

ALEUT BURIAL MOUNDS: *ULAAKAN* AND *UMQAN*

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ABSTRACT

Unangan of the Aleutian Islands archipelago used a variety of methods to bury their dead, including placement of the deceased, often mummified and accompanied by spectacular grave furniture, in bed-rock grottos and fissures. However, two other methods were far more common and widespread. *Ulaakan* were specially built above-ground boxes or conical huts in which prepared bodies were interred. The more enigmatic *umqan* were substantial earthen mounds, often triangular in plan and containing one or more pit burials. *Ulaakan* and *umqan* typically were constructed within the limits or in close proximity to settlement sites. This paper gives an overview of historical accounts and previous archaeological investigations of these two burial types and describes survey data generated since the 1980s. Feature shape and size variability were analyzed using simple statistics, but no clear patterns were identified.

INTRODUCTION

For the last few millennia, Unangan practiced a variety of burial customs presumably related to social status disparities among deceased individuals or their lineages, the circumstances surrounding deaths, wishes of the deceased or their living relatives, labor requirements for grave construction, little-known cultural and religious beliefs, and other unknown factors (Aigner and Veltre 1976:124–126; Corbett et al. 2001:257–258; Frohlich and Laughlin 2002:90–97; Hrdlička 1945:178–195; Lantis 1970:215). Bodies were eviscerated, filled with grass, and often intentionally mummified. They were typically bound in flexed positions (Jochelson 1925:42; Laughlin 1980:89, 96–103, 1983; Veniaminov 1984:196). Several disposition methods were identified ethnographically or archaeologically, including: placement of the deceased in caves and rock fissures, typically with elaborate grave furniture,¹ at localities remote from habitation sites (Bank et al. 1950:160–173; Dall 1878; Hrdlička 1945:412–420; Jochelson 1925:45–46; Pinart 1873a, 1873b, 1875a, 1875b); in abandoned

pits or dwellings within a village (Frohlich and Laughlin 2002:96; Hrdlička 1941, 1945:411, 485; Jochelson 1925:49; Knecht and Davis 2007:69; Laughlin 1980:99); in pits or walled-up side rooms within contemporaneously occupied houses (Dall 1878:7; Jochelson 1925:49–52; McCartney and Veltre 2002:258); rare cremation, possibly of sacrificed slaves (Bank et al. 1950:171; Hrdlička 1945:267, 398–400); and burial in specially built structures adjacent to a settlement (Aigner and Veltre 1976; Coxe 1966:154–155, 173; Frohlich and Laughlin 2002:97–108; Jochelson 1925:49; Laughlin 1980:99; Veniaminov 1984:196; Weyer 1929).

This paper focuses on surface expressions and distribution of burial structures known as *ulaakan*² and large earthen monuments called *umqan*, as known from ethnography and archaeological survey. Much of the inventory data presented here derives from Aleutian fieldwork by Bureau of Indian Affairs (BIA) archaeologists in 1991. Beginning in 1983 and continuing through the early 2000s, the BIA Alaska Native Claims Settlement

Act (ANCSA) Office conducted field surveys in the Aleutian Islands to identify Native historical places and cemetery sites claimed by the Aleut Corporation pursuant to Section 14(h)(1) of ANCSA (1971).³ For the Aleut region, Section 14(h)(1) claims targeted sites identified by Unangan elders or by previous archaeological investigators (i.e., Ted Bank, William Dall, Bruno Frohlich, Aleš Hrdlička, Waldemar Jochelson, Allen McCartney, Christy Turner, Doug Veltre). Qualifying sites were conveyed to the Aleut Corporation as fee-simple properties. Since Unangan settlement sites typically presented extensive surface remains that satisfied ANCSA eligibility criteria, BIA survey protocol emphasized mapping of features and exposed cultural deposits sufficient to delineate bounding site polygons. As a consequence of this approach, BIA archaeologists obtained only limited subsurface and chronometric data for most sites, whereas their work generated robust inventories of surface features and horizontal site structure. During the 1991 field season, BIA committed substantial resources and personnel to its most ambitious and wide-ranging Aleutian Section 14(h)(1) campaign. Survey began in the Delarof Islands, a group of small islands at the western end of the larger Andreanof Island group, and progressed eastward through the central and eastern Aleutian archipelago to the lower Alaska Peninsula (Fig. 1). The surveys relocated and recorded 158 ANCSA sites. Many others were observed and map-plotted. On fifteen of the twenty-seven islands visited, attribute data were obtained at forty-five settlement sites for about 200 features identified as *umqan* or *ulaakan*-like burial mounds. Unlike previous non-ANCSA investigations, BIA policy and the nascent NAGPRA (1990) legislation precluded testing at known or suspected Native burial features.

After reviewing literature pertaining to Unangan surface burials, we discuss the simple statistical and spatial analyses we conducted on the 1991 BIA data, augmented to the extent possible by findings from other surveys. Our goal is to describe some aspects of the variability in burial mound size and shape. We conclude with discussion of the findings as they relate to Unangan life in protohistoric and early historic times.

ALEUT BURIAL STRUCTURES

ULAAKAN

European visitors to the Aleutian Islands noted Unangan burial practices almost from their first landfalls. Most ob-

servers reported differential treatment of the dead based on rank or status. Ivan Solov'ev and A. Ocheredin, visiting the Fox Islands shortly after the 1763–1764 Aleut uprising, described inhumations “covered over with earth” for low-status individuals, in contrast to the wealthy, whose flexed bodies were placed with their belongings in wooden coffins suspended above ground on a driftwood frame and exposed to the elements (Coxe 1966:154–155, 173). Martin Sauer (1972:161), Gavriil Sarychev (1806:77), and Carl Merck (1980:177), members of the 1790–1792 Billings expedition, gave congruent accounts of higher status burials in hewn wood boxes set on pedestals and covered with sod (Fig. 2b). For example, Merck (1980:177) wrote:

The coffins (*kumunak*) [sing. *qumnaġ*] are placed around their huts. It is a long, rectangular box made of thick boards. They are two ells long [ca. 2.3 m], and one-and-a-half ell [ca. 1.7 m] wide, as well as high. And it rests on a pedestal which is 1 ½ foot high and carved out on top. The narrower sides of the box are joined into the longer sides. The covering on top consists first of all of pieces of wood, cut to equal length and placed side by side across. Then there are some boards placed lengthwise, together with a straw hill of turf.

Whale bone or hewn wood coffins topped with sod evidently were used both at open-air burial grounds and within burial caves (Bergsland 1994:336). Waldemar Jochelson's (1925:131) early twentieth-century Unangan informants indicated that *qumnaġ* was a generic term for any burial place.

In the 1820s and 1830s, the priest Ivan Veniaminov obtained detailed descriptions of burial practices in the Unalaska district, including body treatment, feasting, mourning, and associated customs. Like other observers, he distinguished between well-made coffins for the wealthy and simple burial huts or *ulaakan* (derived from *ulaġ*, “house or dwelling” [Bergsland 1994:433]) for those of lower status (Fig. 2a). According to Veniaminov (1984:196):

[following embalming] the body was dressed in the deceased's best and favorite clothes and, swaddled like a baby, put into a *zybka* ([Russ.] a frame over which a skin was stretched). It was then suspended in the very place where the deceased had died and kept there for another 15 days.... On the 16th day after the embalming, the body was carried to the cemetery; if it were that of a *toen* ([Russ.] *toyón*, *tuyuunaġ*) with an escort of all the residents of the village. The body was suspended in the same cradle within a tomb ([Russ.] *grob* or

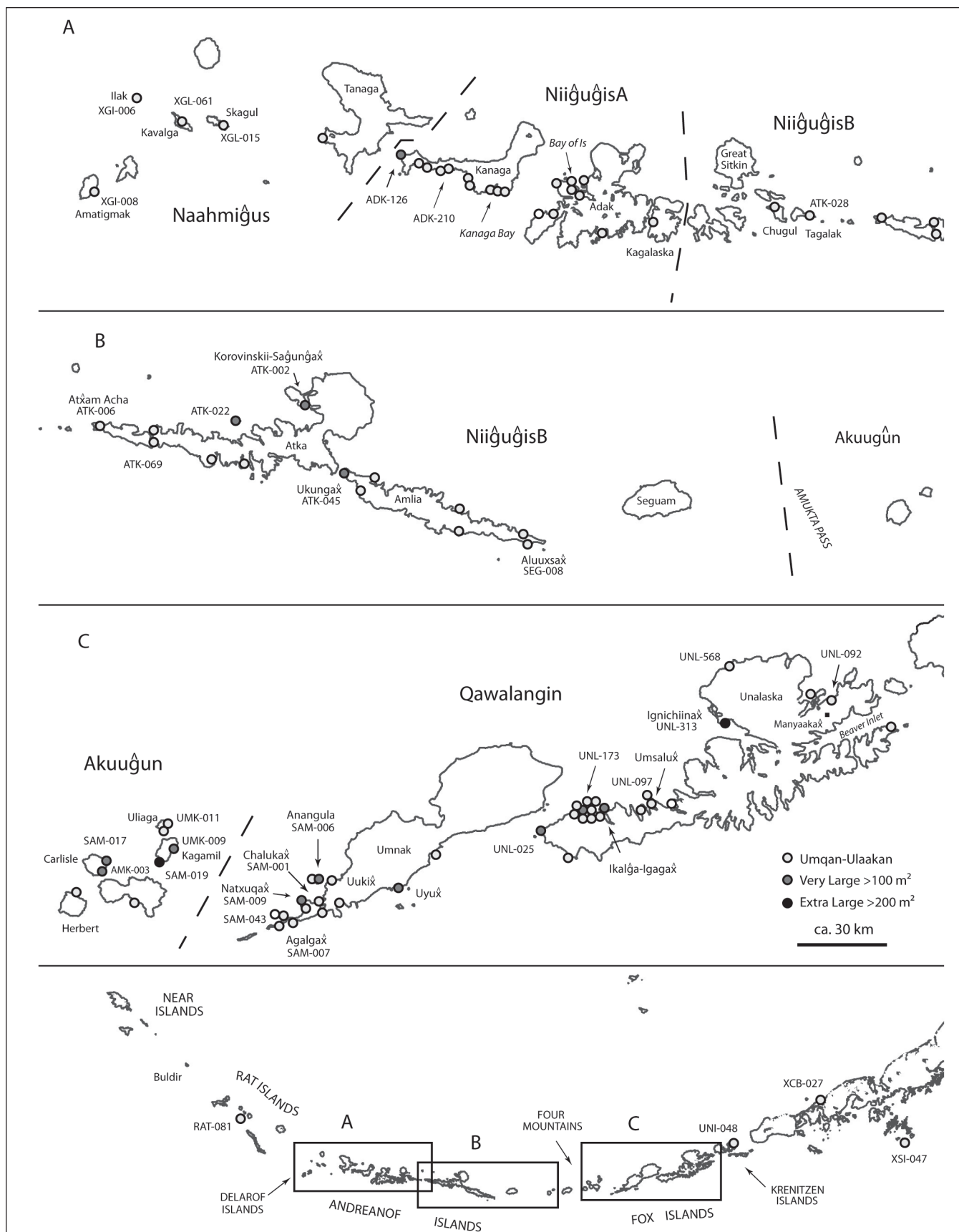


Figure 1: Umqan and ulaakan distribution across the Aleutian Islands.

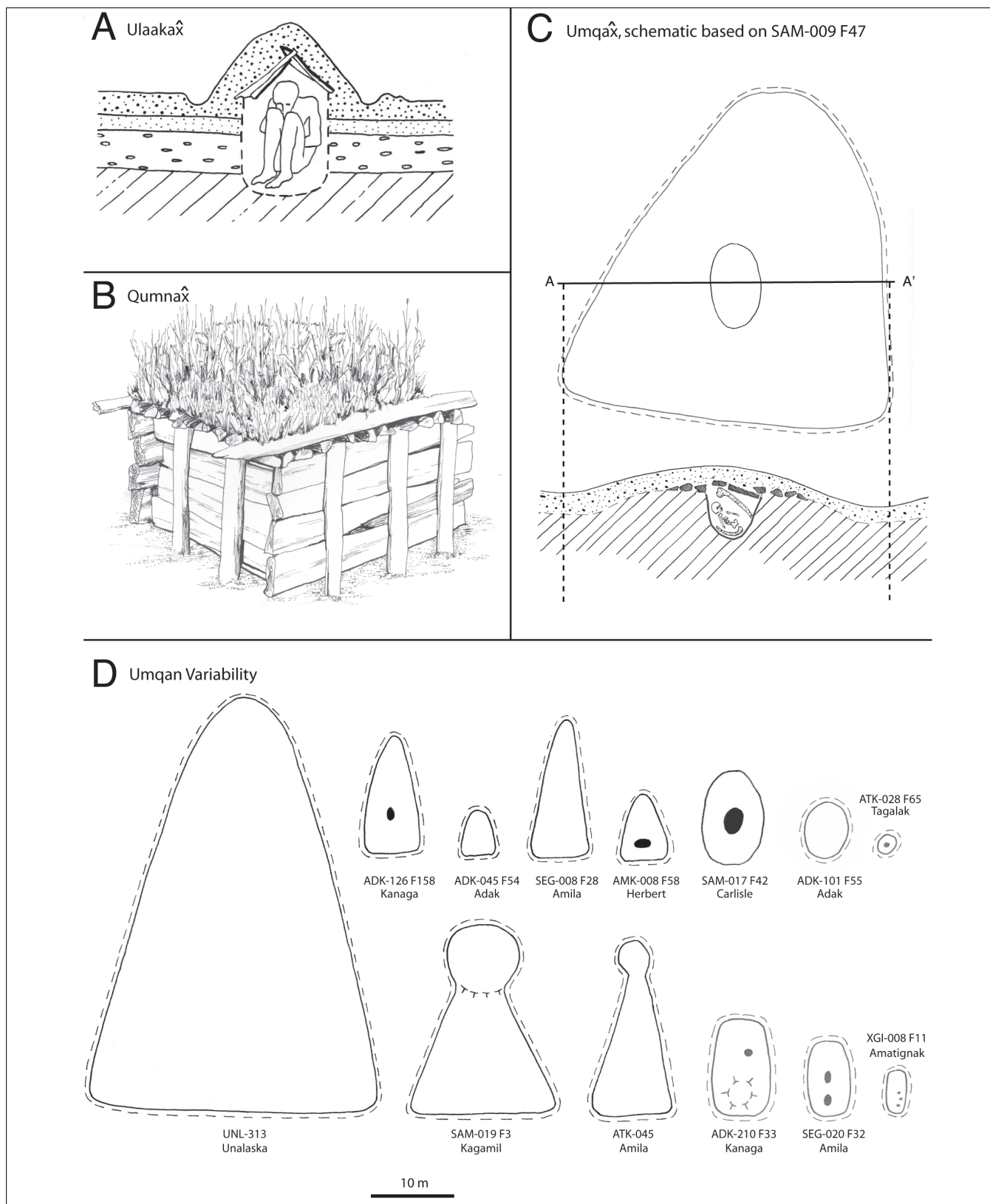


Figure 2: Umqan-ulaakan forms. A: conjectural ulaakan[̂] cross-section based on ethnohistorical descriptions. B: representative qumna[̂] modeled after the “sarcophagus” excavated by Weyer at Ship Rock. C: the relationship between an umqa[̂] surface feature and underlying stratigraphy, as reported by Aigner at Sandy Beach. D: a sampling of umqan-ulaakan forms recorded during the BIA ANCSA surveys, identified by site and island. Figure by Mark Luttrell.

pamiatnik, qumnaᖅ),⁴ which, among the rich and the notables, was no more than a tall square box covered over with planks, sloping on two sides, and ornamented outside with different colors. For the poor it was a simple, small *baraborka* ([Russ.] hut), overlaid with planks and covered with grass, with earth piled on top. Such *groby* are called *ulyakig [ulaakaᖅ]*. . . . These tombs or monuments were always built on some elevated place, according to the testament of the dead person.

Veniaminov (1984:198, 200), Sarychev (1806:77), and others noted also the former custom of killing a rich man's slaves or even his wife and children and burying them with the deceased as grave escorts. The priest Iakov Netsvetov obtained similar information about burials from Atkan informants in the 1830s, as related by Veniaminov (1984:369–370):

Funerals varied according to the wealth and status of the deceased. Notables, the wealthy and outstanding hunters were buried in particular ceremony. Such deceased were dressed in their best garments. The body was placed, in a sitting position, in a small house-like structure ([Russ.] *yurtochka*) dug in the earth and decorated in the best possible manner with grass mats and so forth. The legs were pulled up toward the body [so that the body was flexed]. The structure was then covered from above and totally covered with earth. If the deceased had been a hunter, all his hunting equipment was buried with him, unless he had willed it to someone. . . . The poor and ordinary common people were buried simply in a hole in the ground, but also in a sitting position.

Aleutian archaeologists have excavated and reported on several *ulaakan* burials, beginning with William Dall's investigations in the early 1870s. On Adak Island, probably at ADK-088 in Bay of Islands, Dall (1877:63) dug into a small mound near a midden site to expose a whale bone "sarcophagus" overgrown by ca. 60 cm of peat and containing a badly decayed male skeleton. In 1909, Jochelson (1925:30–34, 50–52) opened seventeen apparent *ulaakan* at three village sites on southwest Umnak Island: Natxuqaᖅ (SAM-009), Aglagaᖅ (SAM-007), and Uukiᖅ (UMK-005). Many more were observed at the sites and at an abandoned village (UNL-058) on Hog Island in Unalaska Bay. Seven of the Umnak features contained identifiable skeletal remains, while in the others the bodies had decayed beyond recognition or the features were not burials. One pit at the so-called Aglagaᖅ "lower village"

contained trade beads and brass fragments, and another had a whale bone post notched by an iron axe (Jochelson 1925:33). These findings indicated early post-contact age for the features, ca. 1750s–1790s. Decayed wood elements in other graves also suggested relatively recent ages. Of the confirmed burials, three contained more than one individual, and all the bodies appeared to have been placed in flexed positions. Although not recognized at the time, *umqan* also are present at both Aglagaᖅ and Natxuqaᖅ, better known as Hook Lake and Sandy Beach, respectively (Aigner and Veltre 1976; Frohlich and Laughlin 2002:97).

Archaeologically, Jochelson (1925:49) characterized *ulaakan* burial features as small pits or depressions as opposed to mounds, as in the following description:

Special burial pits were called *ula'kax'* from *u'lax'* [*ulaᖅ*], house or dwelling, and *ka*, element of the potential mood, i.e., a possible house. Such burial huts, when they collapsed, left indications of their former presence in the form of almost circular pits 1 to 2 meters in diameter [and ca. 1 m deep]. There were burial pits for one, two, or three individuals, according to the number that had died at the same time. A burial pit for one person was designated as a "solitary burial hut" by the Aleut. In these pits the skeletons were found either in a sitting posture or on their sides.

In 1909–1910, Jochelson recorded several traditional tales, all evidently set in precontact times, which referenced *ulaakan* (Bergsland and Dirks 1990:66–69, 138–143, 224–227, 254–267, 542–561). The narrators included Unalaska elders Isidor Solovyov (1849–1912) and Kliment Burenin (b. 1843) and Atkan Mikhail Mershenin (1870–1943). One of Solovyov's stories featured an *ulaakaᖅ* built some distance from the settlement where the deceased man had lived, requiring visitors to travel there by boat. Another Solovyov tale involved an exasperated mother who buried her child alive behind the village in a pit (*asux*) covered over with stones. Burenin's fragmentary tale took place in Koniag (Alutiiq) territory on the Alaska Peninsula or Kodiak Island, where two Unangan prisoners of war were burned alive and their charred remains placed in an *ulaakaᖅ*. In Mershenin's story, an old woman feigned death and according to her wishes was placed in a burial hut with a fully equipped baidarka and other hunting implements. Shortly, she emerged and assumed the identity of a man in order to woo her own granddaughter.

In 1928, Edward Weyer excavated an intact box burial among many graves on the summit of Ship Rock

(UNL-097), just offshore from historic Umsaluḡ village (UNL-037) on western Unalaska Island (Fig. 1c). The grave presented as a vegetated mound approximately 3.6 x 3.0 m and about 0.7 m high, judging by the published diagram, and was situated in proximity to habitation features. The setting suggested the islet served as a burial ground and refuge for the nearby village. Weyer's careful excavation confirmed accounts of "tombs" for higher-status individuals: a well-made 2.1 x 1.2 x 0.4 m "sarcophagus" of hewn planks mortised and fastened with bone nails, which contained one carefully prepared adult male with numerous funerary objects and four other individuals of apparent lesser standing (Weyer 1929). The latter included an adult female, an adult male showing signs of violent death, a child, and an infant. Because it appeared the tomb had been sealed with all its contents and never reopened, Weyer interpreted the latter individuals as possible grave escorts for the rich man, as reported by Veniaminov and others. Three of the five flexed bodies lay within oval drum-like hoops covered with skins, Veniaminov's *zybka*. Absence of glass beads or metal, together with the remarkable state of preservation given the open-air context, indicated late protohistoric age, perhaps the early eighteenth century. Human remains from burial grottos elsewhere on the islet have been radiocarbon dated to the fourteenth through sixteenth centuries AD (Coltrain et al. 2006:540, 544). Table 1 lists funerary objects recovered from burials at Ship Rock (UNL-097) and other sites.

Aleš Hrdlička and his team opened an *ulaakaḡ* in 1938 on Kanaga Island, probably at ADK-059 near Kanaga Bay, but few details have been reported (Laughlin 1980:99). In 1991, BIA archaeologists revisited ADK-059 and nearby ADK-058, where they identified several *ulaakan* consisting of small oval mounds topped with pits, located on the peripheries of habitation areas. Unlike Jochelson, Bill Laughlin's (1980:99) description indicated a mounded surface expression for the burial features:

if no cave or rock shelter was available, a little wood and sod hut was constructed for the purpose [of burial]. Timbers, roughly the size of fence posts, were stacked against each other, forming a little conical tent. Over them, sod was placed. The grass on the sod continued to grow and eventually the little house blended into the color of the countryside, but could be distinguished by the shape. We found such a burial hut (*ulakan*) on Kanaga Island in 1938. The contracted skeleton of a robust male

lay on the floor, although it may originally have been suspended from the top.

During the 1991 BIA survey, Bland observed a partially eroded *ulaakaḡ* consistent with Laughlin's and other descriptions at a village site (ATK-028) on Tagalak Island, near the west end of Atka. Situated away from the main portion of the site, the feature presented as a conical mound about 2.5 m in diameter and 1.1 m high, with a small central pit and indications of a shallow bounding trench. Wind erosion at the feature margin had exposed remains of a small log structure. Yet another report of well-preserved *ulaakan* at a village site on southern Tanaga Island came from Gaston Shumate (1946:17), a soldier stationed at an emergency airfield on the island during World War II:

The bones we found on Tanaga were usually covered by mounds or hummocks in the burial area. The mounds, which made walking difficult, were hollow, held up by frameworks of driftwood. To enter, one merely had to burrow into the side of a hummock. The space inside was just big enough for a man.

In 1948, Ted Bank (1956:181–182) obtained more information about *ulaakan* from elder William Dirks (1882–1966) of Atka village:

Ulakuq was used by the old-time peoples for burying dead persons, if a cave was not nearby. An *ulakuq* looks like a small hill when you see it from the outside. It was made like a round hole in the ground and over the hole was placed bent driftwood or animal bones, like those of a large whale, so that it was hollow inside. The dead person was placed in the *ulakuq* with his clothes and other things he had used, and then mud and grasses were placed over the top.... *Ulakuq* found on many islands. Lots on Atka, mostly near the western end. On Ilak [XGI-006, Delarof Islands], same thing, all over top near edge of cliffs. Not like little hills—top cave in, so now look more like little round holes. Inside each one, an old-time Aleut, all doubled-up.

Both Laughlin and Bank understood (or presumed?) that burial in a cave was the preferred alternative, whereas Veniaminov (1984:196) reported just the opposite: "The poorest and the slaves were buried in caves."⁵ Other probable *ulaakan* excavations have occurred in the Fox Island group, particularly around Chalukaḡ (SAM-001), where an oval stone-walled house at the base of the midden mound dated cal BC 2195–1415⁶ (Laughlin's 1962 Trench A), roughly contemporary with the Margaret

Bay site (UNL-048) at Unalaska Bay. Chalukă occupations continued almost uninterrupted into modern times. Hrdlička's teams removed many burials from large block excavations in the late 1930s, and his student, Bill Laughlin, continued mining the site between the late 1940s and early 1970s. Unfortunately, reporting on burial contexts generally was subordinate to morphological analysis of the human remains (e.g., Laughlin 1958; Laughlin et al. 1979). New trenches excavated across the mound for water line projects in 1974 and 1980 uncovered numerous flexed pit burials that could not be associated with

dwellings, indicating they were likely *ulaakan* (Frohlich and Laughlin 2002:96; Wiersum 1980). Frohlich and Laughlin (2002:96) also made a cryptic reference to burials in stone boxes, "so far identified and excavated only on hills near the Chaluka mound."

Although there seems to have been a distinction between above-ground coffins (*qumnan*) and semisubterranean burial huts (*ulaakan*), the difference is seldom apparent at ground level to the field archaeologist. For the moment, we will consider both varieties as a single type using the term *ulaakă*. As can be gathered from the

Table 1. Contents of burial features.

Site Feature	Objects		Source
SAM-007 <i>ulaakă</i> (?)	trade beads brass fragments		Jochelson 1925:33
UNL-097 <i>qumnă</i> 2.0 x 1.5 x 0.5 m	5 sets of remains 3 wood hoops (<i>zybka</i>) double-bladed paddle 28 weapon shafts 17 bone points harpoon foreshaft float stopper wood helmet wood breastplate wood shield 5 wood bowls wood spoon 2 stone lamps 2 obsidian flakes stone pestle bone wedge	gut parka birdskin parka sea otter skins sealskin blanket 2 gut hoods sealskin thongs 3 skin bags sinew grass garments coarse grass matting fine grass matting skin sewing scraps unidentified ornament red ocher 6 amber beads fire drill socket	Weyer 1929
SAM-009 Umqan E 6.7 x 6.5 x 0.8 m	1 set of remains (1 pit) animal skins 59 jet beads copper fragment on wood disk metal wire		Aigner et al. 1976; Aigner and Veltre 1976:121
SAM-009 Umqan 47 5.8 x 5.0 x 0.9 m	1 set of remains (1 pit) jet labret or earspool		Aigner and Veltre 1976:121–123
SAM-006 Umqan 1 7.5 x 6.3 m	8 sets of remains (6 pits) 3 late-style labrets late-style basalt bifaces		Frohlich and Laughlin 2002:100–103
SAM-006 Umqan 2 6.0 x 5.0 m	3 sets of remains (3 pits) late-style stone lamp labret whetstone red ocher		Frohlich and Laughlin 2002:103–105
SAM-006 Umqan 3 5.5 x 3.5 m	2+ sets of remains (2 pits) 3 late-style basalt bifaces		Frohlich and Laughlin 2002:105–106

descriptions, *ulaakan* were common mortuary features at Unangan burial grounds in close proximity to habitation sites. Considering the large number of village sites on virtually every Aleutian island, the inferred large precontact Unangan population, and the more limited number of potential burial caves and rock overhangs, we suppose that *ulaakan* and interments within household compartments must have been the usual burial practices.

In summary, *ulaakan* consisted of flexed bodies placed in pits or in coffins directly on the ground surface; they were protected from the elements by conical driftwood or bone structures resembling small houses, which in turn were covered with grass and sod. The archaeologist could expect to find a pit, when the superstructure had decayed and sod cover collapsed, or the feature might present as a small mound topped by a shallow pit. *Ulaakan* apparently dating from the late protohistoric and early contact period have been reported or confirmed from at least the Delarof Islands east to the Fox Island group.

UMQAN

Related to *ulaakan* but in many ways structurally distinct from them are *umqan*. Whereas *ulaaka* explicitly designated a grave hut, the term *umqa* as applied to burial features appears to be a relatively recent archaeological innovation. *Umqa* simply means “pit, storage pit,” “like a freezer” according to Umnak elder Afenogin Kirillovich Ermeloff (1890–1956). Both terms are attested from the early nineteenth century (Bergsland 1994:91, 433, 443). However, the fact that Veniaminov did not elicit *umqa* as a burial term or describe such a conspicuous elaboration on the common *ulaaka* seems telling. The application of *umqa* to burial features evidently can be attributed to Bill Laughlin and Gordon Marsh, generally regarded as the first to recognize these distinctive mounds in 1952 at the Anangula Village site (SAM-006), just offshore from southwest Umnak Island. The type or model *umqa* is a large triangular earthen mound:

Looking down from the ridge behind the village we discerned on the flat northwest or west of the site a half dozen structures each outlined by two trenches in the form of a V, with the apex of the V in every case on the uphill end. Our old Aleut informant [Ermeloff], upon questioning, described these as storage pits for roots (Aleut “*umqan*”). The purpose of the V-shaped trenches was to drain the

floors of the root cellars that lay inside each V. There was actually a small pit in the middle of each V, and one large V near the edge of the midden enclosed three such pits. Test excavations of a number of “*umqan*” revealed that they contained only floors constructed of whole and fractured stones (Laughlin and Marsh 1954:28–29).

Instead of mortuary features, testing in 1952 and informant testimony indicated *umqan* were related to food storage. While Unangan regularly harvested a variety of roots (Bank et al. 1950:74–77), the extent to which they were gathered and stored in quantity prior to the advent of gardening in the Russian period is unknown. We wonder how storage would have been enhanced by constructing substantial earthworks around food pits. Moreover, *umqa* (“pit”) seems an awkward term for what plainly are mounds. Other Unangan words for “pit” include *asux*, *chaxa*, and *ixti*, whereas the terms *chagaada* and *kinuga* or *kinugaada* specifically apply to food caches (Bergsland 1994:103, 126, 181, 240). *Qalixsa* designates a cache hole more generally, and *agaya* applies to a storage facility or side room inside a dwelling (Bergsland 1994:22, 304). There are also two terms for design elements representing “triangular hills,” *aygiidan* (from *aygi*, “hillock”) and *chigidan*, but neither word has an obvious etymological relation to *umqa* (Bergsland 1994:119, 137; Jochelson 1968:66).⁷

However, two traditional tales recorded by Jochelson in 1909–1910 featured hummocks (*iinuutkaadan*) that concealed secret dwellings, suggesting a relationship between small mounds and *ulaakan* (Bergsland and Dirks 1990:358–363, 478–483). The more obvious connection is to ordinary dwellings that were built in a similar fashion. Both stories were set in precontact times at unnamed settlements. In the tale by Umnak elder Timofey Dorofeyev (b. 1865), a suspicious wife lifted a hummock behind the village to discover the house of her husband’s clandestine lover, whom she immediately killed. Similarly, a story by Umnak elder Ivan Suvorov (ca. 1867–1934) told of a boy who lifted a hillock near his settlement and found within it the house of his mother, cloistered in self-imposed exile from her villainous husband. That very night the boy killed his father and brought his mother back to the village.

Laughlin and Marsh’s observations at Anangula may have been preceded by Captain James Cook, however. While anchored at English Bay, northwest Unalaska Island, in August 1778, Cook (Beaglehole 1967:161–162)

penned a description of what he believed was the local burial practice:

The Oonalaskadales bury the dead on summits of hills and raise a little hillock over the grave, in a walk into the Country, one of the Natives who attended me, pointed out several of these graves. There was one by the side of the road leading from the harbor to the Village over which was raised a pile of stones, it was observed that every one who passed added one to it. I saw in the Country several stone hillocks, that seemed to have been raised by art. Many of them were of great antiquity; the stones being cemented together and become as it were one stone, but it was easy to see that the hillock was composed of a great number and variety of sorts, nor was it very difficult to separate them.

Cook's account has been interpreted as possibly relating to *umqan*, but he appeared to conflate burial mounds and rock cairns (Aigner and Veltre 1976:126; Frohlich and Laughlin 2002:108). Sauer (1972:161–162) of the Billings Expedition provided clarification with respect to stone features on Unalaska Island, which he attributed to an altogether different purpose: "I observed, in crossing the mountains, piles of stones. These are not burying-places, as has been supposed, but serve as beacons to guide them in foggy and snowy weather from one dwelling to the other; and every person passing adds one to each heap."

Merck, physician and naturalist for the Billings Expedition, obtained the Unangan term *anetschhun* (probably *anachxun* or "cairns of rocks or turf") for such trail markers, but they were better known as *hadgun* (Bergsland 1994:13, 736). John Yatchmeneff (1905–1944) of Unalaska reported a prominent cairn called Manyakaax̄ at the highest point along a former trail from Unalaska Bay to Beaver Inlet; passers-by deposited rocks there to ensure good luck (Bergsland 1994:274). The place-name evidently derived from the Russian *man'yák*, "specter, phantom." Similarly, Veniaminov (1984:133) described the same or a closely related variety of rock mound on one of the Shumagin Islands, situated off the south coast of the lower Alaska Peninsula:

on each of the four land necks of Chernoburoi Island is a moderately large mound [*kolmik*] or pyramid, about 4 *arshins* [ca. 3 m] high, which the Aleuts call *hadgun*. These mounds, composed of small round pebbles, were formed because in former times some of the old men, wanting to know

how long they would live, brought the stones and threw them on top of the pile. If the stones remained on top, then this meant they would soon die. Probably they noted also at what level the stone stopped [rolling] and the speed with which it fell, etc. But how were the original mounds formed? That is not known.

Lucy Johnson's team located one of the Chernabura mounds (XSI-047) in the mid-1980s. In 1989, BIA archaeologists surveying ANCSA claims on northeast Akun Island observed another cairn in the fog-shrouded pass between Saagūx̄ village (UNI-048) and Helianthus Cove. A similar votive tradition prevailed among the Cupiit on Nunivak Island, in the Bering Sea north of the Aleutian chain. At Nuwatat ("rock piles created by people," XCM-085), Cupiit elders reported that a large cairn at the site was built up over an extended period of time by people each adding a stone as they passed to ensure good luck and longevity (Pratt 1995:313–317). Such monuments and customs had wide currency on both sides of Bering Sea,⁸ but while they appeared to share some attributes with *umqan* (i.e., stones), they were not burial features.

In 1937, Laughlin's mentor, Aleš Hrdlička, evidently tested two *umqan* features, or possibly *ulaakan*, on a sloping bench a few hundred meters west of Chalukaax̄ (SAM-001). According to Hrdlička (1945:323):

go first to see the sheep herder nearby. Goes with us to point out several small low but clearly artificial hillocks scattered over about an acre of their ground, near an old small site [SAM-025?] facing the bay close by. On the side of each "mound" is seen a hollow from which evidently the earth for the little hillock was taken. The piles range from 2 to 4 feet in height, are roughly round and each shows a flat oblong about 18" x 30" depression on the top. In the mounds are stones, brought there and laid with some order. Dig into two—over 2 feet down—find nothing, perhaps not deep enough, but for the present can not do more.

Reference to possible bounding trenches, pavement stones incorporated into mound constructions, and shallow pits on the mound summits indicated the features were *umqan*, as later excavations would show. Moreover, examination of 1967 aerial photography for Nikolski village clearly shows several distinct triangular *umqan* and other suspected burial mounds directly west of Chalukaax̄ and seemingly oriented toward the village site (Fig. 3). The features become less conspicuous in later imagery, as a

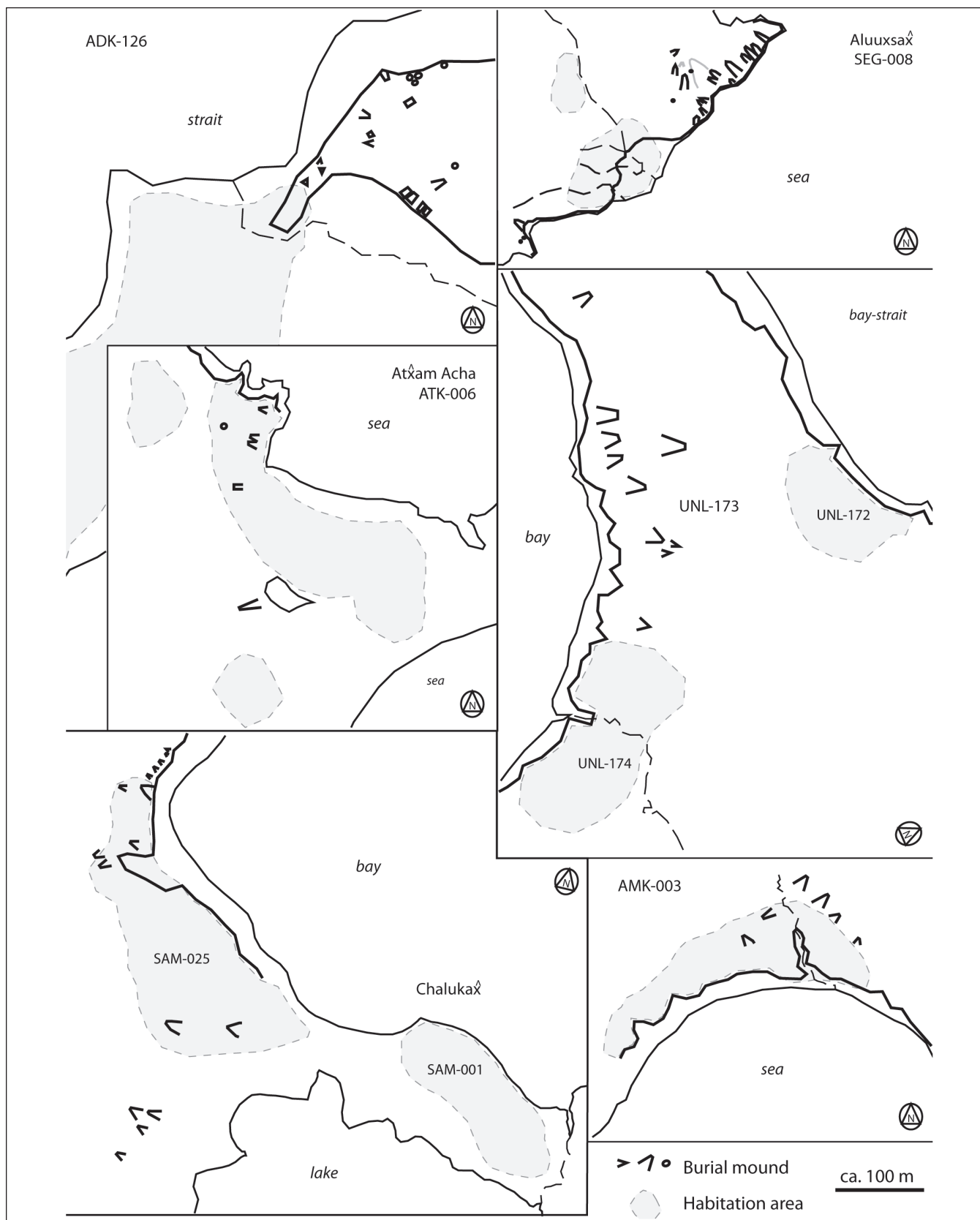


Figure 3: A sample of site plans based on BIA ANCSA surveys. Filled polygons indicate approximate limits of habitation areas and midden mounds; small black chevrons and rectangles represent umqan or ulaakan; bold irregular black lines indicate prominent scarps or bluff edges.

consequence of ongoing local development and use, especially vehicular traffic and livestock trampling.

After Laughlin and Marsh's discoveries at Anangula Village, research biases favoring excavations into deeply stratified midden sites, emphasis on early and mid-Holocene components and explorations of mummy caves, as opposed to studies of horizontal structure and organization of near-surface site remains, left *umqan* largely ignored until 1972 (but see Bank 1953; Martinson 1973). During a wide-ranging Aleutian ship-based survey that year, Allen McCartney (1972:19) observed "4 V-shaped drainage ditches situated in a low ravine above beach" at a sprawling village site (UMK-011) on Uliaga Island, in the Islands of Four Mountains group. Presumably, he recognized them as equivalent to the mounds at Anangula. However, in his synthesis of Aleutian prehistory, McCartney (1984:131) described *umqan* as primarily storage structures: "these V-shaped features are likely the remnants of cache pits that were secondarily used as burial pits." If so, we might reasonably infer that such mounds were for relatively low-status individuals. BIA archaeologists investigated UMK-011 in 1991 and located five triangular *umqan* averaging 13.9 m long and 9.3 m wide at the base. They also mapped two smaller oval mounds interpreted as *ulaakan*.

Significant new information emerged in 1972, when Jean Aigner and Doug Veltre (1976) conducted a broad survey of southwest Umnak Island, locating, mapping and testing numerous sites. In the course of that work, at least sixty-two triangular-to-subtriangular *umqan* were identified at or adjacent to six villages (26% of sites investigated). Measured features at five sites ($n = 43$) averaged 8.3 m long, 6.3 m wide at the base, and about 1 m high. The largest example, Umqan 5 at Idaliuk East (SAM-042), was 15.8 x 8.3 x 1.7 m. Tests into eight of the features at five sites established without any doubt that all of them were burial mounds. The researchers found that Umnak *umqan* typically displayed the following attributes (Fig. 2c):

- a low mound of conspicuously large size, bounded on at least two sides by shallow trenches and topped by one or more small, off-center pits;
- triangular or teardrop shape, rarely rectangular, with apex located upslope;
- placement on a relatively low angle, often at or near an abrupt slope break (i.e., bluff edge); and
- association with a habitation site, generally near the periphery and facing the dwelling ruins, less commonly at some remove and facing the sea.

Tests at Hook Lake near Aglaga \hat{x} (SAM-007), at Idaliuk West (SAM-043), and at Sandy Beach (Natxuqa \hat{x} , SAM-009), including excavation of two features at Sandy Beach, revealed a common construction method for the *umqa \hat{x}* (Aigner and Veltre 1976; Aigner et al. 1976). A burial pit was excavated to a depth of ca. 0.5 m to receive the treated body, then lined and capped with a driftwood or whalebone structure⁹ in the manner of an *ulaaka \hat{x}* . Next, trenches ca. 0.3–1.0 m were dug around the structure, and the sod and soil were heaped around and over the burial to form a low mound ca. 0.2 m above the ground surface. The mound then was paved with a horizontal layer of stones, and the whole was capped by another lift of fill and sod (cf. Hrdlička 1945:323). The stone pavement suggests some relationship to the rock cairns (*anach \hat{x} un*) described above. Conceivably, the pavement formed the finished surface, which gradually became covered by sediment accumulation and vegetation growth. Curiously, stones were not observed by BIA archaeologists at any of eight partially eroded *umqan* recorded during the 1991 survey.¹⁰ Over time, one or more depressions formed on the *umqa \hat{x}* summit, corresponding to the number of subsurface burial pits. Typically, though, one individual was buried near the feature center (Aigner and Veltre 1976:121).

With respect to antiquity, the researchers found that in all Umnak cases the burial pits had been dug through Ash IV, a local tephra marker bed estimated to date from 3000 C¹⁴ years BP, but possibly having a maximum age of cal BC 970–5 AD (Aigner et al. 1976:128; Miller and Smith 1987:436). Of the two excavated features at Sandy Beach, Umqan E (6.7 x 6.5 m) contained the remains of a child buried with a copper disk and metal wire that suggest early contact-period age, ca. 1750s–1790. Adjacent Umqan 47 (5.8 x 5 m) contained a middle-aged female; absence of metal or trade goods there indicate likely protohistoric age, ca. 1450–1740s. Robert Black, geologist for the survey, surmised that the combination of weathering, acidic volcanic soils, vegetation growth, and continued eolian deposition likely would obscure *umqan* surface expressions within ca. 600 years, suggesting a maximum limiting age (Aigner and Veltre 1976:121). However, the researchers observed on the surface at nearby Sandy Beach Bay (SAM-040) "faintly discernible depressions" representing dwellings that dated from ca. cal BC 3350–2310 and earlier (Aigner 1983:24), indicating that *umqan* potentially could persist on the landscape for well over half a millennium.

During the 1973–1975 field seasons, Bruno Frohlich, Sara Laughlin, and others substantially excavated three more *umqan* at the Anangula Village type site (Frohlich and Laughlin 2002:100–106). Altogether, they mapped fifteen more or less triangular *umqan* on the hillside behind the village, portions of which had been occupied as early as cal BC 5000–4590. The burial mounds were considerably younger, since like Sandy Beach they were constructed after deposition of the Ash IV marker bed. Features averaged 9.4 x 7.1 m. Umqan 6, the largest mound, topped with four summit depressions, measured 25.7 x 14.5 m; Laughlin and Marsh noted this monument in 1952. Like the Sandy Beach *umqan*, Anangula features also appeared to consist of *ulaakan*-like burial pits capped by whale bones or rock slabs and covered by stone pavements and earth. Umqan 1 (7.5 x 6.3 m) contained six such pits, only one having surface expression. Overlapping pits and at least one pit interpreted as predating trenching and mound construction indicated a substantial period of use for the cemetery area and multiple burials within some *umqaġ*. Burial A contained three individuals, including two infants. Burial C, the best-preserved pit, contained a middle-aged female of the Neo-Aleut physical type and was capped by driftwood logs and whalebone elements. Umqan 2 and 3 (6 x 5 m and 5.5 x 3.5 m, respectively) were similarly constructed; each enclosed two or more burial pits. All the burials in Umqan 2 were infants. Funerary objects associated with the features are listed in Table 1.

Frohlich and Laughlin (2002:115) reported a maximum age for the Anangula features relative to subjacent Ash IV but felt that most were “probably not older than a few hundred years.” Burial C in Umqan 1 likely postdated the tenth through thirteenth centuries AD, based on the oldest radiocarbon ages for the Neo-Aleut physical type in the Fox Islands (Coltrain et al. 2006:540–541). The general state of preservation and absence of trade goods suggests the Anangula *umqan* may be approximately contemporaneous with *umqan* at Sandy Beach, estimated at 1450–1750s or earlier. However, assertions by the excavators that *umqan* burials (as opposed to simple *ulaakan*) persisted well into historic times seems only weakly supported by Cook’s vague 1778 account and metal from the infant burial at Sandy Beach (Aigner and Veltre 1976:124; Frohlich and Laughlin 2002:106). Glass trade beads or an identifiable metal object in association with a burial would be more definitive, as in the possible *ulaakaġ* at Aglagāġ. While rare, metal objects were available in aboriginal

times from several sources (e.g., Asian shipwrecks, Native trade networks).

In 1974, the known distribution of *umqan* was extended well beyond Umnak Island when Veltre identified five typic (i.e., the type shape), inverted V-shaped *umqan* on the bluff overlooking Korovinskii village (Saġuuġaġ, ATK-002) on Atka Island (Veltre 1979:181, 206–208). Excavated components at the habitation area below spanned later prehistoric times (cal BC 90–340 AD) through the 1870s. The discovery of associated *umqan* was not unexpected and confirmed suspicions that they constituted a regional Unangan burial practice (Aigner and Veltre 1976:126). At Korovinskii the features averaged 13.6 x 7.2 m, exceeding in size all the Umnak examples except the largest feature at Anangula Village. Limited testing at two features (F72, F74) revealed both were covered by “main ash,” a conspicuous local tephra marker bed with an estimated deposition range after cal AD 1290–1490 but prior to the 1740s (Veltre 1979:259–264, 2001:206). Thus, the Atka *umqan* appeared to be late prehistoric or protohistoric in age, similar to the Umnak sites, and likely were associated with pre-eruption components at the settlement.

In 1983, BIA teams working on ANCSA Section 14(h)(1) claims on western Adak Island, in the Andreanof group, revisited sites located previously by Frohlich and Kopjanski (1975) and identified subtriangular or U-shaped *umqan* at three localities in the Bay of Islands (ADK-088, ADK-104, ADK-120). Follow-up work in 1991 located more *umqan* or *ulaakan* at six sites in the Bay of Islands (ADK-045, ADK-101), Three Arm Bay (ADK-025), along the west coast of Yakak Peninsula (ADK-032, ADK-034), and in Camel Cove on the south island coast (ADK-109).

The Aleut Corporation’s Section 14(h)(1) claims on Unalaska Island, east of Umnak, were constrained by land status issues, but in the course of limited investigations in 1984, BIA archaeologists conducted rather extensive helicopter reconnaissance along portions of the west coast. The team observed conspicuous triangular *umqan* at eight “non-ANCSA” sites (UNL-153, UNL-171, UNL-172, UNL-177, UNL-178, UNL-181, UNL-568), including several features on the hillside above Makushin village (Ignichiinaġ, UNL-313). During separate surveys in 1986, Veltre et al. (1986:31–32, 55, 56) relocated the features at UNL-173 and UNL-177 and observed more *umqan* at UNL-034 (Ikaġa-Igagaġ). With respect to the ANCSA claims, oval *umqan* or *ulaakan* were identified at three Unalaska sites (UNL-025, UNL-027, UNL-108).

Independently, Shawn Dickson and Chris Wooley have visited or observed these and possibly other Unalaska *umqan* sites over the last decades.

Rick Knecht probed the Makushin *umqan* (UNL-313) in 2000. In a row of four typic triangular mounds on the hillside facing the village, one measured an astonishing 53 x 37 m, the largest recorded monument from anywhere in the Aleutians (Knecht 2001). Two soil probes into this behemoth suggested construction “no less than 2,000–3,000 years ago,” based on overlying tephra tentatively correlated with ash beds at Summer Bay (UNL-092), on northeast Unalaska (Knecht and Davis 2001:277). Knecht’s estimate substantially exceeded the maximum age of about 600 years proposed by Black (Aigner and Veltre 1976:121). At the Summer Bay site, four large *umqan* (ca. 20–25 m long) overlooked a degraded site interpreted as a warm-season camp occupied about cal BC 40–80 AD (mean of five dates) (Knecht and Davis 1999). Tephra capping the habitation site were visually correlated with ash covering the nearby *umqan*. According to Knecht and Davis (2001:277), “in testing the trenches, we were surprised to find a thick series of bedded tephra on top of the disturbed soils left by their prehistoric excavators, indicating that the trenches were probably contemporaneous with the occupation of the Summer Bay site around 2000 BP.”

Other BIA work occurred in 1985 on well-surveyed Amchitka Island, one of the Rat Island group west of the Delarofs. Significantly, no *umqan* or *ulaakan* were encountered at any of the eighty-five mapped sites, although many sites had been damaged by military construction and vandalism, ca. 1943–1970s. Nevertheless, it appeared that 100-km-wide Amchitka Pass marked the western limit of their distributions, until 2009 when Caroline Funk (2011) discovered an *ulaaka*-like outlier on Rat Island (RAT-081). The U-shaped or subtriangular (?) mound measured about 5.2 x 2.5 m and appeared to have a depression near the base. Farther west, no extradwelling burial features have been reported to date for Buldir Island or the Near Island group. To the east, typic *umqan* have not been reported beyond Unalaska Island, although they may be present in the Krenitzen Island group. In 1988, BIA archaeologists described an apparent *ulaaka* or small *umqa* at a village (XCB-027) near Moffet Lagoon on the north side of the lower Alaska Peninsula, which hints at the prospects for further discoveries during more careful surveys. The Moffet feature

was circular, about 6 m in diameter and 2 m high, but without a summit pit or ringing trench.

In 2001, USFWS captain Kevin Bell showed BIA archaeologists what government fox trappers had characterized as “four huge letters” dug into the hillside above historic Ukunga village (AKT-045), at the west end of Amlia Island in the Andreanof group. In fact, it was a row of monumental triangular *umqan* with associated smaller burial mounds overlooking extensive habitation remains dating from prehistoric times through the 1870s. The largest example (21.8 x 10.0 m) had a circular mound attached to the apex that gave the feature a keyhole shape in plan view.

1991 BIA SURVEYS

BIA ANCSA surveys in April through August 1991 substantially enlarged the known *umqan-ulaakan* distribution and generated much of the data described below. Beginning at Amatignak Island (XGI-008), in the Delarof group, BIA teams encountered *umqan*-like mounds. Lively crew discussions ensued in the following weeks as to whether relatively small oval and circular mounds should be considered *umqan*, since they diverged markedly from the typic V-shaped monuments described for Umnak and Atka. As survey progressed eastward, the archaeologists observed suspected burial mounds in a variety of shapes and sizes, and noted that the different forms co-occurred at many sites. The distinction between classic *umqan* and apparent non-*umqan* (*ulaakan*?) features blurred as more data accumulated. At the same time, the size, visibility (distinctness), and number of features per site appeared to increase along the west-to-east transect.

Altogether, at least 200 presumed burial features were identified at forty-five settlement sites on fifteen islands.¹¹ By the end of the season, it appeared that *umqan* consisted of three general types: small conical mounds, with or without bounding trenches, topped by pits about 1 m in diameter and up to 1 m deep; larger and more subtriangular oval mounds, usually with one or more summit pits and a surrounding trench; and large inverted V- and U-shaped mounds of classic form, rarely rectangular, and usually with lateral trenches and superior pits. Where present, bounding trenches measured at least 30 cm wide and deep, circumscribing the mounds completely or only partially. Summit pits usually were located along the longitudinal axes, generally closer to the base, but they could be irregularly placed. In addition to pits, the surfaces of

some *umqan* had superimposed “moundlets,” conceivably *ulaakan* structures that had not yet collapsed to form depressions.

Burial mounds of all shapes conformed to the general site patterns described in the 1970s for Umnak and Atka. Fig. 3 depicts plans for several sites representative of *umqan* settings. At intrasite scales, *umqan* were found most often at the edges of settlements, only occasionally within habitation areas, and in rare instances at more or less isolated localities (e.g., ATK-069, SAM-019). Like other known sites (e.g., ATK-002, SAM-007, UNL-313), some features were arranged in rows traversing a hillside or bluff edge (e.g., ADK-126, ATK-045, SEG-008, AMK-003). Mounds were built on a slight prominence, often overlooking the village, but commonly facing the sea from a bluff edge. Proximity to a habitation site, local ground slopes, and well-defined slope breaks appear to determine aspect (orientation), rather than alignment with any cardinal direction. On a regional scale, the known western limit of *umqan* distribution at Kanaga Island (Laughlin 1980:99) was extended to the Delarof group. As noted already, burial mounds were not encountered to the east beyond Unalaska Island. However, land selection issues and limited pre-1975 site inventories for the Krenitzen group constrained ANCSA Section 14(h)(1) claims on these islands, so we consider this subregion to have good potential for future discoveries.

By 1991, the status of *umqan* as burial features was a settled matter, based on the 1970s Umnak excavations. But to dispel any lingering suspicions that these earthen mounds could have any relation to storage pits, we note the following cases. At Kagamil Island (SAM-019), the BIA team recorded one *umqaḡ* measuring 27 m long, 20 m wide at the base, and about 1 m high, which would amount to an estimated 250 m³ or almost 9,000 cubic feet of fill (Fig. 2d). Like the example at ATK-045 on Atka, a circular mound attached to the apex gave the feature the appearance of a giant keyhole. It lay about 350 m from the nearest habitation site, which consisted of two house depressions. Located near the edge of a slightly backward-sloping terrace that dropped precipitously 75 m to a rocky shore, the *umqaḡ* had its apex somewhat lower than the base, off-setting any drainage benefits its large trenches may have afforded. This feature was more than 5 km from the nearest settlement of any size but close to the well-known Warm Cave–Cold Cave burial

grottos, where human remains have been radiocarbon dated to the thirteenth through seventeenth centuries AD (Coltrain et al. 2006:540). The massive size and remoteness of the Kagamil *umqaḡ* from a village made it an implausible food storage facility, whereas close proximity to the burial caves is consistent with a mortuary function. The fact that the “drainage” ditches sloped backward indicates a culturally determined rather than a functional design, although run-off diversion may have been the original purpose.

Another example comes from the southeast end of Amila Island (Fig. 3). At Aluuxsaḡ (SEG-008), twenty of thirty-eight surface features (52%) were identified as *umqan* or *ulaakan*. Most of the burial mounds at the site were located on an elevated area about 100–200 m east of habitation remains and midden deposits dating from at least cal AD 665–1025. Triangular ditches aligned with nearby features but without associated mounds were also observed at the burial ground, suggesting older cemetery plots, moundless variants, or unfinished earthworks. If the features were storage pits, we wondered why resources would have been stored at such a distance, across a stream and on an adjacent knoll, when the terrain among the dwellings appeared just as well drained. Nor would the separation of caches from dwellings have served to conceal the stores from plundering enemy warriors, since they were plainly visible from the village.

2011 GOOGLE EARTH SURVEY

To supplement ground-based inventories described so far, O’Leary attempted to identify additional burial mounds using medium-resolution imagery available through Google Earth for parts of the Aleutian archipelago. Very large triangular *umqan* were readily visible at known sites (e.g., ATK-006, UNL-313), suggesting that more examples could be identified remotely at other sites or unsurveyed areas. Desktop “surveys” were conducted along coastal segments with adequate photo coverage, from the Rat Island group to the lower Alaska Peninsula. Whereas previously reported *umqan* often could be detected, only a few new features were observed, in some cases identified only tentatively (e.g., XGI-061). *Umqan* sites on southwest Unalaska identified by BIA aerial surveys in 1984 were mostly confirmed (e.g., UNL-173, Fig. 3).¹²

DATA ANALYSIS

METHODS

We performed simple statistical and spatial analyses on the burial mound data generated in 1991 to look for patterns related to feature size and shape. To the extent possible, we folded into the 1991 series information from BIA surveys from all years and comparable data obtained by other researchers, notably Veltre (1979:206–208) for Korovinskii (ATK-002) on Atka Island, Aigner and Veltre (1976) and Frohlich and Laughlin (2002) for southwest Umnak Island, and Veltre et al. (1986) and Knecht (2001) for western Unalaska Island (Table 2). Although more than twenty *umqan* sites are known for Unalaska, attributes were available for only a few features. Our metric and observational data consisted of six attributes: shape (triangular, rectangular, oval); size (length, width, height, area); presence or absence of trenches, summit pits, and moundlets; and aspect, that is, orientation of features relative to the presumed habitation site or the sea. For this analysis, the *ulaaka*-*umqa* distinction was subordinate to shape and size classifications based on the field data.

Because the pooled data set represented work by many archaeologists over several decades, there were inherent data-quality issues. The BIA surveys were conducted pursuant to Native land claims legislation rather than as part of a research program, and only late in the 1991 season did Bland (1992a, 1992b) conceive the idea of compiling and analyzing the burial data. Although archaeologist Sara Laughlin had specialized knowledge of *umqan* from her work on Umnak, in practice, features could be described by any BIA crew member. Consequently, attributes such as plan view shape, distinctness of mound expression, and presence of bounding trenches were less consistently and more subjectively recorded than if features had been described by a single investigator intent on the study of burial mounds. Measurements also were inconsistent for triangular *umqan*, with some observers reporting maximum mound length (perpendicular to base) and others recording lengths for each lateral side (cf. Aigner and Veltre 1976:117). These same issues applied to the non-BIA data. Aggregating comparable data from all available sources yielded 288 features for sixty sites. Including other confirmed, reliably reported, and remote-sensed sites where no feature descriptions were available, the number of known sites was eighty-six (Table 2).

Shape, unfortunately, was found to be a rather subjective attribute; we saw this in field notes as a gradient from oval to subrectangular to U-shaped to triangular. Nevertheless, shape constituted the means for defining analytical units and subsampling the data set. Bland's (1992a, 1992b) solution for shape ambiguities was a binary classification of features as rectilinear versus curvilinear. Here we have replaced his original scheme with a tripartite one: triangular, rectangular, and oval. The triangular class consisted of any features approaching a three-sided mound, including V-, U-shaped, and subtriangular variants. The rectangular class included the few roughly quadrilateral features. Oval shape conformed to Bland's curvilinear class by combining circular and oval mounds, which occurred in all size classes. Features described as circles or nearly circular probably were ovals.

With respect to size, field values were standardized as maximum feature length and width ("height" and base for triangular mounds), excluding bounding trenches where present. Size directly reflected relative labor invested in mound construction, and by inference possibly the social status of the interred. To investigate the perceived west-to-east size gradient for burial mounds, areas (m²) were calculated by simple geometric formulas based on three idealized shapes. Typical *umqan* were assumed to be isosceles triangles for our analysis. However, as a consequence of common deviations from model forms, area values must be considered approximations.¹³ We examined size in more detail for triangular and oval mounds, since these shape classes had the widest distribution and presented the most interesting possibilities for identifying monuments for important individuals or settlements. Features were tallied initially by 10 m² size classes. We classified areas less than 20 m² as small, ca. 20–50 m² as medium size, and mounds greater than 50 m² as large. The large mound category was further subdivided for extreme size ranges.

Initially, we contemplated calculating and comparing feature soil volumes for the data set. However, few longitudinal or transverse profiles were available, and even maximum mound height was not reported consistently by the 1991 BIA crew. Consequently, size classes based on sediment volumes would be very crude. Moreover, differences in mound height and volume may reflect feature age as much as original design, due to weathering (cf. Frohlich and Laughlin 2002:96).

Table 2. Summary umqan-ulaakan inventory.

Shape codes: T = triangular; ST = subtriangular; U = U-shaped; SR = subrectangular; O = oval; C = circular.

**AA- indicates a BLM serial case file number assigned to an ANCSA Section 14(h)(1) claim; it serves as the identifier for related BIA ANCSA site reports and records. Correlations with AHRS tri-glyphs are approximate.*

Tribe	Island	Site	Min Count	Shape	Aspect	Source*
	Rat	RAT-081	1	O	?	Funk 2011
Naahmîgus	Amatignak	XGI-008	6	O, ST, SR	Sea	BIA AA-12023
	Kavalga	XGI-061	3	ST	Sea	Google Earth
	Skagul	XGI-015	1+	ST	Sea	Google Earth
	Ilak	XGI-006	5	O	Sea	BIA AA-12036A
	Tanaga	XGI-021	1?	?	?	BIA AA-12047
NiîgugîsA	Kanaga	ADK-218	8	O, C, SR	Site	BIA AA-12052
		ADK-205	6	T, ST, O	Site	BIA AA-12053
		ADK-210	7	U ST, SR	Sea	BIA AA-12054
		ADK-051	1	O	Sea	BIA AA-12055
		ADK-222	4	C, ST	Site	BIA AA-12057B
		ADK-058	8	O, C	Site	BIA AA-12062
		ADK-059	6	O, C	Site	BIA AA-12063
		ADK-060	2	O, T	Sea	BIA AA-12064B
		ADK-067	3	C, O	Sea	BIA AA-12071A
		ADK-068	1	C	—	BIA AA-12072
		ADK-126	17	O, T, ST, U, C	Site	BIA AA-12077
	Adak	ADK-025	8	ST	Site	BIA AA-12087
		ADK-032	2	C	—	BIA AA-12093
		ADK-034	8	O, C	Sea	BIA AA-12096
		ADK-045	5	ST	Sea	BIA AA-12107
		ADK-088	1	U	Sea	BIA AA-12110
		ADK-101	5	O, ST, C	Site	BIA AA-12118
		ADK-104	1	SR	?	BIA AA-12121A
		ADK-109	2	O, ST	Sea	BIA AA-12127
		ADK-120	2	U, ST	Site	BIA AA-12138D
	Kagalaska	ADK-001	1	O	Site	BIA AA-12141
NiîgugîsB	Chugul	ATK-029	3	ST, O	Sea	BIA AA-12162
	Tagalak	ATK-028	1	C	—	BIA AA-12163
	Atka	ATK-006	4	ST, SR	Sea	BIA AA-12165
		ATK-069	1	SR	Site	BIA AA-12166B
		ATK-008	1	ST	Sea	BIA AA-12167
		ATK-010	7	ST, SR, C	Site	BIA AA-12169
		ATK-025	1	ST	Site	BIA AA-12174
		ATK-002	5	T	Sea	Veltre 1979:206–208
	Salt	ATK-022	1	U	Site	BIA AA-12175
	Amlia	ATK-045	7	T, SR	Site	BIA survey
		SEG-004	2	ST	Site	BIA AA-12185
		SEG-008	16	ST, U, SR	Site	BIA AA-12189
		SEG-011	2	O, C	Sea	BIA AA-12190
		SEG-012	5	ST, SR, O	Site	BIA AA-12191
		SEG-013	6	ST, U	Site	BIA AA-12192
		SEG-019	4	ST, O, C	Site	BIA AA-12198
		SEG-020	7	SR, ST, O	Site	BIA AA-12199

Tribe	Island	Site	Min Count	Shape	Aspect	Source*
Akuuḡun	Herbert	AMK-008	3	T	Site	BIA AA-12201
	Carlisle	AMK-003	4	ST, U, T	Site	BIA AA-12203
		SAM-017	7	T, O, SR	Site	BIA AA-12204
	Chuginadak	SAM-016	5	ST	Site	BIA AA-12208
	Uliaga	UMK-010	9	ST, O, C	Site	BIA AA-12210
		UMK-011	7	ST, O	Site	BIA AA-12211
	Kagamil	SAM-019	3	ST	Sea	BIA AA-12215
		UMK-009	2	U, O	Sea	BIA AA-12213
Qawalangin	Anangula	SAM-006	15	ST, T, SR	Site	Frohlich & Laughlin 2002:98–99
		SAM-027	2?	ST	Sea	Frohlich & Laughlin 2002:97
	Umnak	SAM-007?	11+	ST	Site?	Aigner & Veltre 1976:116
		SAM-009	17	ST, T	Site	Aigner & Veltre 1976:115
		SAM-010	?	?	?	Google Earth
		SAM-025	13+	ST, SR	Site	Hrdlička 1945:323
		SAM-040	6	T	Site	Aigner & Veltre 1976:115
		SAM-042	6	ST	?	Aigner & Veltre 1976:116
		SAM-043	15	ST, O	?	Aigner & Veltre 1976:115-116
		SAM-046	1	ST	Sea	Google Earth
		Chungsun	?	?	?	Aigner & Veltre 1976:117
		UMK-013	8	ST	Site	BIA AA-12218
		UMK-014	2	ST	Sea	BIA AA-12219
	Unalaska	UNL-003	1+	?	?	Knecht & Davis 2001:277
		UNL-025	7	C	--	BIA AA-12226
		UNL-027	2?	ST	Sea	BIA AA-12228
		UNL-032	5	ST	Site	Google Earth
		UNL-034	1+	ST	Site	Veltre et al. 1986:31–32
		facing UNL-034	3	ST	Site	Google Earth
		UNL-036	2	ST	Sea	Google Earth
		UNL-094	4	ST	Sea	Google Earth
		UNL-097	1	SR	?	Weyer 1929
		UNL-153	6	ST, SR	Sea	Gilbert et al. 1984
		UNL-171	4	ST	Sea	Gilbert et al. 1984
		UNL-173	10	ST	Sea	Gilbert et al. 1984
		UNL-177	4	ST	Site	Gilbert et al. 1984
		UNL-178	1	ST	Sea	Gilbert et al. 1984
		UNL-179	3	ST	Sea	Google Earth
		UNL-181	1?	ST	?	Gilbert et al. 1984
		UNL-313	4	T	Site	Gilbert et al. 1984
		UNL-568	15	ST	Sea	Gilbert et al. 1984
Qigiigun	Unalaska	UNL-092	3	ST	Site	Knecht 2001
	Sedanka	UNL-108	1	C	--	BIA AA-12239A
	Peninsula	XCB-027	1	C		BIA AA-12270

Aspect refers to the apparent orientation of a burial feature relative to nearby cultural and topographic features. We reduced the local site configurations to a binary scheme: orientation toward a nearby habitation site or toward the sea. The statistic was expressed as the percentage of features facing the site (% site). Due to the proximity of burial mounds to a village in most cases, we assumed that the site occupants built the adjacent monuments. Presence or absence observations for trenches, summit pits, and summit moundlets were expressed in the same way (i.e., as a percentage of features with that attribute).

The study region naturally lent itself to a linear comparison, on a west-to-east transect that we interpolated as a straight line. Shape and size (area) attributes were analyzed by island segments. Whereas island group names as delineated on USGS maps (e.g., Delarofs, Andreanofs) were assigned somewhat arbitrarily in historic times or on the basis of geographic criteria, such as bracketing ocean passes, our approach relied on ethnohistory. At historic contact (ca. 1740s–1750s), and presumably from protohistoric times, Unangan apparently were organized into at least eight socioterritorial groups. These eighteenth-century regional groups have been reconstructed from ethnohistoric evidence, linguistic data, and inference (Bergsland 1994:xv; Black 1984:41–71).¹⁴

Leaving aside the possible outliers on Rat Island (RAT-081) and lower Alaska Peninsula (XCB-027), our data set involved five contiguous regional groups (Fig. 1). Proceeding from west-to-east: Naahmīgus occupied the Delarof Islands and adjacent Tanaga; Niiḡuḡis inhabited the Andreanof Islands but reportedly were divided at Adak Island into autonomous Kanaga-Adak (NiiḡuḡisA, including Kagalaska Island) and Atka-Amlia (NiiḡuḡisB) subgroups (Black 1984:55); Akuuḡun lived east of Amlia among the Islands of Four Mountains; Qawalangin occupied the western Fox Islands, including Umnak, tiny Samalga, and the west coast of Unalaska; and Qigiḡun inhabited northeast Unalaska and the Krenitzen Islands. Because only a handful of features were identified for Qigiḡun territory, they were included with Qawalangin. We looked at burial mound shape and size distributions for these ethnohistorically attested socioterritorial groups, recognizing that they occupied territories of different sizes, that territorial boundaries changed over time, and that survey coverage was incomplete or uneven across the study area.

RESULTS

As BIA archaeologists had perceived in the field, mean feature length for the whole sample ($n = 288$) increases west-to-east, but variability also increases significantly. Whereas size for the largest mounds in any segment increases along the transect, most features are small- and medium-sized. The majority of mounds in all segments have bounding trenches (56%), and just under half have summit pits (47%). At Anangula Village (SAM-006), Frohlich and Laughlin (2002:99) estimated that summit pits covered as much as 30% of the mound surfaces. Similar calculations were not performed for our data set due to inconsistent reporting of pit dimensions. Moundlets are rare overall (associated with less than 1% of burial features) but are more common in the western segments. This pattern could indicate relatively younger features with intact burial structures. Overall, it appears that burial mounds are more likely to face a habitation site than the sea (52% versus 48%), especially in the eastern segments (Akuuḡun 77%; Qawalangin 91%). Western sites, where more than half the mounds are oriented toward the sea, apparently deviate from the general pattern. In terms of area, substantial feature variability means that an overall average ($36 \pm 76 \text{ m}^2$) has little interpretive value. Even when shape is considered, the variances are large or sample size small. Fig. 4 illustrates the overall distribution by shape and size for 280 features from all geographic segments. Triangular mounds are most common in all size classes except the smallest. The three shapes occur together at only six sites (7%), whereas combinations of two shapes (usually triangular and oval) were observed at eighteen sites (21%).

TRIANGULAR

Mounds presenting the typic inverted V form constitute a robust subsample, about 60% of all features ($n = 170$). On the basis of shape, they would be considered *umqan* in the conventional archaeological terminology. However, features in the smallest size class (0–10 m^2) possibly are *ulaakan*. Our findings are summarized in Table 3. The Fox Island data derive largely from southwest Umnak, and we regret that only limited information is available for the concentration of *umqan* sites on southwest Unalaska (Fig. 1). Note also that this shape class probably occurs more often in the Naahmīgus segment (Delarof group) than our data show, judging by recent finds for Kavalga (XGI-061)

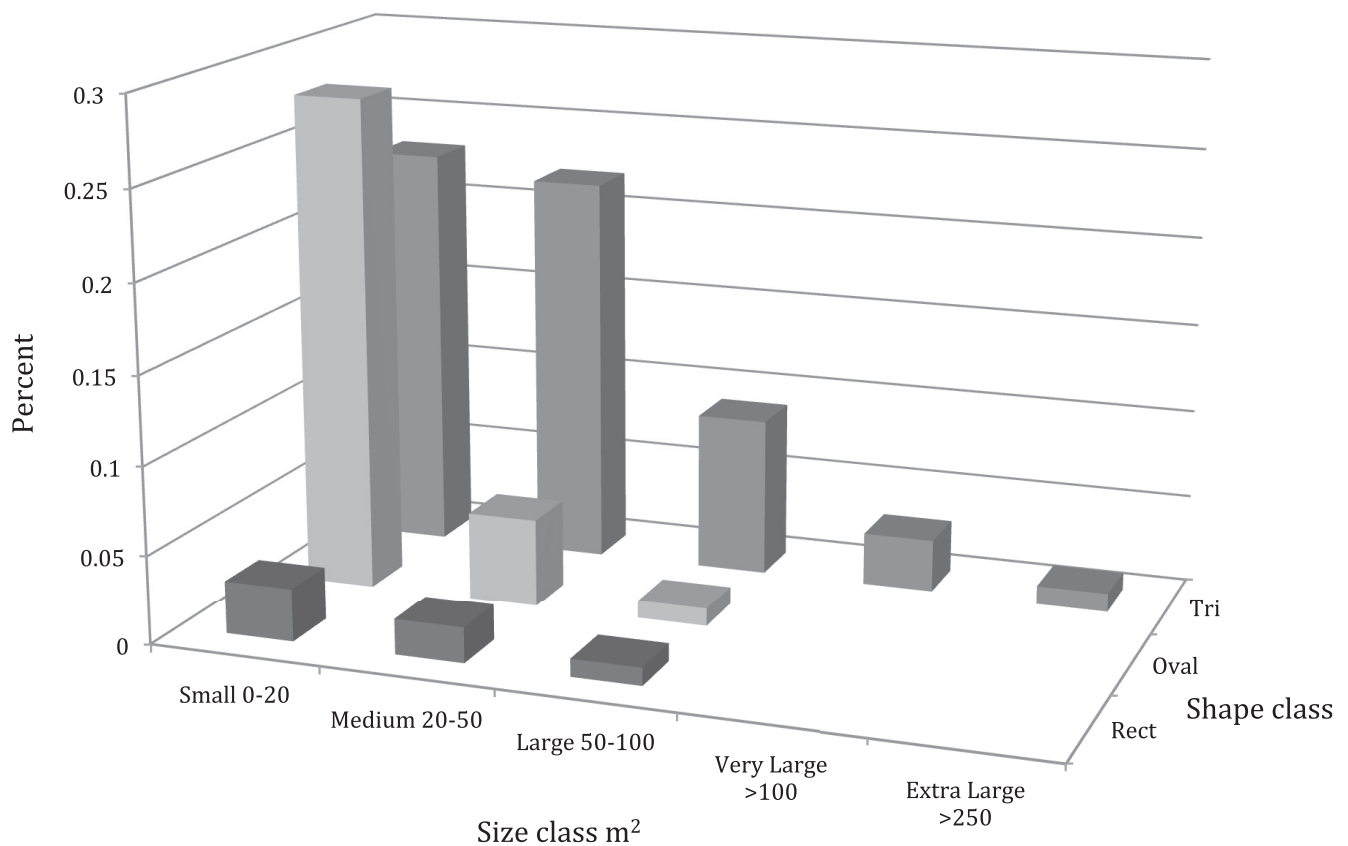


Figure 4. Size-shape distribution as a percentage of all features ($n = 280$); many of the smaller mounds probably are ulaakan.

Table 3. Triangular features.

Segment	Number of Sites	Number of Features	Length (m)	Length Range	Base (m)	Height (m)	Percentage of features with a trench	Percentage of features with summit pit	Percentage of features with summit moundlet	Percentage of features facing site
Naahmiġus	1	1	7.4		3.6	0.4	1	1	1	0
NiiġuġisA	11	28	7.2±2.9	2.5–14.2	4.5±1.5	0.8±0.4	.68	.46	.25	.46
NiiġuġisB	14	45	9.9±5.1	2.7–23.7	5.5±2.2	0.6±0.3	.66	.55	.24	.35
Akuuġun	8	27	13.6±5.2	5.4–27.0	9.1±3.5	1.1±0.4	.85	.55	.07	.74
Qawalangin	9	69	10.1±7.8	3.1–53.0	7.5±5.4	1±0.4	.68	.42	0	.92
Total	43	170	10.1±6.4							

Note: Data on Qawalangin include observations reported by Aigner and Veltre (1976:117).

and Skagul (XGI-015). Tanaga remains largely unexplored for burial mounds. In general, triangular mounds tend to be significantly larger than oval features in all geographic segments. While both shapes are common throughout the study area, features in the large size classes (greater than 50 m²) are overwhelmingly triangular in plan (80%). Typical features commonly have trenches (60%), and slightly less than half have summit pits (48%). Moundlets were observed primarily for the Niiġuġis segments. For NiiġuġisA they occurred only at features without obvious pits.

We charted the distribution of all triangular mounds ($n = 165$) by area on the west-to-east transect. While size does increase easterly, the correlation is weak ($r^2 = 0.0578$). Nevertheless, mounds in the larger size classes are noticeably absent from the Naahmiġus and NiiġuġisA segments. On average, mounds are largest for Akuuġun, but this finding may change if more data from southwest Unalaska (Qawalangin) was included. A few features

greater than 100 m² occur in NiiġuġisB and segments east. Fig. 5 shows the distribution of triangular features by 10 m² size classes for the five linear segments. Six conspicuous outliers exceeding 170 m² in the eastern segments represent Kagamil sites SAM-019 and UMK-009, the largest *umqax̂* at Anangula (SAM-006) and three superlative examples from UNL-313 on Unalaska. Wide chevron trenches associated with the large mounds make them visible on Google Earth imagery. Evidently, these were monuments to exceptional individuals and lineages or indicate places of special importance in the ancient Unangan world. Mound construction would have involved significant time and effort, especially if it incorporated pavements of manuports carried up from the beaches, as the Umnak excavations revealed. Features in the smallest size class are common in all segments except Naahmiġus and Akuuġun.

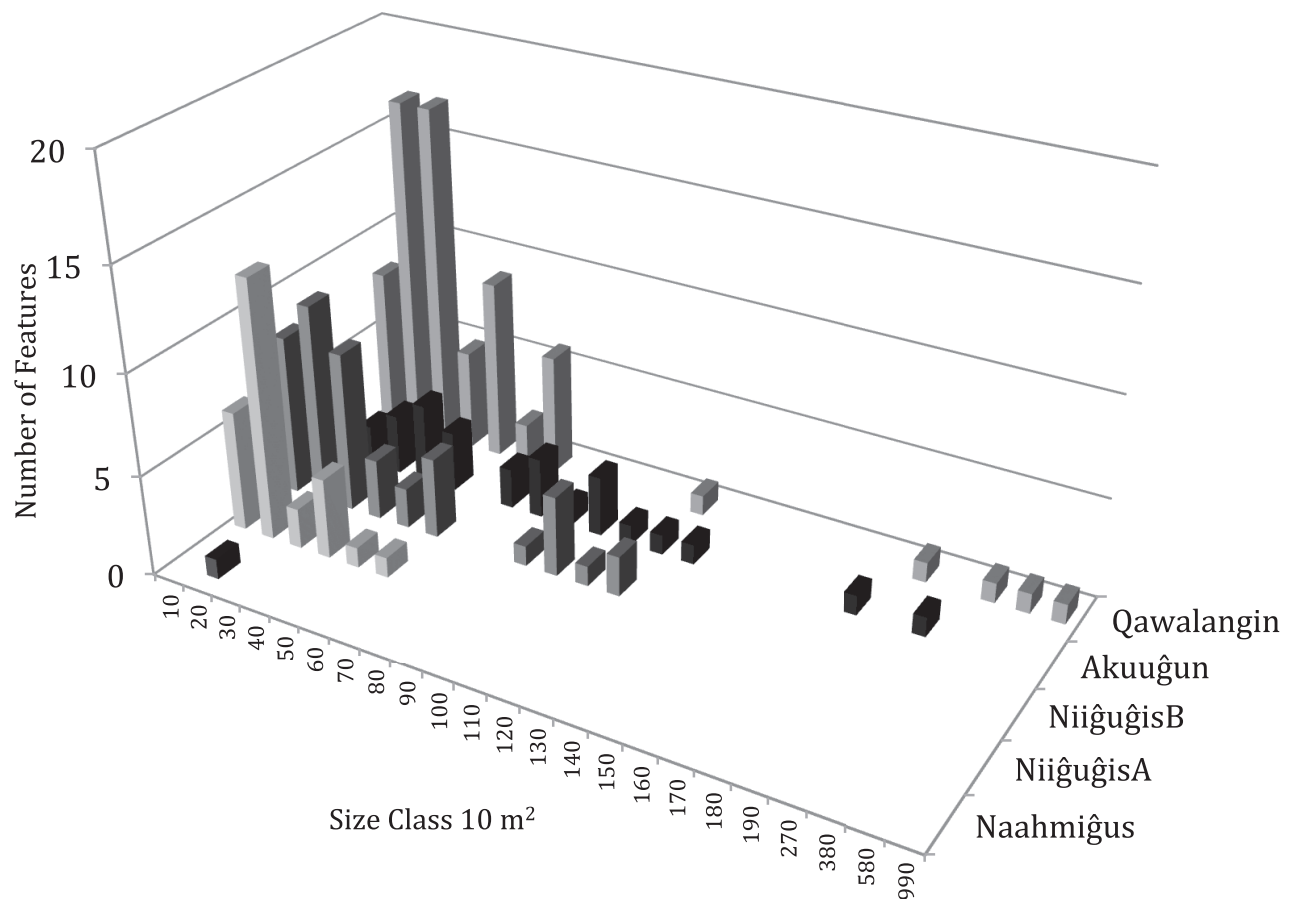


Figure 5. Frequency distribution for triangular mounds by 10 m² size class for linear segments; note class change after 190 m².

OVAL

This shape class includes 34% of all features in the pooled sample. Data are summarized in Table 4 and Fig. 6. Although some examples are quite large (e.g., a mound at SAM-017 was 12.5 x 8.3 m and 81.4 m²), ovals generally comprise the smaller size classes, including 72% of all burial features less than or equal to 5 m in length. Together with local triangular variants of similar size, many of the

smallest examples may be *ulaakan*. Geographically, oval mounds are most common in the NiiġuġisA segment, and secondarily NiiġuġisB and Naahmiġus, but they occur in all segments. If we assume that surface expressions of mounds become less angular over time due to weathering, vegetation growth, and loess accumulation, then some of the small- to medium-size oval features could represent degraded triangular or rectangular forms. More likely, oval mounds are a central Aleutian style.

Table 4. Oval features.

Segment	Sites	Count	Length	Range	Width	Height	%trench	%pit	%mdlet	%site
Naahmiġus	2	9	4.1±0.8	3–5.4	2.6±0.7	—	.66	.33	.11	0
NiiġuġisA	15	58	3.6±1.7	1.2–8.5	3±1.2	0.7±0.2	.60	.43	.01	.46
NiiġuġisB	8	12	3.7±1.8	1.5–8.8	2.7±0.9	0.6±0.2	.33	.66	.16	.41
Akuuġun	4	9	5.3±3.7	2–12.5	3.3±2.2	0.7±0.2	.33	.33	0	.89
Qawalangin	3	9	7.2±2.9	2.8–12	7.3±2.9	—	.22	.11	0	.89
Total	32	97	4.2±2.3							

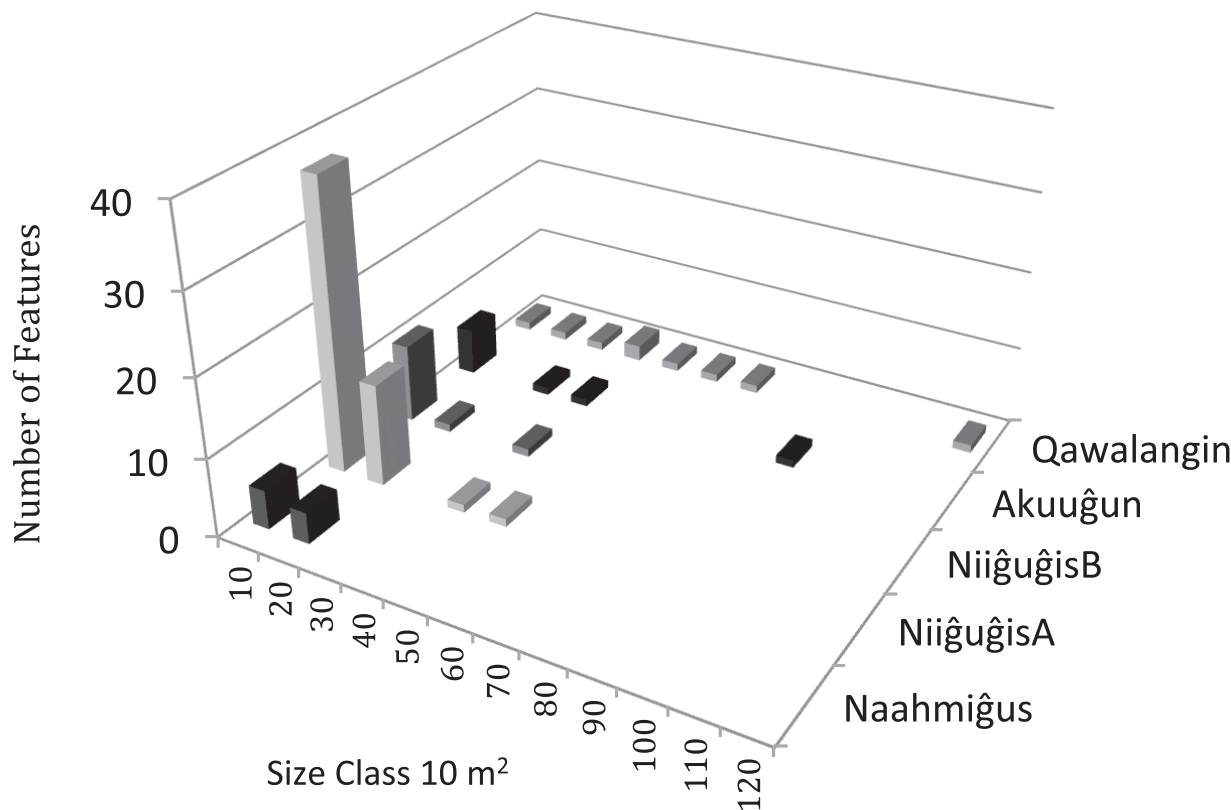


Figure 6. Frequency distribution for oval mounds by 10 m² size class for each segment. The large Qawalangin outlier is UNL-025.

RECTANGULAR

Rectangular mounds are relatively uncommon, comprising only 7% of the pooled sample (Table 5). Where present they tend to be greater than 7 m in length (63%) and account for 10% of all features in the large size classes (i.e., greater than 50 m²). They are most numerous in the Niiġuġis segments (74%), which also have the largest examples: ADK-126 (13.2 x 13 m); ADK-210 (11.6 x 6.4 m); and SEG-008 (14.5 x 5.5 m). Rectangles co-occur with triangular forms at seven of the ten Niiġuġis sites, suggesting they are variations on the same general design. In fact, 80% of all rectangles occur together with triangular mounds and about 40% of the time with oval features. This shape class may represent *umqan* variants on the model triangle.

DISCUSSION AND CONCLUSIONS

In summary, Unangan burial mounds have a wide distribution in a variety of shapes and sizes. The majority are triangular, and overall size is generally less than 50 m² (83%) or about 6.1 x 4.3 m. In nearly all cases mounds are located near a settlement site, commonly facing the village but often oriented toward the sea. While shape varies, features generally conform to descriptions based on the type sites on southwest Umnak: low mounds bounded by trenches and topped by small depressions marking the pit burials. On the west-to-east transect, mean size increases, but features in the small size range are usually abundant. The largest measured examples are in the Four Mountains group and on Unalaska, but features classed as large are present on most islands west of Tanaga. Whereas the 1991 BIA survey enlarged the distribution substantially, Fig. 1 conceals the coverage limitations, especially if we scale down to local island areas. Many sites that probably contain burial mounds remain unmapped or unexplored,

offering excellent potential for new discoveries and more refined analysis. As Aleutian archaeologists outline their future research agendas, we hope this paper highlights the importance of site-scale mapping, the utility of considering horizontal site structure surrounding excavation units, and the potential for recognizing near-surface cemetery components within or adjacent to habitation ruins.

Our attribute data roughly describe the variability of mound shape and size, but they do not allow us to differentiate between *ulaakan-qumnan* and *umqan* burial types. Returning to the terminology, *ulaakaġ* and *qumnaġ* are well-attested mortuary features. The former term designated a small inhumation pit covered by a conical driftwood or whale bone structure topped with sod. Our study ignored simple pits encountered at many sites that were also potential burials. By all accounts (e.g., Veniaminov 1984:196, 369–370), *ulaakan* were intended for lower ranked individuals. Related *qumnan* were well-crafted, above-ground or semisubterranean coffin boxes reserved for higher status individuals, although Jochelson understood the term as referring to any burial. We know this style from historic accounts (e.g., Merck 1980:177; Veniaminov 1984:196) and from Weyer’s (1929) excavation at Ship Rock. Both styles generally were built in designated (?) burial grounds set apart from habitation areas. And because both were capped by earth and sod, after several centuries exposed to the Aleutian environment the types cannot be distinguished reliably in the field. From our vantage well removed from aboriginal language and customs, it seems that either Unangan term could apply to relatively small burial mounds that are present in all shape classes. Common to both *ulaakaġ* and *qumnaġ* is the connotation of a diminutive or imitation dwelling for the dead. Their known range extends from the Rat Islands east to the lower Alaska Peninsula.

Table 5. Rectangular features.

Segment	Sites	Count	Length	Range	Width	Height	%trench	%pit	%mdlet	%site
Naahmiġus	1	1	5	—	1.9	0.3	1	1	0	1
NiiġuġisA	4	4	8.2	2.9–13.2	6	0.6	.50	.50	.50	.50
NiiġuġisB	6	10	7.4	3–14.5	3.9±1.2	0.4	.30	.90	0	.40
Akuuġun	1	2	12	10, 14	10, 11	0.8, 1.4	0	0	0	.50
Qawalangin	2	2	5.5	3.6, 7.5	3, 4	0.7	1	.05	0	.50
Total	14	19	7.7±3.6							

While there are insufficient data to suggest a temporal priority for either style, we suspect that *ulaakan* may be the more generic and possibly older burial form. *Ulaakan* appear to be unique to the Unangan region, whereas *qumnan* have close analogues to burial practices common to Native groups throughout southern and western Alaska (cf. de Laguna 1947:87–90). It is tempting to suggest that *qumnan* are associated with the Neo-Aleut horizon in the study area and resulting sociocultural transformations thought to have occurred after AD 1000–1250 (cf. Lantis 1970:216). Black (1987:37) considered burial customs to be very conservative cultural attributes, so substantial changes in mortuary treatment or interment should signal major cultural changes. Ethnohistoric accounts and limited excavations only indicate that *ulaakan-qumnan* burials date from protohistoric times and persisted into the early contact period. Writing in the 1820s–1830s, Veniaminov described *ulaakan* in the past tense, implying the practice was extinct by the early nineteenth century.

Archaeologists adopted the term *umqan* to designate relatively large triangular mounds first recognized and investigated on southwest Umnak (Black 1987:35). Their range is known to extend from at least the Delarof Islands to the Fox group, with undiscovered examples likely in the Krenitzen group. While *umqǎx* may be a misnomer (“a storage pit, like a freezer”), the term is now part of the conventional jargon. Typic *umqan*, as originally defined, are the most common mound form and certainly the most monumental, although our data show a continuum of size and co-occurrence with other shapes across the region. This suggests that triangular forms may have been the preferred shape among several possibilities. Consequently, the feature definition needs to accommodate that variability. At present, we are unable to posit a link between the preponderance of triangular features and Unangan ideology or iconography. We suppose that *umqan* are essentially earthen elaborations around core *ulaakan* or *qumnan* structures that served to emphasize status of the deceased or his lineage and to provide the mortal remains additional protection from the raw Aleutian climate. Excavations targeting so-called *umqan* features in the small-to-medium size classes indicate they contain pit-type burials that conform to ethnohistoric descriptions of *ulaakan*. Perhaps *ulaakan* is a better generic term for all burial mounds.

Since *umqan* rarely were built in isolation from settlements, at least according to present data, we assume

they were intended to be accessible to villagers, seemingly in contrast to remote burial caves. In several cases large *umqan* would have been visible well offshore from the settlement (e.g., ATK-045, SAM-006, UMK-011, UNL-092). According to Veniaminov’s (1984:221) account, Unangan generally believed that souls of the dead (“shadows”) had agency and “dwelled invisibly among their kinsmen, accompanying them on land and sea.” Living descendants called on them in times of danger and distress. At the same time, Veniaminov (1984:218) reported that near most settlements there was “some mound or *kekur* ([Russ.] an off-shore rock) or some outstanding feature, on a cliff, which were strictly prohibited to all women and young men.” Such prohibitions may have applied to *umqan* as well.

Unlike *qumnan* and simple *ulaakan*, which ethnohistoric sources differentiate according to the deceased’s social position, we might infer status based on the size and labor invested in *umqan* construction. Large features, situated close to settlements and visible from afar, evidently commemorated renowned individuals, advertising the wealth and prestige of the deceased, his lineage or the home settlement.¹⁵ In the excavated examples, burial pits containing multiple individuals of both sexes ranging in age from infant to adult suggest *umqan* may have been family or lineage plots within a larger community burial ground, unless some of the pits contain hapless grave escorts. Note however that many other individuals would have been interred in lateral house compartments, in simple *ulaakan*, and in rock crevices and caves. As reported by Frohlich and Laughlin (2002:103) for Anangula Village, truncation or superposition of pits and their presence in *umqan* trenches may indicate a long period of use for the features and burial grounds. Unique keyhole-shaped mounds (ATK-045, SAM-019) formed by attaching an earthen oval to the apex of a large triangular feature may be another indication of reuse or modification over time. But whereas new burials may have been added, as yet there is no good evidence the mounds themselves grew by accretion. Certainly, interment in an *umqan* context seems to imply elevated social status. On the other hand, we are struck by the limited number of grave goods recovered from the excavated *umqan*, relative to their monumental size (Table 1). By comparison, the apparent big man’s *qumnǎx* at Ship Rock contained a rich trove of funerary objects jammed into a 2 x 1.5 x 0.5 m box (Weyer 1929). Perhaps this indicates relative age for

the well-preserved Ship Rock burial and that outside of sheltered burial grottos and the buffering chemistry of shell-rich middens, skeletal remains and organic grave goods simply disintegrate in open-air Aleutian contexts.

Umqan appear to be an old burial form, and most excavated examples may be precontact in age. This is suggested by their apparent absence from ethnohistoric descriptions, except for the possible relationship to votive rock cairns (*anachxun* or *hadgun*). We noted already that freshly constructed mounds may have been paved with stones that became buried by sediment and organic material over time. At Korovinskii on Atka, *umqan* are demonstrably older than late protohistoric age based on tephra-chronology. The Neo-Aleut woman buried in *Umqan* 1 near Anangula Village suggests burial after ca. AD 1000, assuming the physical type is a reliable horizon marker (cf. Ousley and Jones 2010). All the Umnak *umqan* apparently are younger than 2,000–3,000 years, again based on the local tephra sequence. However, on Unalaska they may date earlier than 2,000 years, indicating that typical triangular mounds are an ancient, enduring Unangan tradition. If we accept the age estimates for Unalaska features at Makushin and Summer Bay, *umqan* appear to predate the advent of very large communal dwellings (and associated sociocultural complexity?), which appear in the twelfth century on the lower Alaska Peninsula and are found at late protohistoric settlements as far west as the Four Mountains group. Aigner and Veltre (1976:126) suggested that *umqan* construction declined in the early contact period and that pit or compartment burials inside dwellings became more prevalent. Historical links between *umqan* and so-called longhouses will be established only with improved inventory data for both feature types and with closer dating for the burial mounds.

Aigner and Veltre (1976:127) also suspected that *umqan* were “correlated negatively” with burial caves of approximately the same protohistoric age. This seems to be the case for many Aleutian sites. However, BIA surveys show that Unangan cave ossuaries or crevice burials co-occur with settlement sites on several islands, including Kavalga (XGI-009), Kanaga (ADK-210), Amlia (SEG-001), and Carlisle (SAM-017), and that *umqan* also are present at the sites. The limiting factor evidently was a suitable rock grotto (cf. Laughlin 1980:99). Spatial isolation of burial caves may not have restricted access as much as social controls and taboo enforcement of the sort Veniaminov described. On the other hand, known buri-

al caves and some *umqan* may have significantly different ages, if Knecht’s (2001; Knecht and Davis 2007:277) estimates for UNL-092 and UNL-313 are correct. The oldest cave burials at Kagamil (SAM-019) and Ship Rock (UNL-097) date from only the ninth through twelfth centuries AD. Bank (n.d.) obtained a potentially older date of cal 360 BC–AD 975 on wood from the so-called Mask Cave at SAM-019, but the standard deviation was very large (1660 ± 300 BP). Note, however, that older caves may be sealed by colluvium or pyroclastic deposits, lost to coastal erosion, or still await discovery. For the moment, these age estimates do not support the notion of a late prehistoric change in mortuary practices. Literature review and Aleutian site surveys suggest a variety of ways that Unangan shaped the landscapes in and around their villages by constructing substantial houses, *ulaakan-umqan* in adjacent burial grounds, mysterious sod circles (Veltre 1979:215–218), and votive rock cairns. Although socio-religious beliefs and practices that motivated development and construction of burial features are largely opaque from our vantage point, and associated Unangan terminology has become obscure, all such monuments retain significant historic, scientific, and cultural value. On site scales, we anticipate that new or refined patterns of surface remains at ancient villages will emerge to illuminate our understanding of long-term Unangan use and occupancy.

ENDNOTES

1. For example, wood and whalebone scaffolding, tiered burial platforms, boats and boat paraphernalia, skin garments, weapons and hunting equipment, slat armor and wood shields, wood dishes and household items, woven mats and baskets, skin bags.
2. Unangan singular nouns end in *-x̂* (e.g., *ulaakax̂*), plural nouns in *-n* (*ulaakan*). Italicized spellings follow the orthography developed by Bergsland (1994). Nearly all are in the Eastern dialect. Note that Unangan regional group and place names are not italicized.
3. Alaska Native regional corporations formed under provisions of the act could obtain title to heritage sites in their respective regions when the subject properties satisfied eligibility requirements modeled after regulations developed for the National Historic Preservation Act (1966). See Pratt (2009).
4. Box burials of the *qumnan* type described by Veniaminov and others, either partially buried or

raised on pedestals, were part of a common mortuary practice that prevailed in much of subarctic Alaska during late precontact and early contact times (mid- to late 1700s) (de Laguna 1947:87–90; cf. Lantis 1970:216). Early visitors reported very similar wood coffins from virtually all the tribes inhabiting the Gulf of Alaska, adjacent interior territories and the Bering Sea coasts. Box burials were described for the Tlingit at Lituya Bay by la Pérouse in 1786; at Port Mulgrave by William Beresford in 1789 and Alejandro Malaspina in 1791 (de Laguna 1972:540), by Frederic Litke (1987:96) in 1827 for the Northwest Coast, by the hieromonk Gedeon in 1804 for Kodiak Island Alutiit (Pierce 1978:131), for Tlingit and Koyukon–Deg Hit’an Athabascans in 1868 by Frederick Whymper (1966:78–79, 186–187, 199), by Johan Jacobsen (1977) in 1883 at Native villages scattered from southern Vancouver Island to the Yukon River, by Edward Nelson (1983:310–322) in 1877–1880 for Yupiit and Inupiat of the Yukon-Kuskokwim Delta and Bering–Chukchi Sea coasts, and by Whymper (1966:256) for Siberia. Box burials very similar to *qumnan* are known archaeologically from mummy caves and habitation sites of Chugach Alutiit in Prince William Sound (de Laguna 1956:97–99).

BIA investigations in the Yupiit homeland documented surface box burials persisting as a common burial form well into the 1940s. For example, Nunallerpak (AA-9373), near the mouth of Black River in the Yukon River delta, has many such graves dating from the 1920s–1940s (USBIA 1984). At nearby Qip’ngayagaq (AA-9883), one surface burial dates to 1982.

5. Veniaminov (1984:196) goes on to write: “However, as is evident even now on the basis of several signs, it seems that they sometimes buried the rich in caves also.”
6. Unless otherwise noted, radiocarbon ages were calibrated to 2 σ using CALIB 6.0 (Reimer et al. 2004; Stuiver and Reimer 1993).
7. Russian explorer Mikhail Malakhov (pers. comm. to O’Leary, 2013) recently suggested that triangular *umqan* might represent the steep, symmetric profile of stratovolcanoes, which on clear days dominate many Aleutian viewsheds. Interestingly, a tale narrated in 1910 by Isidor Solovyov described how a mythical ancestor enhanced the strength of his sons by “lifting up

the sides” of several volcanoes, pulling ribs “dripping with juices” from the demon chiefs within, and placing the wrapped bones behind his sons’ baidarka seats (Bergsland and Dirks 1990:164–167).

8. In Kamchatka, on the mainland beyond the westernmost Aleutian Islands, Stepan Krashennnikov (1972:30) reported the same type of mound in 1755: Five versts [ca. 5 km] from this town [Aunup-Chanuk, in Koryak country] is a small territory called Unkaliak (the evil stone spirit); the Koriaks say that this particular spirit lives there. Whoever passes this way for the first time must offer a pebble to the spirit or else they believe the devil will bring ill fortune to their journey; as they toss these stones one on top of the other, there is a considerable pile of them.
9. Black (1987:35) interpreted the features as “pit burials,” evidently ignoring the surrounding mounds.
10. Caroline Funk (pers. comm. to O’Leary, 2009) suggests using a rigid probe to test for the presence of stone pavement.
11. In 2008, BLM cadastral surveyors identified a triangular *umqan* just outside BIA site boundaries established in 1991 for a village (XGI-015) on Skagul Island, in the Delarof group. Surveillance by Google Earth indicated that other burial mounds may be present.
12. The season and time of day for the imagery were limiting factors. Lush vegetation at the height of the growth season, snow cover, high-angle sunlight, and gullied terrain near sites reduced the possibility for *umqan* detection along many segments, even for some verified sites. Consequently, only the largest or most fortuitously oriented features were visible. We were forced to conclude that easy-access remote sensing cannot yet substitute for aerial reconnaissance and ground-based surveys. On the other hand, present coverages can easily detect distinctive habitation features, such as large proto- and early historic communal longhouses in the Fox Islands, dated AD 1650–1800 or earlier, and comparable “nucleus-satellite” dwellings on the lower Alaska Peninsula, dating to 1500–1800, but which appeared as early as AD 1125–1250 (Maschner 1999:96–98; McCartney and Veltre 2002:258–259).
13. Frohlich and Laughlin’s (2002:99, 101) detailed feature plans and careful area calculations indicated that our approach underestimated size for Anangula triangular mounds by an average of 20%.

14. Warfare, Eastern Unangan dialect capture, changes in material culture, and certain physical traits have long indicated an east-to-west population drift during late protohistoric and early historic times (Berge 2010; Bergsland 1994:xxv; Bergsland and Dirks 1990; Chatters 1972; Laughlin and Aigner 1975:197; Leer 1991; Maschner and Reedy-Maschner 1998; Street 1994). Recent genetic, radiometric, and isotopic analyses on human remains from Fox Islands–Four Mountains burials indicate that a significant biological change originating from eastern sources (i.e., Kodiak and lower Alaska Peninsula) occurred after about AD 1000, possibly coinciding with increased social stratification and adoption of mummification and large communal dwellings (Coltrain et al. 2006:545; Smith et al. 2009). However, multivariate procedures integrating craniometric, genetic, and chronologic data indicate a very complex population history (Ousley and Jones 2010), and marked changes in mortuary practices in the study region have not been demonstrated.
15. Erica Hill called our attention to the importance of social structure for interpreting burial practices and to the potential for feature size variability to track the relative importance of lineages or the longevity of settlements, where larger *umqan* could indicate more prominent lines or longer occupations at a site. We have alluded to the latter possibilities but have not emphasized them for want of ethnohistorical support. Hill also wondered whether *umqǎ* structure could mirror the configuration and organization of the traditional communal dwelling. In the eighteenth century, inhabitants of a settlement (and probably nearby villages) were all related through interdigitating consanguineal and affinal relationships. Based on the well-developed avunculate, preferred marriage rules, and other traits, Lantis (1970:227–240) concluded that Unangan probably reckoned descent through the female line. Intricate plots of traditional tales repeatedly invoke the close relationship between a boy and his mother and her brothers, in opposition to his biological father and paternal relations (Bergsland and Dirks 1990). The ubiquity of interne-cine treachery and violence is striking. However, the matter remains unsettled because the ancient kinship system had been substantially altered well before 1900 (Bergsland 1994:576). One or more lineages would have occupied several large communal dwellings, each

house controlled by a lineage headman, and the whole settlement loosely administered by a lineage chief (*tukux̌*). Veniaminov (1984:241) characterized the patriarchs' authority as rather limited in most matters of daily life. Like other Alaska Native groups, individuals were expected to be self-reliant with respect to regular subsistence and household activities, yet there also was a premium on cooperative behavior, and nuclear families in fact would have been highly interdependent. Cross-cutting lineage relationships, or more likely amplifying them, was a social hierarchy of at least three classes: leadership elites or notables, commoners, and slaves (Veniaminov 1984:240–241). Slaves, typically foreign prisoners of war, may have been few in number. The elite class included descendants of the founding lineage of a settlement or island, together with individuals who demonstrated superior leadership skills, exceptional hunting abilities, bravery in war, etc. Composition and relative size of the middle class is unclear from fragmentary ethnohistoric sources. According to Lantis (1970:245), “the most plausible explanation is that there tended to be just one large wealthy kin group which was related to the chief (possibly a joint family or a true clan, for which there is some evidence) dominating each village.” Unfortunately for our analysis, house form and size evidently changed both through time and spatially along the island arch. Absent better dating for these transformations, it is impossible to relate them to variability in the poorly dated burial features. Nevertheless, it seems reasonable to suggest that the largest *umqan* (and the most elaborate cave burials?) might have been constructed for elite or the most revered headmen, or as suggested by Hill, a lineage founder or apical ancestor.

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