

ANCHORAGE MUSEUM

Conservation Examination Report and Treatment Proposal



Accession #: 1978.052.001
Object: Chief's Necklace
Classification: Adornment, Beadwork

Artist/Maker: Once known.
Culture: Athabascan, Dena'ina.
Village: Tyonek.

Object Date: c. 1920 (attributed)
Medium: Dentalium, rawhide, Cornelian D'Aleppo (white heart) beads, sinew, woolen flannel
Dimensions: 79.1 x 14.6 x 1.2 cm (31 1/8 x 5 3/4 x 1/2 in.)

Reason for Treatment: Stabilization to facilitate collections access by community members.¹

Examined By: Daisy Diamond (Graduate Objects Conservation Intern, Anchorage Museum and Graduate Fellow Winterthur/University of Delaware Program in Art Conservation)

Consulted: **Monica Shah** (Deputy Director of Conservation & Collections, Anchorage Museum)
Stephanie Black (Conservator, Anchorage Museum)
Aaron Leggett (Senior Curator of Alaska History and Indigenous Cultures, Anchorage Museum; President of the Native Village of Eklutna)
Angie Wade (Culture & Historic Preservation Director, Nay'dini'aa Na' Kayax [Chickaloon Native Village])
Selena Ortega-Chiolero (Museum Specialist, Chickaloon Village Traditional Council [CVTC])

Proposal Date: July 10th, 2025

¹ This treatment was completed in tandem with the treatment of an additional dentalium necklace, 1978.035.002. Portions of the treatment report that are identical or highly similar include the "Significance and Cultural Context," "Materials and Manufacture," and "Appendix I: Consultations" sections.

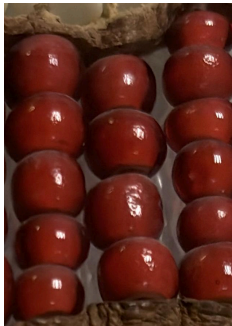
Description

This necklace is composed of a pendant with dentalium and large white heart beads (table 1) and red woolen fabric strips at the lowest edge suspended by a rawhide and beaded neck strap. The pendant (43 x 14.6 x 1.3 cm) has six horizontal rows of dentalium beads that alternate with horizontal rows of white heart glass beads on each of the twenty vertical cords. The 1.2 x 5-6 cm red woolen fabric at the lowest edge of the pendant has a twill weave and is sewn on one end to the same cordage as the rest of the beadwork. The beads are joined with sinew cordage and a 0.3 cm wide strip of hide is used as a spacer between rows of dentalium and white heart beads, except at the lowest edge.

The neck strap is a single piece of hide, so would not be adjustable. Beadwork is joined to the hide neck strap with knots and overlaid beaded elements, indicating the front-side of the necklace. The neck strap has four horizontal rows of dentalium beads that alternate with white heart glass beads of two different sizes on each of the five vertical cords. There is a single hole (<1 mm) pierced into the neck strap above the beaded elements on each side. The light brown hide at the back of the neck strap is composed of a corium layer with tightly knit fibers.

This hide is a medium-toned brown with a wrinkled texture and pronounced follicles rows on the intact grain layer. The species is potentially deer, elk, or moose due to the similarities in texture, follicle rows, and historical context; however, further investigation with peptide mass fingerprinting (PMF) could be pursued for more specific identification (Kaplan 2025, 8-9). In 2011, Kim Cullens Cobb noted the leather to be tanned and be sourced from cow or pig (2011).

Table 1. Overview of beads.

	Dentalium	Large white heart beads	Small white heart beads
Image			
Description	White-cream shell with horizontal striations, slight curvature, and one more narrow end. Oriented with the wider end pointing towards the bottom of the necklace.	Opaque white centered glass with red to red-orange opaque exterior. Select beads have red to red-orange translucent exteriors. Rounded with slight variance in shape.	Opaque white centered glass with red to red-orange translucent exterior. Select beads have red to red-orange opaque exteriors. Rounded with slight variance in shape.
Dimension	Approximately 3.75-5.5 x 0.5 x 0.5 cm. Slight variance. <0.5 mm wall thickness.	Approximately 0.3-0.5 cm in diameter and height. Slight variance.	Approximately 0.2-0.3 cm in diameter and height. Slight variance.

Significance and Cultural Context

Provenance and Source Community

Many communities feel tied to this particular necklace. There is a strong desire on the part of community members to interact with this dentalium necklace (as well as the necklace last stewarded by Shem Pete, 1978.035.002) (Monica Shah, personal communication, July 5th, 2025). There is significant known provenance history (table 2 and fig. 1).

Table 2. Provenance information.

Dates	Person/Steward	Tribal affiliation	Notes
<u>Date unknown.</u> Likely created after the late-1800s (refer to “Materials and Manufacture” for additional information).	<u>Artist once known.</u>	<u>Dena’ina or Ahtna (?).</u>	Made at Kroto Creek Susitna Station according to notes assembled by Dr. James Kari, linguist at the University of Alaska Fairbanks (Chief’s Necklace n.d.).
<u>? - ?</u>	<u>Big Chilligan</u> (Chilligan Philip) (_-1930)	Originally from Susitna, later chief of <u>Tyonek (Dena’ina)</u> (Kari, Fall, and Pete 2003, 25).	Leona Deck stated Big Chilligan was her “great, great, great grandfather” (Chief’s Necklace n.d.).
<u>? - 1963</u>	<u>Nickefor Alexan</u> (also spelled as Nickafor Alexan and Nickefor Alexander in records)	<u>Tyonek (Dena’ina)</u> (Chief’s Necklace n.d.)	Nickefor was the father of Leona Deck and one of the leaders of the village, lay priest in the Russian Orthodox Church, and an accomplished story teller (Bowers and Sieja 2014, Chief’s Necklace n.d.).
<u>1963</u>	<u>Leona Deck</u> (Maiden name: Bartell?)	<u>Tyonek (Dena’ina)</u> (Chief’s Necklace n.d.)	Leona Deck received this necklace after her father’s death in 1963 (Chief’s Necklace n.d.).
<u>1978 - present</u>	<u>Anchorage Museum</u>	N/A	Purchased in 1978 by the museum (Chief’s Necklace n.d.).

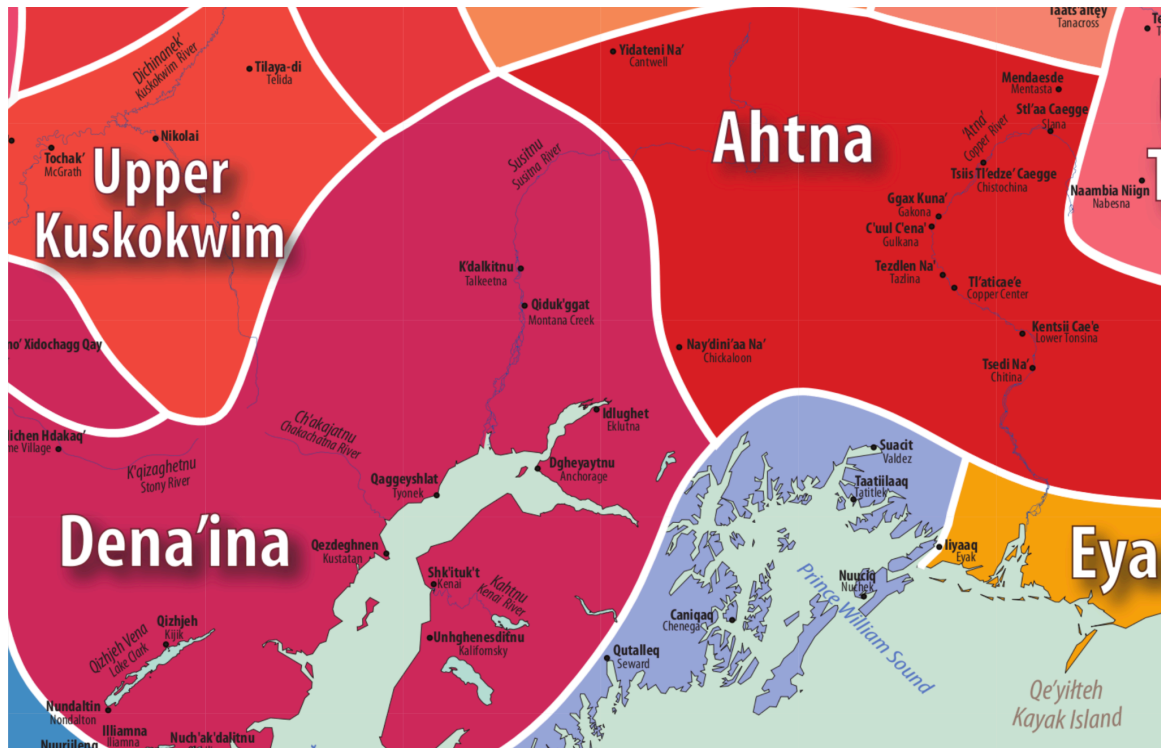


Figure 1. Map of the Indigenous people of Alaska. Of particular note is the village Tyonek and the Susitna River. Image source Krauss, et. al, 2011.

Dentalium necklaces

Most dentalium shells that were traded by Indigenous communities were gathered from the western deep coastal waters of Vancouver Island by the tribes of Nuuchah-nulth, including the Chicklisah, Kyuquot, and Ehattesaht communities (fig. 2). On the eastern coast of Vancouver island, the Kwakwaka'wakw of Quatsino Sound and Cape Scott, were also significant source communities for dentalium. These shells were traded, worn, and valued by many Indigenous communities in western North America as a source of currency and decorative wealth (Sherr Dubin 1999, 381, 423; Nuytten 1993, 110; Van Tassel 2020, 102; Binus 2003). In Southwestern Alaskan Indigenous communities, dentalium necklaces vary in design and are highly valued (figs. 3-4). Yurok men sometimes tattooed their arms with marks to measure dentalium and recount the myths of the Great Dentalium: Pelintsie (Nuytten 1993, 110; Keeling 1993, 48). These necklaces were restrung if the cordage became too loose or was otherwise damaged (Leggett, consultation, July 15th, 2025).



Figure 2. Map of dentalium trade. Image source Nuytten 1993, 111.



Figure 3. Athabaskan dentalium necklace. The owner of this strand was a wealthy man, as it included over 140 dentalium and 420 glass trade beads. Collected in Southeast Alaska, 1917. Length: 46 inches. Image source: Penn Museum (NA5774).



Figure 4. Tlingit, AK. Late 19th century. Dentalium shells; red, black, and blue or large carnelian colored cylindrical glass beads, and abalone-shell pendants. Penn Museum, NA10765. Image source: Sherr Dubin 1999, 423.

Materials and Manufacture

Dentalium shells

Dentalium are the elongated, hollow exterior protection of marine mollusks belonging to the *Scaphopoda* family (fig. 5). These shells are also known as “tusk” or “tooth” shells, and these animals live primarily burrowed in sand or mud (Van Tassel 2020, 102). Dentalium shells are primarily composed of calcium carbonate. Harvesters would use a long broom head with an extended handle to push into mollusk beds and ensnare the shell beds, all amidst sometimes intense swells (fig. 6-7) (Nuytten 1993, 110). Harvesters would then pry the animals from their shells with hardwood splinters, snap the tips, and string them to standard lengths known as *hy-kwa* in Chinook coastal trade circles. Dentalium shells adorn the jewelry, clothing, bags, and other belongings of many Indigenous communities (Nuytten 1993, 110).

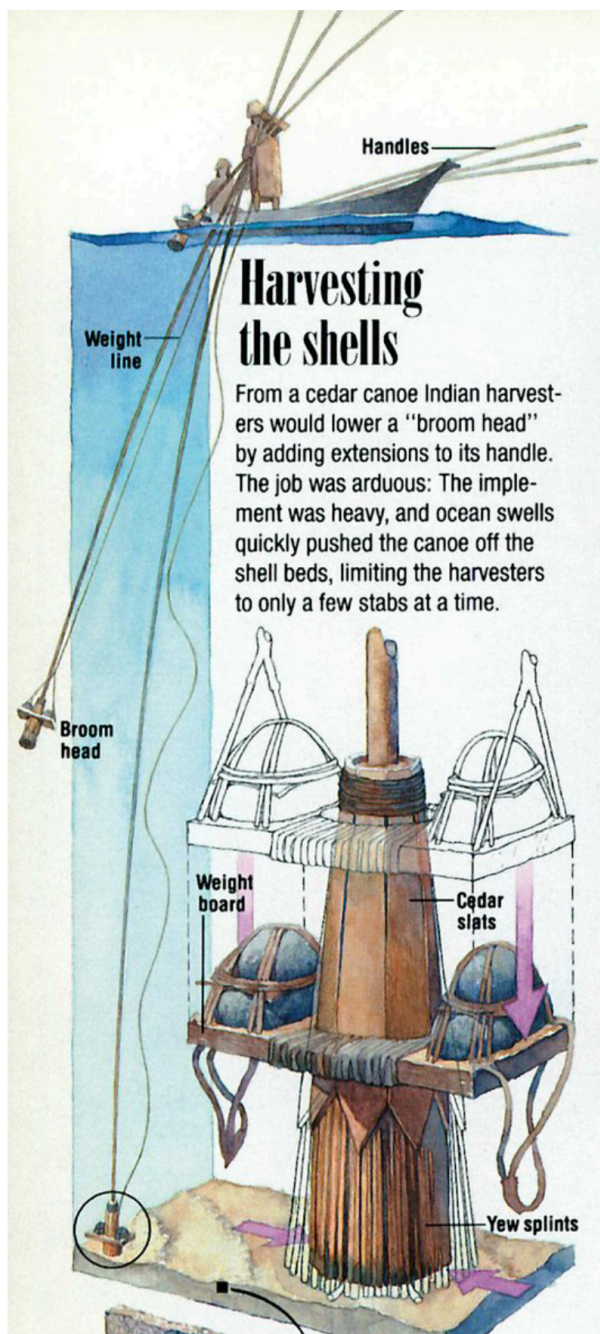


Figure 6. Dentalium hunting diagram. Image source Nuytten 1991, 114.

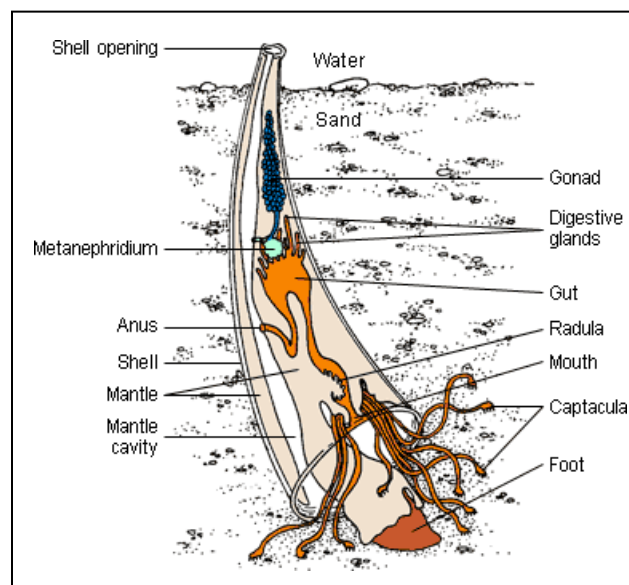


Figure 5. *Scaphodoa* anatomic diagram. Image source Ivy Livingstone, BIODIDAC.



Figure 7. Dentalium harvested in the broom splits, controlled from the boat 50 feet above. Documented as part of Phil Nuytten's research during the 1991 dentalium harvest in Kyuquot Sound, the first established native dentalium harvest in a century.

White heart beads

Glass beads were traded by Europeans with Indigenous communities in Alaska starting in the early- to mid-1800s. These beads were sourced from Venice, Czech Republic, China, and Central Asia. White heart beads, used in two different sizes to create 1978.052.001, are also known as *cornaline d'Alleppe* beads. These multilayered beads were originally made with opaque red over translucent green or other colors in Venice and introduced in Alaska during the period of 1874-1886, which may suggest the earliest date this necklace was made. Translucent red-over-white beads were produced as early as the 1820s-1830s, but were not traded with North Pacific communities until 1897-1902. The smaller white heart beads have a more translucent appearance, potentially moving the date of product to a more recent period (Francis 1988, 341). Prior to these trade routes, beads were made from natural materials such as stone, bone, ivory, shell, or teeth (Francis 1988, 341).

Condition

This necklace is aesthetically well-preserved, but structurally unstable for frequent handling. Primary condition concerns include minor pitting, crizzling, and cracking/breaks on select beads as well as overall surface dust (figs. 8-9).² At least since 2023, there have not been any additional breaks on dentalium beads. There is a missing string of glass beads and missing single dentalium bead on the neck strap, which is adjacent to an area of loose cordage (fig. 10). There are two areas of more prominent accretions of unknown origin (figs. 11-12). The wool shows no signs of color shift and is in good condition with minor fraying at the edges. This color stability is of significant note, since this necklace was previously displayed for over two decades.

There is variable staining of the dentalium, with some shells exhibiting darkness at one edge, dark material embedded in growth rings, or distinct absence of staining. The absence of staining could be due to natural variability, prior cleaning, or replacement.

There is an accession number written in black on the verso PR of the hide neck strap. A minor treatment was previously completed during a condition assessment: “the sinew threaded through the strand with the missing beads was stabilized; it was threaded through two hide strips and twisted back on itself” (Kim 2011).

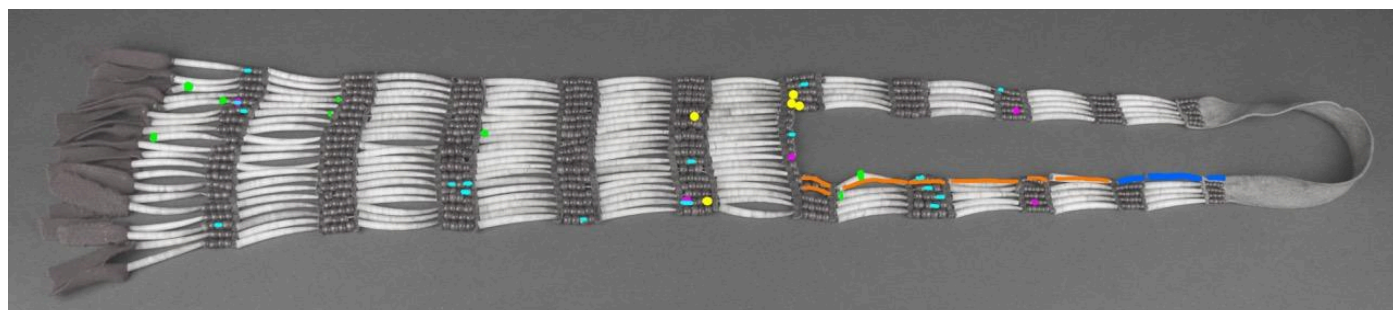


Figure 8. Condition diagram. Legend: **Breaks**, **Accretion**, **Pitting/Crizzling**, **Crack**, **Missing beads**, **Loose Cordage**.



Figure 9. Minor, stable pitting and surface dust. Bead noted in figure above on center PR of neck strap with a fuchsia dot. 25x magnification.

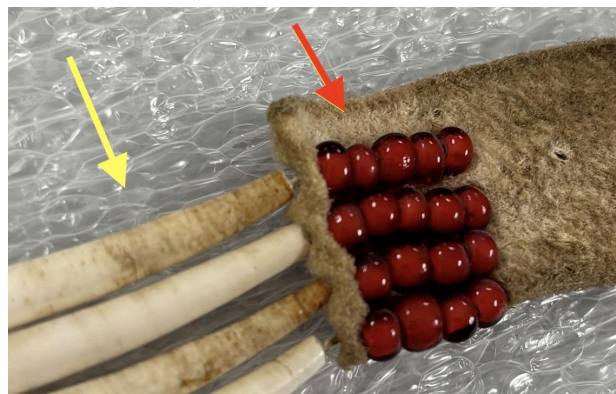


Figure 10. Missing small white heart bead strand (red arrow) and missing dentalium bead (yellow arrow). PL neck strap.

² Unstable glass beads appear broken, cracked, crusty, stick, finely crazed, discolored, or bleach the support material in contact with the bead (Stone 1987).



Figure 11. Accretion on neck strap large white heart bead. 10X magnification.



Figure 12. Accretion on center upper pendant red heart bead. 10X magnification.

Purpose of Treatment

The purpose of this treatment is to prevent the loss of beadwork and stabilize the necklace for handling to improve accessibility and connection with descendant communities. The role of consultations is of central importance to the development of this treatment, as a method to incorporate Indigenous knowledge³ and values into the treatment.

Treatment Proposal

1. Carry out pre-treatment research, examination, and photo documentation (*4 hours, completed*).
2. Conduct consultations with Aaron Leggett, Angie Wade, and Selena Ortega-Chiolero to collaboratively discuss the significance of this necklace, desired extent of treatment, and potential treatment approaches. Write a summary of the conversations and decision-making process (*4 hours*).
3. Dry surface clean both sides of the necklace (*est. 1 hour*).
 - Overall dry surface clean with a soft-bristled brush, cosmetic sponges, and soot sponges. Cleaning will be minimal and embedded dirt will be left in place.
 - Vacuum textile components with a low-speed HEPA filtered vacuum and nozzle cover.
4. Evaluate pH of beads. If elevated, wet clean with localized, swab-applied 1:1 water and ethanol to slow glass deterioration (*est. 1-3 hours*).
5. Stabilize loose cordage and re-establish tension by gently tightening strands and attaching them in place with a beading needle and imitation sinew or toned conservation-grade thread, as needed (*est. 2 hours*).
6. Carry out post-treatment photo documentation and write the treatment report (*est. 2 hours*).

Total estimated time: 14-17 hours

Daisy Diamond

Date: July 21, 2025

³ As stated by Paige Van Tassel, Indigenous emerging conservator of Anishinaabe (Ojibwe) and Nêhiyaw (Cree) descent, "Indigenous ways of knowing and learning include story sharing, community links, land links, nonlinear pathways, learning maps, and deconstruction and reconstruction of established methodologies, all of which vary among tribal nations yet are important to integrate when dealing with cultural heritage" (2020, 101-102).

Monica Shah [email approval] **Date:** July 21, 2025

Stephanie Black [verbal approval] **Date:** July 21, 2025

Treatment Report

1. Carried out pre-treatment research, examination, and photo documentation (4 hours).
2. Conducted community consultations with Aaron Leggett, Angie Wade, and Selena Ortega-Chiolero to collaboratively discuss the significance of this necklace, desired extent of treatment, and potential treatment approaches. For summaries of conversations and additional information about the consultation process, refer to “Appendix I: Consultations” (4 hours).
3. Completed surface cleaning (1 hour).
 - Cleaned both sides of the necklace with cosmetic sponges after using an air puffer tool to remove non-embedded dust and dirt. Dust and dirt removed was minor, with the exception of the flesh side of the leather spacers on the back of the necklace. From these locations, moderate dust and dirt was reduced.
 - Vacuumed textile components with a low-speed HEPA filtered vacuum and nozzle cover.
4. Evaluated the pH of beads. Completed localized, swab-applied cleaning with 1:1 water and ethanol to slow glass deterioration (1.5 hours).
 - Testing indicated an elevated pH on large white heart beads with visible evidence of glass bead deterioration and non-elevated pH on the small white heart beads (fig. 13, table 3).⁴ A high pH could indicate chemical glass deterioration due to flux migration or the glass erosion that exposes fluxes. A high pH could also be indicative of basic surface deposits unrelated to chemical deterioration of glass. Additionally, chemical deterioration can occur without elevated pH. The immediate surface of the glass beads may contain glass migration products, which are still an integral part of the bead.

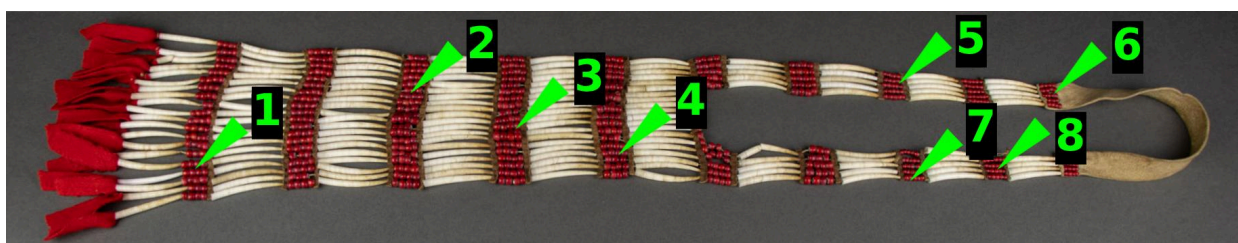


Figure 13. pH testing locations.

Table 3. pH testing results. Basic pH indicates beads with possible evidence of glass deterioration.

Bead category	Location	pH	Bead category	Location	pH
Large white heart beads	1	< 7.9	Small white heart beads	5	< 7.9
	2	9.1-9.4		6	< 7.9
	3	9.1-9.4		7	< 7.9
	4	< 7.9		8	< 7.9

⁴ pH tests conducted by holding a dampened pH-Fix 7.9-9.8 strips with reverse osmosis water in contact with select beads for 10 seconds and then comparing the color to the provided color key. pH indicator strips distributed by CTL Scientific Supply Corporation, NY.

- Following testing, completed localized wet surface cleaning with 1:1 water and ethanol applied with a microswab dried slightly on blotter paper to large white heart beads with visible evidence of deterioration (figs. 14-16). Ensured excess solvent did not reach the cordage or leather. This will potentially reduce the risk of cyclical decay.



Figure 14. Areas of localized wet cleaning indicated with white arrows on to large white heart beads.



Figure 15. Lower PL neck strap, following dry cleaning and before wet cleaning.



Figure 16. Lower PL neck strap, following dry cleaning and wet cleaning.

5. Stabilized loose cordage and re-established tension. Gently unwrapped previously stabilized sinew and tightened the strand. This resulted in additional length of sinew cordage (fig. 17), which was threaded through existing holes with a beading needle and secured to a Golden Acrylic toned Dual Duty Plus cotton thread with 15% Paraloid B-72 in 1:1 acetone and ethanol and knots (fig. 18) (1 hour).



Figure 17. Sinew cordage after re-establishing



tension. Upper PL neck strap.

Figure 18. Sinew cordage after stabilization.
Upper PL neck strap.

- Actual and imitation sinew were decided against as treatment materials due to practical limitations. In the short time frame, actual sinew was not able to be sourced. Imitation sinew had a waxy coating which could have caused localized staining or deposit issues. Additionally, the imitation sinew had a bright white-yellow color and did not retain conservation paints very well.

6. Carried out post-treatment photo documentation and finalized the treatment report (2 hours).

Total treatment time: 13.5 hours

Treatment complete: July 27th, 2025

Storage, Exhibition, and Handling recommendations

The progression of glass deterioration of the large white heart beads should be monitored visually by evaluating cracks, crumbling, or losses. Periodic evaluation of pH could indicate when wet cleaning would be beneficial, as time and resources allow. If crumbling occurs, consolidation may be needed. High and low pH can accelerate the deterioration of unstable glass (Stone 1987). The necklace is stable for handling, though careful attention should be applied to the upper PL neckline, which was stabilized in this treatment.

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Further Reading

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⁵ Accessible in the Anchorage Museum Non-Circulating Collection (E98.C8A53).

Appendix I: Consultations

Purpose and Methodology

Conversations with Aaron Leggett, Angie Wade, and Selena Ortega-Chiolero were arranged by Monica Shah to ground the care of these necklaces in Dena'ina and Ahtna perspectives. Aaron Leggett is a Dena'ina knowledge-bearer, Senior Curator of Alaska History and Indigenous Cultures at the Anchorage Museum, and President of the Native Village of Eklutna. Angie Wade is Ahtna and has a rich background in Ahtna culture, archaeology, and storytelling and is currently the Culture & Historic Preservation Director at *Nay'dini'aa Na' Kayax* (Chickaloon Native Village). Selena Ortega-Chiolero has Indigenous roots in the Tarahumara community of the Barranca de Cobre in Chihuahua, Mexico. Selena is a cultural worker who supports the Chickaloon Tribe's initiatives in cultural site preservation, cultural tourism, and repatriation as the Museum Specialist for the Chickaloon Village Traditional Council [CVTC]).

The goal of these consultations was to share about the condition and material observations of the necklaces while connecting them with associated values, stories, and community histories. This combination of goals held the potential to appropriately and collaboratively approach the preservation of these necklaces. Through open-ended exchanges and questions, these conversations provided space to discuss treatment approaches, treatment materials, and the long-term accessibility of these necklaces for descendant communities. Select questions (paraphrased here) include the following:

- What do you see when you look at both of these necklaces?
- Could you share about the significance of these patterns and colors?
- Who might be most interested in accessing these necklaces in the future?
- Could you see there being circumstances where someone would wear these necklaces again?
- Does the current condition affect your view of the necklaces, their effects on the viewer, or their meaning?
- What do you think about the decision to clean and the extent of cleaning that could be pursued?
- Do you think missing beads should be replaced?
- Should loose cordage be stabilized? Does this vary for the distinct areas of loose cordage?
- What kinds of materials should be used for stabilization treatment?
- Is there anything else you'd like to share about these necklaces?

Conversations were intentionally not recorded to respect the privacy of any stories that might arise and to strive to avoid an extractive research dynamic. The conversations situated these necklaces in a network of stories and social relationships. In addition, these conversations guided treatment protocol. This appendix provides an overview of the conversations and decision-making processes that inform this conservation treatment.

Consultations with Aaron Leggett

Meetings with Aaron Leggett took place on July 15th and 17th, 2025 with Monica Shah, Stephanie Black, and myself present.

We discussed the power of dentalium necklaces. Aaron shared that these two necklaces are directly connected to leaders, status, and authority within Dena'ina tradition. Necklaces of similar design were created and used in Athabascan cultural traditions. These necklaces were often worn by a *qeshqa*, which translates to a “rich man” and refers to leaders rich in wisdom and knowledge. Aaron emphasized how important these necklaces are, describing them as a “symbol and ultimate expression of our people.” These necklaces have been used as part of the Alaska Native Heritage Center symbol and a recreation is present on the second floor of the Dena'ina Civic and Convention Center in Anchorage. Aaron shared that many Dena'ina belongings are not still in Alaska, so the belongings that are here take on even greater significance. The loss of culture, theft of land, and trauma inflicted on the Dena'ina people – particularly in the coastal and Cook Inlet areas – was forcibly inflicted during the gold rush, establishment of the railroad industries, and active Russian

colonization. Also, we discussed how Chickaloon acts as a gateway or connection village between the Ahtna and Dena'ina peoples.

We discussed materials and design elements. Red is a traditional color of the region, since red ochre and iron oxide were used for many years before Europeans arrived in Alaska. Red may possibly have had matrilineal significance as well. I learned from Aaron about an Ahtna clan, *Tsisyu* which translates to "Ochre Paint People." Also, dentalium beads are important symbols of trade and connection between Indigenous groups more broadly. Aaron shared that the sinew would be threaded through the hide by poking a hole with an awl or bird bone needle to then allow the sinew to be pushed through.

Aaron noted the particular power imbued in 1978.035.002, emphasizing that its provenance across Dena'ina leaders is uniquely well-documented and detailed. It was helpful to hear more context about the provenance lineage and the connections between the different leaders. Aaron shared stories about Shem Pete wearing and performing with these necklaces after they were donated, and that Shem Pete was glad that they would be kept safe at the museum. We had an interesting conversation about the difference between this sentiment and one of "pride." Aaron also shared that the single row of red beads at the top of the pendant was somewhat unusual on necklaces like these.

While talking about the condition, Aaron indicated that the neck strap of 1978.035.002 had stretched over time due to the weight of the beads. He noted that 1978.052.001 was still likely worn but the thicker hide on the neck strap did not stretch. We discussed the significance of the tied neck strap of 35.002 (adjustable? ripped?) in comparison to the single piece of hide on the neck strap of 52.001. We also discussed the historical restringing and maintenance that could have been performed on dentalium necklaces (i.e. the two different types of cord and felt used in 1978.035.002). Dentalium necklaces were very regularly maintained and cared for. Aaron noticed that some of the dentalium shells are brighter, but this could be due to natural variation, replacement by source communities, or historical cleaning.

While discussing the potential treatment, Aaron shared that the priority is to ensure that nothing more is lost. He agreed that gentle surface cleaning was appropriate and that the staining of the dentalium shells is consistent with the object. We collectively decided which specific areas on both necklaces would receive treatment to re-introduce tension and prevent the further loss of beadwork. I was especially curious to hear Aaron's perspective on mending the dentalium shells, since they weren't actively unstable or at risk of loss... He felt that the breaks were part of the history of the shell and did not need to be mended or replaced. Informed by conversations during the consultation with Angie and Selena, we asked Aaron about his perspective of using locally sourced sinew, imitation sinew, or conservation-grade threads for stitch stabilization. As this wasn't an object used by a shaman or in highly sacred contexts, he felt that conservation-grade thread was sufficient. Aaron also shared that he was open to replacement if it improved stabilization, but that if it was solely aesthetic, it was not necessary or desired.

While discussing the extent of treatment, the history of the necklaces and their future anticipated use was central to our conversation. Aaron shared that the necklaces would likely not be worn again, as there are no traditional leaders today for whom wearing them would necessarily be appropriate. This was incredibly helpful information to know for the conservation treatment, as treatment could focus on stabilization for viewing and study rather than active use. And since these necklaces are some of the most frequently viewed items in the collection, stabilization for viewing is especially desirable. Indigenous makers may also recreate or study the material processes of these necklaces in the future. We also discussed how these are not going to be viewed from 6 feet (a standard conservation metric for aesthetic compensation), but rather up close and even under a microscope. This also supported a minimally interventive treatment approach.

Aaron restated how special it was to spend time with these necklaces up close.

Consultation with Angie Wade and Selena Ortega-Chiolero

The meeting with Angie and Selena took place on July 16th, 2025 with Monica Shah, Stephanie Black, and myself present.

We discussed the provenance information for 1978.035.002 to clarify the connections this necklace had with Chickaloon. Susitna Station is a newer place that appears within the Dena'ina language area, but Susitna Lake is far to the east of the Talkeetnas within the Ahtna area, near Chickaloon. Angie emphasized that these villages and communities are extremely connected, and that there have been Chilligans who lived in Chickaloon.

Angie shared that the red heart bead was the first one that she learned about. Her enthusiasm and attention to the intricacies of the beadwork was immediately clear. She shared that there are stories of dentalium existing in freshwater, contrary to what mainstream marine science declares, and that there is a lake in Alaska known as "Dentalium Lake." We talked about the variance in the black, brown, and blue beads of the neck strap on 1978.035.002. Angie said this could be related to working in low light! She also shared that bead order is extremely important in elder belief systems, and this should not be disrupted.

We spoke about how the person who wore these necklaces would have carried a great duty. Each time these necklaces were potlached to someone, they earned the responsibility to wear and care for the necklace. We talked about how Shem Pete temporarily gave the necklace to Ned for safekeeping and how they both decided the Anchorage Museum was the best home. This reflects the great responsibility of the museum to care for and maintain connections with this necklace. The museum was trusted to help continue this tradition at a time when shared stewardship with a collecting institution was a much more uncommon practice. Angie agreed that people should not wear these necklaces without permission from tribe leaders.

Angie emphasized how important it is to have honor, good intentions, and a good heart while doing any preservation work for these necklaces. Selena shared that if you can't embody those qualities and handle the responsibility of these necklaces, take time to become grounded. It is essential to respect those who made them and the spiritual owners of these necklaces across time. We also talked about the personhood embodied particularly in regalia and jewelry.

Angie and Selena both saw the condition of the necklaces as related to a snapshot in time. The "weirdness" and "anomalies" speak of the past. While discussing the treatment, Selena discussed the value of aligning care with natural materials. She saw the use of organic materials to be very respectful and appropriate, providing an example of using a quill to clean a moose hide. We talked about how locally sourced sinew would be a compatible treatment material that would add integrity to the piece and convey respect to the original makers and owners of the necklace. I asked if it would be appropriate if someone outside of Dena'ina or Ahtna culture fulfills this role, and they felt requiring genetic relation was "in the weeds." To distinguish this as a conservation repair, they recommended explicit written and photographic documentation. We talked about the nuances of this decision. Artificial sinew was seen as a potential bridge material between traditional repair practices and conservation treatment approaches. We also talked about housing and the sustainability and practical challenges that unnecessarily building housing enclosures can create.

Reflections

I was particularly struck by this approach towards consultations, focusing more on creating space for a conversation about "what stories and memories do these objects generate?" rather than following a formal, rigid questioning approach that has the potential to create hierarchy and extractive dynamics. These stories and memories are all connected and extremely important. I hope to continue developing this practice of discerning how stories are connected to philosophies of care that inform conservation decisions and holistic approaches to heritage preservation.

I had many inter-related takeaways about the approach to consultations. I learned that open-ended short questions are extremely important. While trying to be transparent about what I've learned so far, I found it is very easy to ask a leading

question. For example, “what do you think about cleaning?” led to a more nuanced and fruitful discussion about values rather than phrasing like: “we were thinking of doing gentle surface cleaning with X, Y, and Z to reduce surface dust. What do you think of this?” I also found that having books and photos nearby that were associated with the necklaces (*Shem Pete’s Alaska* and *Dena’inaq’ Huch’ulyeshi*) sparked further conversation and allowed us to discuss reference materials. I also appreciated that Monica opened these consultations by explicitly naming that this was partially a learning experience for me, and that we wanted to create space for feedback in real time. This created opportunities for corrections and, I hope, encouraged an honest environment to exchange information and collaborate. It is also very important to discuss consultation documentation together and provide sufficient time for review prior to finalization.

My view of provenance has definitely expanded from the narrow museum framework of relating to legitimacy of monetary value. Provenance can also be about lineage, history, and stories. An oral tradition. When belongings are potlached from someone, they relinquish ownership. In the museum environment, these prior owners and their cultural descendants are still seen as stakeholders. These consultations have been meaningful opportunities for me to unlearn some of the western views of tribes as fixed and geographically bounded. This doesn’t acknowledge border areas and intermarriage that strengthens ties between communities.

I was also thinking about the importance of follow up, sharing findings, and having collaborative relationships unfold over long periods of time and multiple meetings. I appreciated the opportunity to meet with Aaron twice. Because of this, I was able to synthesize ideas from our prior conversation as well as my conversation with Angie and Selena. We were able to wrap up conversations thoroughly and ended with what I felt was a very collaboratively established conservation treatment plan.

Appendix II: Before Treatment Photo Documentation

Figs II.1 through II.2 were documented with a Canon EOS 80D DSLR camera (100 ISO, 1/60s, f/4). The light source was the Interfit F5 Two-Head Continuous Fluorescent Lighting Kit with two five-light lamp heads, ten 32W fluorescent 5600K daylight lamps, and two softboxes. Post-capture processing included cropping and white balance adjustment within Adobe Camera Raw.

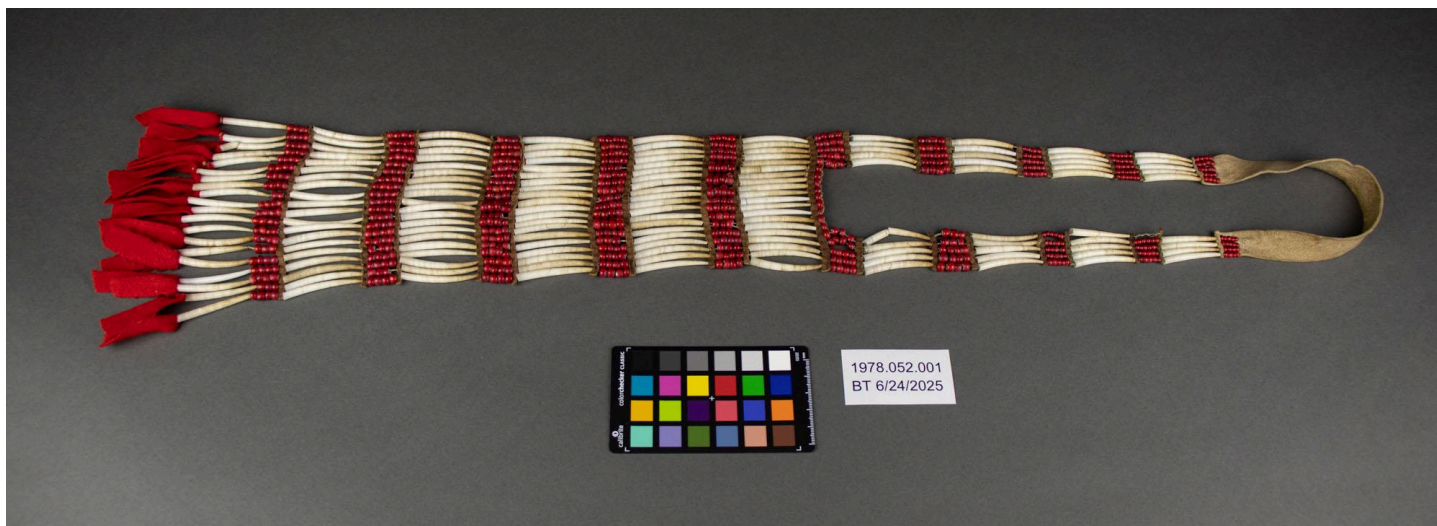


Figure II.1. Before treatment photo documentation, overall front.



Figure II.2. Before treatment photo documentation, overall back.

Appendix III: After Treatment Photo Documentation

Figs II.1 and II.2 were documented with a Canon EOS 80D DSLR camera (100 ISO, 1/60s, f/4). The light source was the Interfit F5 Two-Head Continuous Fluorescent Lighting Kit with two five-light lamp heads, ten 32W fluorescent 5600K daylight lamps, and two softboxes. Post-capture processing included cropping and minimal white balance adjustment within Adobe Camera Raw.



Figure III.1. After treatment photo documentation, overall front.

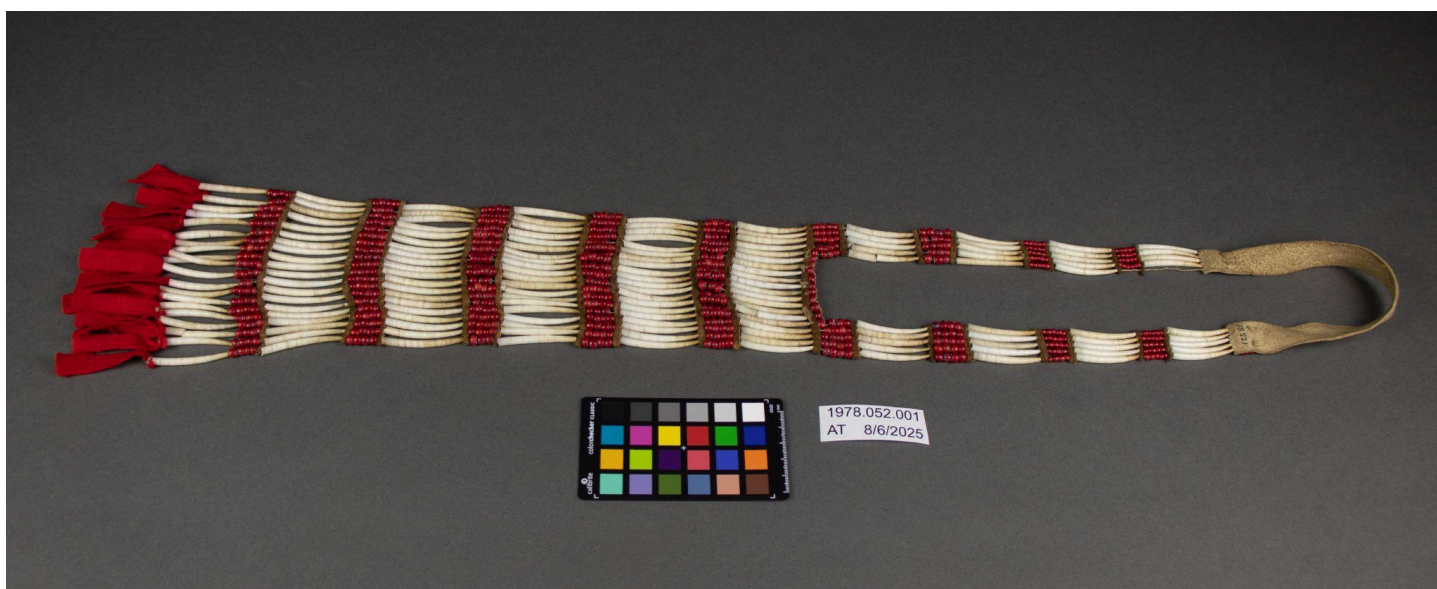


Figure III.2. After treatment photo documentation, overall back.