

CHAPTER 9. WORKED FIBER—QIPESNGASQAQ

Worked fiber objects are rarely preserved in Kodiak’s archaeological sites. However, a few sites have produced examples of woven, braided, tied, and sewn artifacts made from plant and animal tissues. Assemblages from Karluk One and the Malina Creek site include fiber artifacts from the Koniag tradition (Steffian et al. 2015). Archaeologists also recovered fragments of basketry from the lower (Kachemak?) layers of the Uyak site (Heizer 1956:29; Hrdlička 1944:342). The presence of grass combs in Late Kachemak assemblages, including the Uyak site, suggests grass weaving is at least 1200 years old. Similarly, net sinkers found in a site after about 4500 years ago suggest people used plant and/or animal fibers to tie nets, a related technology. Other tools, like line sinkers, harpoons with line holes, multi-component tools that would have been lashed or tied together, suggest the need for cordage. We suspect that Alutiiq ancestors transformed plant and animal fibers (e.g., sinew, baleen) into useful objects throughout Kodiak prehistory (Figure 9.1).

Figure 9.1. Temporal distribution of fiber artifacts

Woven Tools	OCEAN BAY								KACHEMAK					KONIAG	
	7500	7000	6500	6000	5500	5000	4500	4000	3500	3000	2500	2000	1500	1000	500
Bark Sinker														?	
Basket									?						
Container (birch bark)														?	
Cord		?													
Mat										?					
Net							?								
Worked Fiber										?					

Note: Evidence of woven artifacts is based on the presence of tools used in their manufacture (grass combs) and tools that require fiber elements (e.g., nets, harpoons with line holes, etc.)

Baskets are among the best-known fiber tools. Like archaeological evidence of fiber objects, Alutiiq baskets are rare in museum collections. Ethnographic collections provide limited information on the types of woven objects that may have been manufactured in the distant past. Despite their rarity, historic accounts indicate that baskets, mats, and cordage were an integral part of household equipment (Korsun 2010, Lee 2006). Baskets were particularly important. They held small objects, were used as cooking, drinking, and eating vessels, and functioned as containers for food storage and collecting. Very large baskets, fitted with leather straps, even acted as backpacks for travelers carrying clothing and bedding.

Alutiiq people wove much of their basketry from spruce roots that they dug from the forest floor, cleaned of their outer coverings, and split into flexible strands with a fingernail (Lee 1981, 2006). Spruce-root baskets were woven upside down, with concentric rings of extra twining to reinforce their bases. Some were painted or finely decorated with overlays of other weaving materials, for example, maidenhair fern. Other common weaving materials included beach rye grass and baleen. Photos of these materials, as both raw material and woven items, appear in the raw material section below. It should also be noted that kelp was widely used for line and examples are preserved in ethnographic collections (Korsun 2010). This is very strong

material and a line sinker from Karluk One has a band of thin marine algae lining in its pecked groove (part of a kelp frond?). This was probably used to limit friction and help secure a rope to the sinker. However, no kelp tools are described here, as this lining is the only known occurrence of a possible marine algae object in an archaeological collection.

We include birch bark containers in this category, as they are fiber containers made with cut, folded, and sewn plant materials. Similarly, we include sinkers made by wrapping birch bark around a pebble. These tools fit best in this class.

As so little is known about ancient twining techniques and twisted objects, we recognize just a few broad artifact types in this industry (Table 9.1). Each of these classes has been found in Kodiak sites (Figure 9.2). However, each general class likely represents a larger set of objects that have not been preserved.

Table 9.1. Alutiiq terms for fiber objects

English	Alutiiq	Comment
Bark-wrapped Sinker	Kicauteq ^m , Kitsuuteq ^c	
Basket	Inartaq ^m	Includes basket starts (performs)
Container	Yaasiiguuq ^c	
Cord / Line	IRafkuq ^m	
Mat	PiRaq ^m , Alliqaruq ^m	
Net	Kugyaq ^m , Kugyasiq ^m	
Worked Fibers		Of all material types

m = term in modern usage, c = term created by Elder Alutiiq speakers

Figure 9.2. Examples of fiber artifacts from Karluk One (AM193).





Alutiiq Technological Inventory

Artifact Class Summary Sheet

English Names **Alutiiq Names**

Industry Weaving **Activity** Fishing **Function**

Common Materials

LxWxD (cm)

Tradition Ocean Bay Kachemak Koniag Alutiiq

Miniature Yes No/Unknown **Example Sites Found**

Description

These are two piece artifacts. In the center there is a small, oblong, unmodified pebble (slate or greywacke). Around this pebble is wrapped a thin, cut piece of birch bark. The bark is twisted like a candy wrapper around the pebble, creating a tight twist against each end of the pebble and a flared end. Presumably, the sinker was tied to a line around the twisted area of the bark.

References

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Sinkers made of bark wrapped stones, Karluk One (AM193)

Alutiiq Technological Inventory

Artifact Class Summary Sheet

English Names	Basket		Alutiiq Names	Inartaq	
Industry	Weaving	Activity	Cooking/Storage	Function	collecting, cooking, storing
Common Materials	Spruce root, beach rye grass, baleen				
LxWxD (cm)					
Tradition	<input type="checkbox"/> Ocean Bay	<input type="checkbox"/> Kachemak	<input checked="" type="checkbox"/> Koniag	<input checked="" type="checkbox"/> Alutiiq	
Miniature	<input checked="" type="radio"/> Yes	Example Sites Found	Karluk One, Malina Creek		
	<input type="radio"/> No/Unknown				
Description	<p>This is a diverse class of objects, represented by a small number of archaeological finds. Often the type of basket is tied to the material used in its production, as described below.</p> <p>(1) Spruce Root: Tightly woven baskets of spruce root were the most common type of basketry recovered from the Karluk One site. These vessels range from very large collecting / cooking baskets to smaller baskets for storage and perhaps holding food (like a bowl). Most are round with set of concentric rings on the base—these maybe both reinforcing and symbolic of the Alutiiq universe. However, these is an unusual oval example from Karluk One. Some have braided handles.</p> <p>Fragments of spruce root basketry were common at the site and are often squares or rectangles of woven material that look like pieces of “Wheat Chex” cereal. We have also seen these in avocational collections, particularly as charred fragments. Worked fragments of spruce root are typically round on one side and flat on the other. The material often appears dark brown after being buried.</p> <p>It is interesting to note that spruce trees don't grow in the Karluk area, so the roots used to make these containers were collected / trader for from the northern Kodiak Archipelago or the Alaska mainland. Given the volume of spruce root weaving, this must have been a commonly moved material.</p> <p>(2) Grass: Grass basketry is less common the spruce root, probably due to differential preservation. However, a miniature grass basket from Karluk One has an open style weave, suggesting the use of these pieces for collecting things like roots, herbs, bark, feathers, etc. It has a braided rim. Grass strands are flat and thin, much more delicate than spruce root or baleen. The material often appear black after being buried.</p> <p>(3) Baleen: The remains of one very large baleen basket were found at Karluk One. This piece features uniform strips of baleen forming the vertical elements with well-spaced rows of twining holding them together. It has a braided rim. Baleen strands are grey, flat, and have a hairy appearance (little pieces of material fraying along the sides). Strips of baleen are denser than grass and may be brittle.</p>				
References	<p>Lee, M. 1981 Lee, M. 2006 Steffian et al. 2015</p>				
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BASKET



Left: Fragment of an open weave baleen basket from Karluk One.

Below: Fragment of spruce root basketry from Karluk One.



Bottom: Spruce root basket from Karluk One.



BASKET

Right: Grass basket start from
Karluk One.

Below: Miniature grass basket
from Karluk One.



Alutiiq Technological Inventory

Artifact Class Summary Sheet

English Names	Basket		Alutiiq Names	Inartaq
Industry	Weaving	Activity	Cooking/Storage	Function cooking, storing, sewing?
Common Materials	Birch bark body held together with spruce root stitching			
LxWxD (cm)				
Tradition	<input type="checkbox"/> Ocean Bay	<input type="checkbox"/> Kachemak	<input checked="" type="checkbox"/> Koniag	<input type="checkbox"/> Alutiiq
Miniature	<input type="radio"/> Yes	Example Sites Found	Karluk One	
	<input checked="" type="radio"/> No/Unknown			
Description	<p>These containers resemble those made by Athabascan peoples of Alaska's interior, and may be a late prehistoric trade item or introduction to the Kodiak region. They are made from thick sheets of birch bark. This is not the thin, papery, white material on the outer trunk of a tree, but the sturdy, light brown inner bark that is less platey. The bark is cut to shape, then folded and stitched with spruce root to retain its shape. Fragments of both round and rectangular containers are present in the Karluk One assemblage, although none are complete. Elder Lucille Davis suggested that a tri-fold rectangular example was a kakiwik (sewing bag).</p> <p>One distinctive characteristic of these containers is the treatment of their cut edges. A simple running stitch is common a small distance below the edge, and then the edge is finished with a whip stitch that covers the cut materials in a continuous set of wide spruce root stitches.</p> <p>We suspect that these containers are made of paper birch bark harvested on the mainland. However, drift logs could be a source of this material if the bark was in good shape when the log reached Kodiak. Black birch grows on Kodiak and could be a source of bark, although the trees tend to be smaller.</p>			
References	Steffian et al. 2015			
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CONTAINER

Folded and stitched birch bark containers from Karluk One. From top left: fragment of a round container, folding rectangular container, stitched edges of containers.





Alutiiq Technological Inventory

Artifact Class Summary Sheet

English Names	Cord / Line	Alutiiq Names	IRafkuq
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Industry	Weaving	Activity	Hunting	Function	Many
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Common Materials	Spruce root, grass, baleen
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LxWxD (cm)	
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Tradition Ocean Bay Kachemak Koniag Alutiiq

Miniature	<input type="radio"/> Yes	Example Sites Found	Karluk One
	<input checked="" type="radio"/> No/Unknown		

Description	<p>This is another broad category for different types of cord and line. Examples are rare in archaeological collections but a study of ethnographic assemblages could shed light on the variety and types of line used for different purposes and help to further classify archaeological examples.</p> <p>Examples from Karluk One include braided grass and spruce root, which might have been used for something like a basket handle, to a heavier baleen line plaited with a lanyard style stitch.</p> <p>Line is a very important part of many harvesting tools, from harpoon assemblages to deep sea fishing rigs to collecting baskets. I was also likely used for a wide variety of daily tasks - hanging food container inside houses, tying up boats, creating draw strings in clothing, etc.</p>
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References	Steffian et al. 2015
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CORD

Example of cordage from Karluk One





Alutiiq Technological Inventory

Artifact Class Summary Sheet

English Names	Mat	Alutiiq Names	PiRaq, Aliqaruaq
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Industry	Weaving	Activity	Cooking/Storage	Function	Beding
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Common Materials	Grass
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LxWxD (cm)	
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Tradition Ocean Bay Kachemak Koniag Alutiiq

Miniature	<input type="radio"/> Yes <input checked="" type="radio"/> No/Unknown	Example Sites Found	Uyak Site, Karluk One
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Description	<p>Woven mats were part of the common furnishings of Alutiiq houses. Woven from grass, mats served as bedding, door and wall coverings, household partitions, kneeling pads for kayaks, and wrapping for the dead. They were woven from dried and bleached beach rye grass and were sometimes embroidered with designs made of colored grasses or adorned with fabric, gut, or decorative attachments. Large mats took a great deal of time to make. Weavers stopped making these large, labor-intensive pieces in the late nineteenth century. Instead they focused on producing smaller baskets, which were highly prized by westerners and could be used as currency.</p> <p>There are no definitive mats in the Karluk One collection, however, two pieces of open weave twining may be fragments of mats.</p> <p>Hrdlicka describes fragments of grass mats from the Uyak site - with thick groups of parallel fibers held together by widely spaced row of stitches.</p>
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References	Steffian et al., 2015 Hrdlicka 1944:342
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Alutiiq Technological Inventory

Artifact Class Summary Sheet

English Names **Alutiiq Names**

Industry Weaving **Activity** Fishing **Function**

Common Materials

LxWxD (cm)

Tradition Ocean Bay Kachemak Koniag Alutiiq

Miniature Yes No/Unknown **Example Sites Found**

Description

A small fragment of tied net was recovered from the Karluk One site. It is made of fine strips of baleen tied in a diamond shaped pattern. Net gauges from the same site illustrated that craftsman made nets with a variety of hole sizes. The holes in the Karluk One example (see next page) are just 1 cm across, suggesting that this net could have been used for small fish or birds. Sea mammals were also harvested with nets set on the beach.

Based on the presence of net sinkers (notched pebbles) in sites after about 4500 BP, we suspect that nets were common tools used throughout the Kachemak tradition as well.

References

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NET

Net fragment of baleen from the Karluk One Site





Alutiiq Technological Inventory

Artifact Class Summary Sheet

English Names **Alutiiq Names**

Industry Weaving **Activity** Manufacturing **Function**

Common Materials

LxWxD (cm)

Tradition Ocean Bay Kachemak Koniag Alutiiq

Miniature Yes No/Unknown **Example Sites Found**

Description

This is a catch all category for fiber debitage - prepared or partially prepared materials that have not yet been twined, braided, sewn, etc.

As knowledge of Alutiiq manufacturing develops and archaeological evidence of fiber working accumulates, it may be possible to divide these materials into classes based on stage of manufacture and / or manufacturing technique (e.g., splitting, cutting).

References

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PREPARED FIBERS



Tied bundle of grass from Karluk One



From Top: strips of baleen, a tied bundle of baleen fibers, baleen fibers wrapped around a stick