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CONTRIBUTIONS of the CENTER for BEAD RESEARCH 1:

REPORT ON THE BEADS FROM  
REESE BAY, UNALASKA ISLAND, ALASKA

Excavated from a Longhouse in 1986 by Jean S. Aigner  
of the University of Alaska, Fairbanks

The beads from Reese Bay are of considerable interest for two reasons. One is that imported beads were most likely brought directly by the Russians between ca. 1765 and 1806-10. This date is too early to include goods which the Russians bought from Yankee (mostly Bostonian) skippers beginning after 1807 or from the British through the Hudson's Bay Company beginning in 1839. Additionally, the Reese Bay bead assemblage is one of the largest and most varied group of trade beads from this early period yet excavated in Alaska.

The topics to be considered in this report are as follows:

1. A description of the beads with special reference to those sent to the Center for Bead Research for examination.
2. A consideration of trade beads from this early period in relation to other published assemblages from Alaska.
3. Parallels and contrasts with trade beads from other areas of North America.
4. A discussion of the likely manufacturing sources of the beads.
5. An examination of the early bead trade documented in historical literature as it applies to the Reese Bay assemblage, including the names used for beads and the beads used in the trade.
6. A consideration of the mechanics by which the beads reached Reese Bay, how they passed into the hands of the Aleuts, and how they were selected.
7. An examination of how the beads may have been used or participated in the systemic life of the site.
8. A discussion of how the beads may have left the systemic context and entered the archaeological context.
9. A report on the amber bead, which may have been locally produced.

Following the text of the paper is a catalogue of the beads sent to the Center for Bead Research and a copy of the report (77. Contribution of the Amber Research Laboratory) of the spectographic examination of the amber bead made by Curt W. Beck.



## 1. The Beads from Reese Bay

A total of 496 beads were excavated from the longhouse. Of these, all but one are made of glass, and are certainly imports or "Trade Beads." The non-glass bead is of amber and certainly was produced in Alaska. It is considered separately in Section 9. The balance of the following remarks applies only to the imported glass trade beads.

Of the glass beads excavated, a representative sample of 76 were selected and sent to the Center for Bead Research for examination. Remarks on particular beads are applicable to specimens in this sample, while the figures in Table 1 and Table 2 are based on the sample and other data supplied by Dr. Aigner.

If gross characteristics of the beads are considered, two factors are immediately apparent: color and size. There are also some differences in shapes among these beads. The greatest variety is among the larger beads, and will be discussed in detail later. Among the smaller beads, shape results from the length of a section cut from a glass tube and the amount of reheating given the section. The divisions made by Oswalt and Van Stone [1967:58] have little meaning for such beads except when the origin of the beads is known, in which case they may help differentiate between beadmakers. That does not apply here.

The colors noted in the catalogue appended to this report were determined by the use of color charts, producing relatively fine distinctions. It is unlikely that either the Russians or the Aleuts considered such differences significant, and, for example, thought of all "dark blue" beads as being any one of a number of shades.

Another difference is in the size of the beads. We have divided them into two groups, "small beads," with neither length nor diameter exceeding 0.49 cm, and "large beads," with at least one dimension 0.50 cm or more. The size differences have significance beyond mere magnitude. All the "small beads" are "drawn" beads, made by sectioning a glass tube. All the "large" beads are "wound" beads, made by wrapping molten glass around a wire or rod. These divisions are more useful than separating beads into the arbitrary categories of "seed" and "pound" beads. Oswalt [1980:67] divided beads from Kolmankovskiy Redoubt into these groups, "seed" beads being from 0.15 to 0.26 cm and "pound" beads from 0.28 to 0.75 cm. His assemblage was said to have few overlaps, but this is not the case with the Reese Bay material. Of the 67 small beads (all called "seed" beads here) examined, 7 or over 10 % of them fell between Oswalt's categories, with diameters of 0.27 cm. Moreover, no drawn beads approaching the 0.75 cm diameter size were found at Reese Bay; the presence of larger drawn beads may be an indication of later Russian trade.

The data for color and size of the Reese Bay beads are found in Table 1.



Table 1: Characteristics of Reese Bay Trade Beads

Color	Number	Percent	Small	Percent	Large	Percent
White	244	49.3	235	47.5	9	1.8
Blue	170	34.3	168	33.9	2	0.4
Red-brown*	44	8.9	44	8.9	0	
Yellow	20	4.0	20	4.0	0	
Green	8	1.6	7	1.4	1	0.2
Amber	4	0.8	0		4	0.8
Lavender	2	0.4	1	0.2	1	0.2
Black	1	0.2	1	0.2	0	
Clear	1	0.2	1	0.2	0	
Totals	495		477	96.4	17	3.4

\* These beads have red-brown exteriors and translucent green or blue interiors. They are known as "cornaline d'Allepo" beads, a trade term long established in the literature [Haldeman 1879:269]. Despite the assertion in Alaskan-Yukon archaeological literature [Oswalt and Van Stone 1967:60; Morlan 1972:47], there is no indication that they ever had anything to do with the city in Syria.

An examination of Table 1 reveals several facts. One is that the white and blue beads predominate at Reese Bay, accounting for 83.6 % of the total assemblage. The second is that the great bulk of beads are small drawn ones, making up 96.4 % of the assemblage. A third fact is that in two cases, the red-brown and the amber beads, only one type were found; all the red-brown beads are small drawn examples, and all the amber beads are of the larger wound type.

## 2. Comparison with Other Alaskan Assemblages

One of the more difficult problems in Alaskan archaeology is to separate imported goods which had been brought by the Russians only and those which may have also been brought by Americans after Aleksandr Andreeich Baranov contracted with Yankee skippers for goods (the first was to arrive in 1807, but was wrecked) [Khlebnikov 1973:61-4], from John Jacob Astor's American Fur Company beginning in 1810 [Ibid.:77-8], or bought from the British after he had contracted for the sale of material from the Hudson's Bay Company (from 1839) [Gibson 1976:157, 201].

An advantage in studying the Reese Bay assemblage is the rather tight chronological control over the material. The first known outside contact with the site was when Ivan Solov'ev stayed at Reese Bay for a few weeks in 1765. Even before that Russian traders were active on Unalaska. In 1778 Captain James Cook's party landed nearby at English Bay and visited Deep Bay, but not Reese Bay. Although Reese Bay was still occupied in American times (from 1867), the longhouses there had been abandoned soon after 1805, when Nikolai Petrovich Rezanov of the Russian-American Company persuaded the toion (chief) that they were unsanitary.



One of the first archaeologists to study Alaskan beads seriously was de Laguna, defining two types of early trade beads in the region. The large wound blue beads she called "Cook Type," not because Cook brought them but because he and his men often commented on them at Prince William Sound in 1778, before the Russians had explored the area [1947:138]. She refers to these as "Protohistoric," as at Prince William Sound they were in use before direct contact with Europeans [1956:60-2, 211].

The other beads she called "Glacier Island Type," after an island in Prince Edward Sound [1947:138]. These are small drawn beads primarily of blue, white, and black. These she believes came to the Chugach only after direct contact in 1778 or later [1956:211].

We have not retained de Laguna's terminology for these beads, but both types were found at Reese Bay.

An excavation at Pedro Bay at a site thought to date between 1750 and 1800 uncovered fifteen glass beads, listed as large, medium and small. No discussion of the manufacturing process was reported, but it is assumed that the large beads are wound, and that the small beads were drawn. Two large beads were compared to de Laguna's "Cook Type," and the small blue beads to the "Glacier Island Types;" no black or white drawn beads were found. The other five types were not related to beads at Prince William Sound. The excavators stated their belief that glass beads were in the region before 1741, but presented no evidence for that assertion [Townsend and Townsend 1961:48-9].

At the Three Saints (more properly Three Bishops) Bay Colony, the site of Gregorii Ivanovich Shelikhov's first Alaskan settlement, more beads were found. Three Saints was established in 1784; by 1793 Baranov was building a new settlement at the present town of Kodiak. The original colony was maintained at a reduced size until ca. 1850, but sometime between 1793 and 1850 was moved two km away. The beads uncovered there may include some later than the Reese Bay material, and are from a Russian post rather than a native settlement. Of the 129 glass beads excavated, 121 were small drawn beads and eight were larger wound beads in white, dark and light blue [Clark 1985:114, 120].

We may compare the beads from these four roughly contemporary sites. The figures in Table 2, expressed in percentages, are not strictly comparable, but give an idea of the beads in circulation in this period. The four sites are: 1.) Reese Bay, ca. 1765 to 1806; 2.) Skeleton II at Glacier Island, Prince William Sound, only represented by drawn beads and counted by this author from de Laguna 1956: Pl. 45.11-13, dated post 1783; 3.) Pedro Bay, at which bead type 5 bead is assumed to be wound and bead type 6 is assumed to be drawn, dated from 1750 to 1800; and 4.) Three Saints Bay Colony, although the numbers of each color of wound beads were not reported. We have assumed here that beads described as "dark purple" would be classified by the color charts used for this report (ISCC-NBS) as purple-blue and have classified them with the blues. The site is dated from 1784 to sometime between 1793 and ca. 1850.



Table 2: Comparison of Early Trade Beads from Alaskan Sites

Site ---->	Reese Bay	Prince William S.	Pedro Bay	Three Saints
Date ---->	1765-1805 +	post 1793	1750-1800	1784-1793 +
No. of Beads ---->	495	485	15	129
Bead Type:				
White: drawn	47.5	22.5		65.9
: wound	1.8		26.6	> 6.2*
Blue: drawn	33.9	58.6	46.6	17.8
:wound	0.4		26.6	> 6.2*
Red-brown: drawn	8.9			10.1
Yellow: drawn	4.0			
Green: drawn	1.4			
:wound	0.2			
Amber: wound	0.8			
Lavender: drawn	0.2			
:wound	0.2			
Clear: drawn	0.2			
Black: drawn	0.2	19.0		

\* Blue and white wound beads totaled 6.2 %.

The beads from Reese Bay represent the largest and most varied assemblage of those considered. It is even more diverse than this table indicates, as there are differences among the classes represented here as well. Blue and white beads (dark purple, 12.4 %, from Three Saints being classified with the blue) are dominant. Wound blue and white beads are all but universal, although always in small numbers (the percentages at Pedro Bay are high because of the small sample available). None were reported at Prince William Sound, but this was one burial, not a site; wound blue beads were reported in small numbers from other places along the Sound. A striking difference in the Prince William Sound assemblage is that black drawn beads were heavily represented. The red-brown cornaline d'Allepous were found only at Reese Bay and Three Saints Bay in approximately equal percentages. Their presence shows that they were traded by the Russians, despite Morlan's observation [1972:70].

### 3. Comparison of the Beads with Other North American Assemblages

Small drawn beads, commonly called "seed" beads, are known in North America at least by 1570-1595 [Pratt 1961:6], although they did not reach the more isolated Senecas in any number until 1710 [Wray 1983:47]. In the Great Plains none seem to have been in use when George Catlin visited [1844], but were available shortly thereafter. Wildschut and Ewers date their introduction there at about 1834 [1959:49], and Hail at around 1840 [1983:51]. Their occurrence at Reese Bay is substantially earlier.



Some drawn beads from Reese Bay are of compound construction, with a core of one color and an outer coat of another. These include the 44 red-on-green or red-on-blue cornaline d'Allepos, at least eleven of white cores with clear exteriors, and at least one with a gray core and white exterior.

The cornaline d'Allepos have been called "very common" in Alaska [Woodward 1959:99], and are widespread elsewhere in North America. Brain places their range between 1600 and 1836 [1975:106], although he refers to somewhat larger sizes. Kent noticed their occurrence on the eastern seaboard as early as 1595 [1983:80]. Good remarked that the smaller "seed" sizes generally precede the larger ones [1979:122].

The clear over white beads have approximately the same distribution as the cornaline d'Allepos. Brain notes occurrences from 1600 to 1890, with a median date of 1754 [1979:105].

Two small "seed" beads (Catalogue Nos. 457, 489) are tubular in shape, and called "bugles" in the trade. The only difference between them and the usual "seed" beads is that the latter were agitated over heat after being cut from a glass tube, while "bugles" were not.

Among the wound beads, the lavender one (# 237) is decorated with yellow glass applied in circles, and then "combed" by pulling a rod through them while still hot to make a floral pattern, dubbed "squiggle" [Kelly and Johnson 1979; Francis 1980]. Such patterns are found as early as 1725 [Burke 1936:63]. Brain notes a chronological range for them between 1725 and 1850 [1979:113]. They are on sample cards dated as late as 1899 [Francis 1980:35]. The particular color combination of the Reese Bay bead does not seem to be recorded elsewhere, but there is a great variety of combinations known.

One wound white bead is elliptical in shape (# 257). It is very similar to beads often<sup>called</sup> "barleycorns" elsewhere in North America [Smith n.d.:3; Good 1972:111; Harris and Harris 1967:174].

Two beads (# 459 and # 236, the later fragmentary and not sent for examination) are of amber colored glass with small protrusions over their surfaces. These are called "mulberry" or "raspberry" in the literature. Quimby notes their occurrence during the Middle Historic Period 1670-1760 [1966:86]. Brain reported their distribution along the Mississippi and into the Great Lakes from 1699 to 1833 (eliminating the suspect early date for the Keller site) [1979:111]. Amber colored mulberries, as opposed to blue or clear ones are rare in North American, though are found in other parts of the world [personal observation]; some were found at Fort Michilimackinac (1715-1781) [Maxwell and Binford 1961:119]. There is some question as to how the protrusions were formed. Kidd suggests the beads were molded after being wound [1970:50], while Brain notes the lack of a seam and suggests they were rolled over a plate with depressions [1979:111]. However, they also lack any area of overlap and the protrusions are not uniform from one specimen to another. It has been suggested that the wound bead was scored with a tool and allowed to reheat over a flame [Harris 1987; Francis 1987].

A green wound bead (# 126) was paddled into a tapered "teardrop" shape with a square section. No parallels for this bead have been noticed.

The other five beads sent for examination are oblate or suboblate in shape: one of sky blue (# 771) and another slightly darker (# 585), a white bead (# 390), and two amber colored beads (# 459, 680). The blues and the white bead are well made (but not perfectly), with evenly coiled glass and small perforations, while the amber beads are not as evenly coiled, have more bubbly glass, are less regular in shape, and have larger perforations.



Wound blue beads are rare in most American contexts, except for "Crow" beads of the Great Plains [Hail 1983:52], which are later in date, and "Padre" beads of the Southwest [Sorensen 1970:16], which are of a different type of glass. In the Northwest, however, they were in great demand [Woodward 1967:17-8; Strong 1959:226], and were probably the tiacomoshack or Chief Beads of the Columbia River Basin, a term that refers to the status of the beads, not to the owner. White wound beads have a similar distribution, although they took second place to the blues.

Historical sources confirm the distribution of these beads. They were virtually unknown to Americans and British entering the Northwest. Lewis and Clark were poorly informed about the beads they would need, and took few blue ones. Lewis often mentioned them, calling them common or coarse: "[the] most inferior kind, are esteemed beyond the finest wampum." [1814:144] The lack of these beads was almost disastrous for the expedition [Francis 1986a:44-6]. A typical encounter was recorded by Lewis:

[For a skin we offered] a watch, a handkerchief, an American dollar, and a bunch of red beads; but neither the curious mechanism of the watch, nor even the red beads could tempt him; he refused the offer but asked for tiacomoshack or chief beads, the most common sort of coarse blue-coloured beads, the article beyond all price in their estimation. Of these blue beads we have but few, and therefore reserve them for more necessitous circumstances. [Lewis 1814:84]

The same situation prevailed with the Cook expedition on the Northwest Coast. Captain James King at Prince William Sound in 1778, remarked:

[T]he most certain proofs of their hav<sup>g</sup> a frequent supply of articles belonging to civiliz'd Nations are their blue beads; these of which they set a very great Value, have not the good shape of English beads, but are manufactured by some nation ruder in this art than ourselves, they are a about the size of a large current berry, & intended to be (but are not) round... [Beaglehole 1967:1418].

Captain Cook was so unfamiliar with these beads that he was not sure of their composition. At Prince William Sound he recorded:

They were in possession of iron and a few sky blue beads such as have been before mentioned. These they seemed to value very much, and I had some difficulty to purchase two or three to satisfy my self [sic] whether they were glass or made of some substance they might have amongst themselves. [Beaglehole 1967:365].

Amber colored beads appear on seventeenth and early eighteenth century sites: in the Susquehanna sequence from 1690 to 1740 [Kent 1983:81], at St. John's along the Potomac River from 1680 to 1720 and at The Maine, Virginia, from 1615 to 1625 [Miller et al. 1983:133, 141], at the Womack site in Texas from 1700 to 1729 [Harris et al. 1965:313], and at Ft. Michilmackinac from 1715 to 1781 [Maxwell and Binford 1961:119]. Except for the overlap at Ft. Michilmackinac and Kipp's Post [Brain 1979:107-8], they do not appear after about 1750. In two different areas, it was noted that they had disappeared before 1745, in the Seneca territory [Wray 1983:45] and among the Wichita



Indians [Harris and Harris 1967:156]. This time span is too early for Reese Bay. Amber glass beads on later sites were made differently with a single turn of glass, and dubbed "Blob-wound" by R. King Harris [Good 1972:115; see also Murray 1964:Pl. III].

In sum, the drawn beads, including those of compound construction, the wound bead with the "squiggle" design, the "mulberry" beads, and the elongated "barleycorn" beads are well attested at other North American sites at the time the Reese Bay longhouses were occupied. The green square drop shaped bead has no known parallel. The blue, white, and amber wound beads, however, are not found during this period in North America except along the Northwest coast. Moreover, the blue beads, the most important of the group, were quite unfamiliar to Americans and Englishmen coming into the area for the first time.

#### 4. The Origin of the Trade Beads

Glass beads are and have been made in many places for a very long time. We can eliminate with confidence small Middle Eastern beadmakers [Francis 1979a] and the various powder-glass beadmakers of Africa, leaving those of Europe and Asia. India has been a major beadmaker for millennia and made both wound and drawn beads [Francis 1982a]. Indian glass beads were among the goods sold by the Russian-American Company from their Sitka operations to Hutchinson and Hurth of San Francisco in 1867 [Oswalt 1980:154], but the beads found at Reese Bay are unlike Indian wound or drawn beads.

The leading European beadmaker for 500 years was Venice, Italy; early production was mostly in drawn beads, including "seed" beads and cornaline d'Allepos [Francis 1979b]. Many other European nations tried to break Venice's grip on the industry, and some managed to do so. Bohemia was the most successful, but its apogee comes after the period under discussion, and produced mostly molded beads [Francis 1979c]. Holland was a successful beadmaker, making drawn beads, including cornaline d'Allepos, and wound beads. Drawn bead manufacturing ceased by 1697 [Karklins 1974:66]; it may have continued making wound beads after that time, but our information is not yet complete on that score [Karklins 1987a].

A bead factory was begun in Russia at 'Ust Ruditsky in 1753 by the polymath M. V. Lomonosov. Nothing is known of the beads produced there, and the factory turned entirely to the production of mosaic tiles within two years [Menshutkin 1952:95-8]. No other bead factory is mentioned in the Soviet Encyclopedia [Prokhorov 1970:679], although beadmaking was reported for 1881 [Anonymous 1882?]. The French [Kidd 1979:31-2; Francis 1988] and the English [Kidd 1979:46; Karklins 1987b; Francis 1988] also made beads and could have supplied some of these beads, but our knowledge of their industries is still scanty.

The wound bead with the "squiggle" design can confidently be ascribed to Venice. Beads of this design are found on sample cards from there of the mid nineteenth century [Karklins 1982; Giacomuzzi n.d.], and as late as 1899 [Francis 1980]. The mulberry beads might possibly be of Dutch origin, although this is not completely confirmed [Francis 1987; Karklins 1987a].

The wound blue, white, and amber beads, however, do not appear to be European. This may be deduced from their rarity elsewhere in North America and from the unfamiliarity with them (especially the blues) shown by Americans and Englishmen when they penetrated the Northeast Coast. It seems most likely that they were made in China.



There has been a lively debate over this for some time. Woodward [1967:14-9], Sorensen [1971:15], and Jenkins [1975:6] do not agree with a Chinese ascription, while de Laguna [1956:62], Chu and Chu [1973:138], Liu [1975:14] and Ross [1975:3-4] do. Four objections have been raised by Woodward and others to such beads being Chinese.

1.) When the term "China" is used, this may refer to glass mistaken for porcelain. This is possible; several cases of such misidentification are known.

2.) Beads from China were not necessarily made there, as the British in particular maintained large warehouses stocked with European goods at Canton. This is granted.

3.) China was never a great glass beadmaking or exporting country. This persistent notion [Van der Sleen 1967:99] is erroneous. Although they do not rank as great beadmakers, the Chinese made beads continuously from about 1000 B.C. [Francis 1986b:8-17; 1986c:6]. China was a much more important exporter than had been thought, selling beads all over Asia from at least the thirteenth century [Francis 1986b:32-4; 1986c:7]. More to the point, they are known to have sold beads to the Russians in the eighteenth century, as we shall see.

4.) Recent Chinese beads are not like those found in the Northwest trade. True, but some older Chinese beads are [Harris 1985:9; Chu and Chu 1973:141]. We now know that a much greater variety of Chinese glass beads were made than had been thought. Ming Period beads were made by different techniques; there were at least four beadmaking cities in the nineteenth century; and different types are made today, indicating more than one source [Francis 1986b:30-1; 1986c].

Against these objections, several lines of evidence point to China as a likely supplier of beads to the Russians for the Alaska trade.

1.) China made and exported a considerable variety of beads for a long time, as we have noted.

2.) The earliest beads brought into Alaska (as well as a number of other products) during the 1741 voyage under Vitus Bering were Chinese. Sofron Khitrov recorded that at the landing at Kayak Island they found an abandoned hut from which G.W. Steller and he took a basket, a shovel, and a stone with copper stains on it. Later at Bering's insistence he returned and left, "16 1/2 arshins [28 inches] of green material, 2 iron knives, 20 Chinese strings of beads, 2 iron pipes for smoking Chinese tobacco, called 'shar.'" [Golder 1922:99] The same objects including "20 Chinese strings of beads" were recorded left there in Sven Waxel's account forwarded to the Admiralty College in 1742 [Ibid.:272]. The log book, apparently written by Kharlam Yushin, of Bering's ship, the St. Peter, for 5 November 1741 at the Shumagin Islands, records that Bering ordered presents handed down to men in a baidara (Native craft) near the ship. They were, "4 1/2 arshins of red cloth, 2 mirrors, 3 strings of Chinese beads, small bells." [Ibid.:147]

Natives are often quite conservative in their acceptance of beads, as has been documented in Africa and other parts of the world. It may well be that the blue beads demanded for so long had to match those first brought by the Bering expedition.

3.) Agents of the American Fur Company obtained beads for the Northwest Coast in Canton. John Ebbits wrote from Canton in 1811, "the Beads that answer Columbia's River [sic] are plenty here." [Porter 1931:461]. John Jacob Astor instructed C.C. Cambreling in 1813 to obtain from Canton, "...Buttons & blue pound Beads -- all of which are very good for the Coast [Ibid.:539; see also Woodward 1967:18-9].



4.) The Russians bought Chinese beads at Kiakhta, and were so anxious for them that they charged no duty on them [Coxe 1780:241].

5.) The limited distribution, and the unfamiliarity with them by Europeans and East Coast Americans, which has already been examined, is also highly suggestive.

To conclude this overview, the bulk of the trade beads found at Reese Bay are no doubt of European manufacture. The small "seed" beads and the "barleycorn" bead are probably, and the bead with the "squiggle" design is certainly, Venetian. The "mulberry" bead may be Dutch. On the other hand, the wound beads of blue, white, and amber colored glass would seem most likely to be Chinese.

## 5. Documentary Evidence of Trade Beads Used in Alaska

### 5a. The Names of Beads

Two words were commonly used in Russian to describe the beads in the Alaskan trade: bisera and korol'ki. Biser simply means bead in Russian [Galperin 1977:141]. Ramsay defines these two as, "trade beads, of various colors. Bisera (singular biser) were small beads, bestowed in strings of a sazhen [7 feet] or more; korol'ki (sing. korol'ek) were larger, used individually as ear ornaments, etc." [1981:110] These terms are usually translated as "beads and corals." This author has access only to translations of Russian works (and does not read Russian), and assumes that Ramsay's interpretation is correct, though in some cases alternate interpretations are appropriate.

It is, however, suggested here that korol'ki is derived from "coral," (korall) in much the same way as "pearl" has come to be adapted in several languages (including French, Italian, and German) to mean beads in general. The same was true with the Greek/Latin word margarite, which meant both pearl and beads, and which may have in turn been derived from the Frasi (Persian) marjan, which means coral [Mingana 1925]. Dutch, although not closely related to Russian, provides a parallel. The modern Dutch word for bead is kraal [Van der Sleen 1975:31]. In 1626 corael meant glass beads [van Laer 1924:232], and was used by Dutch authors interchangeable to mean beads actually made of coral or beads of any type [Francis 1986d:3, 5-6].

Three other words were used for beads: garnets, enamel, and pearls. Although these also usually refer to glass beads, in some cases they had more specific meanings. Davydov used "pearl" when describing dentalium shell [1977:149]. Merck commonly used "garnet" (granaten), sometimes qualifying it as "melted garnets" or "glass garnets." At Prince William Sound he said, "The favored items for which they bartered their own merchandise were blue, and more seldom white glass garnets. Less eagerly they sought corals of the same color. They well knew how to select the corals of equal value." [1980:123]. Contrasting corals with garnets suggests that they were somehow different, for example, garnets might be translucent as opposed to opaque corals. This, however, seems doubtful, as translucent (clear) white and red beads are not found in the area then.

The Unalaskan word for bead recorded by Samwell was Tonoomalooch [Beaglehole 1967:1147], which is evidently of local derivation. It is not similar to any of the words recorded by G.I. Davydov for "bead" on the mainland [1977:237, 241].



## 5b. Beads as Handled by the Russians

The account by Shelikhov of the 1788 voyage of Gerasim Grigor'evich Izmailov and Dimitrii Ivanovich Bocharov in the Three Saints mentions beads in several contexts. On 9 May at Chugach Bay (Prince William Sound) they traded for skins with "8 and 9 strings of blue glass beads [bisera]... plus three or four korol'ki." [1981:84]. On 20 May they met the demands of a Chugach for beads to give to his wife, handing over "Ten strings of blue, five of dark yellow and 1/3 sazhen of green glass beads [bisera], together with 27 blue korol'ki" [Ibid.:86]. On 11 June at Yakutat Bay (Bering Bay) they traded "blue and red korol'ki for earrings and blue glass beads [biser]," and later in the day bought a boy to serve as an interpreter for "one large korolek and three sazhen of glass beads [biser]." [Ibid.:96]. Glass beads and korol'ki were also exchanged in early July at Ltuk Bay, without any mention of colors [Ibid.:102-3].

Shelikhov wrote Evstratii Ivanovich Delarov, the manager of the colony in 1789, "I am using this opportunity to send to you... 2 puds [also pood; 36.11 English pounds] of white and blue beads... [bisera]" [Tikhmenev 1979: 20]. Baranov, Delarov's successor, wrote Shelikhov from Chaguch Bay in 1793, "... we have no trading goods here, only beads, and even they are of the small size." [Ibid:32].

We should also note a transaction between the American Fur Company's ship, the Beaver, and Baranov at Sitka in 1811. Alexander Ross had complained that the Beaver and other ships coming to the Northwest had been taking the "unsaleable trumpery" which had accumulated in Astor's East Coast shops to foist on the Northwesterners, "instead of beads and trinkets we get white cotton...." [Porter 1931:484]. Ross was right, and the log book of the Beaver shows this exchange:

October 3 (received) of Alexander Baronoff Esq.		For
290 lbs.	Small Blue Beads	
137 "	Mixed Do & White Do	[\$] 182.16
52 "	Dark Blue Large Do	
116 "	Light Do Do	
		253 Gallons Gin = 182.16
		[Porter 1931:521]

To summarize these exchanges, they include twelve transactions of small beads: four with blues, two with whites, one each with yellows and greens, and four with colors not mentioned, and seven of large beads, two of blue, one of red, and four with colors not recorded, including one of a single large bead. This agrees well with the archaeological data cited in Section 2, except that red korol'ki, were not found at any of the sites considered. The dominance of blue beads was noted by Bancroft, who said they were one of the few trade articles carried by the promyshleniki [1886:205, n. 20].

As for Unalaska itself, James King commented, "They [the Aleuts] were very fond of beads but preferred [sic] those colors & sizes that came the nearest to what they had from the Russians, such as blue, white & brown about the size of a large pea." [Beaglehole 1967:1427] These match very well the larger wound beads uncovered at Reese Bay.



## 6. The Mechanisms of Trade

Beads made in Europe and used in the Alaskan trade would have been brought by the Russians across Siberia, an arduous but well-developed route. As for those which are possibly Chinese, the only source directly open to the Russians was the Sino-Russian trading post on the Siberian-Mongolian border, Kiakhta (or Kyakhta; Maimatschin on the Chinese side). The Russians procured beads from this source; Coxe said that among goods exempted by the Russians from customs duties were "glass corals, beads..." [1780:241].

The Chinese occasionally closed Maimatschin/Kiakhta, most notably between 1785 and 1792. During this time Shelikhov laid plans to trade by other means, such as through Macao [Okun' 1951:34; Tikhmenev 1979:20], but this seems not to have been too extensive, if it ever bore fruit at all. The Russians did business with American skippers as intermediaries. From 1797 to 1820 this trade amounted to 3,648,002 rubles, or 22.3 % of the trade through Kiakhta [computed from Tikhmenev 1978:153, 163]. It is also possible, but unknown, that Chinese traders visited Reese Bay on a less regular basis.

Trade in beads and other exotic articles takes many forms. They may be given as gifts in simple acts of friendship or to indicate mutual respect. They may be used to break down hostile barriers erected by shyness. They may also be used in barter for simple necessities, and in time resemble currencies [Francis 1986a:33-6].

Each of these functions played a part in the early Russo-American bead trade. The case cited in Section 5 in which members of the Bering party left beads and other goods in an abandoned hut on Kayak Island (albeit having already removed a few objects from the hut) recalls the incident in which Jan Ribault in 1582 along the South Carolina coast left goods at a camp site hastily abandoned as the strangers approached, including, "knives, looking glasses, little beads of glass, which they love and esteem above gold and pearls, for to hang them at their ears and neck[s], and to give them to their wives and children." [Hakluyt 1582:G2 verso]

Presents from what must have seemed virtually another planet were an established means of contacting strange natives. The action ordered by Bering at the Shumagin Islands to lower beads and a few other gifts from the St. Peter to the baidara floating alongside [Goldner 1922: 147, 148 n. 93] recalls an incident along the Maine coast in 1607 in which John Davis threw beads, knives, and mirrors into the boat of natives who dared not approach the English ship [Burrage 1906:402-3], as well as many similar early contacts elsewhere along the Eastern seaboard [Francis 1986a:34].

Bering must have anticipated considerable use for beads on his voyage. When in 1762 Stepan Glotov and Jacob Malevinskoy went to Commander's (Bering) Island to retrieve the things left by the Bering expedition after their shipwreck in 1741 and escape the next year, "They brought back with them twenty-two pood of iron, ten of old cordage fit for caulker's use, some lead and copper, and several thousand beads." [Coxe 1780:107]

Beads as marks of esteem and gifts especially to rulers were evident in the instructions given by Baranov to James Shields (Iakov Egorovich Shilts) when the latter was preparing to sail to and survey Chil'kat Bay on Sitka Island, "If you should happen to see the main Chil'kat toion, befriend him and give him a baize cloak with ermines and a velveteen cap, and also from six to ten sazhen of blue beads." [Tikhmenev 1978:44]



There was always a mixture of motives, at least as perceived by the Russians. The previously mentioned 1788 voyage of Izmailov and Bocharov sometimes gave away beads in exchange for fur [Shelikhov 1981:84, 102], for a boy to serve as interpreter [Ibid.:96], and for an anchor left from an earlier voyage [Ibid.:103], or simply to satisfy the demands of a locally powerful man [Ibid.:86].

Very early on, exotic goods were exchanged for food and furs by the Europeans in Alaska. No doubt the Russians regarded this as a sort of currency exchange, as it served their principal purpose of obtaining furs. The Cook Expedition (1778), which was not a purely trading voyage, saw it more as barter. Samwell at Cook Inlet said, "We were surrounded by many Canoes to day [sic] who sold us their Darts and other Things for Beads, iron & Tobacco." [Beaglehole 1967:1121]. At Unalaska James King said, "They daily brought us both fresh & dried berries, for which they got beads & Tobacco...." [Ibid.:1442], and Charles Clerke said, "During our stay at Samgoonoodha [English Bay] we caught as many fish as we cou'd possibly consume, and for a few Beads we might purchase of the Natives almost any Quantity of dried Fish we pleased, either Salmon or Halibut...." [Ibid.:1337]. Nor was foodstuff the only thing available for trade. Edgar remarked that while at English Bay some of the men went to a nearby bay (probably Deep Bay) where, "the Women are pleasingly fair & kind in all respects, granting you favours very freely for a hand of Tobacco or a half a Dozen Beads." [Ibid.:1351]

The Natives were evidently more accomplished at trading than the English: "yet our men make very bad bargains, which is certainly owing to their own faults in spoiling the market, as we always do in every place, particularly here [Unalaska], for the Natives have Phelgm enough to keep up the price of their goods, & we are endued with little patience." [King in Beaglehole 1967:1442]. The Russians, with more experience, must have fared better.

Father Ivan Veniaminov (1824-1834) described Unalaska trading as indirect. The seller chose a young man to go to another Native or a visitor and offer goods to exchange. The youth returned with the proffered swap, and might make other trips to bargain a deal agreeable to both parties. The name of the man trading was never mentioned, though he might be known [1984:212].

In any case, beads or other items which were the best trading goods were demanded by the Natives. The wrong beads were hardly ever tolerated. Just as we observed the problems Lewis and Clark had with the wrong beads along the Columbia River (see Section 3), so was this the case in Alaska.

Glotov and Malevinsky in the Adrian i Natal'ia reached Kodiak in 1763 and were thus the first or perhaps second Russians to do so [see Shelikhov 1981:41 n.\*\*]. They wanted to trade for fox skins, "They [the Natives] did not set the least value upon other goods of various kinds, such as shirts, linens, and nankeen, but demanded glass beads of different colours, for which they exchanged their skins with pleasure." [Coxe 1780:113-4]

The Cook expedition met the same circumstances along the Alaskan coast. At Prince William Sound Cook recounted, "[the Chief was] Ornamented with sky blue beads about the size of a large pea; these he seemed to set ten times more Value upon than our white glass beads which they probably thought was only crystal which they have among them." [Beaglehole 1967:346]

The same light blue beads were demanded all along the Northwest Coast. In addition to references cited earlier for their importance along the Columbia River, at Prince William Sound, and on Unalaska, among the Yakutat Tlingit they were the most precious bead [de Laguna 1972:445], as was true on Kodiak Island [Sauer 1802:177].



In time fashions change and other items of trade became more important to the Natives. Already at Prince William Sound in 1778 Cook mentioned, "These people were also desirous of iron, but it must be pieces eight or ten inches long at least, and three or four fingers broad for small pieces they absolutely rejected." [Beaglehole 1967:346].

The value of such pieces of iron is obvious, as they could be and had long been fashioned into knives, probably beginning with iron obtained from driftwood from shipwreck remains brought by the Japanese current or through indirect trade with neighbors [Golder 1925:97, n. 216; de Laguna 1956:62-3]. Another object highly desired was firearms, but for a long time the Russians refused to trade these. The Americans and English were not adverse to doing so, however, and this was one way they outmaneuvered the Russians in trade, much to Baranov's anger [Khlebnikov 1973:28-9].

Two other trade items also soon created demands due to their own addictive qualities: tobacco and alcohol. At English Bay, Unalaska, King said, "of [tobacco] they were very fond, preferring it to all other things." [Beaglehole 1967:1442]. A few years later Gavriil Andreyevich Sarychev on the Billings expedition said of the Unalaskans, "[tobacco is] an article of the greatest necessity among them" [1806:38]. By 1861 the historian Tikhmenev would say of Nunivok and Ukivok, "They buy only manufactured goods that are strictly necessary for home use. They also buy beads, but their favorite barter is for firearms and alcohol." [1978:438]

We can also perceive changes in fashion among the beads desired. Later beads used in the Alaskan trade are often much different from those we have seen at Reese Bay and the other early sites surveyed here [see Jenkins 1972, 1975; Morgan 1973; Mille 1975]. One bead, a blue drawn hexagonal tube with the twelve corners ground off, which has had no mention thus far, became so popular in the later trade that it has inappropriately been called "The Russian Bead" [see Harris 1985]. A hint of changes in style is given in 1861 when Tikhmenev commented on Bristol Bay, "Beads, formerly much used, are bartered now only in small quantities and only red, black, and white ones of large size." [1978:425].

## 7. The Use of Beads in the Systemic Life of Reese Bay

There is no archaeological evidence yet for bead use at Reese Bay, but there are many descriptions of human ornamentation on Unalaska. About the Fox Islands (Unalaska, Unimak, and Unnak) Piakoff, who visited in 1758 reported, "...the men had bones thrust through their ears, under lips, and gristle of their noses; and the faces of the women were marked with blackish streaks made with a needle and thread in the skin." [Coxe 1780:62] The first report specifically about Unalaska was by Ivan Solov'ev (Solovioff), who spent time at Reese Bay in 1765:

They make three incisions in the under-lip; they place in the middle one a flat bone, or a small colored stone; and in each of the side-ones they fix a long pointed piece of bone, which bends and reaches almost to the ears. They likewise make a hole through the gristle of the nose, into which they put a small piece of bone in such a manner as to keep the nostrils extended. They also pierce holes in their ears, and wear in them what little ornaments they can procure. [Coxe 1780:151].



This early description emphasizes the use of natural materials attached to the face through holes or slits made in the lower lip, nose, and ears. Solov'ev was describing a period soon after contact with the area. A bit later, with the advantage of more documents available, Coxe summarized the use of ornaments on the Fox Islands, though not first hand:

They also adorn...caps with beads of different colours, and with little figures of bone or stone. In the partition of the nostril they place a pin, about four inches long, made of bone, or of the stalk of a certain black plant; from the ends of this pin or bodkin they hang, in fair weather and on festivals, rows of beads, one below the other. They thrust beads, and bits of pebbles cut like teeth, into holes made in the under-lips. They also wear strings of beads in their ears...[1780:257].

Members of the Billings expedition, which visited Unalaska in 1790 and 1791 described Unalaskan ornaments:

The woman's parka has a thick stand-up embroidered collar, 2 vershoks and a quarter high, which is compactly embroidered with small glass beads of white color, among which from various colored beads are made designs without any regular outline. From the upper edge of this collar there hang in front to the wrist seven rows of small and large beads of various colors, and similar decorations also cover all the distance from the upper part of the collar to the middle of the back. In back of the collar hangs on the back [sic] a piece of leather six vershoks long, and nearly one and three quarters wide, entirely covered with beads, and its end decorated with long white goat hairs. ... In old times they hung various decorations from the septum, but this practice had fallen out of use. In their ears they have various perforations, in which they wear a multitude of bead decorations: two or three rows of such beads under the ears. [Billings in Titova 1980:200-1]

The front of the dress [of the women], and the opening of the arms, is trimmed with a row of pearls or coral. Their festival dress is similar in shape, but more enamelled, and bordered with rows of corals, bird's beaks [probably puffin], and goats' hair.... They pierce the cartilage of the nose, and wear long pendant ornaments of amber, coral, and enamel.... They also pierce two holes in the hollow of the upper [sic] lip, in which they wear long thin bones; round the edges of their ears they sew ornaments of blue and white enamel [Sarychev 1806:8-9].

Slips of leather are sewn to the seams of [the women's dresses], and hang down about 20 inches long, ornamented with the bill of the sea-parrot, and beads. A slip of leather three or four inches broad hangs down from the top of the collar, covered fancifully with different coloured glass-beads, and tassels at the ends: a similar slip hangs down the back.... Their ornaments are rings on the fingers, ear-rings, beads and bones suspended from the septum of the nose, and bones in the perforated holes in the under lip [Sauer 1802:155].



The collars [of the women's dress] is usually decorated with rows of white garnets which alternate with blue ones, and crosswise with red crosses. There also hang three or four rows of white garnets from the collar in front. Each row measures two inches or longer. They also use amber and thin little quivers that look like feather quills.... They wear bands of darker fur from the fur seal around their hands and feet. These are decorated with glass beads. Around the neck they wear a similar string with one glass bead tied in. Some of the women wear a short piece of alabaster or bone through the cartilage of the nose. From holes on each end of the nose-stick there hang three rows of white garnets, each two inches long. The incision through the cartilage is wide, because when they put the bone piece in, they also pull the beads and string through the hole. The ear is decorated in front with round buttons of garnets [Merck 1980:78-9].

European trade beads clearly fit well into the prevailing fashion of the Aleuts. Beads were used before the Russians came, but were rare and highly valued [Veniaminov 1984:213]. The Unalaskan word for bead was of local origin. Glass beads were quickly adopted for ornament, complementing the natural materials, and eventually supplanting them [Ibid.:213-4].

Certain beads fulfilled specific uses. The account of Unalaska once attributed to Shelikhov, but more likely to have been written by A.G. Kholodilov between 1772 and 1777, says "They wear bones in their lips and noses, and beads and corals [korol'ki] of different colors in their ears, but predominantly white." [1981:73-4].

Beads were also prestige items, at least for a time. Sarychev recounted that on Unalaska in 1790 Billings had given a large amount of tobacco and beads to an Aleut woman who had been particularly helpful. The next year on the return voyage they learned, "That she became an object of universal envy among her female country-women, and was esteemed the richest of all the inhabitants." [1806:39] Billings described a beaded ornament which was once very precious, but by 1790 had already been devalued:

In their ears they have various perforations, in which they wear a multitude of bead decorations: two or three rows of such beads under the ears. They obtain these decorations from the land of Aliaska [Peninsula], and it is considered so precious that formerly they used to sell for such a pair of earrings a girl or a woman in eternal slavery. [Titova 1980:201]

Among the manner of wearing ornaments, perhaps the most striking was the slitting of the lower lip to permit the insertion of a bone, often decorated with beads. These were commented upon several times at English Bay, Unalaska, as we have already seen. King's description is the most complete:

[W]hat the men have thrust thro the hole in the underlip has the semblance of 2 Boars tusks, and are 2 pieces of bone about 1 1/2 Inch long joining in the middle of the lip, & separating; by means of the tongue they can move these bones, & make them point up or down. Others have a single polished bone the shape & size of a large Stud [a labret]. The Women had long bones thro the Nose & lower lip, both sexes wear beads & other ornaments in their Ears. [Beaglehole 1967:1427]



Cook said that it was common for only women to wear an ornament in the lower lip, "...both men and Women bore the under lip to which they fix pieces of bone, but it is as uncommon at Onalaska to see a man with this ornament as a woman without it." [Beaglehole 1967:460] Several other members of the expedition also commented on the ornament, including Samwell and Edgar [Ibid.:1143, 1352].

Carl Heinrich Merck described lip ornaments at Unalaska, and is notable for his comment on their material, being the naturalist of the Billing's expedition: "...into the lower lip on both sides they put a longer, pointed tooth with a broader haft. Between the tooth and the haft there are some pins visible. Both tooth and pins are made of walrus tusks." [1980:79]

Alexander Rowand described labrets when he visited New Archangel in 1841-42, which give us an idea of how these may have been fixed. He considered it a "filthy practice" which produced "a sensation of great disgust to the spectator:"

The mode in which this deformity is accomplished is as follows:-- When the female is quite young the natural depression below the centre of the lower lip is the spot selected for perforation, which operation is effected by means of a needle and a silver probe, or with a snow white shell (called by the natives "Hyagna," and "sea-teeth" by the sailors) [dentalia]; this shell, which is much prized by them, is introduced into the perforation, which it effectually prevents from closing. As they advance in age the lip is proportionally advanced more and more till they are given in marriage to some chief. [Rowand n.d.:6]

It appears that the boring of the lip was at least in part a mark of ethnic association. Clerke reported:

I asked many of the People that attended the Russians whether they were Natives of Now'unalaska or Kamtschatka, the mode of answer of these Islanders was by running the tip of the tongue through the Hole of the under Lip... by which it should seem that this fashion of ornamenting is peculiar to the Continent of America and the Isles, and that the Natives on the Asiatic side do not come into it... [Beaglehole 1967:1337].

The extent of the use of this ornamental device is not entirely known, but it appears to have been worn chiefly by the Aleuts and some neighbors on the mainland. Labrets of several sorts are known from almost everywhere in Alaska, but this version is more restricted in distribution.

King noted its use by women at Prince William Sound and Cook Inlet [Beaglehole 1967:1418, 1428]. It was worn on Kodiak Island, as first reported by Golotov and Malevinskory from their visit of 1763 [Coxe 1780:116]. By the turn of the century it had gone out of fashion there, as attested both by Yuru Lisianski, who visited in 1804, and Georg Heinrich van Langsdorff, who visited in 1805-06 [Hrdlicka 1944:43]. It was also used at Yakutat Bay [Shelikhov 1981:95]. At Kachemak Bay labrets have been recovered archaeologically from the beginning of occupation there [Bandi 1969:96]. This ornament, however, was not worn as far south as the Copper River [Burket-Smith and de Laguna 1938:396-402].

In addition to the use of beads in face ornaments and on clothing, they were also widely put on a specific man's attire, generally described as a hat, but actually functioning as a sun visor. Solov'ev described it from



his visit in 1764-5, "On the forepart of their hunting and fishing caps they place a small board like a screen, adorned with the jaw-bones of sea-bears and ornamented with glass beads, which they receive in barter from the Russians." [Coxe 1780:151] It may be, judging from this description and the one by Solov'ev cited earlier of face ornaments, that the first use of trade beads was for decorating these caps, and only gradually did they come to decorate facial ornaments, although there is not enough data available to state this with complete conviction.

In his summary of the Fox Islands, Coxe said much the same thing, "On their heads they wear wooden caps, ornamented with duck's feathers, and the ears [?] of the sea-animal called Scivutcha or sea-lion [sea cow], they also adorn these caps with beads of different colours, and with little figures of bone or stone." [1780:257]

Members of the Billings expedition described the cap. "The men wear a wooden bonnet, ornamented with the whiskers of the sea-lion, and with beads, which make them very pretty nodding plumes...." [Sauer 1802:165]. An engraving published with Sauer's journal shows that the beads involved were all large ones [Ibid.:pl.V]. Merck's description is most elaborate:

((Some men wear funny little hats made of thin wood. They are of medium height.)) Such a hat is made of a disc of fir wood which has been boiled to make it pliable. In front it juts out obliquely and rounded; and it is brought together around in back. The sides are narrower. On the outside they are painted green, red, white and black. And there is usually the image of an eye painted on each side. The upper rim of the hat is decorated with sea lion bristles, either on one side only or all around. They are attached either singly or in bunches. And glass corals are fastened to these bristles either at the base, or in the middle or the top. Or they also use garnets. Other ornaments on their hats are figures carved from walrus tusks. They are worn in front. And some wear a bunch of bobbed sea-raven feathers, which are cut out on one of the flags. [Merck 1980:78].

The caps were also mentioned by Billings [Titova 1980:201] and members of the Cook expedition while at Unalaska, including Cook [Beaglehole 1967: 459-60] and Samwell, who called the animal furnishing the bristles a Sea-horse [Ibid.:1142]. A similar cap was described by King at Cook Inlet [Ibid.:1428].

In sum, we have considerable evidence for the uses of beads by the Unalaskans. Before the coming of the Russians, they traded for amber, to be discussed below, and possibly dentalium, and used local tooth, bone, and shell. Glass beads replaced many of these, fulfilling similar functions, and perhaps expanding the use of beads. Beads were used in many ways. They decorated lip and nose ornaments, as well as the ears. They were sewn onto strips of leather to be worn on clothes. On occasion they were worn around the wrist at the ankles, or even the neck [Veniaminov 1984:213], though the latter use was apparently quite rare, as opposed to it being fairly common on Kodiak [Merck 1980:103; Sauer 1802: pl. vi]. Beads decorated bristles atop the men's "hats." A use that has not been mentioned yet, but which is clear from a plate in Sauer was on masks, ornamenting the part that corresponded to where beads were worn on the human face [1802: pl. xi].



T.D. Large = 5,29  
Small = 1,97  
Total = 197

### 8. Beads Entering the Archaeological Context

The study of the events by which artifacts leave the systemic life of a site through loss, abandonment, discard, or purposeful deposit has only begun to receive attention [see Schiffer 1976]. In regards to beads, preliminary studies indicate that an assemblage of beads excavated at a site will tend to be smaller, less showy, and of less cultural value than the assemblage of beads used during its occupation [Francis, in preparation].

None of the beads from Reese Bay were uncovered from a context that suggested purposeful disposition, such as a burial or an offering. It is hoped that further work there and at Deep Bay may provide evidence for how the beads found their way into the archaeological context. In the meantime, a few suggestions can be made.

It is not difficult to imagine how the "seed" beads were left in the longhouse when it was abandoned. Such small beads are easily lost, particularly on an unsealed surface in relatively dim lighting. In addition, 37 were broken specimens (some reported as fragments might have been parts of larger beads, but without seeing the entire assemblage they are assumed to be small drawn beads), which would have been discarded.

As for the larger beads, of the eighteen uncovered, four were broken, and would have been discards. The intact large beads may have been lost as well; more data on the relationship of the findspots of the beads and other features in the longhouse would give a better idea of this. The wound blue beads and amber bead (see Section 9) were presumably highly valued and their abandonment may be significant.

It may be that by the time the longhouse was abandoned (between 1805 and 1810) the use of and demand for these beads had waned. The Unalaskans had by then been in contact with the Russians for over a half a century, and the blue beads may have been devaluated due to relative commonness. If the amber bead was used on facial ornaments, as the peculiar perforation suggests, the giving up of these ornaments may explain why the bead was no longer in use.

Although these remarks are speculative, they are offered as hypotheses testable through archaeological plotting of findspots and further archaeological and ethnohistorical investigations.

### 9. The Amber Bead from Reese Bay

A single amber bead was uncovered at Reese Bay. It may be recalled that there were also four wound beads of amber glass, including two rather rare amber colored "mulberry" beads. King's comment cited earlier that at Unalaska the Natives preferred, "blue, white & brown [beads] about the size of a large pea" [Beaglehole 1967:1427] is also relevant. Although blue and white beads were valued throughout the Northwest Coast, the desire for amber colored ones was no doubt a function of the importance of amber itself.

Coxe reported that on the Fox Islands the Natives, "wear strings of beads in their ears, with bits of amber, which the inhabitants of the other islands procure from [Alaska], in exchange for arrows and kamli [an outer garment of intestine]." [1780:257] There are small deposits of amber in Alaska; it is often washed out by rivers, and gathered on the bank [Poinar and Agudelo 1980:36], or found along the shore after it has been washed out to sea. Amber was also dug out of a cliff on Umnak, with long poles manned from baidarkas [Veniaminov 1984:75].



The members of the Billings expedition took note of amber on Unalaska. Billings said, "Amber is also regarded as very valuable." [Titova 1980:201] Sarychev commented, "Enamel they receive from the Russians, and amber from the Americans of Alaska, both of which are in great estimation." [1806:9]; we noted his reference to amber beads above. Martin Sauer said, "Both men and women are very fond of amber for ornaments...." [1802:156]

Amber was widely used. On Kodiak Island Sauer said, "They are extremely fond of blue beads and amber, and carry on a trade with the natives of the neighborhood of Cook's River...." [1802:177], and Merck said, "Sometimes they have pieces of amber (amat) tied in [their necklaces]. Amber is dug up here, but rather seldom. Therefore it is valued by the people." [1980:103] Davydov reported on the Aleutian Islands, "On their neck and wrist and ankles they wear jewelry made from beads and multicolored stones, but they prefer yellow amber to all others." [1977:149] Veniaminov said at Unalaska strands were worn of "varicolored stones (especially amber) and small bones [bone beads.]" [1984:213]. At Prince William Sound, King said, "the most had a bone ornament stuck in [their lips], & holes in the bone to which they hung their blue beads, & a brown substance like Amber; they were very adverse to part with these lip Ornaments." [Beaglehole 1967:1418] The report of the Aleutians in the Tenth (U.S.) Census by I. Petroff reads:

The most precious ornaments consisted of small pieces of amber that were washed up occasionally by the sea on the south coast of Kodiak, but chiefly on the island of Ookamak [Ugamak?]; these were pierced and strung and served the women as earrings or pendants. At certain times, after an earthquake, as a rule, the ocean seemed to be more lavish in bestowing this treasure, and then the amber formed quite an article of trade between the Kaniags and the people of Bristol Bay and Nushegak; but as these larger harvests of amber only occurred at long intervals the value of the article always remained at a high standard. [Hrdlicka 1944:44]

The amber bead found at Reese Bay is a small disc shaped ornament. It was ground to shape carefully so as to preserve as much of the material as possible from the original nodule, and there are many small depressions left on the surface which correspond to the pockmarked surface of natural amber nodules. The edge of the disc has many small facets, likely the result of the grinding operation and not decorative. Through the center of the disc a bore was made. Sometime later a second bore was made through the edge of the disc, boring from both sides. That the center bore was made first is evident from chips around the spot where the secondary bores met the primary bore, as observed from silicone impressions made of the bores.

The amber itself is apparently local. It was tested with infrared spectrophotography by Curt W. Beck of the Amber Research Laboratory, Department of Chemistry, Vassar College, Poughkeepsie, New York. His Report (77. Contribution of the Amber Research Laboratory) is appended. It shows that the amber contains free carboxylic acid, and the exocyclic methylene group. The absorption pattern ruled out Baltic amber (and thus importation by the Russians), and is very similar to Alaska II amber, the dominant type identified in a previous study of Alaskan amber. The report concludes that although there is amber from other sources with similar spectral profiles, the results are, "strongly suggestive of a local origin of the bead without, however, positively proving it." [Beck 1987]



Amber with similar spectral profiles is found along the eastern seaboard of the United States (such as on Staten Island). Such sources are most unlikely for the Reese Bay bead. The present author placed the bead under a short-wave ultraviolet light; it did not fluoresce.

Whether the bead was made on Unalaska or not cannot be determined. It is at least as possible that a finished bead was made elsewhere in Alaska and traded to the island.

The unusual perforation calls for comment. It may be that it indicates that the bead was attached to a facial ornament, on the ear, the bone in the lower lip, or in the septum of the nose. The second perforation may have held further ornaments, such as "seed" beads. If this was the case, it is possible that the secondary perforation was made at Reese Bay, after a bead with one perforation had been traded into the site. Again, this hypothetical, although potentially testable.

#### Summary and Conclusions

The beads excavated from the longhouse at Reese Bay are of interest for a number of reasons. They constitute one of the largest and most varied assemblages of beads excavated from early Russian contact sites in Alaska, furnishing us with data on the breadth of imported and local beads in circulation in the late eighteenth century. They are also of special interest because they have been excavated from a context which provides a tight chronological control over the material, and all imported beads were all but certainly brought by the Russians.

The beads found at Reese Bay are generally similar to those found in other early Russian contact sites in Alaska. They also answer to the descriptions of beads traded by the Russians as documented in historical sources. Most of them, including the small drawn "seed" beads and several of the larger wound beads, are European in origin, mostly Venetian, while some may be Dutch. A few others, including the most culturally valuable ones, would appear to be Chinese. The amber bead is of local origin. The selection of beads was made primarily by the Aleuts. They desired wound blue (and secondarily white) beads as part of their participation in a northwestern cultural sphere, and appreciated amber colored glass beads as substitutes for true amber.

Ethnohistorical sources reveal the richness of the use of beads in Unalaska at this time. Some beads served particular functions, such as white beads for ear ornaments and larger (mostly blue) beads on men's "hats." Others served to decorate facial ornaments, including the particular lip ornament which was apparently a symbol of ethnic ties, men's "hats," strips of leather worn in front of clothes, and masks. Glass trade beads fit easily into prevailing fashions and in some cases may have enlarged the roles beads played in these styles. There is no direct evidence to show how or why particular beads were discarded, but in some cases it is possible to suggest the mechanisms involved.

Several hypotheses about bead use and their functioning in the systemic life of the site as well as their entry into the archaeological context have been advanced. It is hoped that further excavation at Reese Bay, Deep Bay, and related sites can help to test these hypotheses.



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# CATALOGUE OF THE BEADS FROM REESE BAY SENT TO THE CENTER FOR BEAD RESEARCH

## Notes on the Catalogue

The catalogue is set up in columns as follows:

No.	D.	L.	Color	Kidd No.	Notes
No.	Indicates the Field Catalogue number from the excavation.				
D.	Indicates the diameter of the bead in centimeters				
L.	Indicates the length of the bead (the length of the axis of the perforation in centimeters.				
T.	Indicates the thickness of the beads (used only for the amber specimen).				
Color	Indicates the color of the bead (see below).				
Kidd No.	Indicates the classification number as used in Kidd and Kidd [1970] (see below)				

## Color

The colors of the beads are indicated by one or two letters, followed by a number and either an "o" or a "t." The initial letter is an abbreviation for the color, used as follows:

a = amber	gb = greenish blue	r = red
b = blue	j = gray	v = violet
c = clear	k = black	w = white
g = green	oy = orange yellow	y = yellow
	pb = purplish blue	

When two colors are used on a bead for decoration or for a bead of compound construction, the inner color (or matrix) is recorded first.

The numbers for recording colors are taken from the National Bureau of Standards Color Centroid Charts [see Kelly and Judd 1976]. The approximate correspondence between these colors and Munsell notations are listed in a chart at the end of the catalogue.

The designations following the Color Centroid Chart numbers indicate the diaphanety of the glass beads: o (opaque) and t (translucent/transparent).

## Kidd Numbers

The classification numbers as developed by Kidd and Kidd [1970] are used as far as possible. In cases where no numbers have been assigned for a particular bead, new numbers have been assigned here designated by \*. No new number was assigned # 237, the bead with the "squiggle" pattern. For "seed" beads, no number beyond IIA were assigned, because of the difficulties of determining colors as used by the Kidds.



## GLASS BEADS

## Wound Glass Beads

No.	D.	L.	Color	Kidd No.	Notes
126	.83	1.31	g 146 t	WIIh?	Wire wound, pressed into square drop shape, broken in half, bore .21
237	.90	.86	v/y 256 t/ 82 o		Wire wound with "squiggle" design, much worn, bore .23
257	.43	.75	w 263 o	WIc1	Wire wound "barleycorn", bore .12
390	.89	.87	w 263 o	Wlb	Wire wound with peak, bore .20
459	.85	.50	a 69 t	Wlb11(L)*	Furnace wound, bore .40
568	1.09	.80	a 66 t	WIIId4	"Mulberry," bore .42.
585	.90	.85	b 177 o	Wlb	Wire wound, peak at end, bore .20
680	1.43	1.17	a 69 t	Wlb7(VL)	Furnace wound, bore .56
771	.83	.17	b 172 o	Wlb11(L)*	Wire wound, peak at one end, bore .24

## Drawn Glass Beads

No.	D.	L.	Color	Kidd No.	Notes
70	.24	.33	clear	IIa10	
107	.28	.20	g/r 127 t/ 40 o	IVa6	Cornaline d'Allepo
138a	.32	.21	w/c 263 o/ clear	IVa13	Clear on white
138b	.28	.29	w/c 263 o/ clear	IIIa8	Clear on white, cut at an angle
138c	.32	.32	w/c 263 o/ clear	IIIa8	Clear on white, cut at an angle
143	.32	.25	w/c 263 o/ clear	IVa13	Clear on white, cut at an angle
144	.25	.19	w/c 263 o/ clear	IVa13	Clear on white, cut at an angle
151a	.27	.15	g/r 127 t/ 40 o	IVa6	Cornaline d'Allepo
151b	.26	.17	pb 196 o	IIa	} These two are fused together
	.25	.16	pb 196 o	IIa	
155	.26	.15	pb 196 o	IIa	
167	.31	.21	w/c 263 o/ clear	IVa13	Clear on white, cut at an angle
175a	.32	.21	g/r 127 t/ 40 o	IVa6	Cornaline d'Allepo
175b	.31	.23	pb 196 t	IIa	
194	.31	.28	w/c 263 o/ clear	IIIa8	Clear on white, cut at an angle
196	.37	.21	j/w 264 o/ 263 o	IVa20*	Compound white on grey
220	.27	.26	y 68 o	IIa	



## Drawn Glass Beads, continued

No.	D.	L.	Color	Kidd No.	Notes
217	.35	.32	w/c 263 o/ clear	IIIa8	Clear on white, cut at an angle
223	.33	.33	w/c 263 o/ clear	IIIa8	Clear on white, cut at an angle
236	.37	.31	b/r 186 t 40 o	IVa6	Cornaline d'Allepo, blue center
244	.31	.36	w/c 263 o/ clear	IIIa8	Clear on white, cut at an angle
261	.27	.28	g/r 127 t/ 40 o	IVa6	Cornaline d'Allepo
277	.16	.25	w/c 263 o/ clear	IVa13	Clear on white, cut at an angle
286a	.49	.23	pb 197 o	IIa	Cut at an angle
286b	.30	.26	gb 172 t	IIa	
286c	.36	.22	b 188 t	IIa	
293	.33	.32	gb 173 t	IIa	
296	.34	.27	gb 168 t	IIa	
301	.36	.24	gb 172 t	IIa	Cornaline d'Allepo
303	.24	.17	g/r 127 t/ 40 o	IVa6	
315a	.32	.30	k 267 o	IIa	
315b	.27	.20	gb 169 t	IIa	Cut at an angle
315c	.29	.19	gb 168 t	IIa	Cut at an angle
315d	.31	.30	gb 169 t	IIa	Cut at an angle
315e	.32	.28	gb 169 t	IIa	Cut at an angle
336	.43	.33	b/r 185 t/ 40 o	IVa3	Cornaline d'Allepo, blue center
352	.32	.25	y 97 o	IIa	Cut at an angle
361	.32	.30	y 88 o	IIa	
363	.26	.22	g 139 t	IIa	
381	.32	.30	gb 173 t	IIa	Cut at an angle, very worn
392	.27	.20	gb 168 t	IIa	
403	.29	.28	86 o	IIa	
452	.28	.22	g 139 t	IIa	Cut at an angle
457	.23	.28	v 256 t	Ia21	Bugle, crackled
464	.31	.22	y 72 o	IIa	Cut at an angle
489	.26	.30	gb 168 t	IIa	
579	.31	.19	y 67 o	IIa	
598a	.25	.21	y 84 o	IIa	Cornaline d'Allepo
598b	.25	.18	y 82 o	IIa	
604a	.31	.19	g/r 127 t/ 40 o	IVa6	
604b	.24	.20	g/r 127 t/ 40 o	IVa6	Cornaline d'Allepo
625	.30	.25	g 146 t	IIa	Cut at an angle
648	.30	.23	g 139 t	IIa	
672	.21	.31	b 196 t	IIa	
709a	.25	.32	g 139 t	IIa	
709b	.28	.19	g 139 t	IIa	



## Drawn Glass Beads, continued

No.	D.	L.	Color	Kidd No.	Notes
716	.25	.18	y	97 o	IIa
718	.24	.33	y		IIa
758	.28	.28	y	84 o	IIa
759	.31	.30	y	97 o	IIa
765a	.32	.22	y	68 o	IIa
765b	.25	.19	y	82 o	IIa
776a	.34	.18	oy	70 o	IIa
776b	.35	.31	gb	169 t	IIa
776c	.36	.26	gb	168 t	IIa
776d	.27	.23	gb	169 t	IIa
776e	.27	.21	gb	169 t	IIa
776f		.24	gb	169 t	IIa

Poorly preserved, surface is darkened

Cut at an angle

Cut at an angle

Cut at an angle

Broken in half

## AMBER BEAD

72 1.14 1.03 .37 Lightly ground to shape. Bored with two holes.  
 The first hole (.37 long) bore c. .20  
 The second hole (1.03 long) bore c. .10



## COLOR COORDINATION CHART

Between the ISCC-NBS (Inter-Society Color Council -- National Bureau of Standards) Color Centroid Charts and Munsell Renotation.

ISCC-NBS No. Color description	Munsell
40 strong red brown	0.3YR 3.1/9.9
66 vivid orange yellow	8.6YR 7.3/15.2
67 brilliant orange yellow	0.1Y 8.1/10.5
68 strong orange yellow	9.1YR 7.1/11.6
69 deep orange yellow	8.6YR 6.0/12.1
70 light orange yellow	9.4YR 8.3/6.8
72 dark orange yellow	9.3YR 6.0/7.9
82 vivid yellow	3.3Y 8.0/14.3
84 strong yellow	3.7Y 7.2/9.3
86 light yellow	4.3Y 8.8/6.8
88 dark yellow	3.9Y 6.0/6.4
97 vivid greenish yellow	9.1Y 8.2/12.0
127 gray olive green	4.6GY 3.5/2.0
139 vivid green	3.2G 4.9/11.1
146 dark green	6.6G 2.8/4.6
168 brilliant greenish blue	4.6B 5.9/7.7
169 strong greenish blue	4.9B 4.5/8.4
172 light greenish blue	4.5B 6.5/5.4
173 medium greenish blue	4.7B 4.5/5.2
177 brilliant blue	1.6PB 5.9/9.4
185 pale blue	0.6PB 6.5/2.6
186 gray blue	0.2PB 4.2/3.0
188 blackish blue	9.8B 1.3/1.5
196 strong purplish blue	8.0PB 4.0/10.9
197 deep purplish blue	7.8PB 1.5/8.0
256 deep purplish red	7.3RP 2.6/10.1
263 white	2.5PB 9.5/0.2
264 light gray	6.7Y 7.4/0.2
267 black	N 0.8/