

A HISTORIC ALUTIIQ VILLAGE ON THE OUTER KENAI COAST: SUBSISTENCE AND TRADE IN THE EARLY RUSSIAN CONTACT PERIOD

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ABSTRACT

The Early Contact Village site,¹ located on the Gulf of Alaska coast of the Kenai Peninsula, provides an archaeological record of Alutiiq economy and cultural interaction during the initial expansion of the Russian fur trade across southern Alaska. The site includes a midden mound and the remains of both winter and summer houses. Testing and excavation were carried out in 1993 and 2003 by the Arctic Studies Center (Smithsonian Institution) in cooperation with the National Park Service and the Alaska Native villages of Nanwalek, Port Graham, and Seldovia. Artifacts and stratigraphy indicate a brief occupation (probably less than two years) that took place between AD 1790 and AD 1810, when Russian companies were exploiting the region for sea otter furs and operating a shipyard at nearby Voskresenskii (Seward). The artifact assemblage, including a forged iron knife, Russian coin, lead finger ring, copper, flat glass, and numerous glass beads, suggests that opportunistic *free trade* was the predominant mode of Alutiiq-Russian interaction on the outer Kenai coast in contrast to the *forced labor* regime imposed by the Russians on Kodiak Island and in the Aleutians. Diverse and abundant faunal remains at the Early Contact Village site indicate an independent, unrestricted subsistence effort rather than incorporation into the full Russian labor and fur production system.

KEYWORDS: Russian colonialism, Alutiiq subsistence, trade beads

INTRODUCTION

In AD 1784, an expedition led by Irkutsk fur merchant Grigorii Shelikhov overwhelmed Alutiiq resistance on Kodiak Island and built a stronghold at Three Saints

Harbor, the first step in Shelikhov's plans to expand the Russian fur trade into the central and eastern Gulf of Alaska (Black 1992; Crowell 1997). Within ten years, the

1 Editor's note: AHRS numbers pertaining to sites in Kenai Fjords National Park were removed from this article by request of the National Park Service.

Shelikhov-Golikhov company had established additional outposts on Kodiak Island, the Shumagin Islands, the Alaska Peninsula, and the Kenai Peninsula, competing with the Lebedev-Lastochkin Company in areas as far east as Yakutat Bay (Black 2004:104–111; Fedorova 1973). In AD 1799, the assets of the rival firms were consolidated into the Russian-American Company (RAC), a quasi-governmental trading monopoly that ruled southern Alaskan and controlled its fur trade until AD 1867.

The outer (Gulf of Alaska) coast of the Kenai Peninsula may have had an Alutiiq population of about 600 at the time of first Western contact (Oswalt 1967). A number of historic settlements and place-names are recorded in Russian records and Alutiiq oral history (Cook and Norris 1998; Crowell and Mann 1998; De Laguna 1956; Leer 1980). Native villages included Kaniag, Qutaleq, Ayalik (Aialik Bay), Yálik, Agmílek, Kangiliq (Port Dick), Nunacungaq (Rocky Bay), and Qugyugtuliq (Fig. 1). Russian forts were built at Aleksandrovskii (Nanwalek, lower Cook Inlet) in AD 1786, Voskresenskii (Seward, Resurrection Bay) in AD 1793, and Fort Konstantine (Nuchek, Prince William Sound) in AD 1793. Outer coast indigenous residents were employed at Voskresenskii, traded furs there, and joined

Russian-organized kayak fleets that were dispatched from Kodiak each year during the 1790s and early 1800s to hunt for sea otters along the Kenai Peninsula, Prince William Sound, and the mainland coast to the east (Cook and Norris 1998:41–42; Davydov 1977:193–197; Gideon 1989:62–64, 69–71; Tikhmenev 1979 Vol. 2:35, 46–52, 66). George Vancouver encountered one such flotilla at Port Dick in AD 1794 that numbered over 400 men (Cook and Norris 1998:41; De Laguna 1956:34; Vancouver 1967). On return trips, some of the hunters stayed behind at “the islands near Voskresensk [Resurrection] Bay” to hunt birds for parkas (Davydov 1977:194). The location is an apparent reference to seabird colonies in the Chiswell Islands off Aialik Bay or at Renard, Rugged, Hive, and Cheval islands in Resurrection Bay.

Recent archaeological excavations at the Early Contact Village in Aialik Bay—rendered “Ayalik” as an Alutiiq (Sugcestun) placename—contribute to an understanding of indigenous life and ethnic interaction during these first decades of Russian contact. Aialik Bay is a 30-km-long fjord located just west of Resurrection Bay, in Kenai Fjords National Park. The Early Contact Village is situated on the western shore of the bay, about 55 km from the former

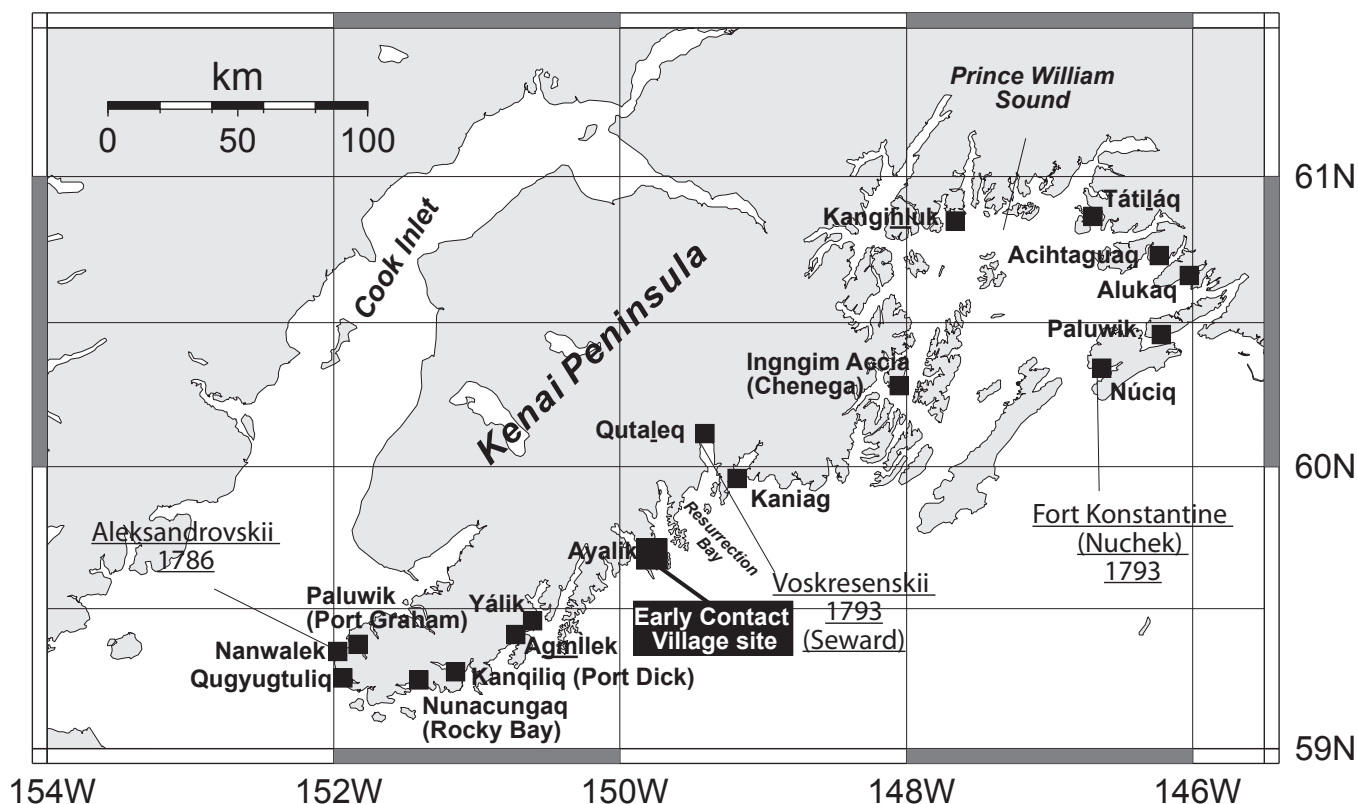


Figure 1. Historic Alutiiq villages of the outer Kenai Peninsula coast and Prince William Sound, with locations of Russian forts (underlined) and study site.

Voskresenskii fort (at Seward) by water, and only 5 km from the nearest of the Chiswell Islands.

The site is the first Russian-era Native settlement to be excavated between Cook Inlet and Prince William Sound (Crowell 2004, 2007). The village is not remembered in Alutiiq oral history, although Eleonore McMullen and other elders at Port Graham and Nanwalek recall stories of ancestral residence at Ayalik in Aialik Bay, which can be securely identified as the Denton Site where late-nineteenth-century artifacts have been recovered (see discussion below). Neither the Early Contact Village nor the village of Ayalik appear on Russian or American period maps of the region.

Our analysis of artifacts and site formation processes at the Early Contact Village suggests that the site was occupied for a very brief period—probably less than two years—between AD 1790 and 1810. Artifacts found include stone and bone components from traditional hunting weapons (lances, darts, harpoons, arrows) as well as glass beads and other Russian imports. As discussed below, the beads are comparable to assemblages from southern Alaskan sites with dates between AD 1785 and 1820, while several other glass and metal artifacts are identical to items excavated at Three Saints Harbor (occupied AD 1784–ca. 1805). A Russian half-kopeck coin dated AD 1748 provides a *terminus post quem* for the Early Contact Village but was issued at least four decades prior to its earliest possible occupation. A charcoal sample from the base of the midden (Beta 74860) yielded a radiocarbon date of 180 \pm 60 yrs BP at one standard deviation. Calibrated with InterCal04 (Reimer et al. 2004), the probabilities at two standard deviations are AD 1650–1700 (15.4%), AD 1720–1820 (36.4%), AD 1830–1870 (2.8%), and AD 1910–1960 (13.6%).

ARCHAEOLOGY OF ALASKA NATIVE SETTLEMENTS IN THE EARLY RUSSIAN PERIOD

Of particular interest at this and other Alaska Native settlements of the early Russian period is evidence pertaining to the colonial political economy, which was based largely on the “impressment” of Alaska Native labor for fur and food production (Black 2004:133). As Russian merchant voyagers expanded across the Aleutian Islands and southern Alaska, they sometimes engaged in peaceful trade with indigenous populations, but more frequently sought to coerce and exploit them through armed force, killings, harsh punishments, and the seizure of hostages (Black

2004:128–135; Gideon 1989:69–71; Liapunova 1987; Okun 1979). On Kodiak, Shelikhov imposed a policy of universal Native service that was formalized in the RAC charter of 1821 (Dmytryshyn et al. 1989:362). By the terms of the charter, half of the male population between ages 18 and 50 could be taken for sea otter hunting (for up to three years of service), but in reality most able-bodied men, women, and children were required to hunt, fish, trap, harvest birds, prepare food, make clothing, or tan skins for company use (Davydov 1977:191–197; Gideon 1989:61–69; Okun 1979:200). This system brought hunger and hardship to Alutiiq communities because labor for the Russian companies undermined the subsistence effort needed to lay in sufficient food supplies for winter (Davydov 1977:196; Gideon 1989:70).

Russian dependence on Alaska Native production of food and goods was related to the great difficulty of transporting supplies from Siberian ports, and the forced labor system itself—which generated a minimal need for exchangeable goods such as glass beads, tobacco, and metal tools—was also adapted to this constraint (Fedorova 1973:232–242; Gibson 1976). Based on these conditions, Crowell’s world system model for Russian American archaeology derived archaeological predictions for Alaska Native settlements (Crowell 1997:20–30). Especially during the earliest phase of the colonial period (pre-1799), when all goods were shipped with great difficulty from Okhotsk, indigenous village sites should be characterized by: (1) very limited quantities and varieties of trade goods; (2) the predominance of cheap, small, and easily transported trade items such as beads; (3) little evidence for the substitution of imported tools, clothing, or foods for traditional equivalents; (4) evidence for the continuation of hunting by traditional techniques (e.g., harpoon and dart hunting for sea mammals), as mandated by the Russian companies; (5) the absence of guns and iron knives or other weapons, which were prohibited in trade (Crowell 1997:52; Shelikhov 1952:35); and (6) restricted subsistence patterns including a shift toward foods harvested by women (shellfish, eggs, fish, and plant foods) because male labor was diverted for sea otter hunting.

These predictions apply in particular to the so-called “dependent” or “settled” regions where Russian control was strongest, listed in the 1844 RAC charter as the Aleutian Islands, Kodiak Island, and the Alaska Peninsula (Dmytryshyn et al. 1989:470).

Alaska Native village sites from these areas generally conform to the model, showing continued use of bone

and stone tools for many decades after contact. Beads are common but only very limited quantities of iron, copper, ceramics, and bottle glass appear until the 1840s (Clark 1974a,b; Knecht and Jordan 1985; Veltre 1979, 2001; Veltre and McCartney 2001; Workman 1966).

Although the 1844 RAC charter also claimed the “Kenaites” (Dena’ina) and “Chugach” (Prince William Sound and outer Kenai Coast Alutiiq) as dependent peoples, Russian labor documents consistently referred to these groups as “semi-dependent,” meaning that the RAC had little or no actual control over their lives (Fedorova 1975:17; Okun 1979:206). In this situation, Native hunters were not subject to impressments but instead received payment for their furs in tobacco, beads, iron, copper, and other imported trade goods (Fedorova 1975; Hassen 1978). Archaeologically, indigenous settlements in these “semi-dependent” areas—including the Early Contact Village—should show characteristics of a *free trade* mode of interaction with the Russians rather than a *forced labor* mode, including more goods received in trade and little or no evidence of restricted subsistence. However, because the Early Contact Village dates to the earliest phase of Russian colonialism, when supply links to the home country were poor, large quantities of trade goods would still not be anticipated. As Aleksandr Baranov lamented about the state of trade at Voskresenskii in 1793:

As you know, we have no trading goods here, only beads and they are of small size. The large beads are of the kind for which there is no demand. There are not enough to buy sea otters with, and even our native workers no longer take them in exchange for fox skins. (Tikhmenev 1979 vol. 2:32)

SITE DESCRIPTION

The Early Contact Village was discovered in 1989 during post-*Exxon Valdez* oil spill surveys, followed by mapping and testing for the National Park Service in 1993 (Mobley et al. 1990; Crowell and Mann 1998:103–109). The present paper focuses on excavations conducted in 2003 by the Smithsonian Institution’s Arctic Studies Center, in cooperation with the National Park Service and the descendant Alutiiq communities of Nanwalek, Port Graham, and Seldovia (Crowell 2004). The site consists of a midden mound and cluster of seven house depressions (Structures 1, 2, 3, 4, 10, 12, 16), four cache pits (Structures 5, 7, 11, 14), and two aboveground sod wall features (Structures 6, 13), centered in a swale between relic beach ridges (Ridges 1 and 2; Fig. 2). The spit is growing to the west so that this portion of the beach is older than Ridge 1 and the current storm berm. Late-nineteenth-century log cabin mounds of the Denton Site and a small midden dating to about AD

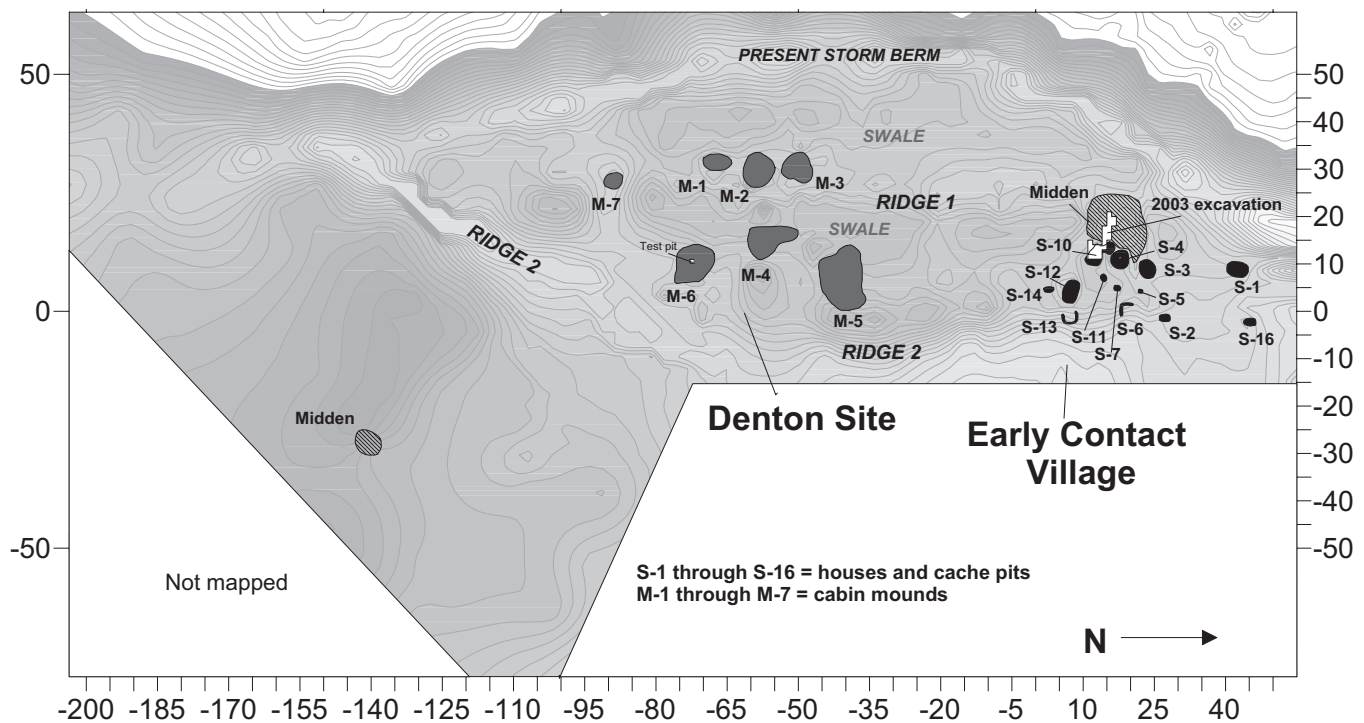


Figure 2. Site locations and structures at the Early Contact Village and Denton sites, Aialik Bay, Kenai Fjords National Park. Scale in meters.

1400 are located nearby (Crowell and Mann 1998:101–112). Dwellings at the Early Contact Village appear to be a combination of summer houses (aboveground, with sod walls) and semisubterranean winter houses.

The Early Contact Village site is partially overgrown by living spruce trees that are up to 70 years old (based on tree cores). Mature spruce that were killed by saltwater inundation after the AD 1964 earthquake are located on the crest and flank of the adjacent storm berm, and ring counts show that these trees started growing in about AD 1815. It therefore appears that the village was surrounded by open, treeless beach at the time of its occupation. A detailed description of the geomorphology and formation history of the site area is provided by Mann (Crowell and Mann 1998:44–51).

The innermost beach ridges, located 100 to 200 m east from the Early Contact Village, are covered by old-growth mountain hemlocks that are almost all about 180 years old. Many are growing from even-height decayed stumps. This pattern suggests that an original stand of large trees was extensively logged in the AD 1790s.² It is possible that this timber was cut to supply the Voskresenskii shipyard (Crowell and Mann 1998:88–89).

MIDDEN AND HOUSE EXCAVATIONS

In 1993, we dug two 1 x 1 m test units (A and B) in the midden mound and a third 1 x .5 m unit (C) inside Structure 4. In 2003, we excavated a 22 m³ block that cut through the deepest part of the Early Contact Village midden, partially subsuming the earlier A and B units and extending into an adjacent house pit (Structure 10) (Fig. 3). In 2003, we also excavated a 1 x 2 m test in Structure 13. Excavations and field recording followed cultural strata, which when sufficiently thick were subdivided into 10 cm levels for vertical control. All excavation was done by trowel. Three-dimensional coordinates were recorded for all artifacts, bones, and flakes discovered *in situ*, and 100 percent of excavated soil was wet-screened through 1/8 in. mesh to ensure nearly total recovery of beads and other small artifacts.

MIDDEN

The midden is a low, grass-and-spruce-covered mound approximately 225 m² in extent and up to 60 cm thick. Residents of the village disposed of hearth waste, household refuse, and food remains at this central location rather than in a more dispersed pattern around the houses. The midden has several distinct strata (Fig. 4):

Stratum 1: Dark reddish-brown post-occupation humus.

Stratum 2: Fire-cracked cobbles (graywacke and granite) in a loose matrix of dark brown mineral soil, with circular lenses of charcoal that may represent individual hearth dumping episodes; contains artifacts and some bone and shell.

Stratum 3: Charcoal-stained, loose mineral soil with few rocks; high density of faunal remains and numerous artifacts. Fish bone is concentrated in a single large lens, overlain by crushed shell.

Stratum 4: Very rocky and deeply stained by charcoal; relatively few artifacts and very little bone or shell. Originally designated as “Lower Stratum 3.”

Stratum 5: (Noncultural.) Loose graywacke pebbles and cobbles with deteriorated driftwood logs; the original beach surface.

As discussed below, we infer that Stratum 3, with its high density of faunal remains, represents a spring/summer layer between two winter/fall layers (Stratum 2 and Stratum 4).

STRUCTURE 4

Structure 4 is a shallow (30 cm), sub-rectangular house pit measuring about 4 m on each side. Results from test unit “C” excavated in 1993 (Crowell and Mann 1998:106–107² and Fig. 57) revealed an upper stratum of wood debris, a house floor consisting of gravel over charcoal-stained peat, and a lower house floor of densely charcoal-stained sand.

STRUCTURE 10

Structure 10, a semisubterranean house pit, has a square central chamber about 45 cm deep and 4 m on each side, with a 1 x 2 m side room extending to the northwest and

2 This observation and estimate was made in 1993 by Thomas Hamilton (United States Geological Survey). It includes a lag time of 20 years after cutting for trees to germinate and reach 1 m coring height.

3 The house was incorrectly identified as Structure 8 in the 1998 report.

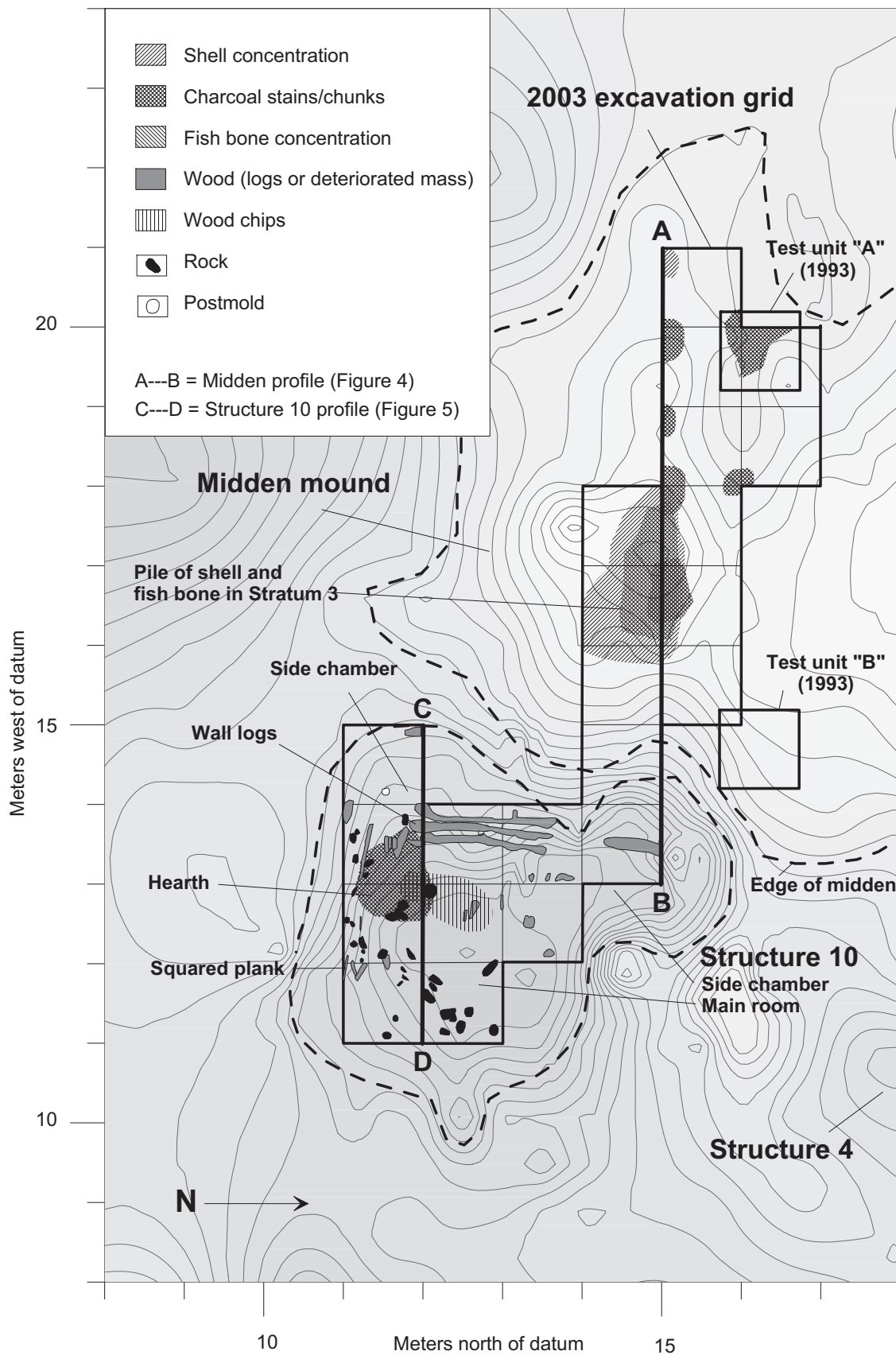


Figure 3. The 2003 excavation block and subsurface features at the Early Contact Village midden and in adjacent house depression, Structure 10. Midden test pits A and B, excavated in 1993, are also shown.

a smaller, less distinct side room on its west side. Interior deposits (Fig. 5) were found to consist of:

S-10 Stratum 1: Post-occupation turf.

S-10 Stratum 2: Charcoal-stained house floor mixed with beach pebbles, small pieces of fire-cracked rock, and fragments of burned (calcined) bone.

S-10 Stratum 3: Dark reddish-brown peat containing wood chips, bark, and stringers of charcoal.

S-10 Stratum 4: Culturally sterile beach pebbles and cobbles.

The basal peat layer (S-10 Stratum 3) is thin in the center of the dwelling, where it may represent the compressed remains of grass that was laid down as an insulating layer over the beach rock. At the house margins, this peat layer becomes much thicker. Although there is no distinguishable break or change in its composition, here it probably represents collapsed wall sods.

The house floor deposit (S-10 Stratum 2) is up to 10 cm thick and contains thin intermediate stringers of peat that may indicate a grass re-flooring episode. A similar double

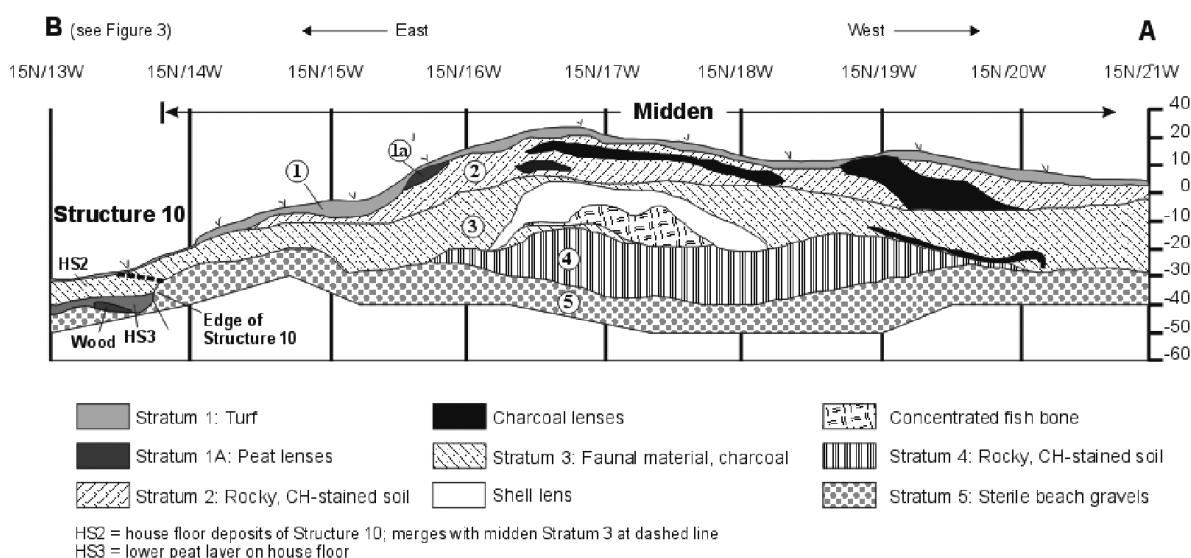


Figure 4. East-west stratigraphic profile through the Early Contact Village midden (labeled A-B in Figure 3).

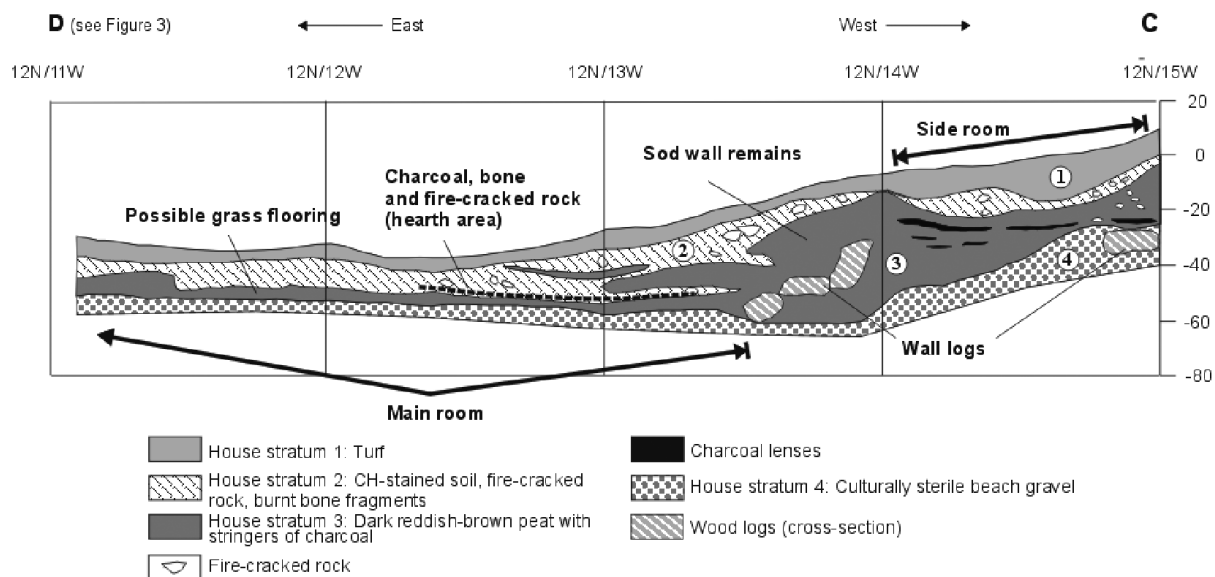


Figure 5. East-west stratigraphic profile through Structure 10, Early Contact Village site (labeled C-D in Figure 3).

layer of house floor deposits was noted in Structure 4 (above). The interior stratigraphy of these houses suggests probable use over a period of two winters, with re-flooring at the start of each occupancy. Structure 13, one of the Early Contact Village houses with aboveground sod wall mounds—interpreted as a probable summer dwelling—was found to have only a single floor level with no peat layers (see below).

A thin lens of charcoal-stained soil in the southwest corner of Structure 10, interpreted as a hearth, was surrounded by a scatter of small, calcined bone fragments. No other bone was preserved on the house floor. Nick Tanape Sr. of Nanwalek suggested that the occurrence of burnt bone in the vicinity of hearths (noted also at the precontact Bear Cove site in Aialik Bay) is evidence of the Alutiiq custom of *pinahsuhtut* (“they are hunting for good weather”), in which bones are tossed into a cooking fire to quell stormy weather (Tanape 2002, personal communication).

Horizontal spruce logs and fragments were found in place along the western and southern walls of the main room, apparently once part of a retaining wall that prevented inward slumping of the loose beach gravel (Figs. 3 and 5). The floor of the western side room is at the same level as the top of this log wall, which may once have extended all around the main chamber. The end of a squared board was found along the southern edge of the main chamber, possibly part of the retaining wall or else a remnant of interior planking as reported for Chugach Alutiiq winter houses of this time period (Walker 1982:140–141).

Two postholes about 10 cm in diameter were found in the interior, but the minimal evidence for roof support posts and absence of a collapsed sod roof layer suggest that the house had a lightweight covering, probably spruce or hemlock bark laid over a light wooden frame. Walker described an equivalently built, although much larger, winter dwelling—with subterranean floor, sod walls lined inside with planks, and a light roof covered with “chingle or pine bark” over “small Beams or Branches bent in circular form” in Prince William Sound in 1786 (Walker 1982:140–41). Georg Steller found a bark-roofed, semi-subterranean Alutiiq dwelling on Kayak Island in 1741 (Steller 1988:67).

STRUCTURE 13

Structure 13 is a square house depression (3 x 3 m x 10 cm deep) enclosed on its north, east, and south sides by

linear sod mounds (10 cm high x 50 cm wide). These mounds appear to have been embankments around a mostly aboveground structure such as a small hut made of wooden planks. This type of construction was typical of reported Chugach summer dwellings (Crowell and Mann 1998:129–130; Portlock 1968 [1789]:253; Steller 1988:197). A 1 x 2 m test unit was excavated just inside the structure along its western edge. The excavation revealed 15 cm of heavily charcoal-stained floor deposits without any internal layering. Artifacts from the house included glass beads (11) and a few slate flakes and fragments of burnt bone. Based on the artifacts, this dwelling was probably contemporaneous with the other tested houses.

ARTIFACTS

Artifacts from the Early Contact Village (Table 1) reflect a period of cultural transition when Alutiiq tools, weapons, and other manufactures were largely unchanged but when Russian trade goods were beginning to be incorporated into the culture. Glass beads are the most common imported items in the assemblage, while iron, copper, and glass artifacts are rare. Ceramics are completely absent.

STONE TOOLS

Stone artifacts from the site include components of hunting weapons and tools for cutting, scraping, and grinding. Hard black slate, which was shaped into finished tools by sawing, flaking, and grinding, was the primary raw material. Over 800 unmodified slate fragments, representing debitage from the manufacturing process, and 60 slate preforms and preform fragments were recovered from the midden and house depressions.

Barbed lance blades ($n=11$; Fig. 6:bases F–K and tips A–E, all slate) with short, square stems are typical of the last millennium of Chugach (Alutiiq) prehistory in Prince William Sound, including Palugvik 4 and the historic Chugach phase (De Laguna 1956:60; Yarborough and Yarborough 1996:56–66). They were probably used to arm “repeating” lances with detachable heads, used for killing harpooned or netted sea mammals (Birket-Smith 1953:25; Davydov 1977:219; Nelson 1983:145). Similar blades occur in Late Koniag phase sites in the Kodiak archipelago, including Kiavik where they date to between the mid-fifteenth and mid-seventeenth centuries (Clark 1974a:Pl. 17w). Over half of the examples from the Early Contact Village site were found in Stratum 3 or Stratum 2 of the midden, in

Table 1: Artifact counts and stratigraphic contexts, Early Contact Village site. Totals include results from 1993 test pits and 2003 excavations.

	Midden 2003 + 1993 Test Units A & B				Structure 4 1993 Test Unit C		Structure 10 2003			Structure 13 2003		Total
	Strat. 2	Strat. 3	Strat. 4	N/D	Strat. 4	Strat. 5	Strat. 2	Strat. 3	N/D	Strat. 2	Strat. 3	
Stone Tools												
Barbed lance blade	1	4	2	1			2	1				11
Triangular endblade	2						1	3				6
Stemmed arrow point		2					3	1				6
Burin-like tool	1	1										2
Chisel bit	1											1
Slate flake	99	195	87	23	7	1	239	168	3	10		832
Slate preform	12	14	3				12	14	1	4		60
Slate tool fragment	2	7					3	2		1		15
Projectile point (fragment, unidentified type)	2	3	1					2				8
Notched cobble scraper	1											1
Cobble spall	2	2	2		1		1					8
Quartzite slab scraper			1									1
Whetstone								1				1
Bone tools												
Composite fish hook	1	2										3
Toggling harpoon head		1	1									2
Barbed dart or harpoon head			2									2
Worked bone		3	1									4
Bone awl			1									1
Unidentified bone tool		1										1
Bone preform		2										2
Trade artifacts												
Glass beads	76	63	15		1	3	41	44		10	1	254
Flat clear glass	4	2		1								7
Bottle glass							1					1
Coin		1										1
Copper arrow point		1										1
Copper fragment			2	1								3
Lead finger ring							1					1
Iron knife blade with tang	1											1
Iron nail/spike	2						1					3
Mica fragment	1	3										4
Totals	208	307	118	26	9	4	305	236	4	25	1	1,243

association with sea lion, harbor seal, and porpoise bones. Only tips and bases (no complete artifacts) were found, a pattern probably resulting from impact breakage when the lances were used, followed by discard of the broken pieces and rearming of the weapons. Stages in the manufacture of

these tools are illustrated by a flaked preform (Fig. 6L) and a preform with flat-ground margins (Fig. 6M).

Triangular endblades ($n=6$; Fig. 6O–P, all slate) appeared about 1,000 years ago in the Alutiiq region and continued to be used into historic times (Clark 1974a:54 and Pl. 16a–c; De Laguna 1956:Pl. 28:9–10). They were

employed as tips for arrows, toggling harpoon heads, and lances. A midsection with medial ridge (Fig. 6Q) could be from either a barbed or triangular point. Three very small endblades (Fig. 6W–Y, slate) do not appear to have analogues at other published sites in the Alutiiq region. One possible use for these implements was as tips for small toggling harpoons.

Stemmed arrow points ($n=6$; Fig. 6R–S, slate) are considerably smaller than similarly shaped points from other parts of the Alutiiq region (e.g., Heizer 1956:Pl. 45; De Laguna 1934: Pl. 31). The two complete points (Fig. 6R–S) are from Structure 10. Small, sharp tips (Fig. 6T–V) are probably from this type of projectile. Highly acute marginal angles distinguish these from lance blade tips.

Burinlike tools ($n=2$; Fig. 7A) are ground on both faces. The illustrated example, from Stratum 2 of the midden, is made of greenstone. One margin of the tool was ground to a sharp edge and the other was ground flat to make a perpendicular striking platform for removing burin flakes. A single burin scar (upper left corner of the tool as shown) makes a right-angled cutting edge. There is no evidence of use wear. A second example from Stratum 3 of the midden (not illustrated) is flat-ground on the cutting edge and shows slight use wear.

This type of carving tool for bone is a classic Paleoeskimo form seen in the Arctic Small Tool, Old Bering Sea, and Ipiutak traditions of Alaska, as well as the Dorset tradition of Canada. The geographically closest examples include flaked and polished burins from the Brooks River Gravels phase on the Alaska Peninsula (Dumond 1981:Pl. V:a–e) and the lower component of SEL-033 on Chugachik Island on Kachemak Bay (Workman 1996:44–45), both between 3,100 and 4,000 years old. The presence of this antique form at the Early Contact Village site is unexplained.

Chisel bits with bifacially ground cutting edges ($n=1$; Fig. 7B, slate) were probably hafted with bone or wooden handles and used for fine wood carving. They have been found at the Northwestern Lagoon Site (Crowell and Mann 1998:144–45) and McArthur Pass site (Betts et al. 1991:137) in Kenai Fjords National Park, as well as other sites of the last millennium in Prince William Sound (De Laguna 1956:Pl. 15–6; Yarborough and Yarborough 1996: Fig. 34) and the Kodiak archipelago (Clark 1974a:98; Heizer 1956:49).

Notched cobble scrapers ($n=1$; Fig. 7C, quartzite) were probably used as spokeshaves for shaping wood. Comparable examples have been reported from the Bluffs Phase on the Alaska Peninsula, dating to about AD

1450–1800 (Harritt 1988:Pl. 19d), from the sixteenth-to-seventeenth-century Kiavik and Rolling Bay sites on Kodiak Island (Clark 1974a:Pl. 27n and Pl. 28), and from the Uyak Site on Kodiak Island (level and date unknown) (Heizer 1956:Pl. 29a).

Cobble spalls ($n=7$; Fig. 7E, H, I, quartzite) have been reported for Gulf of Alaska sites of all time periods and were general-purpose tools used as knives, scrapers, wedges, choppers, or saws (Clark 1974a:81–83; De Laguna 1934:60–61).

Other stone artifacts include a thin slab of quartzite used as a scraper (Fig. 7D), which bears a rust stain left by contact with a piece of iron. A fine-grained, tabular whetstone (Fig. 7F) has a smooth, slightly concave surface and was probably used to hone the edges of lance blades and other slate tools.

BONE TOOLS

Composite (two-piece) fish hooks ($n=3$) are represented by a shank (Fig. 8A) and two barbs (Fig. 8B–C). On this type of hook, which was used for cod, rockfish, and other medium-sized ocean fish, the barb section was lashed to the shank with sinew cord (Birket-Smith 1941:Fig. 23). One of the barbs from the site has a lashing groove around its base. Archaeological examples are widespread in the Gulf of Alaska, with dates ranging from more than 6,000 years ago to the historic period (De Laguna 1934:Pl. 43 5–13; De Laguna 1956:Pl. 36 7–11; Hausler-Knecht 1993; Knecht 1995:163–169).

Toggling harpoon heads ($n=2$; Fig. 8D) include one full-sized example, probably for seals, with a broken slot for a stone endblade, a transverse line hole, and a closed socket. In the Gulf of Alaska, toggling harpoon heads were used from about 3,500 years ago into the twentieth century, but were less common than barbed harpoon heads (Birket-Smith 1953:24–26; De Laguna 1934:Pl. 38; De Laguna 1956:171–173; Heizer 1956:Pl. 58). A miniature toggling head (Fig. 8F) may be from a fish harpoon, or may possibly be a toy. It has a slot for a tiny endblade (see possible examples, Fig. 6W–Y), transverse line hole, closed socket, and bifurcated toggle. No examples of this size from other sites have been identified.

Barbed dart or harpoon heads ($n=2$), represented by an eroded base (Fig. 8E) with off-center line hole and an additional small fragment, were commonly used for seals and sea otters. Eighteenth and nineteenth-century ethnographic examples are ubiquitous (e.g., Birket Smith

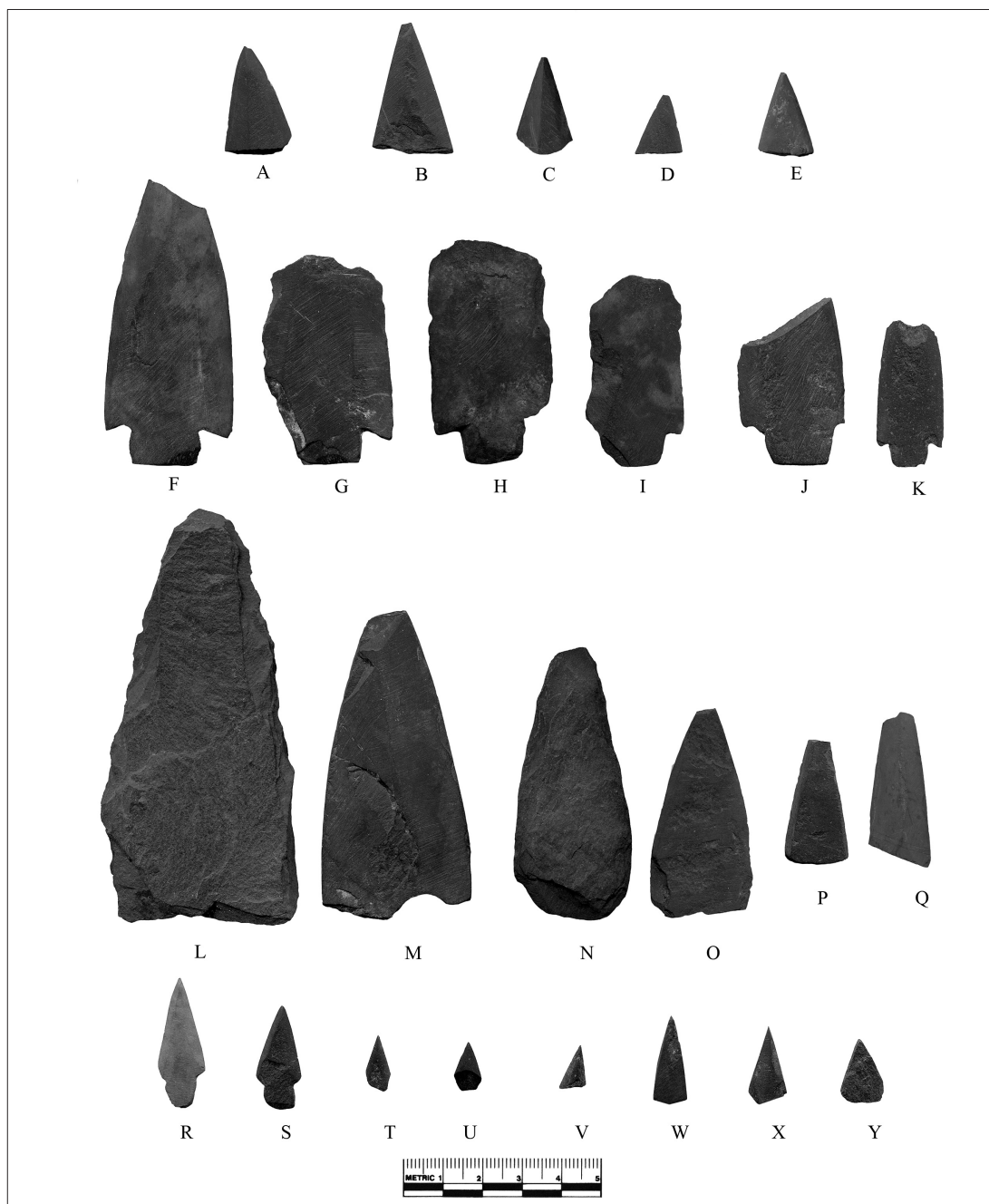


Figure 6. Ground slate projectile points, Early Contact Village site. A. KEFJ-137:2354 barbed slate lance blade tip; B. KEFJ-137:2332 barbed slate lance blade tip; C. KEFJ-137:1970 barbed slate lance blade tip; D. KEFJ-137:1682 barbed slate lance blade tip; E. KEFJ-137:2106 barbed slate lance blade tip; F. KEFJ-137:1684 barbed slate lance blade base; G. KEFJ-84:1161 barbed slate lance blade base; H. KEFJ-137:2059 barbed slate lance blade base; I. KEFJ-137:2098 barbed slate lance blade; J. KEFJ-137:2212 barbed slate lance blade base; K. KEFJ-84:1216 barbed slate lance blade base; L. KEFJ-137:1934 flaked slate lance preform; M. KEFJ-137:2258 slate lance preform with flat-ground margins; N. KEFJ-137:1855 chipped preform for triangular point; O. KEFJ-84:1077 medium triangular slate endblade; P. KEFJ-137:1704 small triangular slate endblade; Q. KEFJ-84:1092 midsection of medium triangular slate endblade with medial ridge; R. KEFJ-137:1857 small stemmed slate arrow point; S. KEFJ-137:1687 small stemmed slate arrow point; T. KEFJ-137:1732 small slate arrow point tip; U. KEFJ-137:2342 small slate arrow point tip; V. KEFJ-137:2006 small slate arrow point tip; W. KEFJ-137:1949 very small triangular slate point; X. KEFJ-137:1821 very small triangular slate point; Y. KEFJ-137:1733 very small triangular slate point.

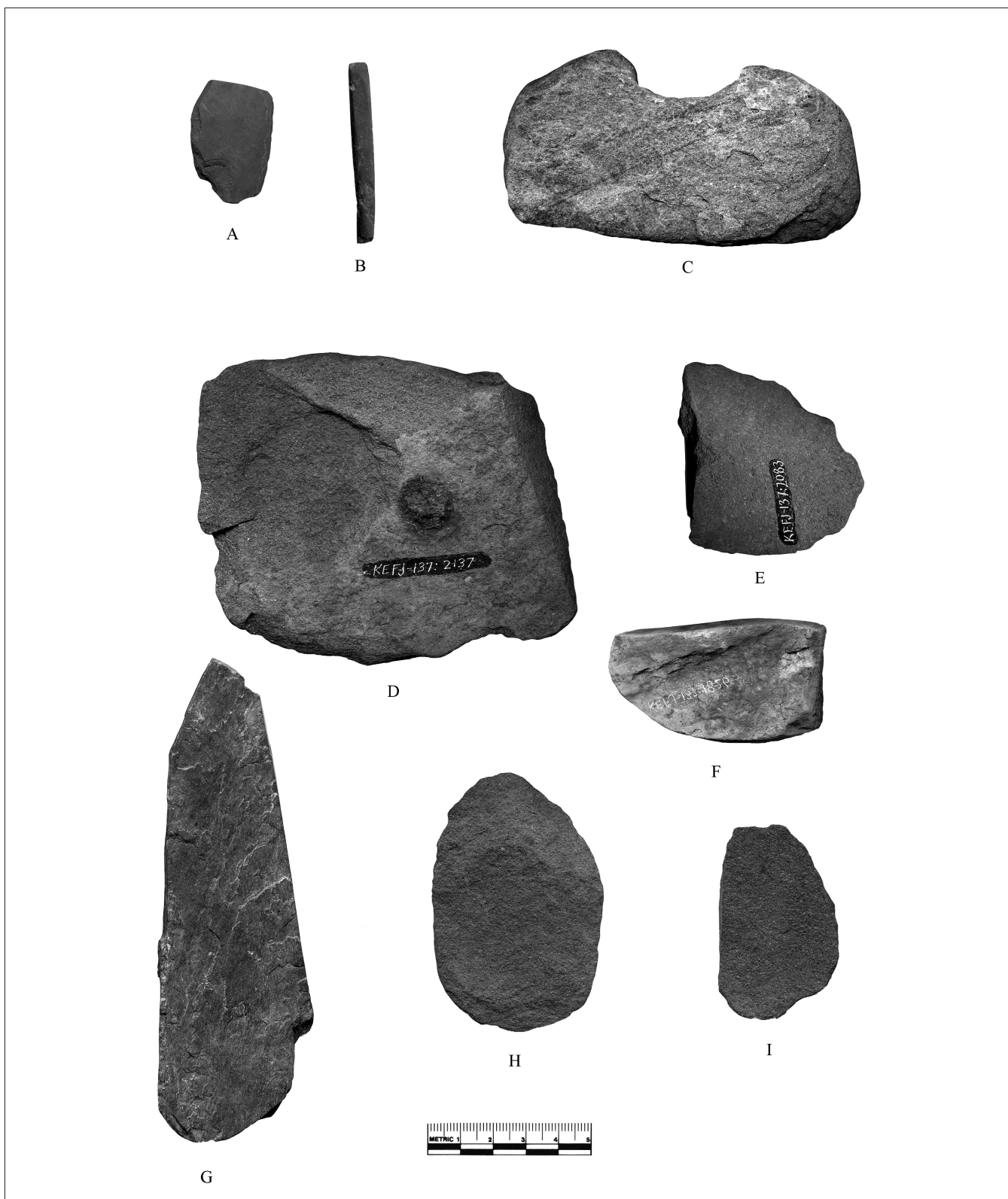


Figure 7. Stone tools, Early Contact Village site. A. KEFJ-137:2019 greenstone burin-like tool; B. KEFJ-137:2038 slate chisel bit with bifacially ground cutting edge; C. KEFJ-137:2358 notched quartzite cobbler scraper; D. KEFJ-137:2083 quartzite slab scraper with iron stain; E. KEFJ-137:2137 quartzite scraper; F. KEFJ-137:1826 fine-grained tabular whetstone; G. KEFJ-137:1706 unground slate lance blade blank; H. KEFJ-137: 2037 quartzite cobbler scraper or slate saw; I. KEFJ-137:2169 quartzite cobbler scraper

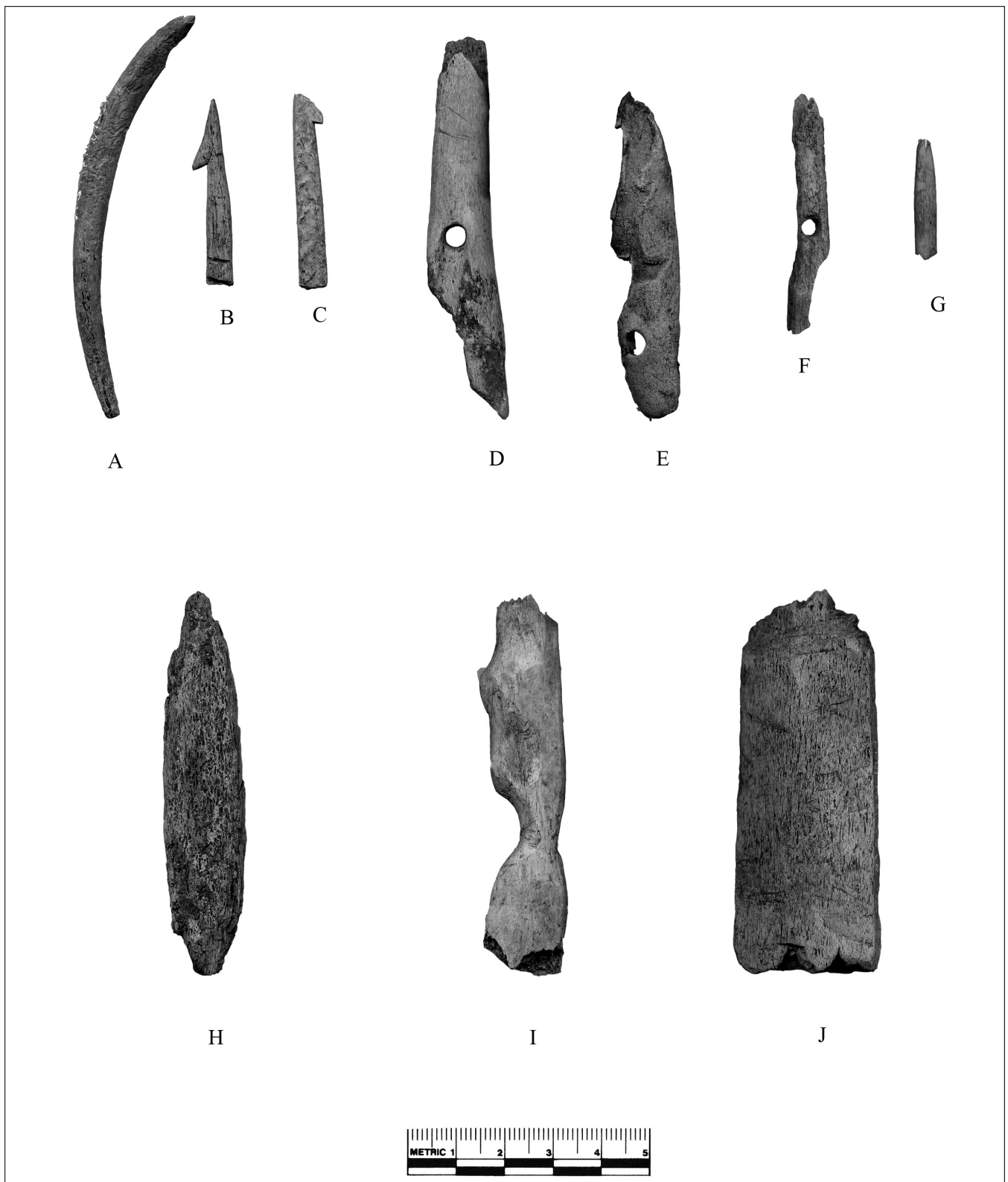


Figure 8. Bone tools, Early Contact Village site. A. KEFJ-137:2400 bone fish hook shank; B. KEFJ-137:2179 bone fish hook barb; C. KEFJ-137:2299 bone fish hook barb; D. KEFJ-137:2163 bone toggling harpoon head; E. KEFJ-137:2155 bone barbed dart or harpoon head; F. KEFJ-137:2077 bone miniature toggling harpoon head; G. KEFJ-137:2196 bone awl tip; H. KEFJ-137:2405 unidentified bone implement; I. KEFJ-137:2075 bone implement in early stage of manufacture; J. KEFJ-137:2318 whale bone implement in early stage of manufacture

1941:135–137) and they are found in many Gulf of Alaska archaeological sites of the last six millennia (De Laguna 1934:Pl. 39; De Laguna 1956:Pl. 33; Heizer 1956:Pl. 57).

Other bone tools include a sharp, round point, possibly the tip for an awl (Fig. 8G), an unidentified implement (Fig. 8H), and two roughly shaped pieces (Fig. 8I–J) representing early stages of manufacture.

GLASS

Beads (Fig. 9). A total of 254 glass beads was recovered from the midden trench and Structures 4, 10, and 13. Bead identification and analysis were undertaken by Rita Eagle.

A large proportion of the assemblage ($n=226$) consists of small (2–4 mm in diameter) to medium-sized (4–6 mm in diameter) drawn beads in various colors. Most are simple hot-tumbled drawn or “pound” beads (dark red, $n=3$; yellow, $n=3$; dark blue, $n=10$; green, $n=14$; greenish blue, $n=111$; and clear over white, $n=60$) (Fig. 9D–I). There are also two dark blue cylindrical drawn beads (Fig. 9A).

Composite drawn beads include red-and-white striped over clear centers ($n=5$), and plain “cornaline d’Aleppo” brick-red beads with clear or greenish centers ($n=18$, Fig. 9B–C). The latter are typical of pre-AD 1840 archaeological sites in Alaska and the Northwest Coast, replaced after that date by white-centered cornaline d’Aleppo beads (Crowell 1997:171; Ketz 1983; Oswalt 1980; Ross 1990).

Wound beads are less common ($n=28$). Examples include medium-sized (4–6 mm) transparent green and blue wound beads ($n=2$, Fig. 9M–N), medium opaque white beads ($n=4$), and large (6–10 mm) opaque white and light blue beads ($n=13$, Fig. 9O–P), all probably Chinese. The Russian fur trade in Alaska was carried out primarily to obtain furs for exchange with the Chinese, and this trade was limited to the Mongolian border town of Kiakhta (Gibson 1976:viii). Beads were one of the few commodities obtainable at Kiakhta without paying duty (Francis 1999:85).

Other wound beads in the collection were probably brought from Venice and transported across Siberia. There

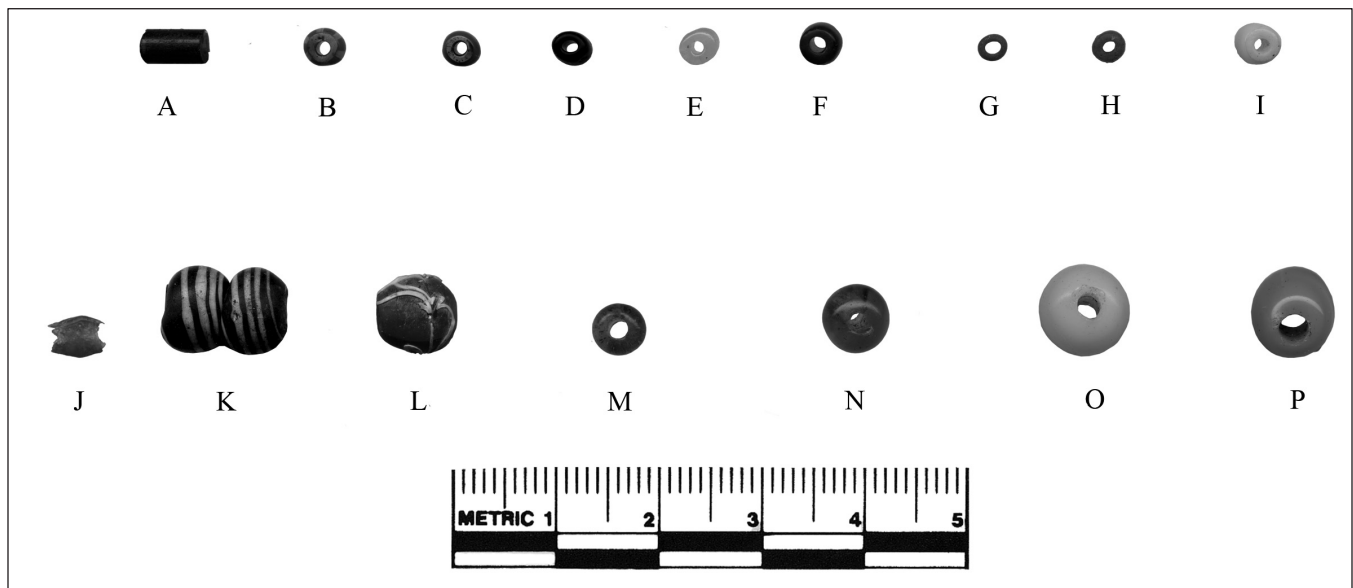


Figure 9. Glass trade beads, Early Contact Village site. A. KEFJ-137:1813 dark blue cylindrical bead; B. KEFJ-137:1809 drawn bead with red and white stripes over clear glass interior; C. KEFJ-137:1841 composite drawn bead with brick-red exterior and clear glass center (“cornaline d’Aleppo”); D. KEFJ-137:1810 small dark red drawn bead (appears black); E. KEFJ-137:1914 small yellow drawn bead; F. KEFJ-137:1808 small dark blue drawn bead; G. KEFJ-137:2263 small green drawn bead; H. KEFJ-137:1972 small green-blue drawn bead; I. KEFJ-137:2308 small clear over white drawn bead; J. KEFJ-137:2024 light red wound and press-faceted bead; K. KEFJ-137:1685 conjoined spherical black (dark green) wound bead with white stripes; L. KEFJ-137:2204 red barrel-shaped wound bead with applied combed loops; M. KEFJ-137:1874 transparent green medium-sized wound bead; N. KEFJ-137:2111 transparent blue medium-sized wound bead; O. KEFJ-137:1944 large white wound bead; P. KEFJ-137:1714 large light blue wound bead

are small (2–4 mm) light red, wound and press-faceted beads ($n=4$, Fig. 9J). The two most elaborate styles are barrel-shaped wound red beads with applied combed loops of white glass ($n=4$, Fig. 9L) and one conjoined spherical very dark green wound bead with white stripes (Fig. 9K). This bead is composed of two simple wound beads that touched and fused during the manufacturing process.

General bead types and colors (Table 2) are consistent with the early decades of Russian contact as determined by seriation analysis of bead assemblages from seventeen southern Alaska historic and protohistoric sites (Crowell 1997:171–177). As shown in Fig. 10, the assemblage is certainly prior to 1840 and most similar

to several sites with pre-AD 1820 dates, including Three Saints Harbor (AD 1784 to ca. 1805) and Reese Bay (ca. AD 1765–1810).

In the Alutiiq region, beads were used for jewelry and dance regalia including necklaces, anklets, belts, earrings, nose ornaments, lip ornaments, and headdresses (Crowell et al. 2001). A cluster of thirty-two blue, white, and red-over-clear drawn beads found together in the midden may have been from a single earring.

Flat clear glass. A few small fragments of flat, clear window glass ($n=7$) were found in the midden, including a piece flaked along one edge to make a small “thumbnail” scraper (Fig. 11A).

	Estimated Date	Cornaline White Center	Cornaline Grn/Clr Center	Wound	Seed	Tubular	Faceted	Drawn Blue	Drawn White	Drawn Other	Sample Size
Kolmakovskiy (Amer. Phase)	1870–1917	■			■			■	■	■	1,541
Kijik	1800–1910	■			■	N.D.			■	■	1,229
Ft. Reliance	1874–1886	■	■		■	N.D.		■	■		865
Kolmakovskiy (Russian)	1841–1866				■			■	■	■	866
Tikchik	Pre-1829–1900		■		■			■	■	■	407
Akulivikchuk	Pre-1843–1890				■			■	■		537
Denton Site	1850s–1900	■			■		■	■	■	■	874
Crow Village	1843–1900							■	■		416
Taral Creek	Late 19th Century	■	■		■	■		■	■	■	246
Point Site	Circa 1875		■					■	■	■	166
Chirikof Island	1790–1867		■			N.D.			■	■	257
Knoll Site	1850s		■						■	■	147
Dakah De’Nin	1816–1840		■					■	■		72
Reese Bay	1765–1810		■		N.D.	N.D.		■	■		495
Uqciuvit	Early 19th Century?		■					■	■	■	1,654
Early Contact Village	1790–1810		■	■				■	■	■	254
Korovinsky	1820–1870			■				■	■		625
Three Saints Harbor	1784–Ca. 1800		■	■				■	■		511
Pedro Bay	1750–1800			■				■			15

Figure 10: Seriation of trade bead assemblages from southern Alaska sites. Modified from Crowell 1997.

Table 2: Trade bead counts and stratigraphic contexts, Early Contact Village site. Totals include results from 1993 test pits and 2003 excavations.

	Midden			House Pit, Structure 4		House Pit, Structure 10		House Pit, Structure 13		Total
Bead Types	S2	S3	S4	S4	S5	S2	S3	S2	S3	
Cornaline d'Aleppo, White Center										0
Cornaline d'Aleppo, Grn/Clr/Red Center	4	7				5		2		18
Wound	9	9		1		3	5	1		28
Seed										0
Tubular						2				2
Faceted										0
Drawn Blue	32	31	7		2	16	22	1		111
Drawn White	20	13	1		1	8	11	5	1	60
Drawn Other	11	3	7			7	6	1		35
Totals (<i>n</i> =254)	76	63	15	1	3	41	44	10	1	254

Bottle glass. A single dark green fragment (Fig. 11B) is from a “case bottle” used for liquor, a type also found at Three Saints Harbor (Crowell 1997:179–181).

METAL ARTIFACTS

Coin (Fig. 11c). A brass or copper one *denga* Russian coin with “Денга 1748” on one side and double-headed eagle on the obverse had an original value of ½ kopek or ½₂₀₀ ruble. *Denga* coins were minted from 1700 to 1828 (Uzdenikov 1992).

Copper arrow point (Fig. 11d). A copper arrow point and three thin fragments of copper were found in the midden deposits. These could be Russian in origin, or native copper acquired through trade with the Ahtna (Hassen 1978:46).

Lead finger ring (Fig. 11e). The ring is identical to two examples found at Three Saints Harbor, along with copper rings (Crowell 1997:190–192).

Iron knife blade with tang (Fig. 11F). The tool is hand-forged, wrought iron, very similar to knives from Three Saints Harbor (Crowell 1997:187).

Iron nails. A square-headed short spike (Fig. 11G), a headless nail with square cross section (Fig. 11H), and the tip of a similar nail (not shown) were found. These objects closely resemble fasteners made at the Three Saints Harbor site, where Russian blacksmiths forged them from wrought iron bars and sheets (Crowell 1997:183–187). A

blacksmith was also employed at Voskresenskii to forge iron nails for shipbuilding (Tikhmenev 1978:63).

Mica fragments. Several small flakes of mica (*n*=4) were found in the midden deposits. Mica sheets were used as an alternative to glass for glazing windows, and numerous pieces were found at Three Saints Harbor (Crowell 1997:195).

FAUNAL ANALYSIS

Vertebrate faunal remains from the 2003 excavations (Table 3), including bones of sea mammals (*n*=3,956), land mammals (*n*=30), birds (*n*=885), and fish (*n*=12,709), were analyzed by David Yesner (Yesner 2004) and Diane Hanson (Hanson 2007). Linda Yarborough reported on faunal remains from the 1993 test excavations (Yarborough 1998:A8–A12).

Land mammals make up only .6 percent of the non-fish fauna in the 2003 sample, and include marmots, porcupines, mountain goat, and domestic dog. The dominant subsistence focus was on maritime hunting. Identifiable sea mammal remains (NISP=2,604)⁴ include Cetacea (whales) (2.1%), Otariidae (sea lions, 18.8%), Phocidae (harbor seals, 33.7%), Phocoenidae (porpoises, 20.2%), and Pinnipedia (either seals or sea lions, 25.1%). No sea otters or fur seals were identified. It was not possible to distinguish individual species of whales and porpoises, although both harbor and Dall porpoise are probably present. Age and sex patterning within the Otariidae and

⁴ NISP stands for Number of Identified Specimens, i.e., raw counts of individual bones. MNI (Minimum Number of Individuals) estimates were not computed.

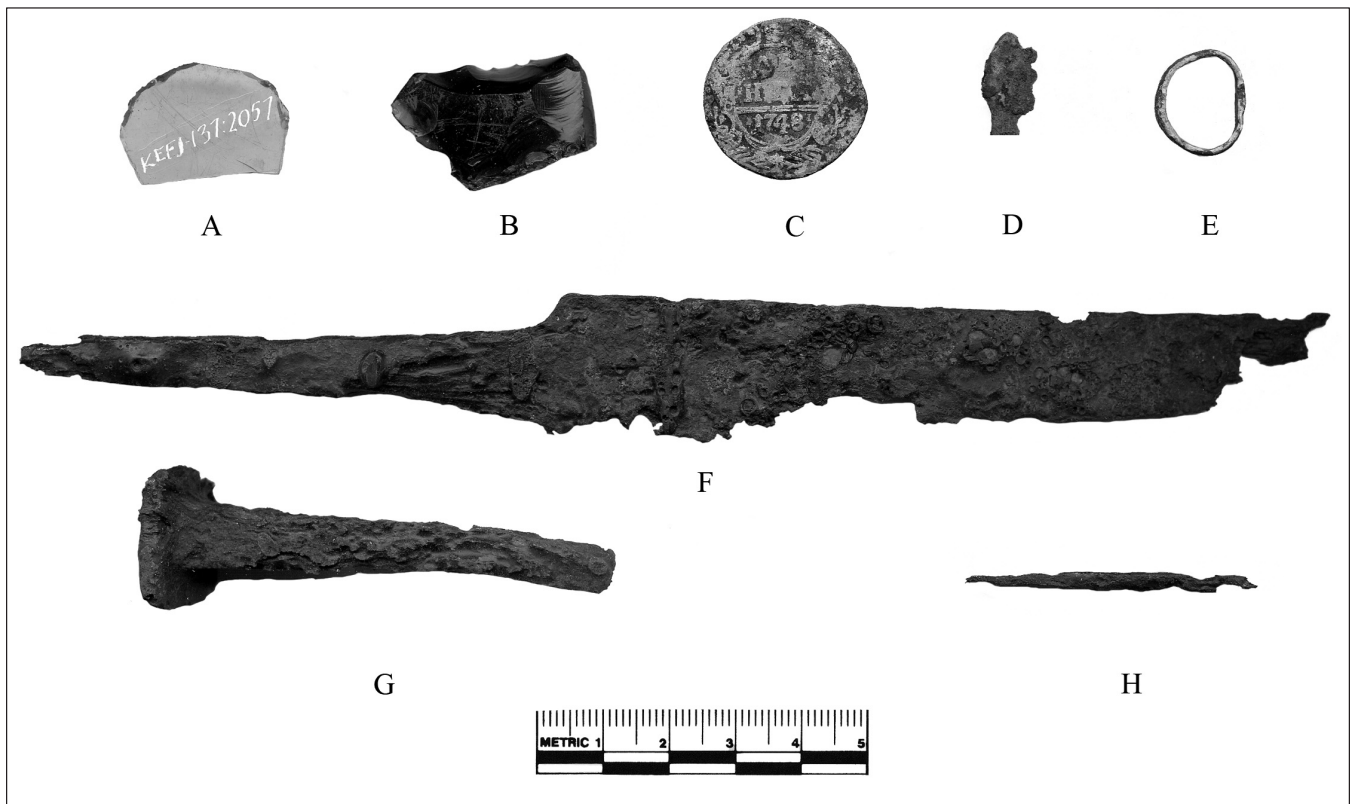


Figure 11: Russian trade items, Early Contact Village site. A. KEFJ-37:2057 thumbnail scraper made of window glass; B. KEFJ-137:1715 "case bottle" fragment; C. KEFJ-137:2097 Russian 1/2 kopek dated 1748; D. KEFJ-137:2259 copper arrow point; E. KEFJ-137:1888 lead finger ring; F. KEFJ-137:2054 iron knife blade with tang; G. KEFJ-137:2202 square-headed short iron spike; H. KEFJ-137:2237 headless iron nail with square cross-section

Phocidae suggest differences in hunting patterns. Sea lions show a nearly balanced sex ratio (44.6% female, 55.4% male, $n=65$) and normal age distribution (39.5% immature and juvenile, 60.5% mature, $n=357$), indicating that they were probably hunted at sea rather than at rookeries. Harbor seals show a much higher proportion of younger animals (76% immature and juvenile, 24% mature, $n=737$) as well as a bias toward females (61.5% females, 38.5% males, $n=26$), suggesting that young seals were taken at pupping grounds. Alutiiq kayak hunting at the head of Aialik Bay, where female seals give birth to their young in May on ice floes in front of Aialik Glacier, is documented for the late nineteenth and early twentieth century (Stanek 1985, 1999; Nick Tanape Sr. 2002, personal communication).

Identifiable bird remains (NISP=579) include seven main families or suborders: the Gaviidae (loons, 0.9%), Phalacrocoracidae (cormorants, 3.6%), Anatidae (waterfowl, 5.2%), Accipitridae (eagles and hawks, 0.5%), Charadriidae (shorebirds, 0.2%), Galliformes (gallinaeous birds, e.g., ptarmigan, 0.5%), and Alcidae (puffins,

murres, pigeon guillemots, murrelets, auklets, 89.1%). There was a clear focus on seabirds (alcids), with puffins the most common of these (66% of alcids). There is a possibility that the high number of puffin and murre bones is the result of Russian-directed harvesting of these birds at breeding colonies in the Chiswell Islands or Resurrection Bay for parka making, as mentioned above (Davydov 1977:194). Both the upper mandibles (including upper beaks) and lower limbs of puffins are virtually absent from the site, suggesting a particular butchering and usage pattern. Puffin beaks were often used for making rattles and to decorate clothing (Crowell et al. 2001).

Relatively few fish taxa are present at the Early Contact Village site. These are cods (Gadidae); rockfish (Scorpaenidae); sculpins (Cottidae); flatfishes, in particular the halibut (Pleuronectidae); lings (Hexagrammidae); salmonids (Salmonidae); and a single representative of the sardines or herring (Clupeidae).

Of the 2,620 fish elements that were identified, cod are clearly the dominant taxon (NISP=1,815, 69.3%), followed distantly by the rockfish (NISP=603, 23%). All

Table 3: Faunal counts (NISP) from 2003 midden excavations at the Early Contact Village site.

Vertebrate Faunal Remains		
	NISP	
Land Mammal Assemblage		% Land Mammal
Bovidae (sheep or goat)	2	7.0%
Canidae (dog)	4	13.0%
Cervidae (antler)	1	3.0%
Mustelidae (weasel family)	2	7.0%
Rodentia (marmots and porcupines)	21	70.0%
	30	
Sea Mammal Assemblage		% Sea Mammal
Cetacea (whales)	55	2.1%
Otariidae (sea lions)	490	18.8%
Phocidae (harbor seals)	878	33.7%
Phocoenidae (porpoises)	527	20.2%
Pinnipedia (seals or sea lions)	654	25.1%
Identifiable sea mammal fragments	2,604	99.9%
Unidentifiable sea mammal fragments	1,352	
	3,956	
Bird Assemblage		% Bird
Accipitridae (eagles and hawks)	3	0.5%
Alcidae (auks and auklets)	516	89.1%
Anatidae (waterfowl)	30	5.2%
Charadriidae (shorebirds)	1	0.2%
Galliformes (ptarmigan)	3	0.5%
Gaviidae (loons)	5	0.9%
Phalacrocoracidae (cormorants)	21	3.6%
Identifiable bird bone fragments	579	100.0%
Unidentifiable bird bone fragments	306	
	885	
Fish Assemblage		% Fish
Clupeidae (herring/sardines)	1	0.0%
Cottidae (sculpins)	42	1.6%
Gadidae (cod)	1,815	69.3%
Hexagrammidae (greenlings)	31	1.2%
Pleuronectidae (halibut)	108	4.1%
Salmonidae (salmon)	20	0.8%
Scorpaenidae (rockfish)	603	23.0%
Identifiable fish bone fragments	2,620	100.0%
Unidentifiable fish bone fragments	10,089	
	12,709	

other species are incidental in comparison. In order of abundance they are flatfishes (NISP=108, 4.1%), greenlings (NISP=31, 1.2%), sculpins (NISP=42, 1.6%), salmon (NISP=20, 0.8%), and herring/sardines (NISP=1; 0.04%).

Only the 1993 test pit shellfish samples have been analyzed (Yarborough 1998:A10). Test Units A and C produced one shell fragment each (both Pacific blue mussel), while Test Unit B in the midden yielded 817 fragments. These were Pacific blue mussel (*Mytilus trossulus*, NISP=637, 78%), chitons (*Amphinura* sp., NISP=147, 18%), cockles (*Cardiidae* sp., NISP=14, 1.7%), Pacific littleneck clam (*Protothaca staminea*, NISP=1, .1%), and unidentified bivalves (NISP=18, 2.2%).

SITE FORMATION PROCESSES AND SPATIAL DISTRIBUTIONS OF ARTIFACTS AND BONE

The spatial distributions of bone and stone artifacts (Fig. 12a), glass beads (Fig. 12b), and the bones of sea mammals and sea birds (Fig. 12c) suggest human behaviors that shaped the archaeological context. Although bird and mammal bones were scattered across the midden, they were concentrated at its center. Fish were even more con-

centrated in this area; over 99 percent of the bones in the analyzed sample ($n=11,991$) came from one central lens (c.f. Figs. 3 and 4), and most of the shell was in a discrete layer overlying the fish. While bone tools (fish hooks and harpoon heads) had a centralized midden distribution, the much larger numbers of stone tools and glass beads were widely and relatively evenly distributed across the midden and inside Structure 10.

One interpretation of these contrasting patterns would be that beads, stone artifacts, and debitage were lost or discarded inside the houses, then tossed randomly onto the midden along with charcoal, fire-cracked rock, and other debris when the houses were cleaned. Some faunal remains (from food consumed inside the houses) were dispersed in the same way. To account for the concentration of faunal remains at the mound center, we posit that during the warm months this area was used for outdoor butchering and processing of sea mammals, birds, fish, and shellfish, generating large quantities of discarded bone in primary depositional context. It is likely, for example, that the fish lens represents a single event, when a large number of cod and rockfish were caught and cleaned at the same time.⁵ Butchering on top of the

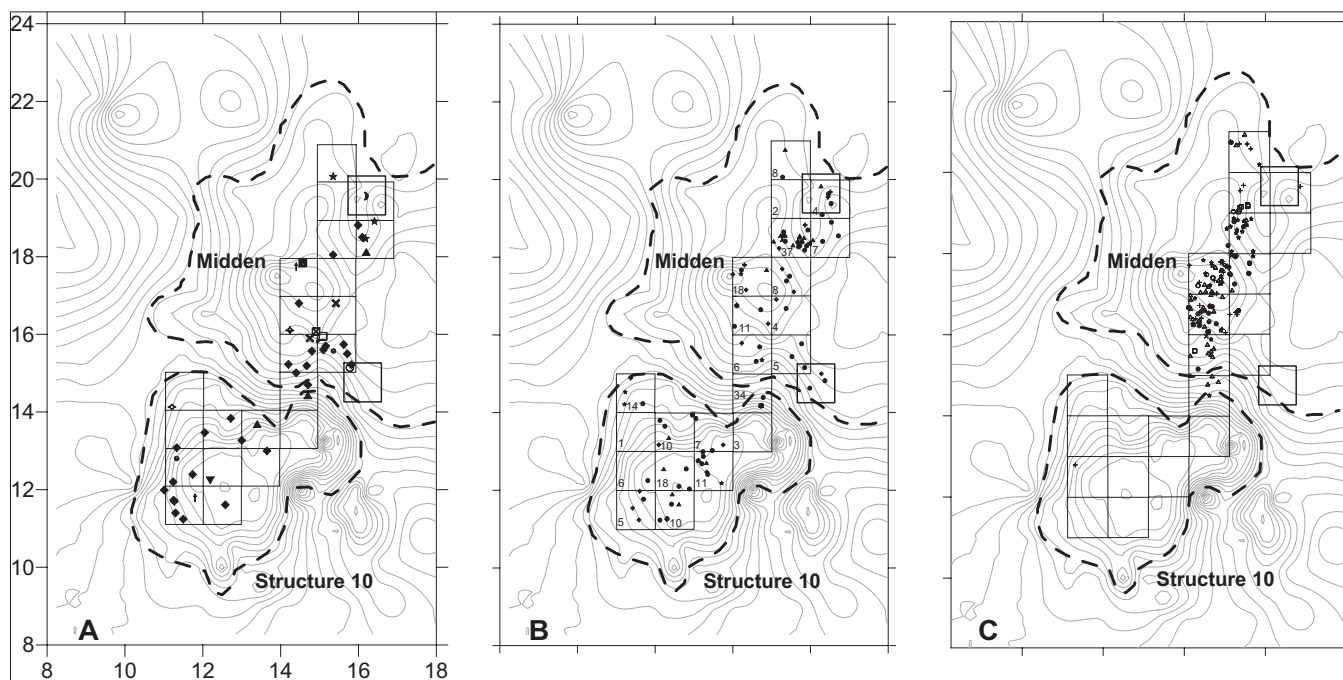


Figure 12: Horizontal distributions of (A) bone and stone artifacts; (B) beads; and (C) bird and mammal bone from 2003 excavations at the Early Contact Village

⁵ The scanty remains of other species (flatfishes, sculpins) in the fish bone pile are from small specimens that may have been stomach contents of the larger fish (Hanson 2007).

midden may also have generated primary deposition of broken slate endblades and bone harpoon heads as these were removed from the animal carcasses.

The stratigraphic composition of the midden and the vertical distributions of bone and artifacts within it are also informative. During excavation, it appeared that the midden strata might represent successive seasons. Stratum 3 suggested a spring-summer layer because of its diverse and abundant mammal, bird, fish, and invertebrate remains, reflecting the intensive food-harvesting activities of the warmer months. Stratum 2 and Stratum 4 suggested fall or winter layers because of their high fire-cracked rock content (associated with winter steam bathing) and lower faunal content, consistent with the more restricted hunting and fishing activities of the colder part of the year.

The vertical distributions of sea bird and sea mammals are shown in Fig. 13. Bone counts for both categories increase steadily from the bottom of the midden (Stratum 4) to a peak in the middle (Stratum 3, Level 2) and then decline through Stratum 2. Hypothetically, this curve (from bottom to top) indicates the changing intensity of overall harvesting efforts during the course of about 15 to 18 months. If the three midden layers do represent seasonal progression, then the sea mammal taxa—predominantly

harbor seals, sea lions, and porpoises—had more extended hunting seasons than the April–July period reported for Kodiak Island (Fig. 14). However, fall and winter hunting for seals and sea lions is historically documented for Prince William Sound (Birket-Smith 1953). Bird bones (mostly alcids) are more numerous than mammal bones in Stratum 2, Level 3, and puffins are at their highest number ($n=114$) in this probable late-summer or early-fall level. As noted above, the taking of seabirds at nearby colonies for making parkas occurred at this time, when the kayak fleets were returning home after sea otter hunting (Davydov 1977:194). The base of the cod-dominated fish lens is at Stratum 3, Level 3, suggesting that the catch occurred in spring or early summer when these fish move into warmer water near the shore. These data are provisionally supportive of the seasonal progression hypothesis, but further study is needed including sectioning of bivalve shells and sea mammal teeth to determine exact ages and season of death.

Artifacts (Fig. 15) follow vertical trends that are roughly similar to that of the faunal remains, with a notable exception—large numbers of stone tools, slate flakes, and beads occurred at the very top of the cultural deposit (Stratum 2, Level 1), just under the post-occupation turf. This suggests a final cleaning of the house interiors, per-

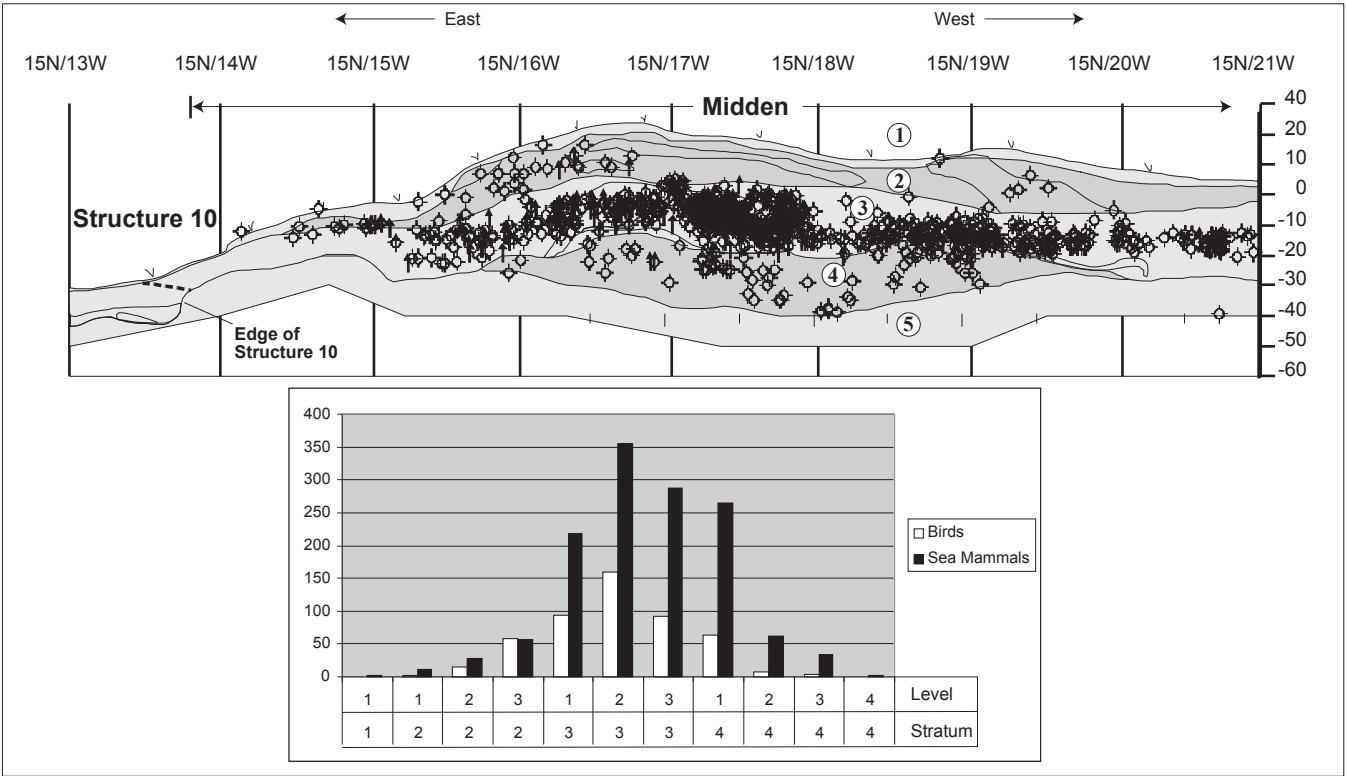


Figure 13: Vertical distribution of bird and mammal bone in the Early Contact Village midden

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FUR SEAL					3,4							
HARBOR SEAL								3,4				
SEA LION								3,4				
PORPOISE								3				
SEA OTTER								2,3,4				
WHALES								1,2,3,4				
SALMON											3,4	
HALIBUT							4,5					
COD												
BIRD EGGS					4							
BIRDS												
PLANT FOODS												
SHELLFISH												

1. Davydov (1977:175, 224, 232)
2. Holmberg (1985:48, 50)
3. Merck (1980:106-106)
4. Sauer (1802:178)
5. Billings (in Merck 1980:206)

Figure 14: Reconstructed Alutiiq seasonal round, Kodiak ca. AD 1800.

haps at the end of the second winter at the site. Beads and artifacts show a secondary peak at Stratum 3, Level 1, perhaps the result of similar activity at the point of moving into winter quarters.

DISCUSSION

Our analysis of midden and house stratigraphy and of the seasonality of faunal remains at the Early Contact Village suggests a brief occupation spanning two winters with an intervening spring/summer/fall. This time estimate implies a rapid buildup of the midden, which is volumetrically composed largely of fire-cracked rock and faunal remains. In turn this implies a relatively large resident population. If all seven of the small semisubterranean houses were simultaneously occupied, a group of 40 or more people might have been present during that season. The summer population is more difficult to estimate. Although two sod-walled features (Structures 6 and 13) may be summer dwellings, plank-walled summer houses used in Prince

William Sound and possibly on the outer Kenai coast would not necessarily have left noticeable surface imprints and so may remain undiscovered at the Early Contact Village site (cf. Crowell and Mann 1998:129–131).

The brief duration of this settlement is anomalous in comparison with the centuries-long usage of late prehistoric village sites on the outer Kenai coast including Bear Cove (~ AD 950–1800), the Northwest Lagoon site (~ AD 1225–1750), and McArthur Pass (~ AD 250–1400) (Crowell and Mann 1998). On the other hand, the site's multiseason occupation is too long a period to be consistent with an on-shore encampment by one of the transiting sea otter fleets. The Early Contact Village thus has the appearance of an opportunistic response to the new Russian presence, representing a brief settlement shift by families from another part of the Kenai coast or perhaps from Prince William Sound. They may have been seeking remunerative opportunities to trade, hunt sea otters and birds for the Russians, or cut timber for the shipyard at Voskresenskii.

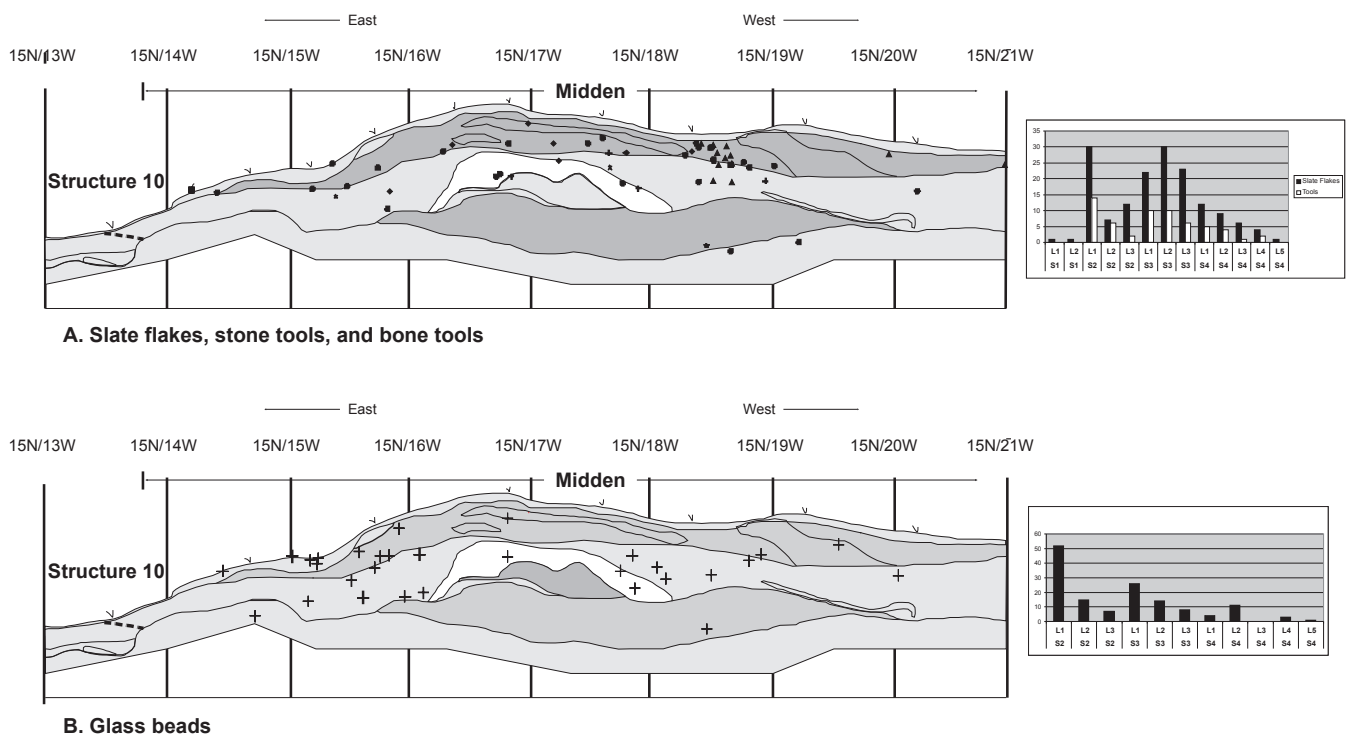


Figure 15: Vertical distribution of (A) stone tools, bone tools, and slate flakes; and (B) beads in the Early Contact Village midden.

Artifacts from the site are largely indigenous, including traditional forms of hunting weapons, fish hooks, and household tools. Slate debitage, slate preforms, and tools for shaping bone and wood (burins, notched cobble scrapers) indicate on-site manufacture of weapons and household articles. Skin preparation (with cobble scrapers) and sewing (awl tip) are also indicated.

Of the imported trade items, glass beads are most common ($n=254$), comprising 20 percent of the total artifact inventory from the site ($n=1,243$, including slate flakes). This number is substantial, especially in light of Baranov's complaint that bead supplies for trade were very limited at Voskresenskii. However, it is not exceptional; the area density of beads in our excavations (10.2 beads per m^2 or 254 beads in 25 1 x 1 m units) is lower than the corrected bead density in and around Longhouse 2 at the early contact Reese Bay site on Unalaska Island (14.1 beads per m^2) (Veltre and McCartney 2001). At the Early Contact Village, beads were found on the house floor as well as in the midden, and may have entered the archaeological record by loss or discard during the manufacture or wearing of jewelry. Jewelry and headdresses were strongly associated with Alutiiq midwinter dances and hunting ceremonies (Crowell 1992; Crowell et al. 2001).

Bead varieties and the proportional representation of types (e.g., a relatively high percentage of wound beads) are consistent with other southern Alaskan assemblages of the late eighteenth or early nineteenth centuries and especially similar to bead inventories excavated from Russian buildings at Three Saints Harbor. Other glass and metal items from the Early Contact Village are similar or identical to artifacts from Three Saints, placing the site securely in the Russian expansionary phase that followed Shelikhov's arrival on Kodiak Island. It is notable that no imported porcelain or earthenware shards were found. Ceramic cups and bowls were fragile and difficult to ship from the Russian Far East, and remained scarce in Alaska indigenous sites until the 1840s (Jackson 1991). Finally, no evidence of firearms or imported clothing (e.g., buttons) was recovered in our excavations.

Several imported artifacts found at the Early Contact Village are of special note. The forged iron knife must have been a rare and especially valuable item, since knives were initially prohibited in Native trade and iron was a scarce commodity even for the Russians themselves. For example, construction of the vessel *Phoenix* at the Voskresenskii shipyard in AD 1793–1795 was hampered by a shortage of iron for nails, tools, and fittings (Cook and Norris 1998:50–51;

Tikhmenev 1978:63). The half-kopeck coin is also unusual. Although Russian coins in half- and quarter-kopeck denominations have been found at Sitka, the Russian American capital after 1804 (McMahan 2002), coins were in very short supply and rarely used to pay Native hunters⁶ (Pierce 1990). Both objects imply a higher rate of exchange for furs or labor than obtained in most colonial locations, and add support to the hypothesis that the outer Kenai coast was an independent, free trade region.

The large quantity of sea mammal remains and evidence for active hunting through an entire subsistence cycle suggest both an abundance of food and the ready availability of male labor. There is no hint of the food shortages and outright starvation induced on Kodiak Island by the forced summer-long absence of most able-bodied men for service in the sea otter fleets, reinforcing the impression that Russian control of labor on the outer Kenai coast was limited.

CONCLUSION

Overall, artifacts and faunal remains at the Early Contact Village in Aialik Bay are indicative of the *free trade* mode of Russian colonialism that prevailed in the “semi-dependent” and “independent” regions of the mainland coast and the Alaskan interior, among such groups as the Chugach, Dena’ina, Tlingit, Yup’ik, and Ahtna, rather than of the *forced labor* mode that was enforced in the Aleutian Islands and Kodiak archipelago. At the same time, the site reflects the constricted colonial logistics of the late eighteenth century, when Russian capabilities to supply trade goods to its colonial periphery were far weaker than those of its North American competitors, the British and French (Wallerstein 1989; Wolf 1982).

Continuing research is focusing on comparisons between the Early Contact Village and the adjacent Denton site, an Alutiiq hunting and trapping camp that was used from the 1850s through the early twentieth century (Crowell 2004, 2007; Crowell and Mann 1998; Schaaf 1989). The Denton site illustrates the great economic changes that took place in the Alutiiq region during the second half of the nineteenth century, when it became linked much more directly to the material relations of the industrialized world system. After the cessation of Russian

rule in AD 1867, the Alaska Commercial Company (ACC) established its own trading posts on the Kenai coast and Prince William Sound, introducing a wage labor and credit system (Cook and Norris 1998:65–70). Until the collapse of fur prices in AD 1897, the ACC paid well for sea otter pelts and sold factory-made clothing and shoes, beads in many varieties, imported foods (flour, teas, condiments), “china” cups and serving dishes, iron tools, traps, and firearms to Alutiiq residents. All of these consumer goods—scarce or nonexistent during the early Russian period—are abundantly represented at the Denton site while only a few traditional tools and weapons (e.g., harpoon and arrow parts and sea mammal spears with metal heads) have been found there. Salmon canneries, established in Cook Inlet between AD 1882 and 1920, provided another source of cash income and drew Alutiiq populations away from the outer coast, promoting a pattern of seasonal use rather than permanent settlement there.

This comparison underlines the significance of the Early Contact Village, which richly represents a historical moment close in time to first Russian contact when the cultural, economic, and political transformations of the colonial period were just beginning to unfold.

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6 It is interesting to note that the coin’s 1748 date coincides with the first decade of Russian merchant activity in the Aleutians following the Bering-Chirikov expedition of 1741. It was probably in circulation for 50 years or more before being left at the Early Contact Village. Several of the half-kopeck coins found at Castle Hill in Sitka were also minted in 1748 (David McMahan, personal communication, 2008.)

Early Contact Village site in 2003, and with this paper we express our tremendous regard for Bill's contributions to the archaeology of the Alutiiq region. Other colleagues, students, and volunteers who worked in the field and laboratory include Forest J. Kvasnikoff, Tim Johnson, Nicole Tozzi, Maribeth Murray, Richard Galloway, Zach Strong, Binh Tam Ha, Derek T. Shaw, Dan Anahonak, Connie Hedrick, Katrina Dupree, Cora Denae Moonin, and Stacy Leona Hetrick. Robin Mills and Linda Yarborough provided excellent and helpful reviews of an earlier draft of this paper.

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