APPENDIX 12

The *Neva*:
Legend, History and Archaeology of
a Russian Shipwreck in Southeast Alaska

Curriculum
Grades 8-12

Evguenia Anichtchenko, PhD

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Cover page image: the *Neva* in Kodiak Harbor, from Urey Lisiansky *A voyage round the world: in the years 1803, 4, 5, & 6; performed, by Order of His Imperial Majesty, Alexander the First, Emperor of Russia, in the Ship NEVA*. London 1814.

INTRODUCTION

The lessons are designed for grades eight to twelve. Funding for the curriculum was provided by the National Science Foundation Award #PLR-1330939 within the context of the project entitled "American-Russian Investigation of the *Neva* Wreck and Survivor Camp: 200th Anniversary Expedition, Sitka, Alaska."Lessons and activities were developed by Evguenia (Jenya) Anichtchenko, PhD (Curator of Exhibits and Collections, Sitka Histroical Society), with support and assistance of Hal Spackman (Executive Director, Sitka Historical Society). The content is based on work of a team of professionals, which was led by the project director Dave McMahan, and included Timothy L. Dilliplane (PhD), Evguenia (Jenya) Anichtchenko (PhD), Daniel Thompson, Artur Kharinsky (PhD), Yury Likhin (PhD), Sean Adams, John Pollack, Gleb Mikhailov, Chuck Carrig, Zlata Lund, Megan Partlow (PhD), Peter Northover (PhD) and Korry Cooper (PhD). TedEd shipwreck animation lessons were designed by Dr. Peter Campbell.

Curriculum Objectives:

- Enrich students' interest in Alaska's history by introducing them to maritime history and archaeology of the state.
- Increase the awareness of Alaska's maritime cultural heritage
- Develop an understanding of interdisciplinary and multi-cultural nature of Alaska's maritime cultural heritage

Curriculum Framework

This curriculum consists of five lessons that can be used as a unit in Alaska Studies or U.S. history classes or as a set of individual lessons and assignments for substitute teaching. Lesson themes are reinforced with activities and worksheets expanding the content. The Curriculum can be used as one unit, or be broken into two parts: 1. general introduction to maritime history and archaeology of Alaska (Lessons 1, 2 and 5); and 2. History and archaeology of the Russian-American Company ship *Neva* (Lessons 3 and 4)

Time Needed

Each lesson can be completed in one class period of 55 minutes

Assessment methods

- Oral presentations and discussions
- Worksheets
- Homework projects
- Research summaries

CURRICULUM OVERVEW AND STANDARDS

LESSONS	LESSON TOPIC	KEY WORDS AND TERMS	STATE STANDARDS
1: Boats and Ships in Alaska's History	Importance of watercraft in the history of Alaska	Maritime history, maritime cultural heritage, kayak, umiaq, dugout canoe, sailing ship, steamship, Coast Guard Cutter	History: A1, B1b; B2
2: Shipwrecks!	Significance of shipwrecks as historic events and cultural heritage sites	Shipwreck, cultural heritage site, cultural preservation	History: A4, B1b, B4, D2, Science: SB, SE
3: Shaman's Curse or Navigational Error: Shipwreck of the *Neva*	History of the Russian-American Company ship *Neva* in the context of social and cultural history of Alaska; cultural diversity of historic record	*Promyshlennik,* round-the-world voyages, Tlingit, shamanism, survival.	History: A5, B3, C4 Culture: E 1-4 Science: SF, SF2, SF 3
4: Searching for the *Neva*	Archaeological excavation of the Neva shipwreck and survival camp; methods and process of archaeological inquiry	Underwater archaeology, magnetometer, side scan sonar, stratigraphy, zooarchaeology, faunal record/assembly/sample, artifacts, spatial context, stratigraphy, ship sheathing, trunnion, gunflint	History: A4, A9, C2, C3, D6 Science: SA, SA1, SA2, SA3, SE2, SF 3
5:Finders/Keepers. Who do Things in the Ocean Belong to?	Legal, ethical and cultural issues of underwater cultural heritage preservation	Cultural ownership, traditional use	History: C1, D3 Science: SF 1-3

LESSON ONE: BOATS AND SHIPS IN ALASKA'S HISTORY

Did you know that Alaska has a coast line that is greater than the coast of the rest of the United States? With that much access to the ocean, plus thousands of rivers and lakes, it is not surprising that boats and ships played an important role in the history of the state. The earliest evidence of boat use in Alaska goes back to 9,000 years ago. One of the newer theories of initial colonization of North America even suggests that first people traveling from Siberia east to North America, may not have walked across the Bering Land Bridge, but moved along its coast in their boats. This would have made transportation easier, and would have provided access to maritime resources, such as fish, marine mammals, and shellfish.

Alaska's coastline in comparison with the coastline of the rest of the United States, National Oceanic and Atmospheric Administration (NOAA)

Before the first Russian and European explorers came to this part of the world, all Alaska Native peoples had their own watercraft. In Southeast Alaska, Tlingit, Haida and Tsimshian nations made mighty canoes that reportedly were capable of crossing the Pacific Ocean all the way to Hawaii. In Central Alaska, Athabascan Indians crafted light and portable birch bark boats. Unangan, Chugach, Yup'ik and Inupiaq people of northern Alaska fashioned watercraft

with marine mammal skins and driftwood and used them to hunt sea otters, seals, walrus and even whales. Centuries ago, Alaska Natives crossed the Bering Strait in their watercrafts to trade and war with indigenous peoples of Siberia, and this is how the first information about Alaska reached Russians. Traditional indigenous boats are still in use in some parts of Alaska. Inupiaq hunters of Point Hope and Barrow are using skin boats to hunt whales, the largest animals on our planet.

The first European ships began sailing Alaskan waters in the eighteenth century. These were the ships of explorers who were looking for an Arctic route from Europe to China known as the Northwest Passage. Later, Russian, European and American ships brought traders and settlers seeking to take advantage of Alaska's rich natural resources. Under Russian rule, Alaska became the site of the first shipyard on the entire Pacific coast of North America. In the second half of the 19th century, hundreds of whaling ships plundered the waters of the Chukchee Sea in search of whales.

After Alaska was purchased by the United States and up until the advance of aviation, ships continued playing the most important role in supplying, protecting, and connecting Alaska with the rest of the nation and the world. Steamships brought gold rush miners to the Yukon and Nome. Cutters of the U.S. Revenue Service (later reorganized as the U.S. Coast Guard) patrolled national waters and naval vessels stood guard during the World War II. Today, boats and ships continue serving Alaska, providing for two main sources of the state's income – tourism and commercial fishing.

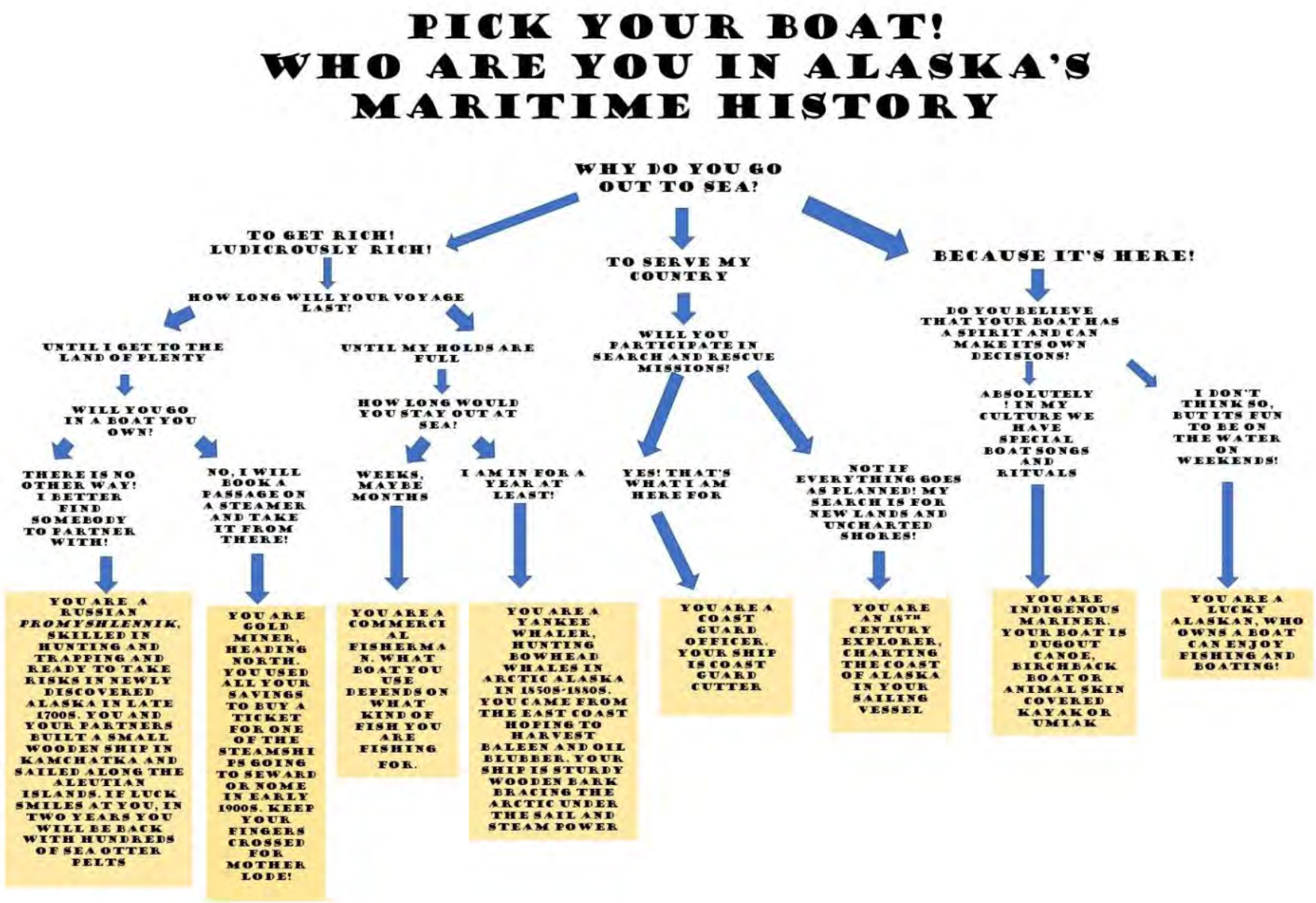
"Underwater people"

When Sugpiaq and Athabascan people first encountered European mariners, they called them "underwater people." For them it looked as if ships emerged from under the waves.

In August of 1763 the one-masted ship of Russian trader Stepan Glotoff called at Alitak Bay on Kodiak Island in South-central Alaska. For Glotoff this was just yet another stop on his fur-gathering tour along the Aleutian chain, but for local indigenous people the strangers and their ship were a new sight. Half a century after this event, local resident Arsenti Aminak recalled:

"When we saw the ship at a distance we thought it was an immense whale, but soon discovered that it was another unknown monster of which we were afraid, and the smell of which made us sick. The people on the ship had buttons on their clothes, and at first we thought they might be octopai, but when we saw them put fire into their mouth and blow out smoke we knew they must be devils (Bancroft, History of Alaska, 1960, p. 144)."

Worksheet 1.1.Pick Your Boat! Who are you in Alaska's Maritime History?
Follow the questions below to find our where do you fit in Alaska's Maritime History.
Record Your Voyage in the Quest Log



Worksheet 1.1.

Quest Log

Use library and on-line resources to answer the questions below

Who I am in Alaska's maritime history?:_____

My time period is:_____

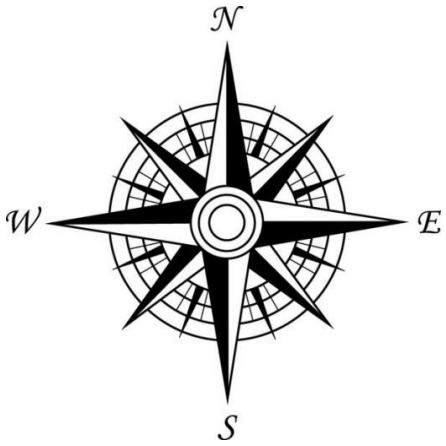
My vessel type is:_____

Vessel hull material:_____

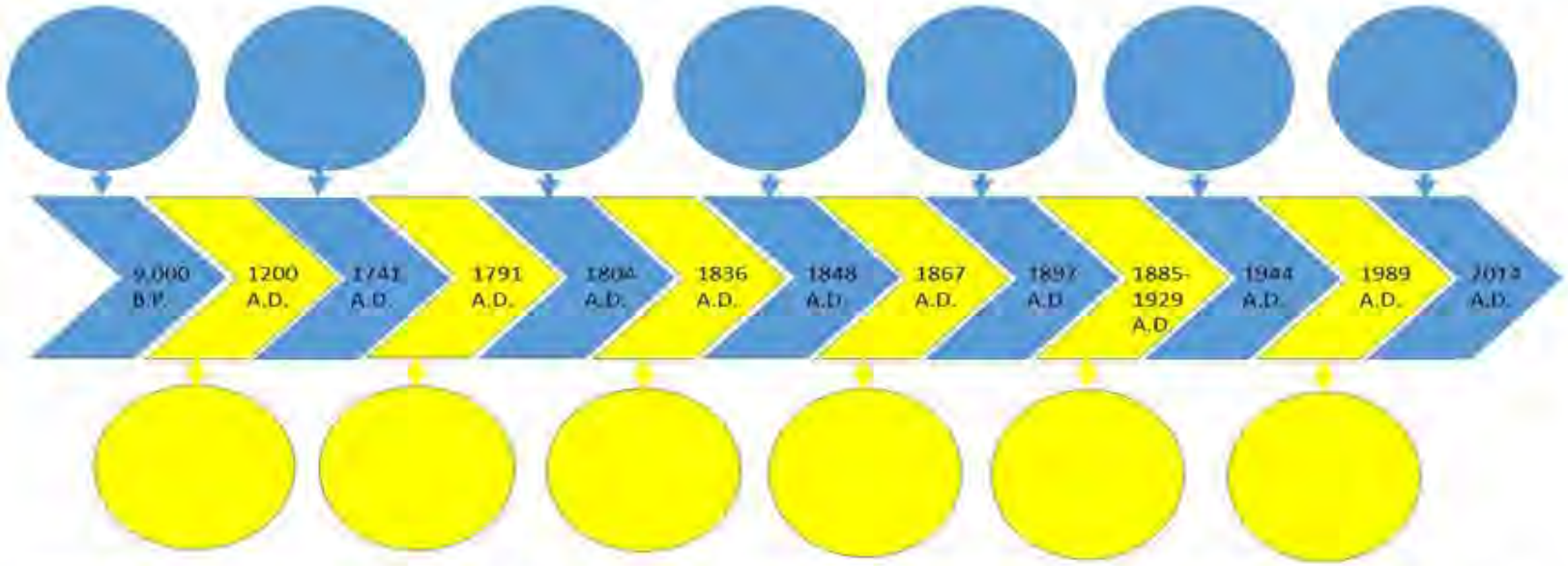
Vessel power mode (paddle/sail/steam/electric/nuclear):_____

Draw/insert image of your vessel:

Describe your recent voyage:

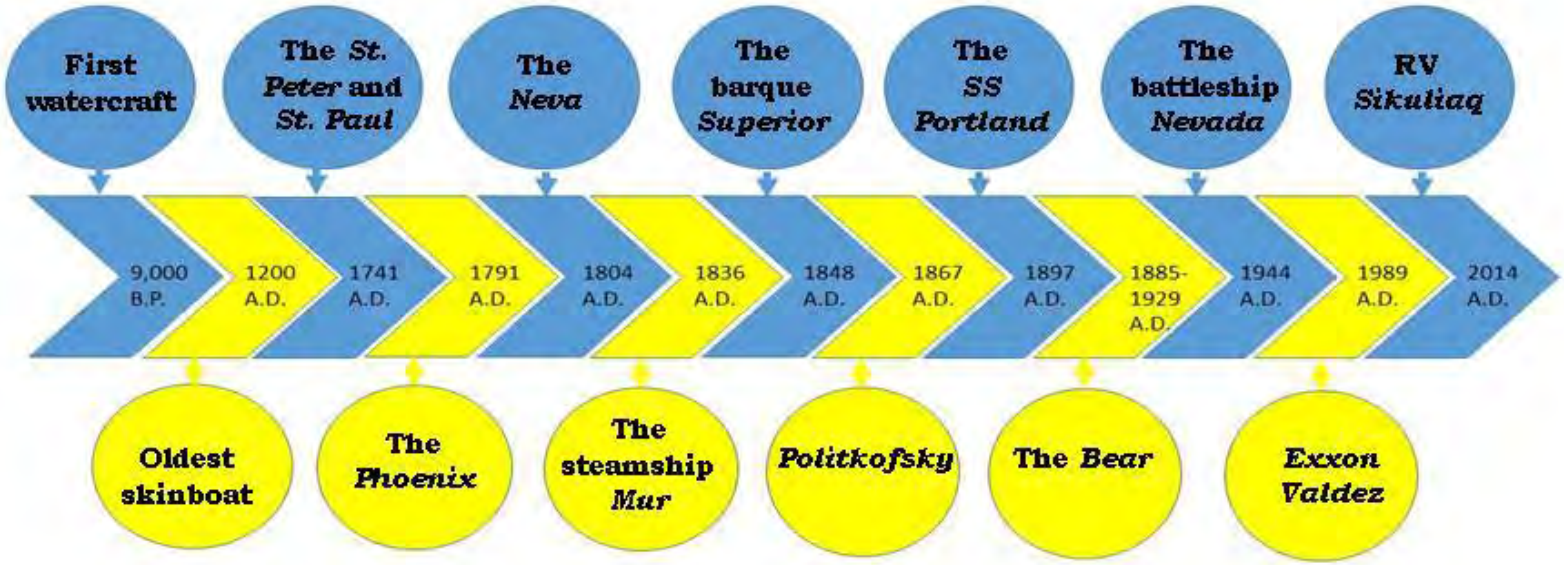


Worksheet 1.2 Ships and Boats in Alaska's History timeline.



- **First watercraft:** the earliest evidence of people using boats in Alaska
- **The *Exxon Valdez* oil tanker** strikes Bligh Reef in Prince William Soundand spills 10.8 million US gallons of crude oil, which impacted 1,300 miles of coastline. It is considered to be one of the worst human-caused environmental disasters
- **The *SS Portland*** delivers the first Alaskan gold to Seattle starting Alaska Gold Rush
- **The oldest skin boat** found in the state of Alaska
- **The *Phoenix:*** the first European-style ship ever constructed in Alaska and the entire Pacific coast of North America is built in Russian settlement in Resurrection Bay, near today's city of Seward
- **RV *Sikuliaq***, a research vessel owned by the National Science Foundation and operated by the University of Alaska Fairbanks is launched. *Sikuliaq*, named after the Inupiaq word for "young sea ice" is designed to support scientific research in high-latitude water.
- **The *Neva***, Russian sloop of war, arrives to Alaska. Ship's artillery's bombardment of Tlinigt fort lends Russian victory and Tlingits withdraw from Sitka
- **The steamship *Mur***, the first steamship to be built in Alaska and entire Pacific coast of North America, is launched in Sitka
- **The barque *Superior*** becomeinitiating s the first American whaleship, to enter the Bering Sea, commercial whaling in high Arctic. By 1910, when commercial whaling in the Arctic had come to an end, the survival of bowhead was in doubt
- **The Russian steamer *Politkofsky*** blows its whistle at the ceremony of transferring Alaska from Russia to US
- **The Revenue Cutter *Bear*** patrols Alaskan waters delivering mail, provision and medical services to remote Alaskan villages
- **The *St. Peter* and *St. Paul,*** Russian sailing ships reach Alaska under the command of Vitus Bering and Alexei Chirikov
- **The battleship *Nevada*** aids the battle for Attu

Worksheet 1.2 Ships and Boats in Alaska's History timeline.
Answer sheet



LESSON TWO: SHIPWRECKS!

With little information about geography and ocean conditions in Alaska, early maritime voyages were dangerous, and many ships were lost. Vitus Bering, the very man who is credited for the Russian discovery of Alaska, shipwrecked on his return journey, and died on an island in the sea which later received his name.

One of the earliest shipwrecks in Southeast Alaska occurred in the summer of 1786, when French King Louis XVI sent Count Jean-François de Laperouse to explore maritime routes to Alaska. By July 2, the expedition reached a previously uncharted bay, which they named Port des Français (today's Lituya Bay). Two weeks later, just before departure, the captain sent three boats to chart the depth at the perilous entrance to the Bay. Swift tidal currents capsized two of the boats and twenty-one men were lost in ten minutes. Interestingly, this shipwreck may have inspired a Tlingit legend about two canoes that carried large quantities of furs packed into halibut skins. When the boats capsized, the legend says, the bags floated "to the face of the cloud at the edge of the earth, and attracted white "cloud people from beyond the horizon," thus, initiating European colonization of Alaska.

Louise-Philippe Crepin, *Shipwreck Off the Coast of Alaska*, 1806, Seattle Art Museum

Even as the knowledge about Alaskan waters improved, ships did not stop wrecking. Nicknamed "the last frontier," Alaska's waters have many dangers. Ships are frequently lost to storms, submerged rocks and reefs, and human error. In northern Alaska, ocean-going vessels must be ready to battle ice. It can accumulate on masts and superstructure and capsize the ship. The Bureau of Ocean Energy Management (BOEM) database has thousands of reported shipwrecks. More than 200 ships wrecked in waters near Sitka, Alaska.

The biggest disaster in Alaska per number of lost ships took place in 1871 when sea ice crushed 32 whaling ships near Point Belcher on Chukchi Sea. Remarkably, no lives were lost in this event and all crew and passengers were evacuated and eventually made their way to Hawaii and the US east coast.

Many shipwrecks were less lucky. On 25 October 1918, the coastal passenger liner *Princess Sophia* sank with the loss of all aboard after grounding on Vanderbilt Reef in Lynn Canal near Juneau. All 364 persons on the ship (both American and Canadian) died, making the wreck of the *Princess Sophia* the worst maritime accident in the history of British Columbia and Alaska. The tragedy had such a lasting mark that it inspired an opera "The sinking of the Princess Sophia," which premiered in Juneau, Alaska in 2018.

Loss and tragedy are not the only outcome of shipwrecks. The ocean environment often preserves remains of wrecked vessels and their cargo, allowing researches to reach hundreds and sometimes thousands of years back in history and learn about shipbuilding, seafaring, and people of the past.

The discipline dedicated to studying remains of human activities under water is called underwater archaeology or maritime archaeology. Maritime archaeologists developed many techniques to study and

Shipwrecks and cross-cultural interactions

Shipwreck survivors often found themselves surrounded by people and cultures of which they had little or no previous knowledge. These unplanned interactions influenced both the survivors and local inhabitants and sometime left lasting trace in cultural and physical landscapes.

In 1794, the Japanese ship *Wakamiya Maru* was broken up by waves while at anchor in Unalga Pass in the Aleutian Islands. Russian traders aided the survivors and took them to Unalaska and then to Okhotsk, from where they traveled to Russian capital of St. Petersburg, before returning to Japan several years later. Their adventures became famous thanks to an illustrated account of their voyage. Many of these illustrations, such as the picture of walrus below, depicted places and things never before seen in Japan,

In Arctic Alaska, a single shipwreck event eliminated some traditional Inupiaq villages and fostered the rise of others. When 32 whaling ships were crushed by ice in 1871near Point Belcher, so much ship wreckage washed ashore, it was it was like having a hardware store and a Wal-Mart wash up on the beach. To utilize this wealth, local Inupiaq people moved into the area and re-settled a village site that had been abandoned for several centuries. The same shipwreck brought a tragic demise for another Inupiaq settlement. People of Nunagiak village discovered the ship's medicine chest and drank the content of all bottles. This poisoned so many that the 1000 year old settlement was abandoned and never again resettled.

The wreck of the Princess Kathleen at Lena Point, near Juneau, 1952

document shipwrecks. Some wrecks are studied by scuba divers; others are too deep for people and require sophisticated remote sensing and submersible equipment. Regardless of methods and equipment, the goal of archaeological research is to learn from the site with minimal damage to it, and to share this knowledge with other people, preserving the history and material culture.

Worksheet 2.1 How Much of Human History is on the Sea Bottom

- Watch the TedEd animation "How Much of Human History is on the bottom of the Ocean." https://ed.ted.com/lessons/how-much-of-human-history-is-on-the-bottom-of-the-ocean-peter-campbell

- Answer the following questions:

1. What is the deepest zone in the ocean that humans once walked?

a) 0-15 feet
b) 15-30 feet
c) 50-200 feet
d) 1-5 miles

2. Incredible new discoveries are made at which depth?

a) Along the beach
b) From 15-200 feet
c) Deeper than 200 feet
d) All of the above - some discoveries were right under our noses

3. What is the benefit of shipwrecks deeper than 50 feet to understanding the past, as opposed to those in shallow waters?

a) They are buried under a lot of sand
b) Shallow shipwrecks are often salvaged or looted, both by people in the past and those today, while deeper shipwrecks can be more intact
c) There are more sharks on deeper shipwrecks
d) The deeper the site it is, the older it is

4. Ships and aircraft are the only types of sites found in the deepest ocean zone. Why?

a) Deep water currents destroy other types of sites
b) All other sites have been found and recovered
c) This depth has always been covered with water during human history so only objects that float down from above are found
d) People physically moved the cities into shallow areas

5. Shipwrecks are found at every depth, but sites like sunken cities are only found within specific zones. What processes play a role in the location of different types of archaeological sites in different zone?

_____

_____

_____

6. **Written history is recorded by an author, but archaeology is physical evidence of an event without the filter of the writer, meaning that it often tells the stories of everyday people or forgotten events that did not survive in history books- such as the Antikythera "computer." What kinds of discovery would make you rethink your local or national history?**

_____

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7. **Shallow archaeological sites are easier to access and there are a great number of them, but they are often damaged over the years by storms and treasure seekers. Deep sites are hard to find and difficult to access, but are untouched time capsules. Should science focus on one type, or are both important?**

_____

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_____

Worksheet 2.2 Ghost Ships: Why do Ships Float (and Sink)?

- Watch the TedEd animation "Are Ghost Ships real?" https://ed.ted.com/lessons/are-ghost-ships-real-peter-b-campbell

- Answer the following questions:

1. **The sunken "A. Ernest Mills" rose from the seafloor when:**
   a) The ghost crew raised the sails
   b) The weight of the dissolving salt decreased below the wooden ship's buoyant force
   c) Fluid dynamics prevented flooding
   d) A whale lifted the ship on its back

2. **The "Frigorifique" sank the "Rumney" because:**
   a) It was seeking revenge
   b) It wanted its crew back
   c) The crew forgot to turn off the engines and its rudder kept it moving in circles
   d) Fluid dynamics

3. **Buoyancy is an upward force equal to:**
   a) The weight of the water displaced
   b) The volume of water around the ship
   c) Earth's gravitational pull
   d) The Coriolis Effect

4. **What natural forces cause ocean currents that can move a derelict ship hundreds of miles?**
   a) Wind
   b) Salinity
   c) The Coriolis Effect
   d) All of the above

5. **The "Mary Celeste" became a ghost ship due to:**
   a) Piracy and murder, causing the crew to disappear
   b) Buoyancy and fluid dynamics, causing the crew to abandon ship too early
   c) Witchcraft and supernatural forces, causing the crew to spontaneously combust

6. **How did derelict ships become a proxy for mapping ocean currents?**

7. **Many events that appear supernatural have natural explanations. Can you think of a natural explanation for phenomena at sea that have the appearance of the supernatural such as mermaids, mirages, and sea monsters? Can you think of some other examples of strange phenomena?**

Lesson 2. Teacher Resources

Worksheets 2.1. and 2.2. are based on TedEd resources. Animation links contain additional resources and discussion points. You can also customize your lesson plan on-line and have your students use the on-line portal to answer the questions and participate in discussions. For more information go to https://ed.ted.com/videos

Worksheet 2.1. Answers

1. C
2. D
3. B
4. C

Worksheet 2.2. Answers

1. B
2. C
3. A
4. D
5. C

On-line resources:

On-line databases of Alaskan shipwrecks: https://alaskashipwreck.com/ and https://www.boem.gov/Alaska-Coast-Shipwrecks/

On-line Museum of Underwater Archaeology: https://mua.apps.uri.edu/pj.html

On-line Lessons, essays, multimedia and other marine archaeology related resources:

https://oceanexplorer.noaa.gov/edu/themes/archaeology/welcome.html

Selected underwater archaeological projects in Alaska:

The Russian-American bark *Kad'yak*: http://dnr.alaska.gov/parks/oha/projects/kadyak.htm

The *Hassler* https://sanctuaries.noaa.gov/maritime/expeditions/hassler/last_days.html

Bark *Torrent* http://www.lostshipwrecks.com/torrent.html

Lost whaling fleet in Western Arctic: https://oceanexplorer.noaa.gov/explorations/15lostwhalingfleets/

LESSON THREE: SHAMAN'S CURSE OR NAVIGATION ERROR? SHIPWRECK OF THE *NEVA*

Why do shipwrecks fascinate people? For some of them it's a promise of sunken treasures. Others seek to solve mysteries of the past, and many are captivated by the stories of adventure and survival. The story of the wreck of the Russian ship *Neva* has it all - and more! It is probably one of the most famous shipwrecks in Alaska because the important role the ship played in the history and because of the stories left behind by the shipwreck survivors and local people. But can all the stories be trusted? Why did the *Neva* sink? And can this two-hundred-year old wreck be found? Collect the clues to find out! Solving a shipwreck mystery is similar to detective investigations: it requires witness statements, material evidence and visiting the site where the events took place. Witnesses of the two-hundred-year old event are long gone, but some of their stories are preserved in written documents and oral lore.

Meet the witnesses:

Captain Yuri Lisiansky

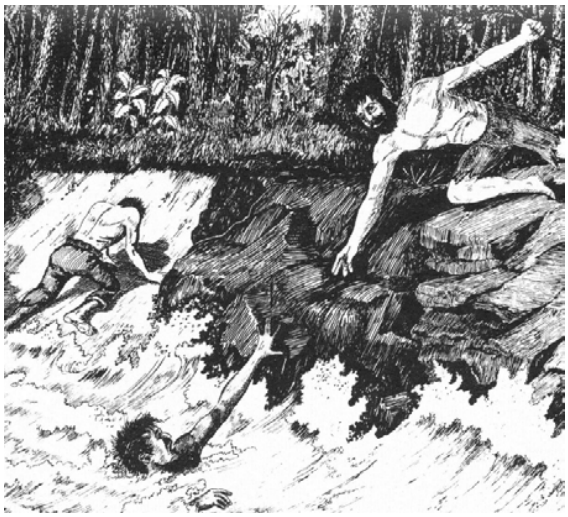
Yuri Lisianski was a naval officer and explorer. Born in Nezhin (nowadays Ukraine) and educated in St. Petersburg, he saw his first naval battle at the age of 15 when he served as a naval cadet on a Russian warship during the Swedish war. In 1793, he was sent to serve in the British fleet. Over the next four years he participated in a number of British naval campaigns, sailing to North America, Africa and India. In 1802, he was tasked with purchasing two ships for the first Russian round-the-world voyage from St. Petersburg to Alaska and back, and later became the captain of one of them, the *Neva*. After the voyage, Lisianski commanded ships in the Baltic Sea. He retired from active service in 1809 and occupied himself with preparing his notes about the voyage for publication. The publisher turned down his manuscript three times on the ground of many errors in the Russian language. He finally self-published both the textual account and atlas in 1812, and then translated his "Voyage round the World" into English.

Tlingit tradition bearer

Tlingit indigenous people of Southeast Alaska have a long tradition of oral history – records of the past that were memorized and passed down from generation to generation. Tlingit historian Nora Marks Daunhauer and her husband and colleague Richard Dauenhauer collected and published some of these histories in their book *Anooshi Lingit Aaani Ka: Russians in Tlingit America*. Yet, other oral historical accounts are not published, and are preserved only in the memories of Tlingit tradition bearers.

Midshipman Mikhailo Il'ich Terpigorev,
Shipwreck survivor

Mikhailo Terpigorev was one of the lucky survivors of the shipwreck of the *Neva*. Several years after the shipwreck, Terpigorev shared his recollections with Russian naval officer and historian Vasili Berkh, who published them in his book "The Wreck of the *Neva*."



Historian

Looking for clues of the past requires knowledge of historic sources, both published and not. Historical research in preparation for looking for the *Neva* took project historians to libraries, archives and museums in US, Alaska and UK.

First voyage to Alaska

Historian:

It all began in 1741, when Vitus Bering made the first sighting of Alaska and his crew brought back valuable sea otter pelts. Over the next half a century Russian settlers established permanent settlements in several places in Alaska. One of them was on Baranof Island, in what is known today as Star Gavan (Old Harbor in Russian) near Sitka, Alaska. In their minds, Russian settlers served their homeland by extending its territory and bringing Russian culture to Alaska. At the end of the 18th century, the Emperor of Russia approved establishment of the Russian-American Company to manage all Russian affairs in Alaska.

Things did not always go well for the Russians. In 1801 several Tlingit clans attacked the Russian fort in Star Gavan and exterminated nearly all the inhabitants. The survivors sent a message to Kodiak – then the capital of Russian America – asking for help. It took the Russians some time, but by late summer 1804, Russians were ready to sail from Kodiak to Sitka to re-establish their presence on Baranof Island. Along with 1000 men, 300 kayaks and two one-masted ships, their forces included the sloop-of-war *Neva*, which had recently arrived in Kodiak.

The *Neva* had a very special mission of carrying out the first Russian round-the-world expedition. The expedition had two main goals: to explore lands and the ocean *on route from the Russian capital of St. Petersburg to Alaska, and to deliver goods from Russia to the Russian-American colonies. The Neva's Captain, Yuri Lisianski, purchased the ship in London for 17,000 pounds sterling (around $27,000 in modern U.S. dollars), and sailed it to Alaska with cargo of provision, supplies, and books, which became the first library collection in Alaska. The Neva arrived in Kodiak in July of 1804, just in time for the Russian re-conquest of Sitka.*

The ship:
Original name: The *Thames* (after the main river in London, capital of Great Britain)
Renamed: The *Neva* (after the main river in St. Petersburg, capital of Russia at the time)
Built: 1800
Builder: Peter Everitt Mestaer, shipwright who built many ships for East India Company
Tonnage: 372 1/94 Burden tons
Extreme length: 110'6"
Extreme breadth: 28'
Draw: 16 ft. when fully loaded
Masts: 2
Decks: 2
Stern: square
Guns:14
Sheathing (metal sheets attached to ship's hull to protect it from wood-eating organisms): copper

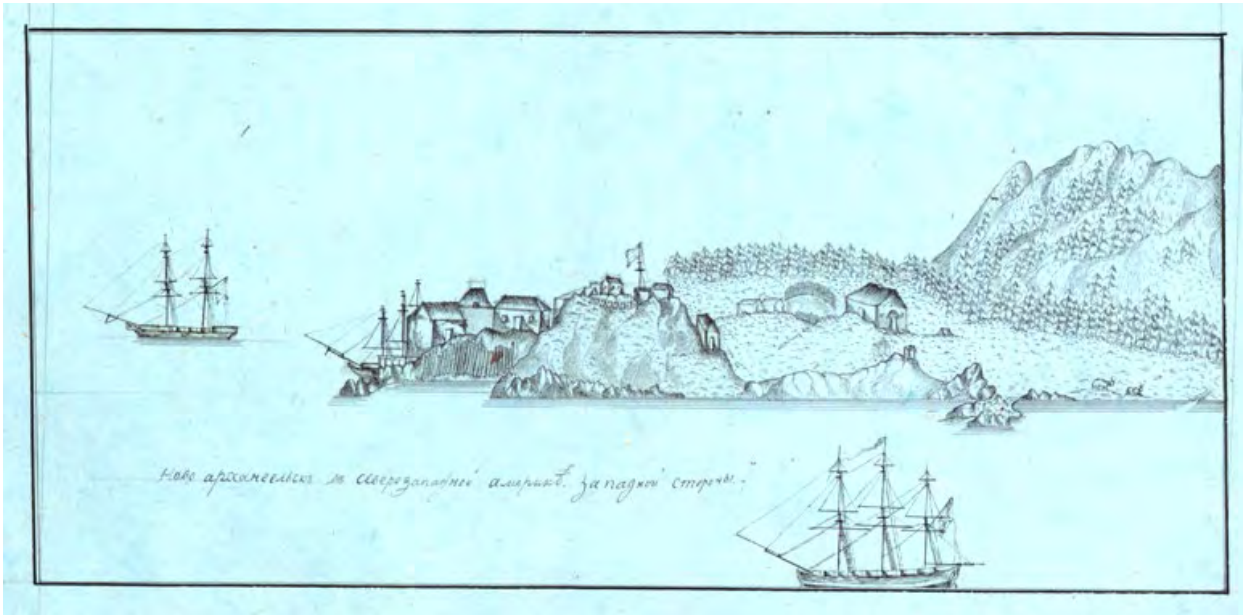
Battle of Sitka

Captain Yuri Lisiansky:

July 13, 1804:
"I now supposed my voyage to be at an end for the present year; but it turned out otherwise. The Russian-American Company manager informed me that our settlement in Sitca Sound had been destroyed by the natives; and he begged my assistance in opposing the savages, and restoring things to their former state. Convinced of the importance to the Russian trade of recovering this establishment, I compiled with his request, and I resolved to prepare for sea immediately."

July 20, 1804:
"We came to anchor in Cross Bay near Sitca. Two of the Russian-American company's vessels, the *Alexander* and *Catherine* arrived ten days before. Shortly, Mr. Baranof arrived from his hunting expedition, in the ship *Yarmak*. In the next two days, three hundred bidarkas, and about nine hundred Cadiack and Aleutian men arrived."

September 23, 1804:
"Our whole force being now collected together, we determined to attack our enemy. The next day the weather was so calm, that our ships were obliged to be towed till ten in the evening, when we anchored for the night, at a short distance from the old settlement of the Sitcans. The *Neva* could not have reached this station, but for assistance of a hundred baidarkas, which, though small in size, pulled with uncommon strength. The next day we landed and took possession of the settlement, which was situated on a hill of a tolerable height and well adapted for a fortification."



The *Neva* in Sitka, 1804, Drawing by Yuri Lisiansky,
***Neva* log books, Russian Naval archive**

October 1, 1804:
"We formed a line with four of our ships before enemy's settlement. I then ordered a white flag to be hoisted on board of the *Neva*, and presently we saw a similar one on the fort of the enemy. From these circumstances, I was not without hope that something would yet occur to prevent bloodshed; but finding no advances on their part I ordered several ships to fire into the fort. The savages kept perfectly quiet till dark. This stillness was mistaken by Mr. Baranoff, and encouraged by it, he ordered the fort to be stormed: a proceeding, however, that had nearly proved fatal to the expedition; for as soon as the enemy perceived our people close to their walls, they fired upon them. In this affair, out of my own ship alone, fourteen people were wounded and two killed; and if I had not covered this unfortunate retreat with my canon, not a man could probably have been saved."

October 2, 1804:
"In consequences of these events, I ordered discharge of guns on the fort. After four days of bombardment, the chief toyon promised to evacuate the fort with all his people."

Neva crosses Sitka Sound, 28 September 1804, Mark R. Myers

October 7, 1804:
"When the morning came, I observed a great number of crows hovering about the settlement. I set on shore to ascertain the cause of this; and the messenger returned with the news that the natives had quitted the fort during the night, leaving in it, alive, only two old women and a little boy. It was on the 8th that the fate of Sitca Fort was decided. After everything that could be of use was removed out of it, it was burned to the ground. We spent the rest of the month fishing and exploring the vicinities and charting the sound, and giving names to previously unnamed bays, islands and straits."

Tlingit tradition bearer

The Tlingit treated the Russians very kindly. In return, the Russians tried to take advantage of them. They tried to make the Tlingit serve them, but the Tlingit were offended. They did not want to serve such people in Sitka. When the Tlingit left Sitka, they were not conquered and made it known that they had not surrendered. This war was to last for many years. They were ready to fight for many years to come. This is our land, we know resources of the country and where to find food, and we have all the hopes in this. Someday we'll come back and conquer them. We did not leave, we retreated. Before the Kiks.adi clan left their fort, their shaman foretold that they would return, and also that the ship which bombarded our people would perish near Sitka.

The 1804 Battle of Sitka, Louis S. Glanzman.

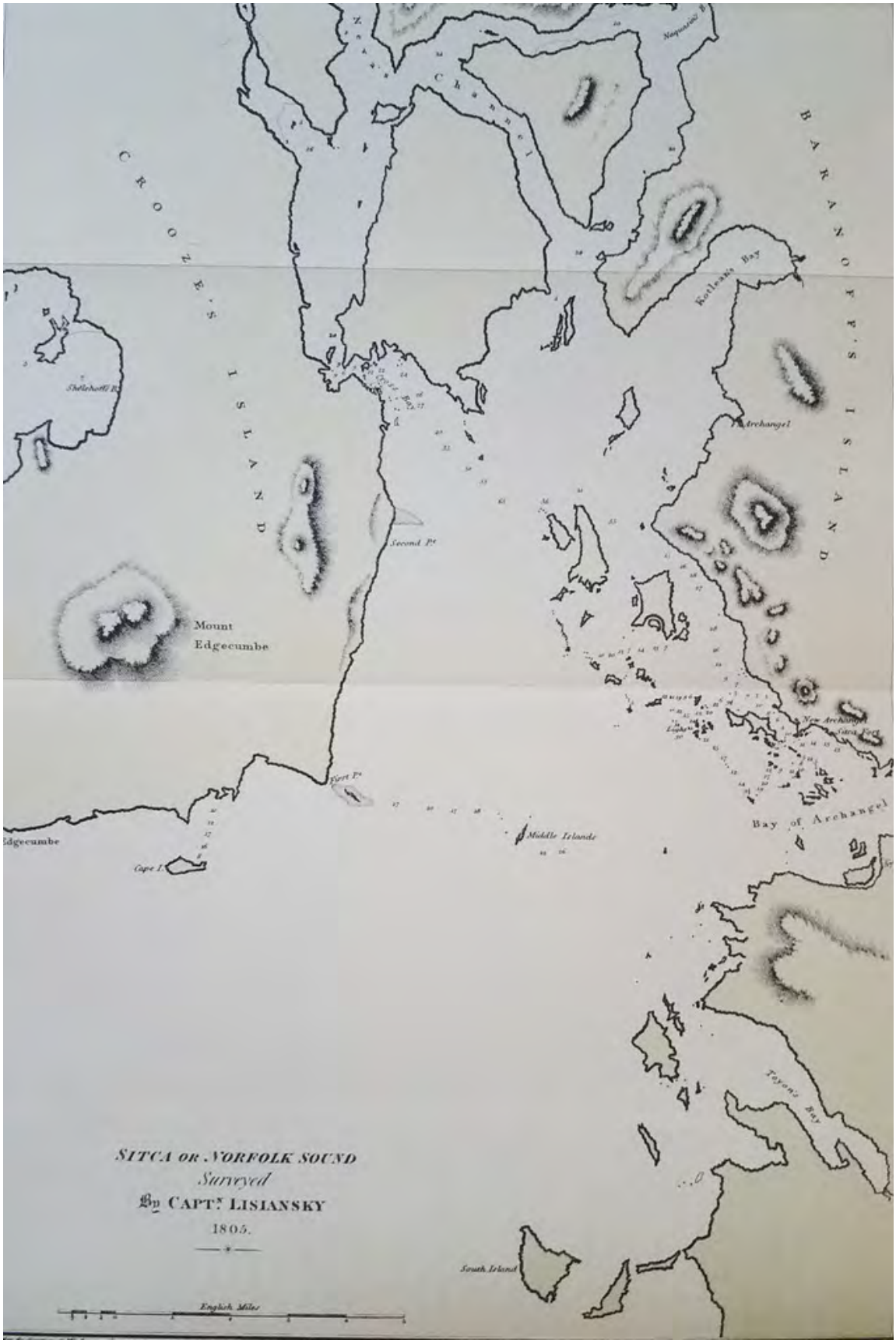


Chart of Sitka Sound made by Captain Lisiansky, 1805.

Return to Alaska and the last voyage

Historian:

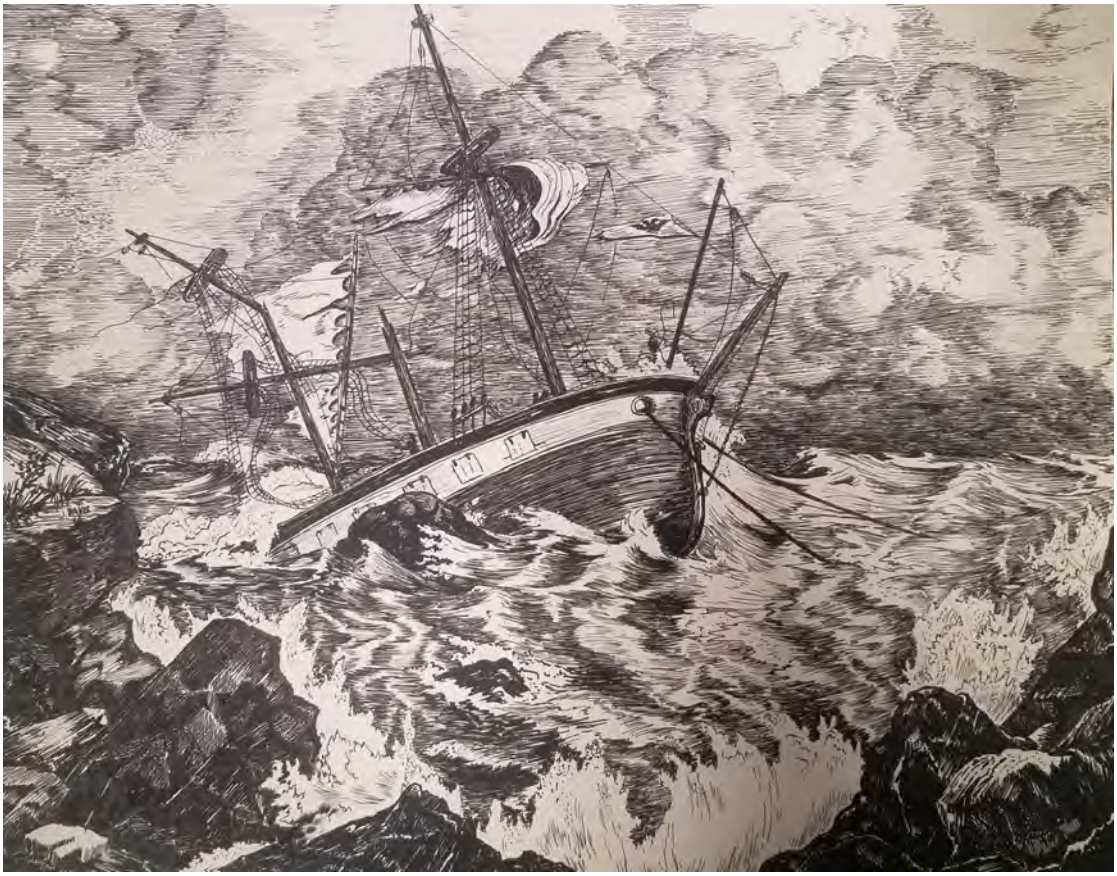
After the battle, the *Neva* remained in Sitka for several months and the captain and crew charted Sitka Sound. The ship wintered in Kodiak and then sailed back to St. Petersburg with a cargo of fur seal, beaver, and other pelts for trade with China. In August of 1806, the *Neva* returned to St. Petersburg and a year later was again sent to Alaska. The *Neva* stayed in the service of the Russian-American Company, sailing between Sitka and Kodiak and making voyages to Hawaii and the Siberian ports of Petropavlovsk and Okhotsk. In late August of 1812 the *Neva* left Okhotsk for what became its final voyage. Bad luck started even before the ship's departure from the Russian port of Okhotsk: a skiff with officials tasked with inspecting it overturned in the harbor, resulting in the deaths of 13 people. Contrary winds soon slowed the voyage and prevented a landing in either Unalaska or Kodiak. People aboard were short on water and fresh provisions, and 13 crew members and passengers died at sea. A short stop at the Resurrection Harbor in Prince William Sound allowed them to take in fresh water and repair the ship, and the crew decided to continue their voyage to Sitka. Finally, early January 1813 brought clear weather, and by January 8 the ship was only 20 miles from Sitka with Mount Edgecumbe's shoreline on the left. Confident in the ship's course, the skipper Kalinin set the course and went below decks at 1 am, but his rest was short.

Shipwreck:

Mr. Terpigorev, shipwreck survivor:

"At one o'clock on January 8th the wind blew from N.W, but was so light that the ship did not go faster than four knots. Navigator Mr. Kalinin went topside, looked at the situation of the shore, and concluding from the appearance of it that the ship would enter directly into the sound, he again went below. The Mount Edgecumbe was on the left, no farther than 30 to 40 *versts*. At 5 AM the cry went out that "the shore is under the bow." When Mr. Kalinin came to the deck, Mount Edgecumbe was on the right and behind the stern. How could the mountain find itself on the right side within three hours if the course remained the same? Not wanting to blame anyone with this conclusion, I assume that probably the man at the wheel changed the ship's course, and in this case the current was an accomplice by multiplying the speed of its course. We now know that the underlying rock formations at the wreck site are laden with iron, which might have caused the primitive ship's compass to malfunction.

Mr. Kalinin ordered the anchor to be thrown, but what happened? "The cable was not checked, because of this, it began to spin with terrible speed and was lost. There remained only one means for the salvation of the *Neva*: Mr. Kalinin began to turn the ship around, but the stern hit a rock, rudder was knocked out, and the waves sat it on the underwater rocks. If we had delayed turning by one minute then all inevitably would have perished, because the collision would have taken place near a very high and inaccessible cliff. It was already getting light, but the wind began to increase, the ship turned with the bowsprit toward the cliff and at



A drawing by J. Davis (1979) that depicts the artist's conception of the wreck of the *Neva.* The previous drawing is also by J. Davis.

that moment it broke in two. On the deck of the Neva a long boat was tied that easily accommodated 60 men. Mr. Kalinin ordered the ropes to be lowered, and the women and the most weakened men to be seated in it with the intention of lowering it lightly on the water; but barely had the long boat touched the water, when a cruel wave turned it over and whose who sat in it became the first victims of the wild ocean."

"At nine o'clock the entire stern of the ship was broken off, she split in half, and those people who remained on her moved over to the bow; holding onto the scattered remains we saw how mixed fragments of the Neva were strewn all over the area, and how some of our companions were now approaching the shore on them, now were thrown back by terrible breakers. At noun the shipwreck was complete: the remains of the ship were swallowed by the waves. I set myself on a piece of the mast with Mr. Bornovolokov, begging him to hold tighter, ut suddenly he turned blue and slid into the water. I saw our skipper, Mr. Kalinin floating towards the shore on a plank just a few minutes before becoming unconscious."

"When I came to my senses, I found myself on the shore about a hundred steps from the edge of the water. Not being able to walk, I crawled to the forest where I noticed several comrades in misfortune. It was a cold winter night. Around midnight all those who escaped the shipwreck gathered together; their number was 29, but two of them because of complete exhaustion lived no more than an hour on the beach. There were 29 of us, 32 of our comrades drowned during shipwreck, and 13 died during the voyage."

"One of us had a flintlock pistol with him and made a fire. We gathered around to survive the night. In the morning we found a great number of items cast up on the beach. Luckily, A barrel of butter, some

meat and some hardtack were washed up. Having strengthened ourselves, we built a hut out of various fragments and began to think about ways to inform Mr. Baranov hat we were here."

After resting several days, we began to bury the bodies of those who perished. I went looking for bodies of Mr. Bornovolokov and Mr. Kalinin. I found Mr. Bornovolokov not far away, completely whole, and after embracing him, delivered him to the earth. I barely found Mr. Kalinin, or better say gathered him: because in one place lay the torso, in another the head, and farther away the legs. One must think that a wave hit him and threw him against some kind of sharp rock.

On January 24, two of our comrades were sent to look for a way to inform Mr. Baranof of their presence. One was sent along the trail to the right, and the one along the opposite one. Through an unusual lack the first envoy encountered a boy riding in a boat, whom he persuaded to take him to the fort, promising him a shirt for his trouble. Alexander Baranof, the Chief Manager of the Russian colonies of America, wept as he listened to the narration of our comrade, and immediately sent several boats to bring all of us to Sitka.

Mr. Baranov also immediately sent to the scene of the wreck an armed party to collect good which were cast on sore. This was a very judicious and useful order, because for the next six months they continued to find things on the shore. The waves were once so strong, the even cast up two carronades."

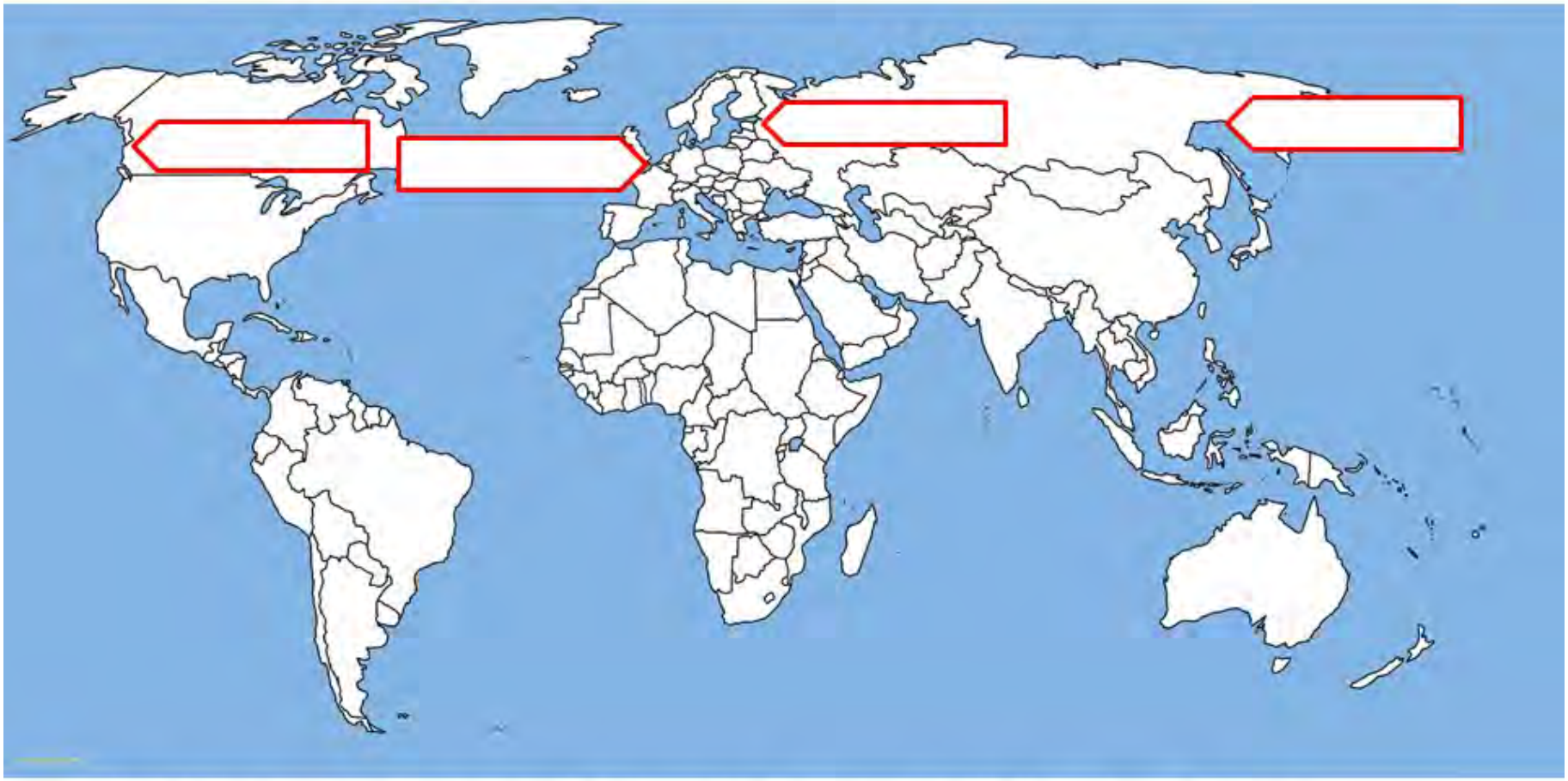
Sunken treasure: legend or fact

Historian:

Soon after the shipwreck, stories began growing up around the *Neva* and the rich cargo some said that she carried. Newspaper accounts over the last two centuries melded truth with fantasy and encouraged many to look for the wreckage. An 1894 article in the *Alaska Herald* told the story of two "Indians" coming into town [Sitka] with an airtight copper tank, utensils, and oak timbers found near Mount Edgecumbe and presumably from the *Neva* shipwreck. According to stories that had been told in Sitka, the ship's captain had placed valuables in barrels and buried them beneath a large spruce tree. In 1915, articles published in the *Daily Alaska Dispatch* (Juneau) and elsewhere reported that a commercial diver from Port Townsend, Washington, had received a permit from the "War Department" to salvage "lost gold" from the *Neva*, which presumably carried a $200,000 payroll bound for Sitka. Other articles outline their plans to "salvage the boilers" from the wreck. Both are unlikely. Workers in Russian America have never been paid in gold, and the sailing ships of the early 1800s had no boilers. Numerous articles discuss plans leading up to the 1915 salvage effort, but nothing has been found to indicate that any such salvage ever occurred and no treasures were found. The timbers washed ashore were reportedly used in construction of altar piece of Sitka's St. Michael cathedral, and a large wooden icon of Archangel Michael, displayed in this altar piece, reportedly floated from the wreckage site all the way to Sitka.

Discussion: Do you think it's likely that the ship carried gold or other treasures? What would you guess the *Neva* had aboard? What parts of the ship and cargo would you expect to survive underwater in Alaska?

Worksheet 3.1. Are we there yet? Test your geography



Match the spot on the map with a place the *Neva* visited: St. Petersburg, Russia
London, UK
Okhotsk, Russia
Sitka, Alaska

Worksheet 3.2. Shipwreck detective

The list of cargo taken by a ship on a voyage is called the ship's manifest. The Neva's manifest for her last voyage has never been found. Based on what you know about Russian Alaska at the time, what goods do you think the ship may have carried?

What do you think caused the wreck? Why?

The location where the ship wrecked is 20 -75' deep and exposed to ocean waves and storms. Based on what you learned about the ship and crew and your guesses about the cargo, what would you expect archaeologists can find on this site 200 years after the disaster?

LESSON FOUR: SEARCHING FOR THE *NEVA*

The story of the *Neva* long fascinated archaeologists and people of Sitka. Because the *Neva* survivors lived on shore for nearly a month, and were rescued by a Russian party sent from Sitka, the general location of shipwreck was well documented. Russians even named a bay for the ship. But finding a historic wreck even along a relatively limited section of shoreline is not an easy task in cold Alaskan waters. Wooden ships break and disintegrate fast in the submarine environment, unless they wrecked in protected bays, were sheltered by the ocean's depth, or covered by bottom sediments. After 200 years, most wrecks are fragmented and spread apart.

Former Alaska State Archaeologist Dave McMahan suggested that clues to the shipwreck location could be found on land in the form of remains of the survivors' camp. In 2012, as the 200th anniversary of wrecking drew close, he, Jay Kinsman (former USFS Sitka District Archaeologist) and Robert Medinger (former Director of the Sitka Historical Society) made an exploratory trip along the outer coast of Kruzof Island. Using a metal detector, the team located a buried cache of axes of distinct Russian design, which pointed to the proximity of the shipwreck and survivors' camp. With this information in hand, McMahan assembled a larger team and initiated a more detailed investigation of the site, which included both land and underwater work.

Searching underwater

Maritime archaeologists employ a number of methods to locate shipwrecks. One of the most effective techniques is remote-sensing with equipment, which allows locating *anomalies* - unusual features on the sea bottom, which appear to be man-made. Two of the most popular remote sensing methods are marine magnetometer and sonar.

Marine magnetometer allows locating ferrous objects underwater, it is in essence an underwater metal detector. Cannons, anchors, mast braces and other ferrous parts of a ship are often located with the use of a magnetometer.

Sonar is used to look for changes in sea bottom topography. It sends out ultrasound waves and detects the signal after they reflect from underwater objects, creating an image of the sea bottom.

Both magnetometer and sonar have their limitations. Magnetometers are sensitive to iron in the natural environment, such as iron ore in the bedrock, lava or other volcanic rock. Sonar is most effective in areas of flat bottom. Much of the underwater landscape in the wreck area was shaped by Mount Edgecombe's volcanic activity: lava flowing from the crater several thousand years ago created submerged canyons and solidified into volcanic rock lining the ocean floor. Sonar data revealed a dynamic landscape of underwater crevasses, pinnacles and rocks, which made it difficult to distinguish between natural and man-made objects. The high iron content in the

volcanic rock generated significant magnetic feedback, making magnetometer search challenging. Heavy kelp growth made both remote sensing and diver survey even more complicated. As a result of these challenging conditions, no shipwreck remains have been found on the ocean floor.

Mount Edgecombe. Photo by Don Kluting.

Searching on land

Archaeological searches for traces of the past are often focused on an understanding of the local environment and changes that occurred in the landscape over long periods of time. It may come as a surprise, but the land and sea floor around Sitka are still changing in response to the melting of glaciers that covered this area over 10,000 years ago. NOAA scientists have found that the land and the sea floor are rising relative to the sea at 17.12 mm a year, amounting to 3.4 meters (about 10 feet) of uplift since 1813. Former coastal and intertidal zones became forested terraces, meaning that some fragments of shipwreck may in fact lie beneath today's forest floor.

To locate these and other artifacts, the team conducted a systematic metal detector survey of the narrow terrace where Russian axes were discovered in 2012. Archaeologist Daniel Thompson located and logged 76 targets, which in turn served as a guide for identifying 3 areas for excavation. Two of them yielded early 19th century artifacts and hearths likely related to the *Neva* survivors' camp. The third excavation block contained mid-to-late nineteenth century artifacts and was likely a Tlingit hunting camp.

How does archaeology work?

Understanding past human activities often requires excavating the ground seeking artifacts or other remains of these actions. A single artifact or a feature has only a fragment of the story, that's why it is important for archaeologists to understand spatial context – the placement of found objects in relation to each other and the surrounding landscape. In simple terms, things found in proximity to each other at the same depth may indicate that they were used for the same activity and at the same time. It is also important to understand the vertical distribution of the objects: artifacts at a greater depth typically were made and used earlier than those found closer to the surface. To gain a full understanding of the site, archaeologists dig small, well-defined units, removing the soil layer by layer, and mapping the position of each found object in both the horizontal and vertical plane. Each recovered artifact is carefully packaged and labeled. The color, texture and type of soil, can also reveal what happened in a particular location in the past. Charcoal can point out an old campfire or hearth, rich soil with organic remains is sometimes a sign of a trash pit or midden, etc. Ultimately, learning about human activities in the past depends on archaeologists' ability to identify their finds, and to figure out how these objects and features relay to each other and larger landscape.

Archaeologist Yury Likhin is excavating an artifact in a "Survivors terrace" unit

Neva archaeological finds

During three field seasons at the survivor camp, archaeologists recovered 583 artifacts. Artifacts found on site included tools, navigational devices, fragments of the ship, personal items and more. Contrary to two hundred of years of stories and legends, not a single item was made of precious metal. Less than luxurious, these items are evidence of shipwreck survivors' resourcefulness.

Archaeologists also uncovered a number of rock piles and charcoal features. Some of the stones were fire-cracked, and the charcoal often contained remains of burnt animal bones. The stone piles may have been used as anchors for tent-like shelters constructed by survivors with sailcloth to protect them from the elements. Russian archaeologists working on the site proposed that the fire-cracked stones may indicate that survivors made and used sweat baths.

Charcoal features are the remains of hearths that were used for warming and cooking. Maintaining adequate body temperature and finding sustenance are key elements of surviving. Animal remains found in an archaeological context are called **faunal remains**. This is the area of expertise of **zooarchaeologists**, who analyze faunal data in order to identify species. On some occasions zooarchaeologists can also establish animals' ages and the season in which they were harvested.

Cache of Russian axes discovered at the Neva survivors' camp in 2012. Photo by Dave McMahan.

Animal bones found in the hearths of the survivors' camp revealed how the crew of the *Neva* sustained itself after the shipwreck. Dr. Megan Partlow, a zooarchaeologist affiliated with Central Washington University, found that most of the animal bone found on the site were remains of Sitka black-tailed deer and harbor seal. According to her analysis, a minimum of two deer were represented, which provided survivors with at least 70 lbs of meat. A harbor seal would add about 88 lbs of meat and blubber to the survivors' diet. People also subsided on rockfish, salmon, and sea lion.

Some of the most informative discoveries were made towards the end of the last field season. At the northern edge of the survivors' camp, archaeologists Dan Thompson and Dr. Brinnen Carter uncovered a rectangular wood stain oriented east-west and outlined my mismatched iron nails. The dimensions of the stain coupled with its orientation left no doubts that archaeologists had inadvertently discovered one of the shipwreck victims' graves. After consulting with the U.S. Forest Service (as landowner) and the Sitka Tribe of Alaska, archaeologists stopped excavation once the nature of this feature had been established and backfilled it without further disturbance. A Russian-Orthodox priest from St. Michael's Cathedral in Sitka, and representatives from the Sitka Tribe of Alaska traveled to the site to hold ceremonies in commemoration of the tragedy and lost lives.

The same week, a metal detector search in a small cove north of the survivor camp identified several targets. When excavated, these target areas revealed caches of axes, ship copper sheathing and trunnion caps. The locations of the caches, on a raised beach deposit, suggest that the artifacts were recovered from shallow waters or the intertidal zone and moved to locations which were at or just above the 1813 high tide limit. The discovery of the trunnion caps was particularly informative. Designed to secure a cannon to its carriage, these are fairly heavy metal fasteners. Shipwreck survivors would not carry these objects too far from the spot they were found, which suggests that remains of the *Neva* may lay beneath the waves of this small cove still awaiting the discovery.

Trunnion caps, photo by D. Thompson

Cannon secured to carriage by trunnion caps.

Activity IV. 1. Artifact detectives

Materials needed: Artifact cards, artifact answer cards, location cards, location answer cards, scissors, pens or pencils.

Time needed: 20- 30 minutes.

Teacher instructions:

1. Cut out and distribute **artifact cards**. Each card has an artifact image, brief description and location group number. Location group number refers to a specific place, where this artifact was found.

2. Divide your class in small groups and ask students to identify their artifacts and fill out artifact name and use lines, which are left blank. After 5 minutes, ask students to share their thoughts.

3. Give each group the answer card for their artifact to see if they guessed right.

4. For the second part of this activity, ask students to find their location group. This will result in four groups of students. One of these groups will only have one person in it.

5. Give each group their location description card. Ask students to combine information from artifact cards with location description and brainstorm how the survivors used this particular area of site. After 5 minutes, discuss with the whole class and give each group answer cards for each location group.

Activity IV. 1. Artifact cards

Object ID: UA 2015-237-0199
Material: copper
Size: 1.5”
Group 2
Object name: _____
What was it used for:_____

Object ID: UA 2015-237-0098
Material: metal
Size: 1”
Group 1
Object name: _____
What was it used for:_____

Object ID: UA 2015-237-0257
Material: wood with metal insert
Size: 8”
Group 1
Object name: _____
What was it used for:_____

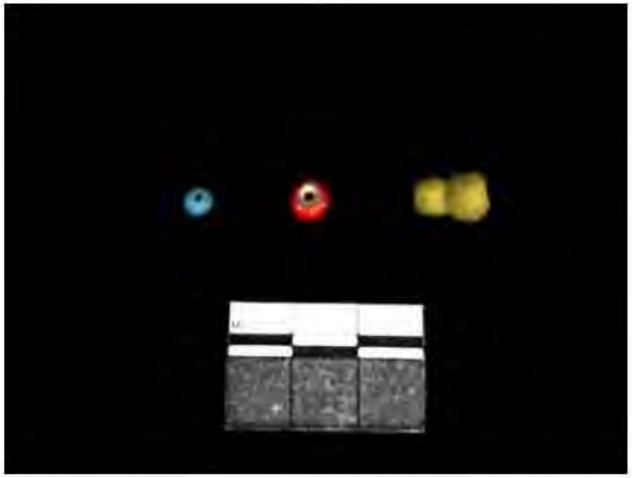
Object ID: UA 2015-237-0271
Material: brass
Size: 4.5”
Group 2
Object name: _____
What was it used for:_____

Object ID: UA 2015-237-0278
Material: brass
Size: 10”
Group 1
Object name: _____
What was it used for:_____

Object ID: UA 2016-63-026
Material: brass
Size: 1”
Group 1
Object name: _____
What was it used for:_____

Object ID: UA 2016-63-028
Material: flint
Size: 2”
Group 1
Object name: _____
What was it used for:_____

Object ID: UA 2016-63-71
Material: iron
Size: 6”
Group 4
Object name: _____
What was it used for:_____



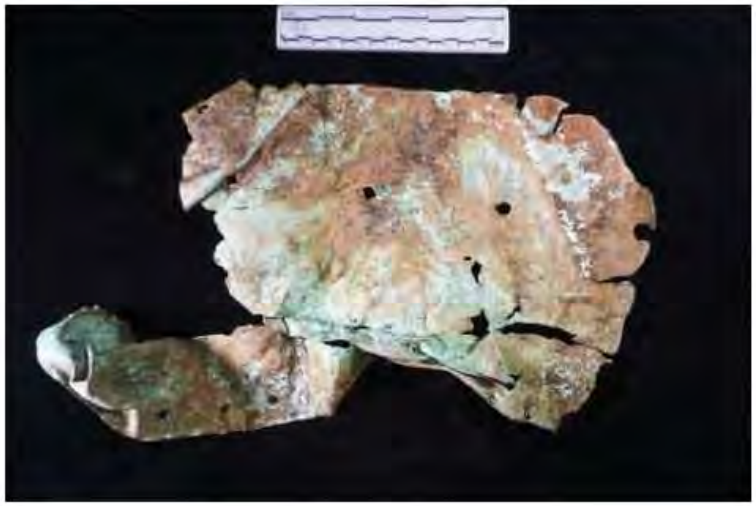
Object ID: UA2015-237-0117-to-0119d
Material: glass
Size: 1/4”
Group 2
Object name: _____
What was it used for:_____

Object ID: UA2015-237-134
Material: ceramic
Size: 1.5”
Group 2
Object name: _____
What was it used for:_____

Object ID: UA2015-237-0262
Material: ceramic
Size: 1/4”
Group 2
Object name: _____
What was it used for:_____

Object ID: UA2016-063-066
Material: metal
Size: 7”
Group 3
Object name: _____
What was it used for:_____

Object ID: UA2016-063-068
Material: iron
Size: 24”
Group 4
Object name: _____
What was it used for:_____



Object ID: UA2016-063-075
Material: metal
Size: 20”
Group 4
Object name: _____
What was it used for:_____

Activity IV. 1. Artifact answer cards

Object ID: UA 2015-237-0199
Material: Copper
Size: 1.5”
Group 1
Object name: A hand-made copper awl made from cut, folded, and hammered sheet copper
What was it used for:
For clothing repair and/or manufacture. Clothing, in Particular, would have been of crucial importance during the winter of 1813, as many survivors came ashore naked and suffered from exposure. Materials for expedient clothing manufacture were probably available for salvage.

Object ID: UA 2015-237-0098
Material: Metal
Size: 1”
Group 1
Object name: Nail
What was it used for: To hold together wooden objects aboard the *Neva*, such as cargo containers, furniture, etc.

Object ID: UA 2015-237-0257
Material: Wood with metal insert
Size: 8”
Group 1
Object name: Pocket knife
What was it used for: This pocket knife was likely of great help to the survivors and could have been used in a number of ways, including butchering prey, making clothes and fashioning tools.

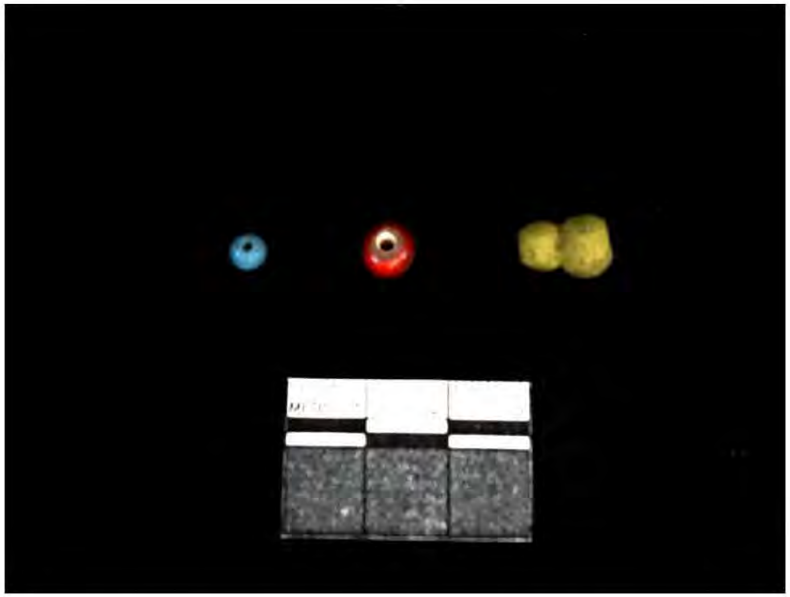
Object ID: UA 2015-237-0271
Material: Brass
Size: 4.5”
Group 2
Object name: Leg from nautical chart divider
What was it used for: The ship’s compass was an essential nautical instrument. In the survival camp, the legs of the compass may have been separated for use as an awl.

Object ID: UA 2015-237-0278
Material: Brass
Size: 10”
Group 1
Object name: Strap guide
What was it used for: It was likely a buckle adjustment for a lightweight cloth bag or satchel. The artifact was recovered in a midden of charcoal and burned bone.

Object ID: UA 2016-63-026
Material: Brass
Size: 1”
Group 1
Object name: Tip of a scabbard (sheath) for bayonet
What was it used for: This scabbard/sheath indicates that the crew of the Neva carried some personal armor. Metallurgical analysis showed that the object was likely manufactured in Europe circa second half of the 18th century.

Object ID: UA 2016-63-028
Material: Flint
Size: 2”
Group 1
Object name: Fragment of gunflint
What was it used for: Originally, this artifact was used to generate a spark in a flintlock weapon. Survivors may have used it to start fires, as mentioned by Midshipman Mikhailo Terpigorev in his recollection of January 9, 1813, the night following NEVA's loss: “*This same evening one of the promyslzlenniks, who had a [flintlock] pistol with him, made a fire and near him the sufferers recovered the first night. “*

Object ID: UA 2016-63-71
Material: Iron
Size: 6”
Group 4
Object name: Russian axe
What was it used for: Russian style axes were among the most common artifacts found in the Neva camp. Altogether, archaeologists recovered 27 axes. Used for cutting trees and wood working, such as ship and house building, axes had to be imported to Alaska from Russia.



Object ID: UA2015-237-0117-to-0119d
Material: Glass
Size: 1/4”
Group 2
Object name: Beads
What was it used for: Russians and Brits imported beads for trade with Alaska Natives. Red beads with white centers were most common from 1860-1880.

Object ID: UA2015-237-134
Material: Ceramic
Size: 1.5”
Group 2
Object name: Ceramic shard
What was it used for: Fragment from a tea cup. This design (printed in dark cobalt) began circa 1802 and was most popular ca 1820-1840.

Object ID: UA2015-237-0262
Material: Ceramic
Size: 1/4”
Group 2
Object name: Pipe stem
What was it used for: This pipe was manufactured between 1836 and 1876 by Jesse and Thomas (J&T) Ford, an English pipe maker in London’s Stepney District. This type of pipe was likely acquired by the Russian American Company through their trading agreement with the Hudson’s Bay Company after June 1, 1840.

Object ID: UA2016-063-066
Material: Metal
Size: 7”
Group 3
Object name: Nail
What was it used for: This and several other similar nails were found in a thin strip of wooden residue shaped as a rectangular box measuring 6 ft x 2 ft.

Object ID: UA2016-063-068
Material: Iron
Size: 24”
Group 4
Object name: Trunnion caps or brackets
What was it used for: To mount ship’s cannon to carriage.

Object ID: UA2016-063-075
Material: Copper
Size: 20”
Group 4
Object name: Ship’s sheathing
What was it used for: Thin sheets of copper were attached to wooden ships’ hulls to protect them from marine wood-eating organisms.

Activity IV. 1. Location cards

LOCATION 1

DESCRIPTION:

North end of a forest terrace overlooking the ocean with forested hill behind and a freshwater stream on one side. Archaeologists uncovered several areas of charcoal intermixed with burned faunal remains, ash, and cultural materials and stone features. Some of the stones were arranged in piles, and some in rings.

LOCATION 1

ARCHAEOLOGISTS' INTERPRETATION:

Due to isostatic uplift, the coastline of Southeast Alaska has raised several feet since the nineteenth century. In 1813, this area was at the beach level. This is where survivors made shelters and cooked their meals. Stone rings encircled cooking and possibly signaling fires. Rock piles were anchors for sailcloth shelters. One of the survivor's accounts mentions that they built huts "having collected sailcloth, canvas, and fabric fragmented by the wind and waves." It is also possible that one or more of the stone piles are evidence of a sweat bath, the preferred Russian interpretation. This is supported by evidence that some stones show evidence of having been exposed to fire. Gunflints found in this area and a half burned grass bundle point out to a method used by survivors to start the fire.

LOCATION 2

DESCRIPTION:

South end of the forest terrace overlooking the ocean with forested hill behind and access to freshwater stream. Archaeologists uncovered a large hearth and several stone piles. The hearth was shallower than the stone piles, and some early 19th century artifacts were beneath it.

LOCATION 2

ARCHAEOLOGISTS' INTERPRETATION:

Due to isostatic uplift, the coastline of Southeast Alaska has raised several feet since the nineteenth century. In 1813, this area was at the beach level. Stratigraphy and artifact assemblage showed that this area was used in two different episodes. Some artifacts, such as a compass leg and an awl made out of ship's copper sheathing, are associated with the *Neva* survivors. Rock piles may represent temporary tents made out of sailcloth. The large hearth, however, is a later addition. Objects found in this section date to 1840-1870, decades after the *Neva* wrecked in the bay. Both earlier and later components had artifacts associated with hunting. The presence of beads in the 1840-1870 level may indicate that the hunting party that camped here included Alaska Native people.

LOCATION 3

DESCRIPTION:

A narrow segment of terrace north of the excavated survivor's campfire and tent site attracted archaeologists' attention because of a hearth eroding from the bank below. While attempting to excavate to the base of the hearth, archaeologists uncovered an elongate organic stain at a depth of around 15.7 inches. The stain outline was rectangular in shape, measuring 6 by 2 feet, and aligned east to west. Several highly degraded iron nails were discovered around the periphery of stain.

LOCATION 3

ARCHAEOLOGISTS' INTERPRETATION:

The organic residue indicated remains of a rectangular wooden box. Its dimensions and positioning from east to west indicated that the archaeologists had come across a grave with a wooden coffin. The rows of mismatched iron nails and spikes in the coffin indicate that it was built on-site, probably using whatever ship's lumber had washed ashore. Crewmen took great care in the interment, placing it close to camp and positioning their comrade in a traditional Russian Orthodox east to west orientation. Based upon the acid soils of spruce forests and the poor condition of unburned faunal remains in the survivor camp area, it is doubtful that the grave contains much more than a "bone stain." Out of respect to the deceased, archaeologists stopped excavating, once the nature of the find became clear. Accounts indicate that around 32 individuals died as a result of the wreck, and that at least some recovered bodies were buried by their comrades. Given the weakened condition of the survivors, it is unlikely that they would have transported the remains very far. At the conclusion of archaeological work, representatives of the Sitka Tribe of Alaska and the Russian Orthodox Cathedral held ceremonies on the site to bless those who perished. At the request of the tribe, the grave was left unmarked to help protect it from vandalism.

LOCATION 4

DESCRIPTION:

A small cove, approximately 500 yards north from the site, separated from the survivor camp by a reef. The metal detector survey located several targets at the tree line. Excavation revealed several metal artifacts, often stuck on top of each other, some with traces of now decomposed wooden containers. The artifacts rested on a sandy beach deposit that is now several feet above high tide due to uplift. This roughly corresponds to the 1813 high tide zone. Artifacts found here included ship's copper sheathing, axes, and elements of ship's artillery.

LOCATION 4

ARCHAEOLOGISTS' INTERPRETATION:

The stacked nature of the copper sheathing, trunnion caps, and axes indicate caching behavior in the aftermath of the wreck. The locations of the caches, on a raised beach deposit, suggest that the artifacts were recovered from shallow waters or the intertidal zone and moved to locations which were at or just above the 1813 high tide limit. The caching might have taken place by the survivors themselves, or by salvors who visited the site shortly after rescue. The spruce root binding may indicate that the caching in the North Cove was done by a salvage crew that included an Alaska Native, although the Russian crew members probably had similar knowledge.

LESSON FIVE: FINDERS/KEEPERS: WHO DO THINGS IN THE OCEAN BELONG TO?

Every ship has an owner, but who do shipwrecks belong to? In the case of recent wrecks, this is often clear, but what about hundred-year-old ships? They may seem abandoned and broken by waves, but shipwrecks are not up for grabs. A set of different laws regulate who owns sunken treasures and cultural sites.

One of the oldest of these regulations is the law of salvage and the law of finds. The law of salvage is grounded in ancient Roman law, which allows a salvor to recover property in peril at sea and return it to its owner for a reward. To claim salvage right the salvor "arrests" the wreck by removing an item (an artifact in the case of a historic vessel) to represent the vessel in legal proceedings. In case of an old shipwreck, finding the rightful owner of a wreck may be challenging. In some cases this can be an insurance agency or a branch of the government. The US Navy, for instance, claims perpetual ownership of all its sunken vessels regardless of the geographical location of the wrecks. Similarly, Lloyds of London, one of the oldest maritime insurance companies, has been involved in a number of disputes regarding historic shipwrecks.

The law of finds, which applies only to property voluntarily abandoned by its owner, means that whoever finds sunken property and takes control over it can become its new owner. There is a common misconception that the schoolyard rule of "finders-keepers" automatically applies to sunken property. However, there are many additional considerations. A treasure wreck may, for instance, have a leaking fuel tank. Acquiring such wreck makes the new owners liable for environmental damage and they may even be forced to undertake costly mitigation.

Diver prepars to dive on the wreck of the SS *Princess Sophia*, photo courtesy Alaska State Library

Just like on land, the ownership of a wreck depends on who owns the bottom it rests on. In Alaska, the ocean floor from intertidal zone below mean high tide out to 3 miles from shore, along with the bottom of navigable waterways, are owned by the State of Alaska. The Alaska Historic Preservation Act and the federal Abandoned Shipwreck Act state that the management of historic

shipwrecks and other cultural sites within this zone are the responsibility of the State of Alaska provided certain criteria are met. In practice, these laws sometimes are perceived to be in conflict with the laws of finds and salvage, and must be decided in court. The State assumes a "colourable" claim on all historic shipwrecks within its jurisdiction – i.e., the State assumes a claim in order to protect historic shipwrecks against damage or looting until the courts establish a rightful owner. Even if a private owner is awarded the shipwreck by the courts, the State may require that archaeological documentation be conducted if State submerged lands are to be disturbed during recovery. Recovery rights for several Alaskan shipwrecks whose losses were paid by insurance companies were awarded by the courts to private parties. The most notable of these wrecks, the gold rush steamship *Islander,* was the subject of a court case for fifteen years before salvage began in 2012. The salvagers recovered gold nuggets, but not enough to pay for the salvage. Much of the ship was destroyed during a long history of salvage attempts. Per agreement with the state of Alaska, some historic artifacts from the ship were recovered in 2012 and are now on display in the State Museum in Juneau. It should also be noted that there are exceptions to State ownership of tidelands and submerged lands. In areas around municipalities, such as Juneau or Sitka, the State has transferred ownership to the municipalities. In other rare instances, such as around some old canneries or homesteads, the tidelands are privately owned.

Today, the future of Alaska's underwater history is largely in the hands of local coastal communities, which hold interest in their maritime heritage. Local divers are often knowledgeable about underwater sites, and the preservation of these sites depends on their will to protect these resources.

Worksheet 5.1. To take or not to take?

Test your knowledge of what you should and should not collect from the ocean

1. You go beach combing and come across a large abalone shell. Is it ok to collect?
   a) Yes
   b) No

2. You find an arrowhead while walking on the Sitka National Park beach at low tide. What should you do with it?
   a) Take it home. It will look good on my mantle
   b) Leave it where I found it, mark the location and tell the Sitka National Park staff about my find
   c) Take it to the museum

3. You chance across a fossil while walking along the ocean in a State Park. What should you do?
   a) Take it and deliver it to the Alaska State Office of History and Archaeology
   b) Bring it home and display in your back yard
   c) Leave it where it was found

4. While diving you find an old bottle. Your actions:
   a) Take it. Bottles are cool and this will help clean the ocean
   b) Leave it where it is. It may be illegal
   c) Take it, but note where it came from and discuss your find with a local archaeologist

5. On a shipwreck dive you go inside the ship hull and notice a porcelain plate with interesting writing on it. What should you do?
   a) Leave it where it is – it is a part of the wreck and contains more information left in its original setting. Besides, other divers may enjoy seeing it on their dives
   b) Take it before somebody else does or it gets destroyed. Perhaps a local museum would want it
   c) Cool. I will take it, it will make a great present.

6. In some tall grass near the path to the beach you notice an old compass. Should you take it?
   a) Of course! It may be worth a lot of money
   b) No, it looks like it is above high tide, and may belong to the people whose house I just walked past.
   c) Yes! I know the curator in local museum. They for sure will be happy to have it.

Worksheet 5.1. To take or not to take?

Answer sheet

7. You go beach combing and come across a large abalone shell. Is it ok to collect?
   c) Yes

8. You find an arrowhead while walking on the Sitka National Park beach at low tide. What should you do with it?
   d) Leave it where I found it, mark the location and tell the Sitka National Park staff about my find
   It is illegal to collect artifacts and fossils in the National Parks

9. You chance across a fossil while walking along the ocean in a State Park. What should you do?
   d) Leave it where it was found
   It is illegal to collect artifacts and fossils in the State Parks

10. While diving you find an old bottle. Your actions:
    d) Take it. Bottles are cool and this will help clean the ocean
    e) Leave it where it is. It may be illegal
    f) Take it, but note where it came from and discuss your find with a local archaeologist
    Unless you have a permit or permission from the landowner, removal may be illegal. Bottles often lack association with a site and do not have larger archaeological context. However, in some cases they may provide an important clue. Talking to an expert may provide you with interesting information about your find and perhaps lead to a deeper understanding of local history.

11. On a wreck dive you go inside the ship hull and notice a porcelain plate with interesting writing on it. What should you do?
    d) Leave it where it is – it is a part of the wreck and contains more information left in its original setting. Besides, other divers may enjoy seeing it on their dives
    Artifacts found on wrecks maintain connection to a larger historical context. If it is a historic wreck, leaving the object in its original location will help preserve information about this shipwreck. Additionally, this wreck is probably the property of the state, which makes any salvage illegal. If it's just a recreational dive site, other divers will enjoy experiencing undisturbed site.

12. In tall grass near the path to the beach you notice an old compass. Should you take it?
    d) No, it looks like it is above high tide, and may belong to the people whose house I just walked past.
    All artifacts found on private land are property of the land owner.

APPENDIX I: GLOSSARY

Artifacts are items left from human civilizations of the past. They include arrowheads, pottery, pot shards, old bottles, pieces of equipment, and buildings. These items are part of our national heritage and researchers are still learning much from them.

Cultural heritage is the legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations.

Cultural preservation The act of using deliberate and well-designed methodologies to maintain cultural heritage from the past for the benefit of the present and future generations

Dugout canoe is a boat made from a hollowed tree trunk.

Faunal record/assembly/sample – animal remains found in the archaeological context

Gunflint is a small piece of flint (hard gray rock) that is used to ignite the gunpowder in a flintlock gun.

Kayak is a boat type used originally by the indigenous peoples of the Arctic, made of a light wooden frame with a watertight covering having a small opening in the top to sit in.

Magnetometer is an instrument which detects changes in the Earth's magnetic field. Earth has a magnetic field that is generated by the molten iron that is swirling in Earth's outer core. The strength of the magnetic field can be measured, and it varies throughout the Earth's surface. When magnetometer is towed through the water, it is constantly measuring the magnetic field which generally is stable and increases or decreases gradually across the surface. If something ferrous in the water, like a large historic cannon, a large anchor, or even an engine block is detected, the readings will deviate very quickly.

Maritime history is the study of human interaction with and activity at sea. It covers a broad thematic element of history that often uses a global approach, although national and regional histories remain predominant. As an academic subject, it often crosses the boundaries of standard disciplines, focusing on understanding humankind's various relationships to the oceans, seas, and major waterways of the globe.

Maritime archaeology (also known as marine archaeology) is a discipline within archaeology as a whole that specifically studies human interaction with the sea,[1] lakes and rivers through the study of associated physical remains, be they vessels, shore-side facilities, port-related structures, cargoes, human remains and submerged landscapes

Promyshlennik is a Russian term for fur hunter.

Round-the-world voyages are voyages of exploration that circumnavigated the globe.

Sailing ship is a ship driven by sail

Ship sheathing is the practice of protecting the under-water section of ship hull from the corrosive effects of salt water and wood-consuming marine organisms through the use of plates attached to the outside of the hull. In antiquity, ancient Greeks used lead plates to protect the under-water hull. During the 18th century, the British Royal Navy pioneered the use of copper sheathing.

Side scan sonar is an instrument used to look for changes in sea bottom topography. It sends out ultrasound waves and detects the waves after they reflect from underwater objects, creating an image of sea bottom.

Spatial context is relationship on an object to other elements of its surrounding and landscape.

Steamship is a ship that is propelled by a steam-powered engine.

Trunnion is a cylindrical protrusion used as a mounting or pivoting point. First associated with cannons, they are an important military development

Umiaq – open (undecked) traditional boat of Arctic and subarctic indigenous people made of drift wood frame and covered with marine mammal skin

Zooarchaeology - is the branch of archaeology that studies faunal remains related to ancient people. Faunal remains are the items left behind when an animal dies. It includes: bones, shells, hair, chitin, scales, hides, proteins and DNA.

APPENDIX II: ADDITIONAL RESOURSES

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