcion

This site has been identified as being the clearest example of Spanish and Franciscan influence on the California Indians, despite not having all that many artifacts to work with. The main reason for the lack of site material is due to local residents have surface collected the area for years and the provenience has been lost. The archaeological remains are found at two different sites. The first site, originally called La Purisima Vieja, which is located in present-day Lompac, was used from 1787 to 1812. It was destroyed by an earthquake. After the destruction of this first mission, the Franciscan

missionaries moved the mission inland about four miles and renamed it Mission La Purisima Concepcion. This newer mission was operational from 1812 to the 1840s (Schuyler 1978: 70-72).

Archaeological excavations began in 1934 and continued until the early 1940s. There were three main excavation areas: (1) the neophyte occupation area; (2) the cemetery; and (3) the Indian barracks. The neophyte area was situated on a hillside to the west of the mission-proper. The area had been comprised of four structures: a mill, another building and two adobe huts. Between these dwellings was a Chumash Indian habitation site. Artifacts included cooking pits, a bronze crucifix, pestles, mortars, manos, an arrowshaft straightener and a string of both glass and shell beads. Further artifactual material included hearths, metates, pottery, shells, clay pipes and the original watering system (Schuyler 1978: 70-72).

The cemetery, which contains about 1500 burials, has had only seventeen exhumed. Of those, only one, an infant burial, was found to have a single blue glass bead possibly associated with it. The burials were all in a supine position and exhibited the Christian practice of burial (Schuyler 1978: 70-72). Perhaps more of the burials had contained glass beads, but they were not exhumed. Although it seems likely that more of the burials should contain these beads because of the relative long period which the Indians spent with the Christian missionaries and the fact that the Spanish used glass beads in their missionization and pacification processes. King (1981: 17) speculates that as the Indians became more incorporated into the Spanish mission system, the original uses for glass beads dissipated and the use of the shell bead made a comeback.

The Indian barracks area consisted of two buildings. One of these buildings measured 554 feet by 25 feet and had been subdivided into twenty rooms. Artifacts excavated included fire-hearths; shells; glass and shell beads; iron tools; metates; glass projectile points; basket

impressions; fragments of steatite, chert and porcelain; roof tiles; asphaltum; and faunal bones (Harrington 1939: 1-2; Schuyler 1978: 72).

7.2.2.10 Mission Nuestra Senora de la Soledad

This mission is located in the Monterey area and was initiated in 1791. Although only a small mission, serving about 700 Cholon Costanoan Indians, it lasted until 1802 when an epidemic severely declined its population. Excavations took place between 1954 and 1967. The cemetery has been greatly disturbed, but artifacts included Mexican earthenware, Cantonese porcelain, pottery sherds, projectile points and glass beads. Under the original church floor were two coffins. The two skeletons each bore evidence of rosary beads around their necks (Schuyler 1978: 73). Details of these artifacts, especially the glass beads, are not available.

7.2.2.11 The Molpa Site

The Molpa site was the pattern site for determining the division between the San Luis Rey (SLR) Complex phases of SLR I and SLR II, or between the Late Prehistoric (SLR I) and Proto-Historic (SLR II) Periods. San Luis Rey I is basically described as the non-ceramic phase, while San Luis Rey II accounts for the pottery-initiated phase. Earlier excavations (Eberhart 1952; Meighan 1954; True 1954, 1957, 1958; True & Meighan 1959; Warren & True 1961; Warren et al. 1961) were primarily targeting the existence of the differences between the San Luis Rey I and II phases. The later archaeological work concentrated on determining the boundaries between the San Luis Rey Basin Indians (Luiseno) from that of the Yuman III Complex (Diegueno Indians). For this reason, the Molpa site (Map 7.4) was excavated in the early 1970s (True et al. 1973: 10-11).

The physical location of the site is at an elevation of 2,500 feet in northern San Diego County. The habitation area included two small knolls along a low ridge and

overlooked an open grassland area. The midden area covered approximately 40,000 square yards. The depth of the midden may be associated with erosional processes from the ridge area (True et al. 1973: 13).

Unfortunately, while there were numerous bedrock mortar and rock art features, in addition to more than 886 artifacts recovered (similar to those found at the PC-3 site), only two glass beads (<1%) were found. The beads were found during the surface collection phase of the excavation. It is unknown from what area of the site they were collected, but the beads represent two known types. One of the beads is described as being disc-like, while the other is a tubular design (True et al. 1973: 47, 68).

7.2.2.12 Joshua Tree Cremation Sites

Warren (1992) attempted to relocate (Map 7.5) the eleven Joshua Tree/Campbell cremation sites originally discovered by Elizabeth and William Campbell. Of those eleven sites, only eight held cremations and two of these were not found; two were found to be impacted; and the balance were found intact. Only three of the remaining four cremations yielded 565 glass beads (Tables 7.7 & 7.8) (Warren 1992: 4).

7.2.2.13 Owens Valley Sites

Twenty-three sites were identified, in 1993, by Delacorte and McGuire within the Owens Valley (Map 7.6). The valley extends north from the China Lake area to just south of Bishop and is bordered by the Sierra Nevada Mountains, to the west, and the Inyo Mountains, on the east. Of these sites, only four proved to contain glass beads. The 166 beads connected with these sites were recovered at site trinomials identified as CA-Iny-124 (2); CA-Iny-291 (60); CA-Iny-3809 (103); and CA-Iny-3812 (1) (Delacorte & McGuire 1993: 89). Unfortunately, the investigators did not choose to describe the quantity of colors per bead types found (Table 7.9). Of note, though, are two compound beads, generally referred to as

"Hudson's Bay" beads. These "red/white" and "red/green" varieties are probably Cornaline d'Aleppo beads, while the "red/pink" variety may also be one. The authors have given a representative date range of 1800 to 1900 for the site (Delacorte & McGuire 1993: 91), which is well within the time frame for the manufacturing of this style of bead.

7.2.2.14 Cuyamaca Rancho State Park Sites

True (1970) surveyed many sites and excavated a major one within this 20,000 acre park (Maps 7.7 & 7.8). The results of his survey listed more than 150 sites, which he classified into three categories: village sites; seed grinding stations; and pre-ceramic/workshop camps (True 1970: 1, 3, 5). The primary site, designated CA-SDi-860, featured three distinct areas (Map 7.9): (1) a habitation zone; (2) milling area; and (3) the burial complex. It is from the last area where three blue glass beads were found. True did not analyze these beads except to indicate that they were small, round and smooth (True 1970: 76). It may be thought, however, that these beads would have been the same style as given to the other local Indians by the Spanish - namely, small, drawn, seed-like beads in a light blue, aquamarine, or turquoise color.

7.2.2.15 Fort Ross

Lightfoot, Wake and Schiff researched the archaeology and ethnohistory of Fort Ross in 1991. Their initial report is comprehensive insofar as it concentrates on the Pomo, Coastal Miwok and Native Alaskan Indian encampments scattered around the Russian fur-gathering site (Maps 7.10 & 7.11). While their study accounts for many artifacts recovered and studied, only a relatively few sites produced glass beads (Maps 7.12 to 7.14). For their preliminary study, much of the historic material was not reported. A new, and more comprehensive, work on these sites is due to be published in the future. The beads for this second study have been analyzed by Lester Ross

(Table 7.10). Perhaps the next volume will shed some light on more accurate descriptions of the beads recovered.

7.2.2.16 Mission Santa Clara

This mission was located in Santa Clara, although it had been moved several times during the Spanish Period (1769 to 1824). The mission was originally to be located in the town Castaic, Los Angeles County, but the Spanish deemed that it should be built in the San Francisco area instead. Father Tomas de la Pena established the mission on January 12, 1777, at the south end of San Francisco Bay, beside the Guadalupe River (Bone 1975a: 2).

At this mission, there were two main areas of excavations. Both areas involved multiple sites where the mission had moved: the third site, at the corner of Franklin and Campbell Streets; and the present site (Table 7.11). The movement of the mission appears to have been created by fires, although Bone's report is only significant to twentieth century fires. Also apparent, from the record, is that numerous artifacts, including glass beads, were collected by the clergy, and others, during each move. Unfortunately, any relevant documentation has been lost. During this century, the three major bead collections were gathered in 1911, 1924, when numerous burials were removed, and 1926, when a fire gutted the church (Bone 1975a: 10).

The bead analysis was started by Bone (1975a) and given a preliminary status. As with the Mission San Jose bead assemblages, Bone used his own typology descriptions to analyze the beads gathered at these two sites. Cane ("C"), or drawn, beads represented 94.4% of those recovered. Wound ("W") beads accounted for 2.6%. Pressed ("P") beads realized 2.3%. Faceted ("F") beads accounted for 0.8%, as did blown ("B") beads (Bone 1975a: 20-22). The color scheme, based on Bone's typology, resulted in the following colors: cobalt blue, copper blue, green, white, clear, red, black, brown, amber, yellow, orange, gray and purple. Of these colors, Bone (1975a: 23-

24, 29) described that 71% were white, clear and red; more than 28% were blue-green; 0.5% were yellow-amber; while the other colors made up the balance.

In 1988, Lester Ross recorded the glass beads found at the third site. His analysis, of the 234 beads, provided a total of thirty-two different types, involving four classes of styles and represented three manufacturing techniques (Tables 7.12 & 7.13).

7.2.2.17 Mission Santa Cruz - Holy Cross Church

The Holy Cross Church was built in 1886, near the mission grounds. In 1993, an excavation of the foundations revealed fourteen intact glass beads and one glass fragment (although nineteen colors are described in the text). While these beads were found in association with the mission, no representation is made which would indicate that the beads were associated solely with the mission. Additionally, Olivella beads and reddish brown-ware were found in the excavated units (Ross 1995: 1).

The records are unclear as to what bead colors were represented at this site. The beads (Table 7.14) represented the drawn variety with three different types. One bead represents a monochrome, cylindrical, enamelled bead with chopped ends. Eleven other beads are described as being monochrome and hot-tumbled with chopped ends. Two polychrome beads with a hot-tumbled finish represents the last type (Ross 1995: 3-4).

Further studies of this site have been conducted by Allen, whose work (1995: 212-220) was based on 205 of more than 1,100 beads found through archaeological excavation. Her primary analysis is only on 87 of the beads which are clearly from the Mission Period (ca. 1810 to 1824) (Tables 7.15 & 7.16), while her secondary analysis was connected with the beads from the Post-Mission era (1824 to 1834). Of the remaining Post-Mission beads, Allen (1995: 217-218) appears to have analyzed 155 (Tables 7.17 & 7.18).

The comparison (Table 7.19) for the primary bead color scheme during the Mission Period, as well as the Post-Mission Period, was white (including several varieties); followed by blue-green (which may represent older typologies which state the color as aquamarine and turquois). There were many more color schemes available after 1824.

7.2.2.18 Mission San Jose

This Spanish California mission site (Map 7.15) is located behind the present Saint Joseph's Church, in Alameda County. Bone's (1975b) bead analysis really centers on his desire to provide a new typology for beads. However, it was not widely accepted as it described beads strictly by letters denoting the manufacturing type, thus eliminating, or severely limiting, other bead attributes.

The beads found at the mission, and typed by Bone, are generalized by manufacturing style; percentage of styles found on-site; and color schemes, but without quantities represented. Bone (1975b: 16-18) states that cane ("C") beads (drawn) represented 89% of those found; faceted ("F") beads accounted for 5%; wire-wound ("W") beads accounted for 3%; pressed ("P") beads were seen in 2% of those recovered; and blown ("B") beads represented 1% of the beads found. The representative colors were (after Bone 1975b: 20): cobalt blue, copper blue, green, white, clear, red, black, brown, amber, yellow, orange and gray.

Dietz (1983: 119, 140, 162-163, 187, 196-197) re-investigated the material that Bone worked on and then reported on his own final archaeological investigation for the mission excavations. In addition to 569 glass beads recovered (Tables 7.20 to 7.25), artifacts included seventeen fragments of an unidentified metal type; a light bulb base; a 22-calibre lead bullet; a United States penny (pre-1958); clam shell disk beads; Olivella disk beads; jute, cotton and wool fabric; a tobacco bag; a glove; ribbon; netting; wire; square nails; a white clay tobacco pipe

fragment; bottle glass; window plate glass; dark blue, Staffordshire bowl fragment; and a cast-metal plate.

7.2.2.19 Mission San Antonio

The Mission San Antonio is located along the coast, about midway between Monterey and San Luis Obispo. It was initially excavated by Meighan between 1956 and 1964, then later by Hoover and Costello in 1976 and 1978.

These later excavations, of the neophyte living quarters at the mission, produced fragments of bottle glass, Chinese porcelain, European ceramics, metal artifacts, groundstones, flaked stone, faunal remains, and a brick and tile kiln (Hoover & Costello 1985: 10). It is with Meighan's excavations that the glass beads were recovered (Tables 7.26 & 7.27.)

It is unclear, from this site, why the yellow-brown beads apparently were more popular than the blue variation. Perhaps this yellow-brown color was introduced at a time when blue beads were not plentiful, but this is only speculation, as there are no accounts from which to ascertain a proper conclusion. The yellow-brown color has no known significance within the Indian world.

7.2.2.20 Western Great Basin Sites

Arkush (1990) recorded the sites from which glass beads were removed in the area of the Great Basin (Map 7.16 & Table 7.28). Most of the Indians, of this region, were nomadic groups who had only brief contact with Europeans, if any. This area comprises the area between east-central California and western Nevada, with most of the sites in California between the Sierra Nevada Mountains and the Inyo Mountains.

7.2.2.21 Seccombe Lake Park Historic Cemetery

This San Bernardino site involved the removal of several human burials. Only one of the exhumations contained glass beads, but another grave had a button-bead within close proximity to the excavated unit. The 304

beads, and the non-analyzed fragments, found in Burial #4 all represented the "seed" type and most likely came from a necklace. Ross (1991) analyzed the beads and found that they represented two types, classes and manufacturing techniques. The bead, or button, from Burial #3 is described as being a mold-pressed, simple, monochrome, hot-tumbled, which is both flat and square. The Burial #4 beads represent these two types: tubular, drawn monochrome, with a tumbled, or fire-polished, finish; and undecorated, single-layer, short and hot-tumbled. There were two major and one minor colors represented. The majority color was white, followed by blue, while only two green beads were noted (Ross 1991: 4-5).

7.2.2.22 Yucaipa Rancheria

The Yucaipa Rancheria site comprises four prehistoric and historic components which are located in San Bernardino County. Hicks (1958: 2, 35-36) and Martz (1977: 3) identified the early Native American part as being the Milling Stone Horizon, with a temporal date of about 4,000 to 1,000 years B. P. They also found that the second area was a Late Prehistoric to Proto-Historic site, which was identified as a part of the Serrano Indian village, having a temporal range of approximately 1,000 to 200 years B. P. This represents the Late Prehistoric Horizon. The third area of the Serrano village site represents the Proto-Historic Period between 200 years B. P. and about A. D. 1850. The last component denotes the American Historic Period of approximately 1850 through the 1860s (Martz 1977: 3, 11). Ross (1990b: 6-10) states that the site's nine beads represent the American Historic Period (Tables 7.29 & 7.30).

7.2.2.23 Murphy Cabin Site

The Murphy Cabin site excavations recovered thirteen glass beads. These beads included two drawn, ten mold-pressed varieties and one ceramic bead, made by the Prosser method. This last method is an early nineteenth century style. The bead assemblages are not color oriented,

but the drawn varieties included monochrome with chopped ends in the following types: (a) undecorated, cylindrical and hot-tumbled; and (b) undecorated and cylindrical. The mold-pressed beads included two types, as well: (1) eight examples of simple, monochrome, undecorated beads with a parallel-sided and punched perforation; and (2) two examples of complex, monochrome, decorated beads with a parallel-sided, punched perforation (Ross 1993: 3-4).

7.2.2.24 CA-Cal-629/630 Burial Sites

These Calaveras County archaeological sites were burial complexes from which glass beads were recovered. Unfortunately, the screening process of these sites was not consistent and, as a result, only two of the burials were completely screened. There were 55 tubular and drawn glass beads recovered from the burials, according to the analysis (Tables 7.31 to 7.33) by Ross (1990a: 2, 4-7).

7.2.2.25 Old Sacramento

Motz and Schulz (1980: 49, 56) analyzed the 117 glass beads which have been recovered from the excavations in the original port-city of Sacramento. These deposits date from 1849 and may be from known examples of beads sold in the city. The authenticity for the sales of beads may be gathered from the following *Sacramento Union* newspaper sources.

> <u>June 24, 1851(a: 2)</u>
>
> NATIVE CUSTOMERS - On passing up J Street yesterday afternoon, our attention was attracted towards a crowd of digger Indians within the store of Hoope & L'Amoreaux. They were intently engaged in purchasing from the obliging proprietors of the establishment, hundreds of "pesos" worth of beads. On inquiry of the chief purse holder, we found that these aboriginies were from the banks of the Cosumnes, where they

had by hard labor and perserverance accumulated quite a snug little sum, but their proverbial love of finery, induced them to part with their last dime. Their squaws and papooses looked as if they had been dug up with the last lump of gold, and had been brought into market without being subjected to any hydropathic treatment since their parturition from "mother earth."

October 3, 1851(b: 1) - The firm of Hoope & L'Amoureaux was offering:

...a full assortment of chalk white, milk white and red beads...

January 12, 1853 (pg. 1) - The San Francisco firm of E. Fitzgerald and Company was offering:

...an unusual full stock of every variety required for the trade (including 10,000 lb. of red and blue styles and 20,000 lb. of) Mammoth size white [beads].

Motz and Schulz attempted to classify the Old Sacramento beads (Illustration 7.1) into their own typology (Tables 7.34 & 7.35). Unfortunately, only fourteen of the 117 beads are listed in their report.

7.2.2.26 Baird Site

The Baird site is located in the Coso Mountain range of Inyo County. The site is in eastern California, within the China Lake Naval Weapons Center. The site, itself, is a cluster of three volcanic rockshelters averaging about four-feet high; ten-feet deep; and eight-feet wide. Remains of human occupation included six petroglyphs; bedrock metates and fragments; manos; pendant fragments; chipping waste (obsidian, quartzite and jasper); Owen's Valley brown-

ware; in addition to two tin cans and fourteen glass beads. The glass beads consisted of three colors: blue (12); red (1); and white (1). No further analysis was completed (Hillebrand 1974: 65-66, 80).

7.2.2.27 Death Valley Salt Pan

The Salt Pan is an area of several sites in and around the greater Death Valley area (Map 7.17). Various items of historical significance have been found in association with these sites and included various articles of clothing (buttons, calico cloth, denim and leather); household items (soldered cans, modern cans, bailing wire, square nails, scissors, combs, tools, pans and some china); and hunting tools (cartridges, glass arrow points and scrapers). Additionally, numerous glass beads (Illustration 7.2) were found in association with several of the sites (Hunt 1960: 285).

The majority of the beads were found in the area of the Furnace Creek alluvial fan deposits (Hunt 1960: 285). The beads were probably used by the Panamint-Shoshoni Indians. The analysis of the beads is somewhat limited (Table 7.36).

7.2.2.28 Hidden Valley Reservoir

This Madera County site was excavated by Fenenga (1975) for the National Park Service. The site reconstruction shows that it was a large habitation area, which may have been used for more than 2,000 years. In addition to 82 glass beads, depressions of at least fifty homes were found and a total of 1,296 non-Indian artifacts (historic items) were collected. These artifacts consisted of glass fragments, buttons, ceramic fragments, cloth fragments, munitions, tools and hardware, nails, metal and tin cans (Fenenga 1975: 166, 268-273).

The typology used to differentiate the glass beads is similar to that used by Bone, whereas a letter system was used to denote the bead manufacturing styles (Tables 7.37 & 7.38).

7.2.2.29 Stahl Site

Harrington (1957) excavated this Pinto Indian site at Little Lake (Maps 7.18 & 7.19). Little Lake is a remnant of the Prehistoric Lake Mohave and the site is at the base of a cliff. Harrington, like most of his contemporaries in the late-1950s, did not attempt to analyze the glass beads he found. Instead, he made mention only of the fact that the beads were found and gave an approximate date to them. The Stahl site glass beads were identified as dating during the 1860s or the 1870s (Harrington 1957: 70).

7.2.2.30 Cottonwood Creek Site/Paiute Village of "Hudu Matu"

Riddell (1951) excavated this site (Map 7.20), located in the Inyo National Forest, in 1946. The nine glass beads were identified by Clement Meighan, but were recorded only as numerical types in Riddell's report (1951: 14, 19-20). It was Lester Ross who put color schemes to Meighan's initial report, which was based on additional margin notes in the 1951 report (Table 7.39).

7.2.2.31 China Diggings

The China Diggings site is located about twenty miles south of the California "Mother Lode" district of the Sierra Nevada foothills. The area, excavated by Kelly (1974), included finds of both prehistoric and historic interest. In addition to the 976 glass beads recovered, there were at least two burial sites. One grave yielded an antler base handle, which apparently fragmented upon excavation. The historic items recovered included buttons, pottery fragments, glass fragments, bar-cut (machine) nails and other metallic items. The pottery fragments were identified as the blue splatter pattern of Staffordshire porcelain, which was made about 1893 (Kelly 1974: 216-217). Of the 976 glass beads found, only 117 (12%) were analyzed (Tables 7.40 & 7.41) by Motz (1974: 338-341).

7.2.3 Discussion of California Sites

Part of this chapter has dealt with the glass beads excavated in California (and the western part of Nevada), but to what period do the sites correspond? While it is unlikely that researchers can be one-hundred percent certain as to where these sites fit, in the scope of first and post-contact scenarios, it is my belief that a third option is available for California sites. First contact could be broken down into two separate categories: those sites within the contact of the Spanish explorers to California and those additional sites where the native populations would have been subjected to the Spanish missionary system. The post-contact scenario would be any site where either the Indians exchanged European goods with their inland neighbors or where there is evidence that either the Mexican Period (1824 to 1848) or the American Period (after 1848) had begun. These later dates do not necessarily mean that all of the California Indian groups had been contacted by either 1824 or 1848, but it does give a reference point as to where to start and until such a time that a more adequate determination, about a particular site, may be ascertained.

As to the sites within this chapter, however, the initial first contact sites should be those that closely follow the initial seafaring explorers to California in the mid-1500s. The most likely sites would be those closer to the Pacific Coast and those near the routes travelled by Bautista de Anza from Tubac, in present-day Arizona, seeking a route from New Spain (Mexico) to the coast.

Archaeological dating techniques, such as (but not limited to) radiocarbon analysis, should be used whenever possible to confirm dates. However, for the purpose of this study, those sites which probably are initial first contact sites (although they cannot be supported without the further use of dating techniques), are as follows.

The Clear Lake Complex appears to fall within this framework because we know that the Pomo Indians were contacted by Sir Francis Drake, if only briefly. Also, Alfred

which the Indians may have been first contacted by the missionaries, should fall within the Mission Period (after 1769) and clearly within something other than first contact. For these sites, the following missions would apply to this category: Mission San Buenaventura, because it was one of the first established, as was San Luis Rey. This latter site was built to minister to the Indians of the coastal areas between Mission San Diego and the ones in the Los Angeles area. As a note, the Deer Springs Luiseno site had direct benefit from Mission San Luis Rey. The Indians of Deer Springs were in direct contact with the mission and were subjected to the cruelties which the missionaries inflicted on their neophyte charges in the name of Christianity. Also, from the archaeological record, the Deer Springs site material shows Cornaline d'Aleppo beads with dark centers. These dark centers were known to have been replaced by light-colored centers during the early 1800s. The other missions to be included into this Mission Period context are: Santa Inez, La Purisima Concepcion, Soledad, Santa Clara, Santa Cruz and San Jose.

The balance of the sites, located in this section, fall within the time frame of post contact. One of these sites, Mission San Antonio, was built after the main missions were erected. The inhabitants of the Owens Valley sites, as well as the Western Great Basin sites were probably first contacted well into the Mexican Period, however there is no direct confirmation of this. The glass beads found within these sites could have been used as exchange items from Indian cultures who had previous contact with Europeans and then they exchanged the beads with non-contacted Indian tribes. This would account for glass beads being found at the following sites: CA-Cal-629/630, the Death Valley Salt Pan, the Hidden Valley Reservoir sites and the Cottonwood Creek site.

As to the other sites listed in this chapter, Fort Ross could be called a combination site. Even though the fort was colonized by Russian fur men and the local Pomo and Coastal Miwok Indians benefited from the interaction of these

foreigners, the encounter was probably not that of first contact. As stated previously, the Pomo Indians, as well as the Coastal Miwok, were visited as early as the 1540s. Thus, the Russian settlement may be considered a second contact, insofar as nearly 300 years had lapsed. Another multiple contact site may well have been the Yucaipa Rancheria. As stated, there were the four components, and either the inhabitants of the Late Prehistoric to Proto-Historic components may have had some contact with native groups who had contact with Europeans. It is unlikely that this area, alone, had direct contact, probably due to its remoteness from the established colonization routes used by the Spanish. In any event, however, the natives lived here into the Historic Period and the beads may have been deposited as a consequence of this time period, as well. The Stahl site fits into the Post Contact Period, due to the date at which the beads are suppose to have come - the 1860s to 1870s. The glass beads, unfortunately, were not described or analyzed, so that the data is not available for confirmation. The dates (1860s-1870s) seem a bit late, as no new types of beads had been produced that would make the dates verifiable. The balance of the historical sites appear to be the following: the Seccombe Lake Historical Cemetery, the Murphy Cabin site, the Baird site, China Diggins and Old Sacramento. The latter two sites are clearly within the Historic Period. Old Sacramento was a thriving port city, on the Sacramento River, by 1848 and was incorporated by 1850. Additionally, the records of the Sacramento Union, which ceased publication within the past decade, indicated that glass beads were being commercially sold by merchants. China Diggins was a miner's camp, probably started sometime after the Gold Rush of 1849.

7.3 Oregon and Washington

7.3.1 Introduction

The area occupied by Oregon and Washington has many contact sites, but only a relatively few first-contact sites. The following sites are the best preserved ones, containing glass beads, that have been excavated. Unfortunately, like California, not all the sites have site plans available for them and discussions are not based on these site parameters. The color schemes for the multitude of beads represented is a branch of the bead researcher's science which has been produced over the past twenty years to better delineate the beads by type of glass used, such as opaque, translucent, transparent; type of manufacturing technique used; and color schemes in order to understand when these types were manufactured and to possibly identify the date of a site. After the Hudson's Bay Company became entrenched in the areas of present-day Oregon and Washington, the color-scheme of the beads (Tables 7.55 & 7.123) did not generally matter to the Indians. The first contact record indicates that the pale, or light blue variety was preferred. In the end, as demonstrated by the archaeological evidence, the color blue was replaced by any color of glass bead. Furthermore, it is apparent from the grave goods' records, as well as the few Hudson's Bay Company bead supply orders that the Company was not strictly requesting blue beads be sent. If the Indians were not requesting that they be given the blue variety, then it could be viewed that the color blue may have either lost its appeal over the years or perhaps it became too commonplace. Unfortunately, there are no records to substantiate this conclusion. Additionally, as previously mentioned, the different ways of describing the beads has been at the forefront of the bead researcher's agenda for several years. It is unknown, however, if these typologies were known to either the Hudson's Bay Company personnel or to the Indians. It does not appear that the respective parties would be too

concerned over what manufacturing style was used for the particular bead which was being used in the exchange process from the fort to the Indian. This difference then, must lie within today's individual typologist's motives and how he/she perceives the meaning of his/her work. As with California sites, discussions are located at the end of both of the following sections.

7.3.2 Oregon Sites

7.3.2.1 Cape Creek Shell Midden

This 1991 excavation (Map 7.21) was located along the central Oregon coast in the Cape Perpetua Scenic Area and the findings included thirty-seven glass beads (Tables 7.43 & 7.44). It is unclear as to why these beads were found within a predominant mixture of shells, but, at least theoretically, the mound was probably used as a refuse dump by a coastal tribe. The tribe, whose identity is unknown, may have had contact with either the Hudson's Bay Company, as evidence by some of the beads which were produced not earlier than 1820 (clearly within the range of when the Company operated in this area), or that they were obtained from other sources, such as an Indian intertribal exchange system.

The most numerous of the beads located were of two types: seed and pony beads, fifteen in number. The colors for these types were limited to opaque and transparent dark blue. Beyond these types were five Cornaline d'Aleppo beads with transparent red over an opaque white center. Sprague (1991: 25) indicates that this latter variety is not the oldest of this type. He states that a green center would be followed by centers of yellow, white with opaque brick-red, and opaque bright red over white prior to the transparent red over white variation. Of course, thirty-seven beads do not make for adequate statements as to dating the site, but Sprague (1991: 25) acknowledges that the blue seed beads probably existed not earlier than 1820 and the Cornaline d'Aleppo beads probably not

before 1840. This then, would mean a longer habitation period for the historic component of the midden. These beads were probably made in Venice. Five drawn-faceted, so-called Russian beads, were found in-situ also. These cornerless, octagonal beads are called "American beads" by the Russian-speaking indigenous population of Siberia. In Africa, they are known as "ambassador beads." Probably of Bohemian design, they appear early in the Pacific Northwest and were not traded, at least in the solid color variety, after 1820 (Sprague 1991: 26).

The last type of glass beads found were wound and spherical. The sample of twelve beads suggested a Chinese manufacturing origin based on shape, size, color, luster, and highly bubbled (pockets of trapped air noted within the texture of the bead) glass. While these beads are considered to be poor time indicators, they have been found in the Northwest from the early Historic Period through the twentieth century Sino-Japanese War era. One determining point may be that several beads were found with the winding tips in place. This would indicate a manufacturing date between 1815 and 1830 (Sprague 1991: 27-28).

The assemblage period would place it well within the sphere of Fort Vancouver's exchange zone and most likely, that the beads would have been imported by the Hudson's Bay Company, located on the Columbia River in southern Washington (Sprague 1991: 28).

7.3.2.2 Lower Coquille River Burial Site

Salvage excavations were carried out at during September of 1974. The three burials, located within village sites, are in the vicinity of Bullards Beach (Map 7.22). The prehistoric artifacts included bone points, lithic points, scrapers, choppers and flakes. Artifactual detail is limited, but 1,278 glass beads were found. It is known that the "wound" bead style made up 99.33% of the beads found and were in the following color schemes: blue-green, amber, black, purple, white and clear. Drawn beads made up only 0.67% of the assemblage. This figure is in

opposition to drawn beads usually making up 97.75% of all glass beads found in archaeological sites (Ross, R. 1976: 1-3 & Ross 1976: 12).

7.3.2.3 McNary Dam Site

This area was used by the Umatilla Indians, who were heavily exploited by Euro-Americans. The McNary Dam project area is located between Lake Wallula (Map 7.23) and Lake Umatilla (Map 7.24) and near the abandoned townsite of McNary. The area was surveyed and excavated. While the report states that glass beads were found, there is no indication that any analyses were performed on them (Schalk 1979: 1).

7.3.2.4 United States Courthouse Site in Portland

While conducting data recovery operations for the construction of a new United States Courthouse, in downtown Portland (Map 7.25), two glass beads were found. The beads were excavated from "Lot #4," formerly a paved parking lot, and part of the area for the new construction. No bead analysis was performed (Roulette et al. 1994: 1, 134).

7.3.2.5 South Umpqua Falls Rockshelter Sites

These two rockshelters, designated as "Upper" and "Lower" were located in the Umpqua National Forest (Map 7.26), in 1982 and 1983, at an elevation of approximately 500 m, in mountains of the Western Cascades. Out of the 602 artifacts recovered, only three glass beads were reported. Two of the beads were reported as being small, "seed" type, wound beads in green-blue and white. The third bead was reported to be a large, wound, blue-green bead (Minor 1987: iii, 53).

7.3.2.6 A. C. White Site

This Late Archaic, ethnohistoric village is located with-in the boundaries of the Santiam River bridge area (Map 7.27). During auger probe tests, glass beads were found, but not recovered or analyzed (Silvermoon 1990: 11).

7.3.2.7 The Davidson Site

This site was located on the southern bank of Little Muddy Creek, near a Southern Pacific Railroad bridge. The site was eventually destroyed by construction. Prior to that, however, identification was made on millingstone features and groundstones. Additionally, two beads were found. One was made of brass and the other one was of blue glass (Davis et al. 1973: 1-2, 18).

7.3.2.8 Hudson's Bay Company Granary Site

This site was evaluated in 1987 by Brauner. Located within Oregon's Champoeg State Park, adjacent to the Williamette River (Map 7.28), the warehouse was built in 1842 and the clerk's house was built a year later. The Hudson Bay Company/Champoeg site was historically significant because it made for an easier route to the French Prairie agriculturalists. It eliminated the need for the Hudson's Bay Company ships to navigate around the Oregon City falls. The Hudson's Bay Company had organized an agricultural agreement with the Russian-American Company in 1839 and the Champoeg site provided the means to get the goods to the Russians. The Hudson's Bay Company ceased operations in 1851. The buildings, along with the Champoeg townsite, were destroyed in the Flood of 1861 (Hussey 1967: 108-111, 348; Brauner 1987: 1-4).

Brauner's (1987: 20) survey produced two glass beads. One is described as being an imitation pearl, which means that it was probably an irridescent white bead. The other glass bead was drawn, tubular and light blue.

7.3.2.9 Williamson River Bridge Site

This riverside fishing camp, in Klamath County, is located on the north bank of the Williamson River, on United States Highway #97 (Map 7.29). Even though this site was apparently occupied for 2,000 years, only one unidentified glass bead was recovered (Cheatham 1991: iii, v, 79).

7.3.2.10 Emigrant Dam Reservoir Site

This primary archaeological area (Map 7.30) was part of the Rogue River Project and numerous midden deposits initially existed. While most of the sites were prehistoric in nature, several others were historic camp grounds. As with most of the Oregon sites, only one spherical blue glass bead was ever found (Newman 1959: 2-3, 6).

7.3.2.11 Yamhill River Burial Mounds

The occupants of the Fuller and Fanning burial sites have been responsible for one of the largest glass bead sites in Oregon. Stepp (1994: Appendix "H") did not analyze the beads found (Tables 7.45 & 7.46), but listed them by color and whether they were hand blown or machine made.

7.3.2.12 Gearhart City

This site is located on the Pacific Coast about ten miles south of the mouth of the Columbia River (Map 7.31). The surveyed area was in two loci. The first locus involved a one square mile area of the city, while the second locus was a fifty acre tract south of the city limits. Within these areas, there were three Clatsop Indian villages:
(1) "Niakewankih" (Niakiewanqui, per Boas 1901: 236; or Neahkown, per Barry 1927: 55) was located at the mouth of Newanna Creek, and means "the middle village" (Minor & Toepel 1978: 3, 5, 7-8); (2) "Necotat," where the town of Seaside is today (Barry 1927: 55-56), was described by William Clark as the "four houses of Clatsops and Killamox" (Thwaites 1905: 320); and (3) "Neacoxy" (or Nia-xaqce, per

Boas 1894: 92), at the mouth of Neacoxie Creek (Lee & Frost 1844: 283), although the Oregon Pioneer Society places this village at the junction of the Neacoxie, Newanna and the Necanicum Rivers (Suphan 1974: 36).

It was at the Neacoxy site in which glass beads were reportedly found within a burial site. According to Nelson (in Minor & Toepel 1978: 14), local residents exhumed the one or two burials and removed the contents. Lorraine Curs, of Gearhart (in Minor & Toepel 1978: 15), has fifty turquoise glass beads and five red glass beads with yellow cores. No further analysis was done on these beads.

7.3.2.13 Trojan III

This site is located on the left bank of the Columbia River, about forty miles southwest of Portland and about six miles from Rainier (Map 7.32). The site (Map 7.33) was located on pasture land which had an associated vegetable garden. The site provided a total of 79 glass beads, which were described as being "Canton"-style beads, in either oval, round or cylindrical in shape, as well as being opaque, and robin's egg blue in color (Tables 7.47 & 7.48) (Warner & Warner 1975: 7, 100-102).

7.3.2.14 Champoeg

The townsite of Champoeg (Map 7.34) is located in its own state park, on a 448 acre historical archaeology complex (Map 7.35). This Williamette Valley site was first settled about 1829 by French-Canadian trappers who had retired from their profession. Most of them became farmers and provided the agricultural crops to California during the 1849 Gold Rush. Champoeg was destroyed by the Flood of 1861 and rebuilt, but destroyed again in the Flood of 1892 (Speulda 1988: 1). There were 23 glass beads recovered from the Champoeg excavations (Tables 7.49 & 7.50).

7.3.2.15 Deschutes Park West Site

This Wasco County site (Map 7.36) is located along the southern bank of the Middle Columbia River. The archaeological component resides with the burial sites, located within several loci and apparently was a much travelled area by trappers, Indians and pioneers. The excavations recovered sixteen glass beads in two styles (Table 7.51) and color schemes (Table 7.52) (Ellis 1984: 34-36, 82-84).

7.3.2.16 Cronin Point Site

Cronin Point is located within the Nehalem State Park at the mouth of Nehalem Bay (Map 7.37). The artifacts found here are suggestive of an Asian material culture. These Asian items apparently have drifted ashore from the various shipwrecks laying just offshore. Four ships are known to have sunk in the vicinity: (1) the San Juanillio (1578); (2) the San Augustin (1595); (3) the San Antonio (1604); and (4) the San Francisco Xavier (1705). Although no artifact analysis has been done on the glass beads recovered, the suggestion is that they were probably "Canton" beads from China (Scheans 1990: 1, 4). As has been previously stated, "Canton" beads were probably made in Europe.

7.3.2.17 Fort Stevens

Fort Stevens lies in the uppermost northwestern section of Oregon, west of Astoria, at the mouth of the Columbia River. The fort was built by the United States Army prior to the American Civil War and served as a military base until 1947 (Maps 7.38 & 7.39). The first archaeological survey and excavation was done in 1979. Only ten glass beads were found in the assemblage and they were not analyzed (Harrison 1988: 5, 7, 21).

7.3.2.18 Rock Corral Site

The Rock Corral site is located on the northern bank of the Sandy River, in Clackamas County, Oregon (Map 7.40). It was probably used as a campsite, but only in historic times. The site's name is derived from a giant boulder around which Oregon Trail pioneers camped and erected a livestock holding pen. The area became the property of the Oregon and California Railroad in the 1860s, but the land was deeded to the United States Government in 1916. The archaeological investigations (Map 7.41) produced five drawn, opaque white glass beads (Musil et al. 1993:1, 26).

7.3.2.19 Bezuksewas Village Site

This ethnographic, Klamath Indian winter village is located on the western bank of the Williamson River, near Chiloquin, Oregon (Map 7.42). Initial occupation could have been as early as 4,500 years B.P., but was known to have survived into historic times. The 1990 excavation produced about 20,000 historic artifacts, of which more than 1,000 were glass beads (Cheatham et al. 1995: iii). Darby (in Cheatham et al. 1995: 183-190) analyzed 960 of the beads (Tables 7.53 & 7.54).

7.3.3 Discussion of Oregon Sites

As with Calfornia Indians, there seems to be a few different areas of first contact, or should it be stated that there are a few isolated pockets where first contact scenarios might have occurred. The Spanish were definitely along Oregon's coastline in the late-sixteenth century, as evidenced by the shipwrecks known to exist off the coast. From the sites in this chapter, we know that the inhabitants of Cronin Point salvaged relics from those wrecks. The records, however, are unclear as to whether the Indians plundered the ships after they sank or whether they just collected the objects as they washed up on shore. Also, there are no written records to indicate if any of the crews survived; whether they lived with the

Indians and may have intermarried with them; or whether they were killed if they did manage to swim to shore. But, we do know that the Indians of some coastal regions knew of Europeans prior to Alexander McKenzie's (1790s) travels through the Pacific Northwest and certainly prior to the Lewis and Clark Expedition of 1804. While there were certain solitary frontiersmen who roamed the Northwest, the organized explorers may be broken down into five categories: the Spanish, by sea, arrived prior to 1804; the Lewis and Clark land expedition between 1804 and 1806; John J. Astor's ill-fated Pacific Fur Company project from 1811 to 1813; the British seizure of Fort Astoria (changed to Fort George) during the American-British War of 1812; the Northwest Company moving into the area on the heels of the war, during approximately 1813 to 1815; and the Hudson's Bay Company taking over the area after about 1820.

With these specific time frames in mind, it still remains difficult to place the sites in this chapter into tight-fitting categories. There are several sites where it is impossible to tell whether they would fit into any of the categories. These sites: the A. C. White site; the Williamson River site; the Emigrant Dam Reservoir site; the McNary Dam site; and the Portland/United States Courthouse site do not have enough written findings to ascertain when any of the artifactual material may have been acquired. Other sites may be excluded from the initial contact period as well. Fort Stevens was constructed by the United States just prior to the American Civil War (1861 to 1864); the Champoeg townsite was constructed by retired French-Canadian trappers in 1829; and the Rock Corral site was used by settlers coming into Oregon Territory over the Oregon Trail, which would have occurred sometime after the Oregon Treaty of 1846.

For most of the other sites, Table 2.1 has been relied on for when certain glass bead styles were known to have existed, in order to place these sites within a workable frame of reference. Unfortunately, even these bead types

do not give a clear indication of when a site may have been visited by Europeans, as some older style beads were probably still being used by the various fur companies even after they were not produced any longer. Concurrently, the Indians at these sites were probably contacted on a routine basis, so that whatever artifactual material is found within the archaeological record, it would be unclear as to what artifact came first, or when it was deposited in the site. One exception to this framework is the Lower Coquille River Burials. While there are not conclusive references to the artifacts, it would not be completely wrong to suggest that this site may have seen evidence of a first contact scenario. The beads that are available are the types which would have existed during the late-sixteenth century. Likewise, the South Umpqua Falls Rockshelters may be evidence of first contact or at most, multiple contact. The seed bead found there was made after 1700, clearly within the realm of Spanish exploration, but the blue seed bead could only have occurred after 1820, or within the realm of the forts of the Hudson's Bay Company. The Davidson Site is another example of contact after 1820, due to the blue seed bead.

Presumably, the Deschutes Park West site occurred during the visitation by Lewis and Clark, as the Clatsop Indians seemingly took a special interest in the welfare of the expedition. Notably, though, all the Indians which Lewis and Clark contacted lived within a short distance of the Columbia River, or where the river met the Pacific Ocean. In addition to the Spanish charting the entrance to the Columbia River, William Clark made a detailed drawing of the entire estuary and river basin (Illustration 7.3). It is also highly probable that the Indians surrounding the Hudson's Bay Company Granary site were first contacted prior to the Company setting up the site, because of the date that the granary was operational. First contact would surely have been made prior to the 1840s. However, it cannot be ascertained which group made that initial contact, although if it was not the seafaring explorers, it

seemingly would have been either the Lewis and Clark Expedition, or those fur companies prior to the Hudson's Bay Company quite literally establishing their presence and taking over the area.

The three Clatsop villages, near the Columbia River, were probably initially contacted by the Spanish, although the first recorded record of these Indians is from Clark's journal. Of interest, however, is that the archaeological record indicates that a Cornaline d'Aleppo (also known as a "Hudson's Bay Company" bead) glass bead, indicated as a red bead with a yellow core, would not have been available until after 1830, thereby placing this bead clearly within the framework of the Hudson's Bay Company. This shows that these Indian villages were contacted by any number of European groups and it cannot be clearly established who was really the first to meet with any group. The Trojan III site Indians were probably contacted prior to Lewis and Clark, but the archaeological record indicated the evidence of Cornaline d'Aleppo beads, in the red exterior over green core, which were not available until at least 1825 and possibly not until 1840, depending on whose article you believe. This Cornaline d'Aleppo bead type is again seen in the archaeological record from the Bezuksewas Village site.

The last two sites were in contact with Europeans by the early nineteenth century. The Yamhill Burial site held glass beads made by the blown method. This was not available until after 1810, which puts it prior to the Hudson's Bay Company. It is known that blown beads were not in the merchandise brought with the Lewis and Clark Expedition and that neither Astor nor the Northwest Company operated in Oregon during that time. Therefore, the Indians must have been contacted by a group previous to 1804. The most likely group would have been the Spanish seafarers, although there are no known incidents of blown beads being on their manifests. Likewise, blown beads are easily broken, so that it would not seem likely that the few land explorers, to travel in the area, would

have had them in their saddlebags. The last site - Cape Creek - reveals ceramic beads (Prosser-molded) which were not made until after 1820. This clearly shows that the Hudson's Bay Company was involved with this site since post 1820. It does not, however, reveal which group may have initiated first contact.

7.4 Washington Sites

7.4.1 Ice House Lake

The 1988 archaeological testing at Ice House Lake, Skamania County, Washington produced forty-six glass beads. The site is located on the Lower Columbia River, downstream from the Hudson's Bay Company's Fort Vancouver and was probably a small Indian habitation site.

The majority of the beads were of the seed variety and had probably been used for embroidery (Tables 7.56 & 7.57). All but one of these beads were probably made in Venice, the exception being a large wound blue bead, possibly of Chinese origin. The bead shapes included cylinder, torus, sphere, lobed sphere, and bicone. Diaphaneity produced a variety of types such as opaque, transparent, translucent, opaque over transparent, transparent over transparent, translucent over opaque, and opaque stripes over opaque colors over transparent. The color schemes included white, light blue, robin's egg blue, light green, blue, red, green, purple (but appearing black), dark blue, and yellow-tan (after Minor 1988: 52; Sprague 1988a: 52-55). Additional artifacts included 159 fragments of glass jars and bottles (Table 7.58).

In addition to the glass jars and bottles, there were twenty-four pieces of clear flat glass, which had probably been used for windows. Based on Minor's (1988: 52) study of glass in historic sites in the Pacific Northwest, twenty-one of the pieces (87.5%) were formed prior to 1855, with the remaining pieces dating between 1850 and 1865. Minor based his determination on the thickness of the respective

glass fragments. There were two glass buttons found, each with four holes for sewing onto garments (Minor 1988: 53).

7.4.2 Asotin Creek Burial Site

This site (Map 7.43), is located in the northwest corner of Washington (Sprague 1959:7).

The seventeen burials exhumed produced an extensive array of glass beads, as well as other grave goods. Many of the burials were infants or young children, but it is unknown as to how they died. Not all the burials, however, contained glass beads. Burial number four was identified as an infant under six months of age. The grave goods excavated included a strand of beads which contained, among other items, twenty-three medium-large Cornaline d'Aleppo (red/white) glass beads. Burial number eight produced a male child of about ten years old. The grave goods here contained, in part, forty-eight Cornaline d'Aleppo beads (Sprague 1959: 12-17).

Burial number ten indicated a child of approximately two years old and 35,856 beads were found (Table 7.59) (Sprague 1959: 17-19). The white and black seed beads, together with the Cornaline d'Aleppo beads were used together on one garment of leather which covered the upper part of the torso. In addition to the beads were thirty round decorated buttons, 490 brass beads, and thirty-four hawks bells. Sprague (1959: 18) states that the way in which the stringing and sewing of the beads was accomplished upon the leather was historically the same as that found in women's dresses of Nez Perce Indians. The large round blue beads were found below the garment and in association with a large brass bell. In the area of the skull were the pink on white spiral over blue paste beads. A copper coin, dated 1856, was also found in association with the burial (Sprague 1959: 18-19), indicating that the burial could not have occurred prior to that year. It is clearly evident that this was the burial of a child of an important tribal elder, perhaps the son, or daughter, of a chief. The copper coin

was most likely a Flying Eagle cent, but its whereabouts are unknown to be conclusive of its type.

Burial number eleven was an infant of about one year old and was possibly female. This exhumation revealed a total of 2,792 beads, including 360 Cornaline d'Aleppo beads; 2,040 very small white seed beads; 250 opaque light green small seed beads; and one translucent pale pink bead (Sprague 1959: 20-21).

Burial number sixteen was that of a male aged over sixty-five years old and was perhaps the best preserved of those excavated. Only fourteen beads were removed, but the skeleton was almost complete. There were five coarse white seed beads; four large white seed beads; four opaque light blue large seed beads; and one large opaque pink seed bead (Sprague 1959: 25).

Burial number seventeen was a male in his twenties, but the remains were badly disturbed. The grave goods contained 254 glass beads (Table 7.60), according to Sprague (1959: 25-26). This burial, based on the amount of European-made exchange goods, indicated that the young man was either a young chief, successful warrior, or the son of either of them.

Forty-one different "trade" bead types were indicated in the excavated burials. The total number of beads reached 39,754. Of this number, 671 were brass and the balance were of glass (Sprague 1959: 31-34).

It is unknown as to the color-scheme(s) for the Cornaline d'Aleppo beads at Asotin Creek (Table 7.61). The traditional color would have been a red exterior over a white core, but the exterior may have been green or white and the core could have been pink or yellow. There is no way of knowing what Sprague was looking at when he devised his typology for the beads found.

7.4.3 Whitman Mission

At the Whitman Mission National Historic Site near Wallawalla, Washington, archaeologists uncovered two opaque, light blue-gray, flat beads. The beads had the characteristics of being molded into five-petaled flower-shapes. The corresponding soil level dates between 1848 and 1855 (Sprague 1985: 40). These beads would have been the polychrome type.

It is my belief that finding only two beads at this site is remarkable. This site was initially set up by the Hudson's Bay Company's Fort Vancouver's Chief Factor, John McLoughlin. It seems to me that there should have been an abundance of glass beads here because the Mission served, at the very least, some Indian children.

7.4.4 Palus Site

The Palus site contained an Indian burial from the Late Historic Period in eastern Washington. The date of this site falls within the span of 1860 to 1910, and clearly outside the first-contact realm. The burial grave goods contained over 100,000 beads, mainly consisting of a large variation of drawn and pony beads. The beads were mostly opaque in color (Sprague 1982: 167). Although outside the First-Contact Period, the occupant must have either been a wealthy, or powerful, individual, or thus have been the kin to one of the aforementioned persons. There was no indication as to the sex or age of the remains.

7.4.5 Fort Vancouver National Historic Site

The Fort Vancouver site (Illustration 7.4), is located in the southern portion of the state of Washington, just north of the border with the state of Oregon. The site is located on the Lower Columbia River near Portland, Oregon. Since the 1970s, numerous archaeological investigations have been conducted at the fort.

Five major areas were excavated (Illustration 7.5). Warehouse #8 was the location of where the furs were stored. It was one of four large block buildings built

between 1841 and 1844, in the "post and sill" method. This method of construction was principally used in Canada. In this building, the furs were sorted, counted, and baled. During 1844, while awaiting delivery to England, about 60,000 furs were housed here (United States Department of the Interior 1994: 1). This building has been reconstructed on its original site.

The New Office was built in 1845, replacing one built in 1829. It was supposed to be used as the finance office, but was initially used to accommodate the crew and officers of the "H. M. S. Modeste." The building was used for accounting after May 1847 (United States Department of the Interior 1994: 3). This building is currently being reconstructed on its original site.

Well over 100,000 glass beads have been excavated and include 152 different variations. These variations have included eighty different types of drawn beads, fifty-seven different wound bead types, ten different types of mold-pressed beads, and three variations of blown beads. Additionally, more than 6,000 beads were recovered at the Hudson's Bay Company's Kanaka Village and riverside complex sites. These additional beads accounted for thirty-nine new variations, which included seventeen more bead types of drawn beads, twelve more wound bead types, and five additional mold-pressed varieties. Most of the beads may be identified as having been manufactured in Bohemia and their location at Fort Vancouver, from the mid-1800s, indicates that the Hudson's Bay Company obtained them either directly or indirectly straight from their manufacturing source (Ross 1976a: 29; Francis 1982). Several outfitters were used to supply goods, including glass beads, to the fort (Table 7.62). The types of glass beads received by the Hudson's Bay Company's Columbia (Western) Department, between 1824 and 1854, are related by Ross (1976a: 31) in Tables 7.63 and 7.64.

The glass beads, which were imported to the fort were sold either by the bunch, pound, or yard-length. Bunches were strung along a preset length. They were generally

large and expensive. Small beads were usually imported by the pound and then resold in smaller weights. Yard-lengths were generally strung and sold in strands (Ross 1976a: 32; Sprague 1985: 92).

The analysis of the Fort Vancouver beads and records of the Hudson's Bay Company showed that positive identifications of distribution sources were China, Bohemia, Venice, and possibly England. The Bohemian beads consisted of the mold-pressed variety. The Venetian origins are assumed because Venice was the major bead manufacturing center during the 1800s. John McCullogh observed, in 1840, that "the glass beads sent from England are all imported, principally, we believe, from Venice" (after Ross 1976b: 32). Ross (1976b: 32) disagrees and states that British glass bead manufacturing, during this time, was probably limited to a few extremely small-scale operations. The "English" beads probably had been warehoused in London by John J. Astor, who was a member of the Hudson's Bay Company's London Committee and one of its major shareholders. It is unclear where Astor received the beads, but if they originated in Venice, then they probably came by ship to the Port of London. If the beads were from Bohemia, then they probably were carted overland to the English Channel and then shipped to the Port of London.

The bead assemblages recovered from the site consisted of 104,680 beads (Table 7.65). Of this amount, 94,877 - over ninety-percent - were recovered from five of the structural areas (Ross 1976b: 34-35).

The remaining 9,803 beads, or slightly over nine percent, came from outlining building remnants, such as the stockades, bakery, warehouses, kitchen, iron-working shop, bastions, and the blacksmith shop (Ross 1976b: 35).

Drawn beads (Table 7.66) represented the largest amount of those excavated - 102,135 or 97.5 percent (Ross 1976b: 35-45).

The second most numerous glass bead category was wound (Table 7.67). This group comprised 2,408 beads, or 2.3 percent, of those excavated (Ross 1976b: 46-51).

Mold-pressed beads, of which there were 166, were produced by pinching or pressing the molten glass in a two-part mold. All of these beads were the simple monochrome variation. This type was spherical with a biconical shape, punched perforation, and ground facets. This bead appeared to look like cut crystal or jewelry beads. The beads, produced in Bohemia, have been referred to as "artificial jewelry," with other descriptive terms such as "cut," "Czech," or "vaseline" beads (Ross 1976b: 51-53).

The last type of bead found at Fort Vancouver had only five examples. These were blown beads which had been either free-blown or apparently blown in molds. One of this type of bead was the simple variety, which was spherical with ground facets. The other four beads were simple, blown-molded, and monochrome with segmented grooves (Ross 1976b: 54-55).

The spatial and temporal comparisons for the beads from Fort Vancouver gave the complex a cultural horizon indication which dates from 1829 to 1860 for the Pacific Northwest (Table 7.68), according to Ross (1976b: 57-59):

Lester Ross has been the foremost authority on the Hudson's Bay Company's Fort Vancouver bead assemblages since the 1970s. His expertise on the subject indicates that because the decorated beads were infrequently found, it is most likely that they had a higher value placed on them, because there were fewer of this type of bead received at the fort. It is also indicated that prior to 1844, drawn beads were the most common type, and only between 1844 and 1852 did wound and mold-pressed beads gain in popularity. Ross further postulates that the subtle changes in preference to certain bead colors during the fort's thirty-year history suggest that white over white, drawn beads may have been popular during the mid-1840s. Furthermore, the purple color and monochrome white became popular after the mid-1840s. The mold-pressed beads appeared after the mid-1830s and those with molded facets after the 1850s. Prosser-molded beads were first patented in 1840, but Ross (1976b: 62) seems to think that their appearance at Fort

Vancouver may indicate a local origin rather than a Hudson's Bay Company or English source. The same may be said for the presence of multi-sided drawn beads with four rows of ground facets (Ross 1976b: 59, 62).

7.4.6 Hudson's Bay Company Kanaka Village Site

This site is located just outside of Fort Vancouver, near the Columbia River (Map 7.44). This Indian habitation site was excavated from the 1960s through the 1980s, with the glass bead information reflected in Tables 7.69 and 7.70 (after Storm 1976: 108-109; Carley 1982: 164-166; Chance et al. 1982: 39, 44, 46-47; Thomas & Hibbs 1984: 169, 244-246, 502; Ross 1976b: 44-63).

Other, non-glass, beads (after Storm 1976: 108-109; Carley 1982: 164-166; Chance et al. 1982: 39, 44, 46-47; Thomas & Hibbs 1984: 169, 244-246, 502; Ross 1976b: 44-63) are noted in Table 7.71. Carley (1982: 162-168) researched an additional 422 glass beads removed from the nineteenth operation of the 1977 excavations (Table 7.72).

Since Carley's work, several other studies of this site have produced a number of artifactual deposits, which provide for a more complete picture of the Indian encampment south of Fort Vancouver barracks. These beads were morphologically described as tube [drawn] (153); wound (4); unidentifiable, friable green (3); and not identifiable (1). In addition to the 161 glass beads found during the 1980-1981 examination, other artifacts included: pottery (common, red paste, earthenware, porcelain and stoneware); glassware (bottle glass, table glass and melted remnants); metalware (container lids, tableware and foil); household furnishings (mirror glass); apparel (buttons and buckles); ornaments (finger rings); tobacco pipes (white clay and porcelain) (Thomas & Hibbs 1984: 100-101).

The second series of excavations produced a total of 2,554 glass beads (Table 7.73), in addition to more of the same items mentioned above (Thomas & Hibbs 1984: 168-169, 244-246).

One last study and testing was started on strata 2 and 3, which was identified as Euro-American, nineteenth century, and included four glass beads (three tube beads and one wound bead). After this initial test, further excavations revealed an additional 920 specimens (Table 7.74), but these were morphologically described as drawn, wound and mandrel-pressed (Thomas & Hibbs 1984: 479, 573, 611, 615, 627, 683). The color scheme for Kanaka Village's 3,161 glass beads are reflected in Table 7.75.

7.4.7 Spokane House

The Spokane House excavations were located within the Fort Spokane Historical Site (Table 7.76), by John Combes, in 1964. The history of this particular site is defined rather well, but the recovery of glass beads - solely from within Spokane House, is stated by Combes (1964: 50) as, "...until a technique is developed to identify and classify trade beads effectively, descriptive data will suffice." Unfortunately, Combes does not describe any beads found from within the fort-proper.

7.4.8 Fort Spokane

Caywood excavated this site in the early 1950s (Maps 7.45 & 7.46). Only remnants of the fort's chimneys, foundations and cellars remained. When the fort ruins were excavated, several Indian burials, with associated grave goods (Table 7.77), were discovered (Caywood 1954: xi-xii).

7.4.9 Fort Nisqually Village

The Fort Nisqually Village, built in 1843, was located at Northwest Landing, in Pierce County, Washington. This site was part of the much larger area of Fort Nisqually-proper, established about ten years earlier by the Hudson's Bay Company (Moura 1990: 1). There were 776 glass beads, as well as five ceramic beads, found at this site (Tables 7.78 & 7.79), of which 95% were of the drawn style; about 90% were hot-tumbled (to smooth their edges so that they could be used in embroidery work); more than 90% were the

oblate type; while over 99% were simple, single-layered beads.

7.4.10 Fort Nisqually

Fort Nisqually was located at Northwest Landing, in Pierce County, Washington (Map 7.47). Table 7.80 details the fur pelts and food resources gathered by the Hudson's Bay Company's Fort Nisqually between March 1, 1834 and January 20, 1835. It took just under a year to deplete the local wildlife (after Moura 1990: 20-21).

The archaeological investigations (Map 7.48) of the Fort Nisqually-proper area were done in the late-1980s. Unlike the Fort Nisqually village area, only 24 glass beads (Tables 7.81 & 7.82) were recovered (after Stilson 1990: 77-79).

7.4.11 Fort Rains Cemetery

This historical cemetery, located on the north shore of the Columbia River, was originally part of a United States Calvary outpost. Today, it is part of the United States Corps of Engineers' Bonneville Area Office (Minor 1988: iii).

Sprague (1988b: 45-49) analyzed the 258 glass beads recovered from this site (Tables 7.83 & 7.84). The beads were all the drawn (seed) variety or wire wound.

7.4.12 Fort Colvile

The Hudson's Bay Company operations at Fort Colvile were located in the Kettle Falls area of the Columbia River. Artifacts, from a late-1960s to early-1970s excavation, included fire hearths, stone foundations, glass fragments, pottery fragments, nails, pipe fragments, button fragments and a few glass beads (Saastamo 1971: 12-13; Chance 1972: 40). Unfortunately, Stout (1973: 5-8) did not analyze any of the beads during her observations.

During 1977, the fort area was again excavated, in anticipation of the Lake Roosevelt project. Chance (1979: 147) analyzed the 5,547 glass beads recovered (Tables 7.85 & 7.86).

7.4.13 Fort Okanogan

Caywood (1954) excavated the site in 1952, while Butler (1954: Appendix "A") minimally analyzed the glass beads found. According to Butler, there were 32 glass beads excavated. The most common color was blue, followed by green, amber, yellow, red, white, black, brown and gray. These beads were either opaque or translucent and mostly round, with several six- and seven-sided, faceted beads. Four seed beads were noted in these colors: blue, green, white and yellow.

Fort Okanogan was re-excavated fourteen years later, by Grabert, as a salvage operation for the National Park Service. According to Grabert (1968: 3-5), the site excavation provided 2,390 glass beads which could be analyzed (out of a total of 2,556), and there were a variety of historical artifacts (Tables 7.87 to 7.89) (Grabert 1968: 38-41).

7.4.14 Kettle Falls Complex

This site is actually acomplex of five sites along the banks of the Columbia River, at the point of the falls to the west and the cascades on the east. Between the falls and the cascades is Lesher's Island. The entire site is located just south of Canada (Map 7.49).

David and Jennifer Chance excavated the area initially in 1971 and subsequently in 1974 and 1977. The area was to become submerged under the new Lake Roosevelt watershed (Chance & Chance 1979: 1; 1982: 2).

During the 1974 excavations, 93 glass beads were removed from Lesher's Island (Tables 7.90 & 7.91) (Chance & Chance 1982: 101).

7.4.15 Ozette Village

Ozette was a fishing village located at Cape Alava, on the Pacific Coast, at the northwesternmost point of present-day Washington (Map 7.50). When Ozette was excavated in 1970, 1,666 glass beads were found (Tables 7.92 & 7.93), in addition to one bead made from ancient amber (transparent,

addition to one bead made from ancient amber (transparent, drawn and yellowish-brown in color) (after Grosso 1991: 5-6).

7.4.16 Nez Perce Burial Sites

This site actually has five loci (Map 7.51): (1) the Wawawai Store; (2) the Nisqually-John Talus site (Map 7.52); (3) the Lawyer site; (4) the Alpaweyma Burials; and (5) the Offield Bar site. Glass beads were found at two of these sites: the Nisqually-John Talus site and the Alpaweyma Burials.

The Nisqually-John Talus site is located on the banks of the Snake River and may be the ethnographic Nez Perce village site of "Isquoli. po" (Schwede 1966: 38). Eight burials were located, with associated glass beads, but only burial six was recorded (Tables 7.94 & 7.95).

The Alpaweyma Burials (Tables 7.96 to 7.119) lie just above the junction of the Snake River and the Alpowa Creek canyons (Map 7.53). The term "Alpaweyma" is a Nez Perce place name (Spinden 1908: 175; Schwede 1966: 37), but was locally named "Timothy's Village" after Timothy Tamootsin, the first Christian chief (Josephy 1965: 190).

The Nez Perce burial area was again excavated between 1979 and 1980, as part of the total burial recovery, site monitoring, and emergency excavations for the laying of a water line (Gurcke 1981: 1). This continuing project recovered additional glass beads (Tables 7.120 to 7.122).

7.5 Discussion of Washington Sites

The archaeological sites in Washington may be categorized as those in Oregon were. Of the preceding sites, five of them clearly fit into the historical framework, which occurred at or near the time when the Hudson's Bay Company established Fort Vancouver, in 1824. The fort initiated contact with the local Indians, such as those Indians involved with the Hudson's Bay Company's Kanaka Village, but long after these Columbia River Indian groups were first contacted, probably by the Lewis and Clark

Expedition. If Lewis and Clark were not the first to contact these Indians, they were the first to record the existence of the native groups. The Palus Site had been established, by Roderick Sprague, as falling after 1860, but the pony beads found at the site would have been available, in the American West, after 1800, or in the Great Lakes region after 1675. The Whitman Mission was constructed well after Fort Vancouver, hence this is an historic, post-contact site. This is also true for Fort Rains, which was established by the United States Cavalry, sometime after the Oregon Treaty of 1846.

Most of the remaining archaeological sites have their contact history rooted prior to the Hudson's Bay Company entering the area. The earliest example appears to be at Ozette. This coastal fishing village was probably first contacted by Spanish seafarers, but the community survived into the twentieth century. Ice House Lake probably was contacted in the early 1700s. The archaeological evidence suggests that the wound beads would have been available from French manufacturers as early as 1600; from Venetian sources as early as 1645; and from a Chinese origin after approximately 1700. It is further possible that England was the country of origin, because a British company was known to supply glass beads from their European source to their warehouse in Canton. Additionally, the Cornaline d'Aleppo beads with a red exterior over a green core were first available between 1825 and 1840. The Chinese (or English) glass beads were probably on either Spanish, English or Portuguese sailing vessels. The Hudson's Bay Company states that English sailing ships brought Chinese goods to the Pacific Coast from Canton, China during the mid-nineteenth century, although these ships could have been sailing much earlier than the records suggest. Equally so, are the known routes that the Portuguese sailors were taking. Remember that a Portuguese ship sank off the coast of California and the Pomo and Coastal Miwok Indians had Chinese artifacts as early as the late-sixteenth century. It is, therefore,

completely possible that Portuguese sailors were along the coast of Washington during that time frame as well.

The members of the Lewis and Clark Expedition were probably the first to contact the Indian groups residing on, or near, the Columbia River. This would have happened about twenty years prior to the Hudson's Bay Company exerting their influence over the region. The sites which would fall within the perview of the Lewis and Clark Expedition would include the following: Fort Spokane, Spokane House, the Kettle Falls Complex, and the Nez Perce Burial Sites. Additionally, the Nez Perce sites contain several types of Cornaline d'Aleppo beads: all red exteriors with yellow, white, green and blue cores. The blue and white cores were available between 1600 and 1800-1825 and again after 1860, while the yellow and green cores were available after either 1825 or 1840.

The Northwest Company was probably responsible for the initial contact of the Indians surrounding what became the Hudson's Bay Company's Fort Nisqually and the associated Nisqually Village, while the Hudson's Bay Company may have been the first to contact the Indians near Fort Okanogan (although Astor shipped furs from the area prior to 1813) and Fort Colvile. Fort Okanogan's archaeological evidence suggests that Russian beads were in the assemblage. These Bohemian beads were available after 1820. This bead was probably used almost exclusively by the Hudson's Bay Company in the areas of Oregon and Washington. The Fort Colvile archaeological assemblage includes Cornaline d'Aleppo red glass beads with white and brown cores. Both core colors had been available since 1600 and would remain available until sometime between 1800 and 1825. They may have again been available after 1860.

The last site, the Asotin Creek Burials, may have had a long history up through the time when the Hudson's Bay Company operated in the area. The archaeological assemblage included many types of beads which spanned a wide range of time frames. The white drawn variety was available from 1580 to 1890; seed beads were general

available after 1700, while blue seed beads were available after 1820; and the red exterior over white core, Cornaline d'Aleppo beads, were available between 1600 and 1800-1825. While this latter type was well known as Hudson's Bay Company beads, their origins clearly indicate that they were available about 70 years prior to the formation of the Hudson's Bay Company.

8.0 Conclusions

8.1 Introduction

The two main questions asked in this thesis were addressed towards European-made glass beads, used in exploration. During the early European contact, glass beads became significant to the indigenous people of the Pacific West Coast of North America. History notes that the glass bead, in the color "blue," became prized by the Indians. With respect to the blue glass beads, did the archaeological record bear witness to this color being given more often than any other color? Secondly, as European culture gained a foothold, through colonization, along the Pacific West Coast, European-made glass beads and manufactured goods were given to the Native Americans. Mostly, these gifts were in exchange for turning in hides and pelts, which were then transported back to Europe, for use in the garment industry. The local Indian economy which resulted from these explorers use of durable goods changed, and increased, the status of several tribes and individuals.

While it is clear that European nations visited the Pacific West Coast of North America during the sixteenth century, and later began colonizing the area in the eighteenth century, it is with the European-made goods that this thesis directs itself. With respect to these durable goods, it is with the glass bead that much of the early economic shifts began to occur within the local Indian cultures.

When tracing the roots of European-made glass beads, it became necessary to differentiate which countries were responsible for producing the majority of glass beads for American exploration. The Island of Murano, in the Bay of Venice, far exceeded every other glass bead producing nation. At Murano's height, the island's glass makers were producing six million pounds of beads per year. Secondly, Bohemia, introduced some novel bead types, one of which was the so-called "Russian" bead, which became popular, although not very numerous, in the Pacific Northwest.

Lastly, the formation of glass bead makers in the Amsterdam region was discussed. These manufacturing centers tell us, at least historically, where the glass beads were produced which may have been sent to America. In order to understand when specific beads were produced, a chart (Table 2.1) was created, to facilitate the amount of archaeological evidence noted in Chapter Seven. By using the table, most archaeological sites, where glass beads occur, may be spatially dated by when the various beads were known to have been produced.

8.2 Potlatch Ceremonies and Economic Changes

The post-contact Potlatches, for the most part, grew way out of proportion to their pre-contact origins. The economic change for the Potlatch People, was in the increased amount and value of articles they were able to give away (or destroy, in the event of an "egotistical" Potlatch). Nowhere else along the Pacific West Coast did this type of increased economic shift take place among Indian groups. The reason for this increase - whether beneficial or not to the Native American - was a direct consequence of the European fur trade and, in particular, to the favoritism of the Hudson's Bay Company to wealthy Indians (making them more wealthy) and to prosperous hunters.

8.3 Possible Potlatch-Enriched Sites

Two types of archaeological occurrences would need to be taken into account if one pre-disposes that Potlatch-enriched sites exist. The first type would be to look at the artifacts, especially glass beads, found within the habitation areas. The second area to consider would be to investigate the tribal graveyards. These latter areas would need to be post-contact, because Indian burials beforehand were, in the majority of cases, cremations. Only four sites could possibly fit this profile.

The Yamhill River burial mounds have one of the largest glass bead collections ever found in Oregon. The

analysis of the site is poor, but they may point to a culture which embraced the Potlatch Ceremony. Unfortunately, this cannot be positively ascertained because of where the 1,670 beads were found is not mentioned in the report.

Washington's Asotin Creek burial site was responsible for the location of 39,825 glass beads. This total represents six of the seventeen exhumed burials. Four of these six burials were the remains of children under ten years of age. The burial with the most glass beads (35,856) was that of an individual approximately two-years old. Again, it is unclear if this site was from the Potlatch People, as there is not enough evidence, aside from the beads, to indicate whether this culture participated in this form of redistribution.

The Palus Site contained over 100,000 glass beads in a single grave. As this site, dated between 1860 and 1890, falls outside the time when the Hudson's Bay Company had ceased operations in the area (about 1850), it is quite possible that the person was one of the Potlatch People. Unfortunately, with the little data available, it is nearly impossible to bring this site to a conclusive decision as to whether the site belongs in this framework.

The Alpaweyma Burials are another example where a large quantity of grave goods were collected. However, in this case, the site is part of the Nez Perce Indian culture and they were not Potlatch People.

8.4 California Sites

California archaeological sites are unique in comparison with some of the sites found in Oregon and Washington. For the most part, there are few archaeologists concerned with recording the historical artifacts, unless the site is purely historic. Mostly, while many sites have an historical component, this may be seen, in the site records, as "historic component" without even a listing of what was excavated. However, notwithstanding this idiosyncracy of some California archaeologists, there are several Post-Contact Period sites, while only a relative few sites which may be deemed as "Contact" sites.

Contact Period sites (whether attributed to initial contact in the 1540s or by first contact in the 1760s) may be first located along California's coastline, from Baja California to a point just north of present-day San Francisco. Secondly, the area from Arizona (at the border between Winterhaven, California and Yuma, Arizona) to the Pacific Ocean must also be included under possible first contact site locales for the 1770 period. As Table 5.1 suggests, the Spanish were responsible for establishing contact with twenty-eight tribal groups and perhaps an additional group in the north-central region of the state. This last group, the Maidu, may have had initial contact with the Spanish or with fur trappers in the early 1800s.

The oldest Spanish sites - those which were developed during the 1540s - may not have been located as yet or perhaps never will be located, as the San Diego area is mostly covered with modern day concrete. There were two known types of beads produced during this time. After 1500, chevron, or "star" beads (because of their unique appearance of resembling a star-like pattern when viewed on their ends), were available. It seems unlikely that these are the beads referred to in the Spanish journals because this style of glass bead would not be inexpensive to make and the Spanish would not have given them as freely as the journals indicate. Additionally, no glass beads of this design have ever been found in California sites. The second style of glass bead - the wire-wound variety - was produced, by Venetian craftsmen, after 1528. In all likelihood, it is this type of bead which is found in most Spanish sites today. In contrast to chevron beads, the wire-wound glass bead would have been inexpensive to make and would have required less man-hours to produce the estimated thousands which were distributed to the California Indians during these earliest explorations.

The predominant amount of glass beads found in California archaeological sites come from sites where Spanish activity was known to have occurred. These places would be the missions and associated Indian settlements

within the mission's greater area of influence. In reference to the color schemes available to the Spanish explorer, it appears, from the archaeological record, that the "blue" glass bead was the one given out the most. Insofar as the missionaries work relied heavily on symbolism, it is plausible that the clergy would use this blue glass bead (signifying purity, the sky, and/or the heavens) to help convert the Indians to Catholicism. Although not found in great abundance, the larger red (and possibly multi-faceted) glass beads (known as rosary or "Padre" beads), which signified "blood" or "war" to the Native Americans, could have been viewed (or used), by the missionaries, to signify the "blood of Christ," but this is only speculation and would require further scholarly study.

Another possibility, in order to ascertain whether a site benefited from the sixteenth century encounters, or the later eighteenth century visitations, would be to examine the burial sites. Although this was not part of the direct focus of this study, it would possibly help to understand the particular time frame for these sites. For example, most of the pre-contact, California Indian cultures practiced cremation for disposal of the deceased. After the missions were established, the burial practiced - for those Indians being converted to Catholicism - would have changed over to the (then current) Christian-style of loosely-flexed burials.

There are no California Indian sites known today where there is only one component, exclusively that of historic artifacts. All known California archaeological sites are either totally prehistoric or proto-historic in artifact content. The latter designation generally refers to the years 1769 to approximately 1775, although it could be used for the earlier sixteenth century Spanish explorations, as well. However, since the sixteenth century excursions within (Alta) California were so very limited in scope, it would be wise not to differentiate between the excursions of the 1540s and the colonization of the post-1769 years. This

entire issue of "initial" Spanish contact versus "first" contact is one of semantics.

8.5 Oregon and Washington Sites

The Oregon and Washington Contact Period begins in the 1500s (possibly during the mid-1500s) by unnamed seafarers. It is known that the Spanish, English, and Portuguese had explorers along the Pacific West Coast since the 1540s. It is possible that one (or all) of these groups were responsible for the first landfall where the Indian settlement of Ozetta stood. It is understood that the various sea traders were generally thought to have initially contacted nine coastal Indian tribes between the 1500s and about 1800. During the latter years of the 1700s, independent fur traders reached the area, either by ship or by coming south out of Canada. Between 1775 and the early 1800s, five more Indian groups were contacted. During the 1780s, the Spanish and French were plying the sea otter trade along the coastal parts or Oregon and Washington. During that decade, they were probably responsible for contacting fifteen tribes, either individually or collectively, and probably three other tribes each. It cannot be ascertained, from the records, which group of seafarers were responsible for contacting these initial fifteen groups. When one ship had loaded its hull with pelts and left the area, another ship would sail in. This next ship would not always be of the same nationality as the previous one.

Unlike California, the areas of Oregon and Washington did not have many missionaries attempting to bring the Word of God to the Indians. Consequently, what archaeological sites there are, are mainly found in association with the forts and outposts built by the fur companies, in particular - the Hudson's Bay Company. Additionally, like California, most of the sites are generational habitation sites, while those connected with the fur company forts have mostly a historical component with whatever the particular Indians brought with them from their tribal areas. In these cases, there is a predominance of

historic material and less prehistoric, or Indian-made, artifacts.

It is known from Hudson's Bay Company records, that a large amount of glass beads, and other European-made articles, were sent to Fort Vancouver. From the fort, needed items were dispatched to the other area posts. An early glass bead supply order, from 1821 (Table 5.3) (prior to Fort Vancouver being built), had 154 bundles of colored glass and agate beads sent to the posts in the area, in addition to another 125 pounds of white and light blue glass beads. By comparison, a glass bead supply order of 1844 (Table 5.4) - just one year before the Oregon Treaty was signed and six years prior to the Treaty's enactment - had the Hudson's Bay Company ordering over one-thousand bunches and almost fifteen-hundred pounds of glass beads.

Again, it is unfortunate that earlier and current archaeologists do not always take the effort to classify the glass bead assemblages found in the excavations in Oregon and Washington. There are very few bead experts along the entire Pacific West Coast capable of clearly identifying these beads and perhaps, for that reason alone, much of the historical beads found in-situ are only morphologically described. Consequently, the primary color scheme for the glass beads found in Oregon and Washington is not justified when cross-checking what the recorded supply records indicate as being ordered. For instance, the supply orders reveal that the Hudson's Bay Company ordered mainly white and blue beads in both 1821 and 1844, but the archaeological records, for Oregon, indicate that the most common glass bead found (where records indicate an amount for the beads recovered) was "clear," or non-colored. There is no indication that "clear" beads were even ordered or received. If we briefly return to the Lewis and Clark Exploration of 1804 to 1806 and check their list of goods (Table 5.2), the only bead colors used were blue and white. For Washington, the glass beads recovered are the "white" colored variety. This may certainly hold true to the records available. Even so, the occasion that "white" was preferred

over blue by such a high percentage (41.9% white to 12.9% blue) is conjectural. In the Indian's color preferences (Table 6.1), the white and blue color schemes are together on the issue of "purity." White also meant "peace." There were no preferences stated for the "clear" variety.

This may show that either the supply orders are not completely accurate or possibly that the answer as to where these clear beads originated (in the supply orders) are guised in the "sample" amounts indicated. While it is conceivable that the Hudson's Bay Company may not have been the only fur company working in the area, during the early to mid-1800s, it is highly unlikely that any other company (other than those noted in this thesis) would have gone unnoticed in the historical record. Additionally, there is no indication, either historically or ethnographically, that the Indians requested a clear form of the glass bead.

It is possible, although highly improbable, that the traders could not get anything but "clear" glass beads. After all, the "clear" bead would have been the most inexpensive glass bead to make and was perhaps the quickest way to export an order. Unfortunately, the records simply do not indicate that "clear" glass beads were ever ordered. If "clear" beads were prominent in Oregon, then it would allow one to expect that Washington would have near the same amount in their archaeological sites, but this is not true. While Oregon (the southern part of Oregon Country) sites have a high percentage of this "clear" bead variety, Washington (the northern part of Oregon Country) had less than 1/10th of a percent of them. Although not part of this study, perhaps the best way to understand this phenomenon would be to complete a spatial determination study of where the beads were located and then ascertain where the fur company forts were located, together with the route taken by Lewis and Clark. If the preponderance of "clear" beads falls either along the coastal areas (seafarers); the Columbia River Plateau (Lewis and Clark Expedition and the fur companies); or the interior valleys (fur companies), it may be possible to extrapolate a reason for this, seemingly

opposite, occurrence. It is notable, however, that in both cases - that of Oregon and Washington - the "blue" color was secondary to the primary variety. Whereas, in California, "white" was secondary to "blue" with "clear" being a distant third.

8.6 Evidence of Glass Beads in the Archaeological Record and What Does It Signify?

Much speculation has been stated and implied about the amount of glass beads available and the types of beads known to have been produced from approximately 1550 through 1850. Records from two of the three major European bead producing areas (Holland and Bohemia) have not historically recorded the quantities of beads produced in their respective regions during those 300 years. The third major manufacturing center was Venice and Murano Island. The texts reveal that at its peak, these two areas were producing six million pounds of beads per year. Assuming that 60% of these beads were the smallest variety - the "seed" bead - it could be postulated that the traders in the Pacific Northwest, based on fur company supply records, were receiving perhaps 10% to 25% of this variety. The balance of the seed beads may have been divided in half for distribution through (1) the garment and jewelry industries in southern Europe and (2) used in the African and Asian trade routes through, perhaps, the East India Company. Therefore, 60% of six million pounds of beads would be 3.6 million pounds, accounting for 360,000 pounds to 900,000 pounds of seed beads being delivered to Oregon, Washington, and California on a yearly basis, during the height of the production years.

The archaeological record for these three West Coast areas does not accommodate this amount easily through the known excavated sites. How many seed beads make a pound in weight? Because of their extremely low weight, an educated guess would be between 5,000 and 10,000 seed beads to the pound. This would then translate into a

staggering 1.8 billion beads (at 10%, or 4.5 billion at 25%) to 4.5 billion beads (at 10%, or 13.5 billion at 25%), just in the seed variety. While this type of bead was surely prevalent in ornamentation and for sewing on clothing, the archaeological record does not come close to proving this many beads, even at the minimal (10%) level, were introduced throughout the greater western half of North America, let alone the Pacific West Coast. Besides which, this only accounts for Venice manufacturing and not those produced in Holland and Bohemia.

Drawn and wound beads, such as the seed variety, were the most popular beads noted in both the historical and archaeological records. However, these were not the only beads to be used with the Native Americans. Until the 1820s, the Bohemian-made "Russian" bead variety was used in exchanges, although this type is found in far fewer sites than any of the more popular types. Most of these beads have been found in Oregon and Washington sites, rather than in Spanish California sites. This would indicate that the Spanish did not use them. However, the large, "pony"-size, wound "Padre" bead is not found in Oregon and Washington and only in a limited number of southern California sites, indicating that either few were given out or few were in the possession of the missionaries themselves. The more notable, Czech-cut (multi-faceted), dark colored, "rosary" bead is not found in any California Indian habitation site and only is one occasionally found in sites within mission boundaries.

Towards the mid-1800s, the fancy, polychrome bead was introduced in the Pacific Northwest. Most of these "flowery" type beads have been found in association with Hudson's Bay Company forts, rather than Indian habitation sites. This may indicate that the Hudson's Bay Company supply officers did not give them out, except in rare circumstances, or that there were not enough to warrant their higher trade value.

Some types of beads do not frequently show up in the archaeological record for the Pacific West Coast, although are

widely found within other areas of the greater United States. Examples of these types include the "melon," "gooseberry," and "blown" varieties. The former two were apparently popular in Spanish-controlled areas, such as Florida and the Caribbean, although they are not found in California. The latter variety is often seen on shipping manifests for paddle steamers using the Mississippi and Missouri Rivers in the central part of America, during the mid-nineteenth century.

While it has been mentioned that excavation methods have employed the use of the one-eighth inch mesh screening in the past fifteen years, could archaeologists have missed the millions of beads postulated as being shipped to this one, rather small, section of the West Coast? Either the amount of beads never reached the billions or caches of these beads are still waiting to be uncovered. The archaeological record does not accurately answer this and the historical accounts of the Spanish military, the fur companies, including the privateers, are left equally clueless as to the number of beads which were brought, or sent, to the Pacific West Coast.

8.7 Summary

The most important concept to consider is that the Europeans brought their own value-based, cultural system with them to the New World. Europe had been using a commodity-for-commodity-based system, or a monetary-based value system, for several hundred years. The New World Indians had no knowledge of what money was, nor would the concept have been initially embraced by them, had that been the way in which first contact explorers decided to conduct business. Therefore, another type of exchange system had to be devised.

The Indians of the Pacific West Coast seemed to embrace the use of glass beads, initially, for the exchange mechanism in the Contact and Post-Contact Periods. However, this practice was augmented with the use of European-made articles as the years continued.

This work has focused on the economic shift of the Native Americans in California, Oregon and Washington during the Pre-Contact Period and subsequently through 1850. The initial contacts, by the Spanish in California; by the Lewis and Clark Expedition; and the fur companies in Oregon and Washington, all gave, or made use of, glass beads, in their dealings with the Native Americans. These articles were either used as gifts, in the case of the Spanish in California; or in exchange for what was needed for survival, as in the case of Lewis and Clark; or for those fur companies employing the Indians to produce furs and pelts.

The journal entries of the Spanish and the Lewis and Clark Expedition were examined to understand the linear approach mechanisms used in obtaining goods with the use of glass beads and other European and American made goods. The content and diversity of the relatively few archaeological sites has been discussed. This clearly shows to what extent more scholarly research still needs to be accomplished in order to understand the very nature of the material native world, in both Pre-Contact and Post-Contact Periods. The magnitude of the sites was discussed and how the quantity of articles found may, or may not, be indicative of belonging to the Potlatch People. Furthermore, the discussion of specific glass bead color schemes included possible reasons why certain colors became popular. The three most prominent color schemes were generated, from the archaeological data, for each state. Even the very nature of the sites, themselves, were put into a spatial-time reference based, in part, on when certain glass bead types were known to have been manufactured. It is with the Post-Contact Period that the researcher must note the effects of European contact and the overall change to the Indian's exchange system. While there were a relatively limited number of tribes which practiced the Potlatch Ceremony, the Potlatch People were also affected by the Post-Contact Period.

The Potlatch, in the pre-contact scenario, was more low-key, with the exchanges being made from native-made

goods. This changed, albeit gradually, through initial contact, so that by the Post-Contact Era, the ceremony had become an over-extravagant affair. Overall, however, the increase of the European-made goods established and maintained a certain amount of loyalty to, in this case, the particular fur company, in which persons of a tribe, involved in the Potlatch, could attain a higher social status within the group. Unfortunately, it may be somewhat difficult to tell, based solely on grave goods, for example, that a particular site is the result of a Potlatch-influenced distribution to the deceased. This is particularly true for those tribes which either redistributed the wealth of the deceased, or destroyed it. In any event, site records may prove if a Potlatch-influenced society existed, even though a grave site would not.

For the rest of the tribes, the Post-Contact years were filled with much resentment towards the scores of American settlers moving into the Pacific West Coast areas after these areas came under the authority of the United States.

The exchange system between the Europeans and the Indians changed the Indians' way of cultural life and their material culture began to blend with that of the Europeans. The fur trade, in the Far West for example, built its trading network around the long standing routes that the Indians maintained with other tribes. The impact, of the European-Indian exchange system, produced little real change in the long run. The trinkets never really replaced dentalia (or native-made products) as a source of value, although their use would have increased the buying power initially. Blankets wore out faster than fur robes. Weapons, such as muskets and pistols, ended up being left for the traditional weapons: lances, knives, bows, and arrows. The English language, as with the Spanish language in California, faded back to tribal languages. The innovations brought into the Indian material culture faded once the item broke or wore out.

In most cases, these early contacts were relatively peaceful and cooperative. This cooperation often enhanced

the relationship until such a time that settlers flooded into the region. It was only after settlers started the westward migration that the Indian found he was being forced off his land and alienated from his culture and cosmology. At this, the Indian retaliated against the onslaught of the American settlers.

The association with European settlers led to the increase in domesticated animals, such as cattle, sheep, horses, and pigs, in much the same way as the California Indians had with the Spanish. The Nez Perce Indians, of the interior valleys, created large cattle herds (White & Cronon 1988: 425), becoming dependent on the cattle for subsistence.

Certain activities were enhanced through contact. Woodworking skills increased; some societal systems changed from bilateral kinship to exogamous, matrilineal lineages; and Potlatches increased the wealth and position of a few chiefs (Duff 1964: 58; Harris & Ingram 1972: 184-185). Even some tribes who had never associated with one another, such as the Nootkans and Kwakiutl (who were fierce warrior-types), began mutually exchanging items (Wilk 1951: 99-100).

These social values, begun by the Europeans, allowed the Indian to realize new horizons in their world. Their individual cosmology had taught them that they had been the only people on "Mother Earth." The Europeans changed that way of thinking and thus changed their perceptions of the world around them.

While change is a necessary part of life, it was also a burden for a group of people whose only contact, outside of their tribal units, were their neighboring tribes, or those that they would occasionally go to war against. For the majority of the Pacific West Coast Indians, their life was one of utopia. However, this all changed with the first European exploration and the preponderance of a small, globular mass of colored glass.

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