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ARCHAEOLOGICAL INVESTIGATION OF THE 1813 WRECK SITE OF THE RUSSIAN-AMERICAN COMPANY SHIP NEVA, SITKA, ALASKA

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International Association of Specialists on Russian America
1021B Meadowbrook Road, Ashland City, Tennessee 37015, USA, MA, 1983.

A collaborative 2012 archaeological survey by the Alaska Office of History and Archaeology, the U.S. Forest Service, and the Sitka Historical Society identified a site (SIT-963) believed to be the camp of survivors from the January 1813 wreck of the Russian-American Company ship NEVA. In 2015 and 2016, excavations at the site by an international team of archaeologists revealed evidence of the survivor camp, as well as ship's hardware and a grave. Collectively, the findings leave little doubt that the long lost survivor camp has been discovered.

Keywords: Archaeology, Russian-American, Neva, Shipwreck, Survivor Camp
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АРХЕОЛОГИЧЕСКИЕ ИССЛЕДОВАНИЯ МЕСТА КОРАБЛЕКРУШЕНИЯ В 1813 г. КОРАБЛЯ РУССКО-АМЕРИКАНСКОЙ КОМПАНИИ «НЕВА», СИТКА, АЛЯСКА

© Д. МакМэхэн
Международная ассоциация специалистов по Русской Америке,
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Совместная археологическая разведка 2012 г., проведенная Офисом истории и археологии, Лесной службой США и Историческим обществом Ситки, определила местонахождение (SIT-963) как лагерь людей, выживших в кораблекрушении в январе 1813 г. корабля Русско-Американской компании «Нева». В 2015 и 2016 гг. раскопки на этом местонахождении международной команды археологов доставили находки из лагеря выживших, а также детали оборудование корабля и могилы. Все вместе эти находки не оставляют сомнения в том, что давно забытый лагерь выживших теперь открыт.

Ключевые слова: археология, Русско-Американский, «Нева», кораблекрушение, лагерь выживших.
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Introduction and Project Background

During the summers of 2015 and 2016, the author led archaeological field investigations at a site believed to represent the NEVA shipwreck Survival Camp (SIT-963) near Sitka, Alaska, after several years of planning and consultation. The project was conceived in 2012, when a search team from the United States Forest Service, the Alaska Office of History and Archaeology, and the Sitka Historical Society conducted an archaeological survey to look for evidence of the wreck site of the Russian-American Company sailing ship NEVA (McMahan 2012). The team reviewed published survivor accounts, conducted interviews with Sitka residents, and conducted overflights to identify potential wreck locations. To assist with the search, scientists from the National Oceanic and Atmospheric Administration (NOAA) provided information on historic tide cycles and rates of uplift in the project area. The convergence of several lines of evidence, along with the report of a cannon discovery by a shellfish diver in the 1980s (Wilber 1993:23), suggested a general location of the 1813 wreck of the NEVA. To test the location hypothesis in the field, the team surveyed the beach and forest fringe along a one-km section of shoreline on the lowest tide of the year in June 2012. The only items of interest on the high energy beach were well-rounded pieces of "beach glass" of indeterminate age. On an upland terrace predicted to be the most logical location for a survivor camp, however, a metal detector survey revealed two caches of Russian axes (9 axes total) stacked as if they had been in crates or containers when deposited (Fig. 1). Colonial Russian axes are distinctive due to the barb or "hook" in front of the handle (Viires 1969:15-17). A hearth containing a hand-wrought iron spike and fragments of calcined fauna was also identified, along with multiple metal detector targets that were not excavated. North of this

Fig. 1. One of two caches of Russian axes discovered in a test excavation in 2012 at a location believed to be the NEVA survivor camp. This led to a grant application to the National Science Foundation. Photo by Dave McMahan

Рис. 1. Один из двух кладов русских топоров, открытых во время разведки 2012 г. на месте предполагаемого лагеря выживших людей с корабля «Нева». Эта находка привела к подаче заявки на грант Национального Научного Фонда. Фото Д. МакМэхэна

location, on a part of the same terrace separated by a stream, late 19th – early 20th century materials were discovered through metal detector survey. This was later determined to have been a Tlingit hunting camp. Believing that the earlier cluster (south of the stream) very likely represented the NEVA survivor camp from the winter of 1813, the team ceased disturbance in order to seek funding for a comprehensive investigation with definable goals.

In August 2012, an underwater survey was conducted through the use of a marine magnetometer borrowed from the USS MONITOR National Marine Sanctuary. Participants included PI McMahan (who was then State Archaeologist), Frank Cantelas (NOAA Office of Ocean Exploration and Research), Bob Medinger (Sitka Historical Society), Sue Thorsen (archaeologist, Sitka), and Davey Lubin (boat captain). The goal of the magnetometer survey was to locate anomalies caused by large iron objects carried by Neva – such as cannon, anchors, and rigging. Unfortunately, the results were problematic. The volcanic rocks from Mt Edgecumbe, an extinct volcano, caused a very steep magnetic gradient in the survey area masking any anomalies that might be caused by artifacts. These shifts were probably caused by lava and pyroclastic flows with high iron content. In conjunction with the 2012 underwater survey, and as a last resort, McMahan conducted a single scuba dive in Neva Bay. It was observed that kelp and sea grass were extremely thick at that time of the year, resulting in very limited visibility of the sea floor. Subsequent underwater surveys were conducted in May 2015, July 2015, March 2016, and July 2016. None of the underwater surveys were productive due to dense kelp and tidal surge that made diving difficult and hazardous.

Armed with a multi-year U.S. National Science Foundation (NSF) grant, an international team of American, Canadian, and Russian scientists returned to the site to conduct terrestrial excavations in 2015 and 2016 (Fig. 2 and 3). Work was initially planned for 2014, but had to be postponed to allow for ongoing consultation with the Sitka Tribe of Alaska, the land owner and other stakeholders. As proposed, the multi-year project would use focused, problem-oriented archival and archaeological investigations to: (1) flesh out the history of the NEVA leading up to the wreck through archival research; (2) validate or invalidate the terrestrial site as the 1813 NEVA survivors' camp; (3) characterize site deposits and material culture in the context of other colonial Russian-American sites and survivor camps; (4) identify outlying features, deposits, and material culture through survey of the beach and uplands; (5) conduct ancillary studies to source and otherwise characterize the assemblage; (6) conduct SCUBA survey to search for evidence of the wreck itself and conduct basic mapping and recordation; and (7) disseminate findings to a broad audience through press releases, reporting, the development of educational curricula, and the creation of a "virtual museum." An added goal was to gather scientific data that would otherwise be lost to erosion from waves. Project participants included: Dave McMahan (Principal Investigator), Timothy L (Ty) Dilliplane (Co-PI), Evguenia Anichtchenko (University of Southampton), Dr. Artur Kharinsky (Irkutsk State Technical University), Dr. Yury Likhin (Taltsi Museum of Architecture and Ethnography), Daniel Thompson (consulting archaeologist), Gleb Mikhalev (videographer), Dr. Brinnen Carter (Sitka National Historical Park), John Pollack and Sean Adams (Institute for Nautical Archaeology), Chuck Carrig (U.S. Dept. of Agriculture), and Zlata Lund (Klondike Travel).

A History of the Russian Ship NEVA (1800–1813)

The NEVA, originally named the THAMES, was a 372 ton frigate constructed in England in 1800 (Krusenstern 1813:3; Shalkop 1979:9; Lloyd's Register, 1801-1802, entry 51) (Fig. 4). As a result of archival research by Anichtchenko and McMahan in London in September-October 2015, we now know that the vessel was built at the "King and Queen" shipyard in the Rotherhithe section of London,

Fig. 2. The 2015 NEVA Project team relaxing for a meal. Clockwise: John Pollack, Daniel Thompson, Artur Kharinsky, Yury Likhin, Evguenia Anichtchenko, Dave McMahan, Sean Adams, and Timothy ("Ty") Dilliplane. Photo by Gleb Mikhalev
Рис. 2. Послеобеденный отдых команды Проекта «Нева-2015». По часовой стрелке: Джон Поллак, Дэниел Томпсон, Артур Харинский, Юрий Лыхин, Евгения Анищенко, Дэйв МакМэхэн, Шон Адамс и Тимоти («Ти») Диллиплэйн. Фото Глеба Михалева

Fig. 3. The 2016 NEVA Project team. L to R: Zlata Lund, Sean Adams, John Pollack, Daniel Thompson, Dave McMahan, Chuck Carrig, and Evguenia Anichtchenko (Brinnen Carter not pictured). Photo by Gleb Mikhalev
Рис. 3. Команды Проекта «Нева-2016». Слева направо: Злата Лунд, Шон Адамс, Дэниел Томпсон, Дэйв МакМэхэн, Чак Карриг и Евгения Анищенко (Бриннен Картер не снят). Фото Глеба Михалева

Fig. 4. "Harbour of St Paul on the Island of Cadiack, Russian sloop-of-war Neva." Drawn by Capt Lisiansky, engraved by I. Clark. Published by John Booth, Duke Street, Portland Place, London, 1 March 1814.

Рис. 4. Бухта Св. Павла на острове Кодьяк, русский военный шлюп «Нева». Гравюра И. Кларка по рисунку капитана Лисянского. Опубликовано в John Booth, Duke Street, Portland Place, London, 1 марта 1814 г.

and was launched on August 6, 1800. Rotherhithe, on the Thames River, was known for many prominent shipyards during the 17th-19th centuries. The ship THAMES was built by the prominent London shipwright Peter Everitt Mestaer (b.1763), who constructed vessels during the late 18th and early 19th centuries. Many of Mestaer's ships were destined for East India Company service, although he is also known to have constructed vessels that served in the British Navy. Records in the London Metropolitan Archives, including extensive tax records and Mestaer's last will and testament, indicate that he was a wealthy man with numerous real estate holdings. Many of his holdings were in the Rotherhithe district, where he also owned a pub near his King and Queen Docks. He was involved with local politics, and was the intended victim of an unsuccessful murder plot according to period newspaper accounts. Mestaer, the son of a wealthy shipwright (Peter Mestaer, 1729-1791), had a younger brother (John Everitt Mestaer, 1769-1853) and older sister (Eleanor Everitt Mestaer, 1761-), but no children. Tax records indicate that, in 1800, Peter Everitt Mestaer was living in the Bishopsgate ward, London's main financial district. The church attended by the Mestaers, St. Mary's, was constructed at Rotherhithe in 1716 and still stands. The first owner of the THAMES / NEVA was Robert Taylor (Taylor and Company) "of Crutched Friars, agent," London. Records at the Docklands Museum relating to late 18th century slave trade list a "Robert Taylor" as being captain of two vessels and captain/owner of one vessel involved with the Caribbean slave trade during 1791 and 1793. While it has not been determined if this is the same Robert Taylor who owned the THAMES, he is the only Robert Taylor yet identified with the shipping industry during the time period in question. Lloyd's registry of shipping indicates that the THAMES was surveyed in August 1800, and completed a voyage from London to Hamburg during 1801-1802 under Master Wil-

liam Linder (Lloyd's Register, 1801-1802, Entry 51). At the time of the survey in 1800, the vessel details were described as: "3 masts, 2 decks; ship's extreme length 110"6, extreme breadth 28; height between decks 5'8"; 372 1/94 Burden tons; square-sterned ship with flush deck and quarter badges, no gallery, carved knac (knee?). [Described variously as having a single deck and two decks]; draws 16 ft. when fully loaded."

A later survey described in the Registry of Shipping, London Foreign Trade (Entry 61, February 19, 1803) repeats information from the initial survey with the exception that tonnage is listed (erroneously?) as 351 62/94 and decks as "one and a half". The survey describes a figurehead as a "kind of head." Entries for other vessels describe figureheads in more detail, such as "figure of a man" or some specific animal. The absence of such language for the THAMES may suggest that the "kind of head" is not that of a person or animal, but perhaps a more stylized representation.

To date, the THAMES' construction plans have not been discovered, and marine historians in London are doubtful that such plans existed or have survived. They suggest that period ship's models may be the best source of construction details. By the time Lloyd's Register was published in June or July, 1803, the vessel formerly known as the THAMES was listed as the NEVA (Lloyd's Register, 1803-1804, Entry 289). The register further indicates that the vessel was sheathed in copper in 1803, and records a trip from London to St. Petersburg under Master "S. Bryant." Interestingly, a notation added to Entry 61 in the Registry of Shipping, London Foreign Trade, indicates that the vessel had been "sold to foreigners" in May, 1803. Historical sources, while varying in some details, have suggested that the THAMES was purchased by Russia in February, 1803, along with the LEANDER (renamed NEDEZHDA), specifically for Russia's first circumnavigation of the globe (1803-1806). While negotiations probably took place during late 1802 and early 1803, the London Registry of Foreign Shipping indicates that the LEANDER (NEDEZHDA) and THAMES (NEVA) were purchased in April and May, 1803, respectively. Adam Johann Ritter von Krusenstern, who lobbied for and organized the voyage, sent Yuri Fyodorovich Lisiansky to Hamburg, then London, to purchase the two vessels (Krusenstern 1813:2-3; Moessner 2003:6). It is possible that Lisiansky first became aware of the THAMES before she left Hamburg in 1802, and completed the purchase in London during the spring. We now know that the THAMES was renamed NEVA before she left London, and was sailed to the Port of Kronstadt with a British master and crew. Research has not yet revealed the extent of refitting, if any, at the Port of Kronstadt. At Kronstadt, Krusenstern assumed command of the NEDEZHDA while Lisiansky was made captain of the NEVA. The purchase price for the NEVA was 17,000 pounds sterling (around $27,000 in modern U.S. dollars), with another 5,000 pounds ($8,000 U.S. dollars) having been spent to repair both the NEVA and NEDEZHDA (Krusenstern 1813:3). Both vessels were similar three-masted sloop-of-war frigates, although the NEDEZHDA at 450 tons was slightly larger than the 372 ton NEVA (Moessner 1993:xiv). The NEVA is said to have carried 14 cannon (Tikhmenev 1978:71) and a crew of 50 professional sailors (Moessner 1993:xiv). Krusenstern, along with Court Chamberlain Nikolai Rezanov, led the overall expedition in 1803-1806. The NEVA and NEDEZHDA left the port of Kronstadt in June, 1803, and a year later became the first Russian ships to visit Hawaii (Lisiansky 1814:99-137). There the two vessels separated, with the NEVA traveling to Kodiak and Sitka, and the NEDEZHDA proceeding to Japan (Pierce 1990:311-313).

It is for the NEVA's role in the 1804 "Battle of Sitka" that she is best known in Alaska. The battle is said to have involved at least 1,000 Russians, Aleuts, and Alutiiq peoples, as well as 500 Tlingit men, women and children. In late September, 1804, Russian-American Company General Manager Alexander Baranov joined Yuri Lisiansky on the NEVA to retake New Archangel (Sitka) from the Tlingit. Along with two smaller vessels,

the CATHERINE and ALEXANDER, the NEVA was instrumental in causing withdrawal of the Tlingit from New Archangel to the Peril Straits area of Baranov Island (Lisiansky 1814:147-168). She then wintered in Kodiak, and by April had joined the NEDEZDA in China with a cargo of fur seal, beaver, and other pelts destined for Canton (Lisiansky 1814:272-273; Moessner 2003:380). Both vessels returned to Kronstadt in August, 1806. Research has turned up numerous period newspaper articles that describe the NEVA's and NEDEZHDA'S mission and ports of call during the round' the world voyage. Following his return from the 'round-the-world voyage, Lisiansky's illustrated narrative of the journey was published in Russian (St. Petersburg, 1810), German (Berlin, 1811-1812), English (London, 1814), and eventually in other languages. The NEVA was the first Russian vessel to call in Australia in 1807 (Massov 2006:203-214). From 1807 until her demise in early 1813, she was in the service of the Russian-American Company (Frederick, in Shalkop 1979:7), although during much of that time she is said to have remained at anchor in Okhotsk to avoid capture while Russia supported France in a war against England (DeArmond 1946:10).

Archival research has turned up little information pertaining to the NEVA's final voyage from Okhotsk in August 1812. Official correspondence from the summer of 1812 in the Russian Naval Archives, St. Petersburg, indicates disagreement between company officials and the Czarist government over whether the NEVA should undertake an emissary mission to Japan or sail to Alaska in support of the settlements there. The Russian-American Company, as owner of the ship, eventually won permission to send the NEVA to Alaska.

Historical Accounts of the Wreck

Because the vast majority of Russian-American Company documents prior to 1818 were destroyed after liquidation of the company, the final voyage of the NEVA is captured in only a few accounts transcribed from survivor narratives. Three accounts (Berkh, Podushkin, Golovnin) were translated from Russian to English and published by the Alaska Historical Society and Sitka Historical Society (Shalkop 1979). A fourth account, of Alexander Markov, was only recently translated and published in English (Bland 2015:285-301). Dates and details in the accounts do not always agree, especially between Markov and the others, but are generally consistent in relating the basic story. The following outline is derived from the detailed account of Midshipman Mikhailo Il'ich Terpigorev (Berkh, in Shalkop 1979:19-45).

The NEVA departed the Siberian port of Okhotsk near the end of August, 1812, in route to Sitka, but contrary winds soon slowed her voyage. She did not pass Atka (in the Aleutian Islands) until the end of September, and strong winds prevented a landing in either Unalaska or Kodiak. Finally, on November 16th she was able to enter "Resurrection Harbor" (in Prince William Sound) for water and repairs. After a heated debate, a decision was made to sail for Sitka on November 27. After more hardships and a water shortage, early January brought clear weather, and by January 8 the NEVA was only 140 versts (93 miles) from Sitka (Shalkop 1979:33). By that evening, the shoreline and Mount Edgecumbe were within sight, and by 1 am the ship was around 30-40 versts (20-26 miles) offshore with Mount Edgecumbe to the left (Shalkop 1979:34). While clouds and rain later diminished visibility, the ship's master Mr. Kalinin had sufficient confidence in the NEVA's course that he went below decks to rest. By Terpigorev's account, at 5 am the cry went out that "the shore is under the bow" with Mount Edgecumbe to the right (Shalkop 1979:34-35). This caused Terpigorev to conclude that the man at the wheel had steered contrary to orders, and that the change in direction was compounded by the currents. The anchor was thrown out but had not been secured to the windlass. As the ship turned about, the rudder was knocked out by a rock and she went aground on submerged rocks. According to Terpigorev, "if they had delayed turning by one minute then all inevitably would have perished, because the colli-

sion would have taken place near a very high and inaccessible cliff" (Shalkop 1979:35). The ship eventually broke in half with survivors moving to the bow. By noon, the ship had been "swallowed by the waves" and survivors clung to masts and other pieces of the ship (Shalkop 1979:37).

Of the 73 men who left Okhotsk, 13 died at sea (15 according to Golovnin) and 32 drowned. Of the 28 who made it to shore, two soon succumbed (Shalkop 1979:38). Fortunately, one of the *promyshlenniks* was able to start a fire with a flintlock pistol, allowing the survivors to make it through the first night. With strength from food items that had washed ashore, they were eventually able to construct a hut (Shalkop 1979:38). On January 24, one of two *promyshlenniks* who had been sent to explore encountered a Native boy in a kayak and was taken to New Archangel. On February 2, the survivors were rescued and taken to the fort (Shalkop 1979:38), having endured January temperatures for 24 days with items either salvaged from the ship or procured from their surroundings.

In keeping with the lore of the sea, stories have grown up around the NEVA and the rich cargo some said that she carried. Newspaper accounts over the last two centuries have perpetuated these stories, melding truth with fantasy and encouraging many to look for the wreckage. For example, an 1894 article in the Alaska Herald related 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 (Shalkop 1979:14-15). The writer went on to describe stories that had been told in Sitka, including one that the ship's captain had placed valuables in barrels and buried them beneath a large spruce tree. A 1915 article in the Daily Alaska Dispatch (Juneau) reported that a commercial diver from Port Townsend, Washington, had received a permit from the "War Department" to salvage "lost gold" from the NEVA (Shalkop 1979:15-16), which carried a $200,000 payroll bound for Sitka. The article went on to say that the wreck had "slid into deep water," and that recovery efforts had been abandoned by the Russian government due to "lack of a proper wrecking outfit." Numerous articles in Pacific Northwest newspapers during 1914-1915 recount plans by Captain J.E. Sayles and salvage diver Charles F. Stagger to salvage the NEVA, but details are sketchy and confusing. For example, one article mentions plans to "salvage the boilers" from the NEVA – an impossibility since a sailing ship of that era would not have a boiler. There is no follow up by the newspapers to suggest that any salvage ever took place, or that wreckage had actually been discovered. Like modern "treasure hunters," Sayles and Stagger were probably trying to entice investors with improbable promises of riches.

The Reverend Andrew Kasheverof, curator of the Alaska Territorial Museum, wrote an article on the NEVA in 1932 based on Golovnin's narrative (Shalkop 1979:16). Adding his own text, Kasheverof described the recent discovery of a cave in the wreck area where the survivors are believed to have taken shelter. The discoverer is said to have found a portion of a "Russian brass candlestick," and noted a crown and horseshoes chiseled into the cave wall. In 1939, Kasheverof placed a mast or yard arm fragment said to be from the NEVA in the Territorial Museum (later the Alaska State Museum). The museum's collections still include the specimen, which is carved from yellow cedar. Another yellow cedar fragment in possession of a private citizen in Juneau is said to have also come from the Kasheverof piece.

Field Methodology

Field objectives and methodologies followed those described in the project's research design. The 2012 baseline was re-established, and was used as a basis for establishing an X/Y/Z coordinate system via the use of a total station and tapes. The site area and surrounding landforms, including terraces and beach, were also topographically mapped by total station. This included an elevational cross-section from the lower intertidal zone to the upper terrace. In 2016, the site area was also mapped by

the use of a drone, courtesy of Sean Adams ("3 Points in Space Media LLC," Vancouver) and Ryan Marlow ("Alaska Aerial Media," Anchorage). Experienced archaeological cartographers John Pollack and Sean Adams (Institute of Nautical Archaeology) oversaw all aspects of mapping. Excavations were carried out through the implementation of block excavations, as well as 50cm x 50cm test pits. To the extent possible, each exposed artifact was assigned an X/Y coordinate and depth below surface (BS). Due to the shallow nature of the deposits, a "below datum" designation was not assigned. However, all notable artifacts were recorded in three dimensions via total station. All soil from excavation units was screened through ¼ inch mesh. The damp or muddy soil did not allow for the use of a smaller mesh size, but soil samples from hearths were collected for flotation or screening through small mesh. Artifacts and fauna from the screens were placed in unit / level bags. At the end of each day, the bagged artifacts were placed in larger bags for that particular day's collection, and secured in a rigid plastic chest in camp.

Metal detectors were indispensable for determining test pit locations, and two different models and coil sizes were used. A Fisher CZ-21 was the primary instrument due to its sensitivity and depth penetration. A Whites M6 was used in conjunction with the Fisher to help determine the nature and composition of targets (i.e., ferrous, non-ferrous, large, small, etc.). The metal detector survey was done systematically by dividing the site area into manageable sections. Every metal detector target was assigned an identifying number and entered into a log. All locations were recorded by total station, and some were also assigned X/Y grid coordinates. The Whites M6 was fitted with a small coil to routinely check units during the course of excavation. Back dirt piles were also routinely examined by metal detector to check for artifacts that had fallen through the ¼ inch screens. Small lead shot and other finds were recovered in this manner. A systematic metal detector survey was also conducted in the beach fringe at the base of the terrace scarp. Daniel Thompson, with a high level of experience in archaeological metal detecting, oversaw the metal detector program.

Each participant kept a field notebook with details of the daily activities in which they were involved. Details of excavation were kept in field notebooks, while stratigraphic profiles and block excavation plan drawings were done in a larger format notebook. These were later drafted and digitized. A dedicated project camera was used to record ongoing excavations, notable artifacts, stratigraphic profiles, and features. Additionally, project videographer Gleb Mikhalev conducted interviews with participants and routinely captured video and photos of progress each day.

Results of Field Investigations

The metal detector survey of the SIT-693 site terrace identified 76 targets in 2015, 42 of which were in the area believed to have been the survivor camp. Twenty-five of the targets were in an area north of the "survivor camp," believed to represent a later (mid-to-late 19th century or early 20th century) Tlingit hunting camp. In 2016, the metal detector survey area was expanded to a small cove north of the Tlingit hunting camp. In this area, archaeologists discovered another cache of Russian axes, as well as copper sheathing and a yard brace (rigging hardware) believed to relate to the NEVA. Sixteen one-meter excavation units were opened in three blocks during 2015. Block 1 (SE Excavation Area), comprised of six contiguous one-meter units, was the first excavated and is in the presumed survivor camp area (Fig. 5). Block 2 (Central Excavation Area), comprised of eight contiguous one-meter units, was located approximately three meters south of Block 1 and is also in the presumed survivor camp area. Block 3 ("Kitchen Terrace Area"), comprised of 2 contiguous one-meter units is north of the stream. This area is now known to be the location of the later Tlingit hunting camp. In addition to the block excavations, numerous smaller (50cm square or less) were opened to remove metal detector targets. In 2016, excavations were expanded to include seven additional one-meter-square units in the "survivor camp" area and

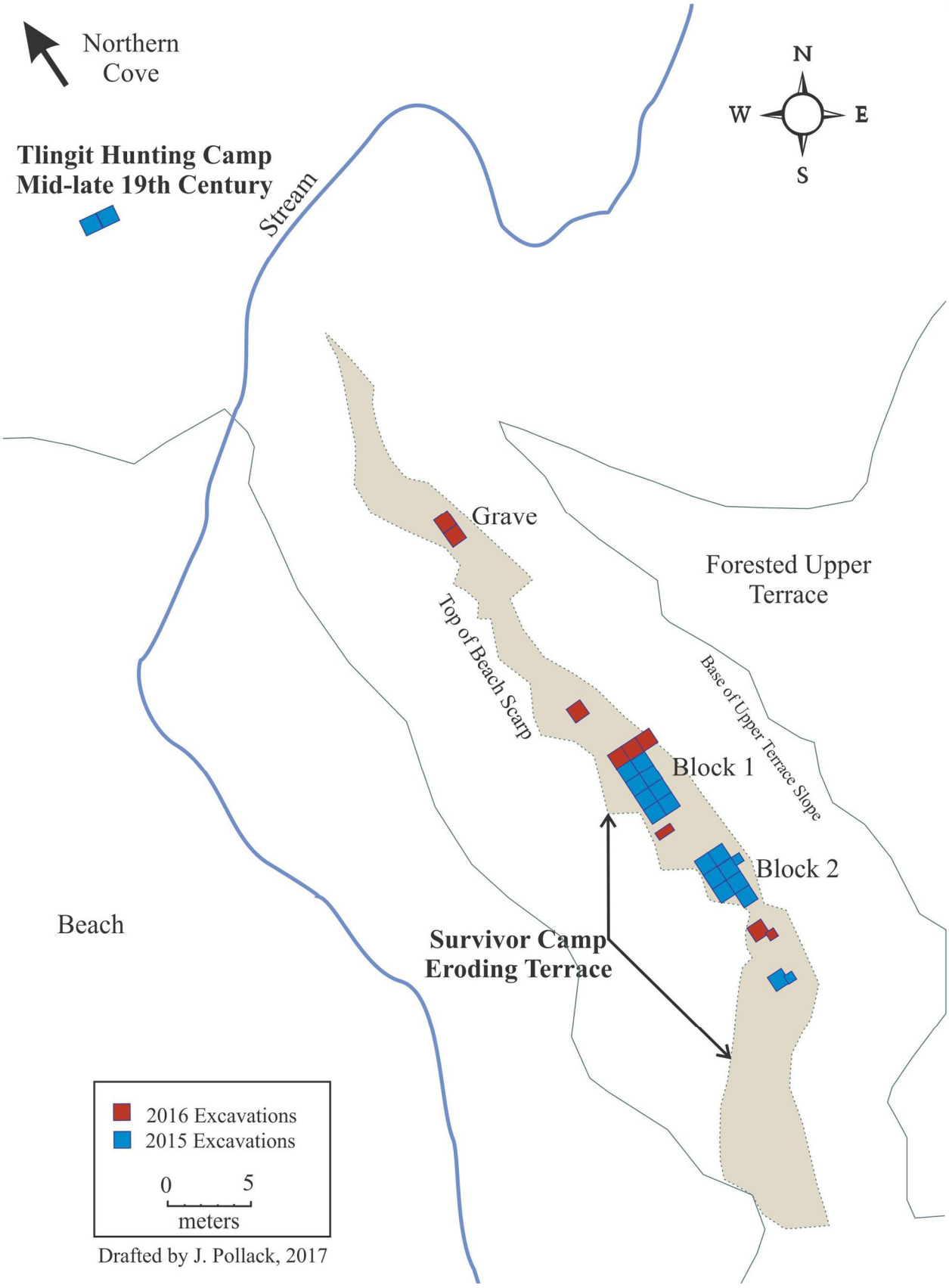

Fig. 5. Plan drawing of 2015 and 2016 excavation units at the NEVA Survivor Camp (SIT-963)
Рис. 5. План раскопов и шурфов 2015 и 2016 гг. на лагере выживших с корабля «Нева» (SIT-963)

several smaller excavations to recover significant metal detector targets to the north of the "survivor camp."

Primary Terrace (Blocks 1 and 2):

Despite demonstrated contamination by later materials, overall findings support the hypothesis that SIT-963 is the location of the NEVA survivor camp. Recovered artifacts, which are consistent with an early 19th century timeframe, include French gunflints, a brass buckle, reworked copper sheathing, copper and iron nails, musket/pistol balls, Russian axes, and the leg from a brass nautical (or carpenter's) divider (Fig. 6). In general, the artifacts are consistent with a "salvage" rather than camp situation. For example, both gunflints and associated small flakes of gunflint material were recovered, suggesting that they were used as strike-a-lights for fire starting. Micro-flakes from the North Block were associated with burned (carbonized) grass, such as might have been used for tender. This is consistent with the survivor account that one of the *promyshlenniks* was able to start a fire with a flintlock pistol, allowing the survivors to make it through the first night (Shalkop 1979:38). Some of the recovered musket balls have been whittled, as if to reduce their size for use in a smaller caliber weapon such as a pistol. Short sections of copper rod were also present, and may have been cut for use in a weapon. Smaller, hand cast lead shot (with mold lines) were also recovered and may sug-

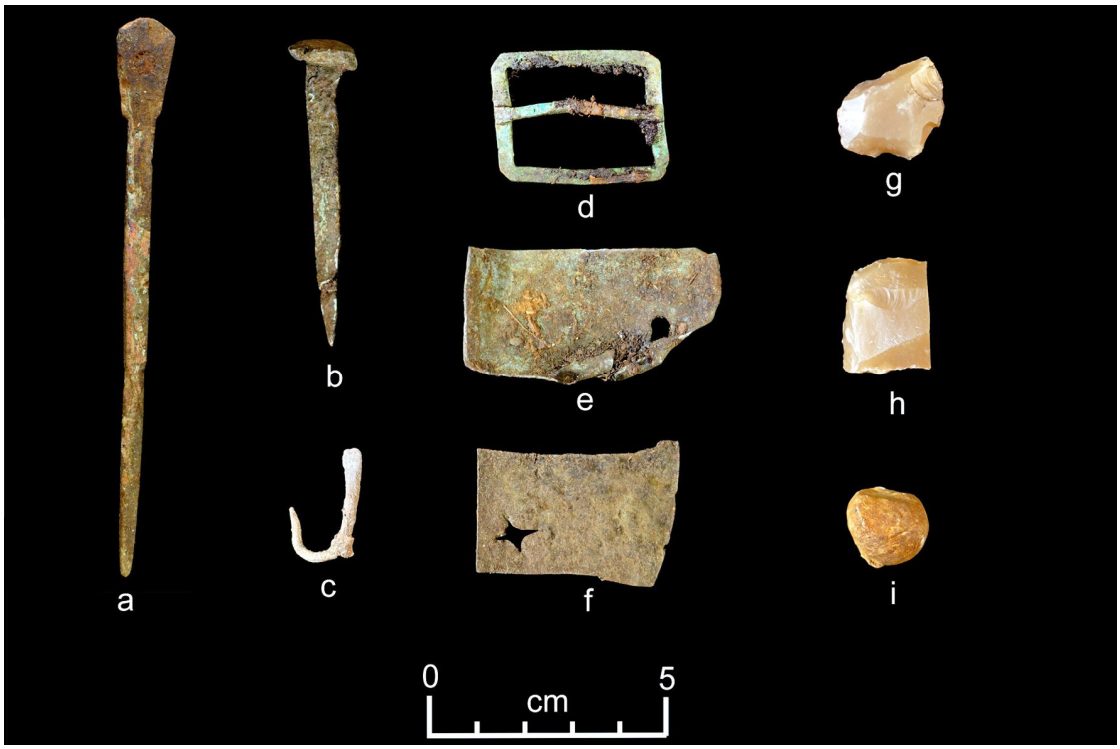

Fig. 6. A representative collection of artifacts discovered in July 2015: *a – one leg of a brass nautical divider for measuring distances on charts; b – a copper ship's nail; c – a fishhook possibly made from a copper nail; d – a brass or copper belt or strap buckle; e – perforated sheet copper, possibly from hull sheathing; f – perforated sheet copper, possibly from hull sheathing; g – French gunflint; h – French gunflint; i – lead musket ball*

Photos by Dave McMahan

Рис. 6. Репрезентативная коллекция артефактов, найденных в июле 2015 г.: *a – ножка латунного навигационного делителя для измерения расстояний на графиках; b – корабельный медный гвоздь; c – рыболовный крючок, возможно, сделанный из медного гвоздя; d – латунная или медная пряжка ремня; e – перфорированная листовая медь, возможно, из оболочки корпуса; f – перфорированная листовая медь, возможно, из оболочки корпуса; g – французский ружейный кремень; h – французский ружейный кремень; i – свинцовая мушкетная пуля*

Фото Д. МакМэхэна

gest the use of a fowling gun. Due to Block 2 contamination, it has not yet been determined if the smaller shot are intrusive. At least one of the copper nails appears to have been shorn off, as would have occurred as the result of wrecking. A copper fishhook recovered from the site may have been fashioned from a nail. Numerous small fragments of copper sheeting, probably ship's sheathing, were recovered from the survivor camp area in 2015.

Features identified during excavations in the "primary terrace" area include several hearths scattered along the terrace edge, as well as two piles of stacked boulders (Fig. 7). The boulders may have served as anchors for a sailcloth tent, or perhaps as steam bath stones. One of the hearths (Block 2) was determined to be intrusive and consistent in age with the nearby Tlingit hunting camp (i.e., mid-to-late 19th century). The intrusive nature of this hearth is visible in profile, and substantiated by artifact analysis. For example, a decorated and marked kaolin pipe stem fragment has been conclusively identified by Thompson as dating within mid-to-late 19th century. Generally, pipe smoking (as opposed to snuff and chewing) was not popular among Russians until the 1830s (personal communication, Dr. Alexander Petrov, Russian Academy of Sciences). Other presumed intrusive artifacts from the hearth include a small piece of clear glass from near the surface, a small piece of water worn transfer-print ceramics, and a jack or pen knife. The knife was discovered in a concretion that was broken apart in the laboratory. Chemical analysis suggests that at least one of the sheet copper fragments is intrusive from the late 19th century. Other than the possibly intrusive items described above, the "primary terrace" deposits were devoid of ceramics, glass and other items which would be expected on a camp or settlement site.

In addition to excavation, seven dendro cores were extracted from spruce trees in the "primary terrace" area by use of an increment borer. Ring counts (from cores at breast height) ranged from 55 to 132 years, without correction for seedling growth or height of the core. With a conservative 5-year correction (i.e., 137 years for the oldest), this indicates that (at the latest) the terrace had uplifted enough to support tree growth by around 1878. Excavations on the terrace indicate that the survivor camp was originally on a sandy substrate indicative of a supra-tidal or beach fringe deposit. This condition probably existed until at least the mid-19th century, based on the presence of intrusive mid-to-late 19th century artifacts in contact with beach sand in the Block 2 deposits. This is consistent with NOAA estimates of 11 feet of uplift since 1813.

"Tlingit Hunting Camp" (Block 3):

Block 3, comprised of a 2m x 1m unit, was excavated north of the "survivor camp" to investigate a large ferrous metal detector target and associated deposits. A stream separates the two excavation areas. While late 19th century materials had been recovered from the Block 3 area during the 2012 metal detector survey, it was hoped that earlier materials would also be discovered. The unit was excavated 0.75m into deposits of hearth material and organic enriched soil. The large ferrous target proved to be a portion of a cast iron kettle containing deer bones. Other artifacts included kaolin pipe stem fragments, a .44 center fire shell casing, an iron gouge or chisel, ceramics, glass trade beads, a button, wire nails, and numerous deer bones. The ages and nature of the items recovered suggests that the deposits probably represent a mid-to-late 19th, or perhaps early 20th century, hunting camp. A recently discovered entry in the 1901 Coast Pilot, based on a 1900 survey, reads: "Neva Bay, 2 ½ miles northward of Cape Edgecumbe, has several Indian shacks, and the Indians find a landing place for canoes behind the reef at the north point at the entrance." This suggests the presence of a Tlingit camp in 1900. The recovery of massive amounts of deer bone, including some within an iron kettle, indicates that the focus of the camp was hunting. Several metal detector targets were noted in the area identified as a landing place, but no excavations were conducted there.

Fig. 7. Dr. Artur Kharinsky (Irkutsk National Research Technical University) recording artifacts adjacent to stacked boulders at the NEVA Survivor Camp (SIT-963) Photo by Dave McMahan

Рис. 7. Доктор Артур Харинский (Иркутский национальный исследовательский технический университет) документирует артефакты, найденные рядом со сложенными валунами на лагере выживших с корабля «Нева» (SIT-963) Фото Д. МакМэхэна

North Cove Area:

In 2016, the metal detector survey was extended around a small cove just north of the "Kitchen Terrace / Block 3" area. Because the south end of the cove overlapped with the north end of the Block 3 hunting camp area, it was assumed that any metal targets would be late 19th century. During testing, however, one of the targets proved to be four panels of copper ship's sheathing (Fig. 8). The sheathing had been ripped from its fasteners and stacked as if cached for later use. Beneath the sheathing was a small bundle of four pieces of iron bar stock secured with a spruce root cord (degraded but identified microscopically). Another target, further north, proved to be a cache of five Russian axes. A rectangular stain in the soil above the axe cache suggests that they had been in a wooden crate. Nearby a piece of iron canister shot or grapeshot was recovered. A metal object was discovered eroding from the root system of a large spruce tree. Subsequent investigation revealed a yard brace, ship's hardware that would have secured a yard arm, perhaps from the topsail (Fig. 9). The yard brace exhibited evidence of intense burning on the outer surface, as if the wooden spar had been placed in a fire to separate it from the hardware. Beneath the yard brace, and in direct contact, were two additional Russian axes. A short distance away, in the middle intertidal zone, a large wrought iron drift pin (as would have fastened the keel to the keelson of a sailing ship) was found wedged in a rocky crevice. The discoveries in the North Cove area are significant in that they represent the first direct evidence of a Russian sailing ship – or at least a sailing ship that was carrying Russian axes. The elevation of the copper sheathing, axes, and yard brace around the cove roughly coincides with where the upper tidal limit would have been in 1813 prior to uplift. The cove is also in downstream alignment with the prevailing current from the estimated wreck location of the NEVA. The only question that remains is whether the ship's materials were cached by the survivors themselves or by later visitors to the site.

The Grave of a Lost Sailor:

A few days before the close of the 2016 field season, team members began investigating a depression at the northern edge of the "survivor camp" area via a 2m x 1m excavation unit. Charcoal and calcined fauna, was eroding from the undercut shoreline at this location and it was assumed that another hearth was present. Subsequent excavations did reveal hearth material, but below the hearth was a rectangular organic stain outlined by heavily corroded nails of different sizes (Fig. 10). The size, shape, and eastern orientation of the feature indicated that a coffin burial was represented. The rows of mismatched iron nails 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 internment, placing it close to camp and positioning their comrade in a traditional Russian Orthodox east to west orientation. As per agreement with the land owner and tribe, the grave was only excavated to the extent necessary to see the outline of the top of the coffin. It was then backfilled without further disturbance. Based upon the condition of unburned faunal remains in the survivor camp area, and the acid soils of spruce forests, it is doubtful that the grave contains much more than a "bone stain".

Accounts indicate that around 32 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. Berkh's account indicates that only two bodies were recovered "completely whole." The only burial he mentions by name is that of Tertii Stepanovich Bornovolokov, Alexander Baranov's replacement as RAC chief manager (Shalkop 1979:40). Certainly Bornovolokov would have been considered of high enough status to warrant the construction of a coffin under primitive conditions, but the occupant of the discovered grave is open to speculation. At the conclusion of archaeological work, representatives of the Sitka Tribe of Alaska and Russian

Fig. 8. A cache of copper ship's sheathing discovered in the "North Cove" area in 2016. Photo by Dave McMahan
Рис. 8. Клад медных оболочек корабля, обнаруженный в районе «Северная бухта» в 2016 г. Фото Д. МакМэхэна

Fig. 9. A yard brace (sailing ship's hardware) discovered in the "North Cove" area in 2016. Photo by Dave McMahan
Рис. 9. Палубная скоба (деталь парусного судна), обнаруженная в «Северной бухте». Фото Д. МакМэхэна

Orthodox Church held ceremonies on the site to bless those who perished.

Collections Treatment and Analysis

Artifacts are presently undergoing analysis at the Department of Anthropology, University of Alaska Anchorage. Some of the iron artifacts, such as axes, were cleaned via electrolytic reduction (electrolysis) at the Office of History and Archaeology (OHA) laboratory in Anchorage. Some of the iron concretions deemed too fragile for electrolysis were x-rayed, courtesy of the Nautical Archaeology Laboratory, Texas A&M University. The radiographs depict mostly iron spikes/nails, although an iron ring (fastener?) and spoon fragment are also visible. There are plans for metallurgical analysis of representative copper artifacts by Dr. Kory Cooper (Purdue University) and Dr. Peter Northover (University of Oxford). Dr. Northover is initiating a study to determine chemical signatures of Russian copper throughout the late 18th and 19th centuries. This will benefit not only our interpretation of the NEVA artifacts, but will contribute to our understanding of collections from other Russian colonial sites in Alaska. Key artifacts from the site have undergone 3D scanning by Ted Parsens (University of Alaska Anchorage) and Sean Adams, (3 Points in Space Media LLC, Vancouver). The scans can be used in a virtual museum exhibit, or to produce duplicate artifacts with a 3D printer. Once analysis has been completed, the collection will be permanently curated by the University of Alaska Museum of the North in Fairbanks.

Soil samples from excavation units were dried in the laboratory, and some were floated or waterscreened through 500 micron mesh to extract charcoal and biological specimens

Fig. 10. The outline of a coffin burial was discovered at the northern edge of the survivor camp. Photo by Dave McMahan
Рис. 10. Фрагмент гроба погребения был обнаружен на северном краю лагеря выживших. Фото Д. МакМэхэна

(fauna and plant materials). Faunal specimens, comprised primarily of small calcined bones from hearth samples, are being analyzed by Dr. Megan Partlow (Department of Anthropology, Central Washington University). She has completed analysis of the 2015 materials, which indicate a preponderance of Sitka blacktail deer remains. Other represented fauna include Steller sea lion, harbor seal, and at least two species of fish. It is cautioned that admixture of later materials from the intrusive hearth in Block 2 may be present. Analysis of the 2016 faunal materials is ongoing but has produced interesting results (i.e., the presence of beaver, as well as hawk or eagle bones). McMahan has conducted microscopic analysis of some specimens (for example, a carbonized grass sample associated with gunflint microflakes).

2016 Underwater Investigations

A side scan sonar survey was conducted with John Pollack's Starfish 492 towed from a 16' inflatable Achilles rigged with a covered laptop platform. The survey was comprised of a number of transects conducted parallel to the shore, across the mouth of Neva Bay, over a two day period. The data are geo-referenced, and will be plotted. However, the data are compromised by thick summer kelp growth. While the sonar provided some possible targets for further exploration, the air in kelp stems generally precludes useful sonar data. The same is true of scuba operations. Several dives were conducted by Adams, Anichtchenko and McMahan (two divers down and one safety diver suited up above), while Pollack operated the boat. Kelp was so thick that the ocean floor could not be observed without tunneling down through the kelp. There was also significant surge, especially along the outside of the reef. While cannon and other large ship's items may be present in rocky crevices in the ocean floor, underwater investigations are very difficult in this area. Due to an estimated 3+ meters of uplift since 1813, it may be more prudent to search for additional remains of the ship in the intertidal zone or forest fringe.

Archival Research

The major elements of proposed archival research have been completed, although Russian documents have not yet been translated to English for final reporting. In September 2014, Anichtchenko and McMahan conducted archival research in St. Petersburg, Russia. Numerous documents were examined in the Russian Naval Archives and the Russian Historical Archives in an attempt to flesh out the NEVA's history, particularly events leading up to the vessel's final voyage. While no details of the wreck itself were discovered, official correspondence details the events leading up to the NEVA's final voyage to Alaska. One of the documents revealed the name of a British firm for follow up in London.

During late September and early October 2015, Anichtchenko and McMahan (along with archaeologist Patricia Browne) conducted archival research in London, UK. Because the NEVA (originally the THAMES) was British built, it was hoped that London archives would contain details on construction, ship yard, builder, and original owner / master. Despite a lack of optimism prior to the trip, significant details were discovered and were incorporated into reporting on the ship's history. Sources of useful information included Lloyd's Register, the British National Archives, the National Maritime Museum's Caird Library, the London Metropolitan Archives, and the Docklands Maritime Museum. Follow up research is ongoing to flesh out and confirm details, and pertinent Russian documents are being translated.

Conclusion

While not all mysteries associated with the wreck of the NEVA have been solved, we can now replace some of the "lore of the sea" with scientific outcomes. Stories have grown up around the *Neva* and the rich cargo that some say she carried. Through the multidisciplinary research accomplished under this project, some of the "lore of the sea" can now be replaced with scientific outcomes. Although analysis is ongoing, the NEVA camp artifacts provide a snapshot in time of the privations of her shipwrecked crew. The archaeological

finds suggest that the survivors were active in their own rescue, sending out organized parties to collect useable wreckage, fishing, and hunting. Excavations confirm the crew had very little, but used everything they could salvage to maximize their odds. Sheets of NEVA's hull sheathing were rolled and hammered to create basic survival tools. Numerous iron axes salvaged from the ship's cargo, along with a handful of gunflints, gave survivors the chance to create fires and shelters. Even the broken leg of a navigators map divider, no longer useful after the NEVA's sinking, could easily have been repurposed as an awl, giving survivors a tool to create tents or heavy sailcloth clothing. After weeks onshore with little more than scattered wreckage, this remarkable ingenuity and skill at foraging allowed the group enough energy to launch overland search parties, a strategy which led to their ultimate rescue.

Despite close geographic, cultural, and historical links between Russia and Alaska, there have been relatively few collaborative international studies in the historical archaeology of Russian America. This project is a more robust continuation of previous collaborative work by McMahan, Dilliplane, Kharinsky, Tikhonov, Lihkin, Anitchenko, and others in Alaska and Russia (NSF Award Numbers ARC-1153209, ARC-0939789, and ARC-0620600). The *Neva* Project broadens our knowledge base of colonial Russian America, as well as shipwreck survivor camps in the subarctic / arctic regions. While no additional fieldwork is planned under current NSF funding, it is important to note that the terrace remnant with the presumed survivor camp is being severely undercut by storm waves. It is fortuitous that the site was discovered in 2012, as it will likely be gone in another decade. A significant percentage of the remaining archaeological deposits have been excavated, and it seems likely that only the inland periphery of the survivor camp remains. The land owner (US Forest Service) has been cautioned that archaeologists should monitor the eroding deposits on an annual basis to recover any eroding artifacts with interpretive value.

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References

Bland, R.L. *Another Version of the Wreck of the Neva*. The International Journal of Maritime History 2015, Vol. 27(2), pp. 285–301.

DeArmond, R.N. Fleet, in *Alaska Life the Territorial Magazine*. Alaska Life Publishing Company, Seattle, 1946. P. 8–14.

Krusenstern, A.J. *Voyage Round the World, in the Years 1803, 1804, 1805, & 1806, by order of His Imperial Majesty Alexander the First, on board the Ships Nadeshda and Neva,* 404 pages. Printed by Roworth [I] and T. Davison [II] for John Murray and the Board of Longitude, London, 1813.

Lloyd's Register of Shipping. *Lloyd's Register of Shipping*, Lloyd's Register Foundation, London, UK, 1764-present.

Lisiansky U. *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, by Urey*

Lisiansky, Captain in the Russian Navy and Knight of the Orders of St. George and St. Vladimir, London 1814. 388 p.

Massov A. The Visit of the Russian Sloop *Neva* to Sydney in 1807: 200 Years of Russian-Australian Contacts. In *Australian Slavonic and East European Studies* (ASEES): 20(1-2), Queensland, 2006. P. 203-214.

McMahan D. J. Search for the NEVA Wreck Site: 200th Anniversary Expedition: Report of 2012 Investigations. Unpublished [restricted] document on file at the Office of History and Archaeology, Alaska Division of Parks and Outdoor Recreation, Anchorage, 2012. 15 p.

Moessner V.J. Translator's Introduction, in *A Voyage Around the World 1803-1807*, by Georg Heinrich von Langsdorff, edited by Richard A. Pierce. Limestone Press, Kingston, Ontario, 1993. P. xi-xxx.

Moessner V.J. 2003 *First Russian Voyage around the World: The Journal of Hermann Ludwig von Lowenstern 1803-1806*. University of Alaska Press, Fairbanks. 510 pages.

Pierce, R.A. Russian America: A Biographical Dictionary. Limestone Press, Kingston, Ontario and Fairbanks, Alaska, 1990. 555 p.

Registry of shipping, *London foreign trade*, British National Archives BT 107/13, 1803.

Shalkop A. *The Wreck of the NEVA*, annotated and translated by Antoinette Shalkop, with an introduction by Antoinette Shalkop and Richard Pierce, 64 pages. Published by the Alaska Historical Society and Sitka Historical Society, and partially funded through a grant from the Alaska Historical Commission, Anchorage, 1979.

Tikhmenev P.A. A History of the Russian American Company. Translated and edited by Richard A. Pierce and Alton S. Donnelly, University of Washington Press, Seattle and London 1978. 538 p.

Viires A. Woodworking in Estonia: Historical Survey. Israel Program for Scientific Translations, Jerusalem [translated from Estonian], 1969. 340 p.

Wilber G. (publisher) NEVA – Russian Man of War. In *Sitka – our 'Land of Destiny,'* Pamphlet published by Alaska Publications, Sitka, Alaska. Copy on file at the Sitka Historical Society Museum. 1993. P. 23.

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The author declares no conflict of interest.

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