Finnish Maritime Archaeological Society

Report on the expedition to the eastern Gulf of Finland (Haapasaari and Kotka) in August 2023

This report responds to the Finnish Heritage Agency's research permit diary number MV/24412/2023 dated 15.05.2023.

Summary

In 2023, the Finnish Maritime Archaeological Society made two expeditions and held one field work camp to dive into the wrecks mentioned in the permit above:

In the Archipelago Sea:

- Borstö 1, in the Register of Antiquities under number 1648
- Vrouw Maria, in the Register of Antiquities under number 1658

In the Gulf of Finland:

- St. Nicholas, in the Register of Antiquities under number 1108

No diving took place on the other wrecks mentioned in the permit that required a permit in accordance with section 5 of the Antiquities Act. This report concerns only the last of the wrecks mentioned above, St. Nicholas, where non-invasive documentation was carried out.

However, attached to this report are wreck-specific reports also on other wrecks not mentioned in the permit, which were also examined using non-invasive methods during the expedition of the Maritime Archaeological Society to the eastern Gulf of Finland on 25.-28.8.2023. These wrecks include:

- The wreck of Eteläkari, number 1000022856 in the Antiquities Register
- Wreck of Järvenkari, in the Antiquities Register under number 1131
- Wreck 1 on the western side of Cow Island, number 2442 in the Antiquities Register
- Wreck 2 on the western side of Cow Island, number 1121 in the Antiquities Register
- Artillery sloop, in the Antiquities Register under number 1116
- Dinghy wreck, in the Antiquities Register under number 1114
- St. Maria, in the Register of Antiquities under number 1109

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The expeditions were led by Markku Luoto, chairman of the society, David Cleasby as the maritime archaeologist in charge, Vesa Saarinen as the head of the society's flagship, DSV Stella, and Ekku Pinola and Panu Hänninen as heads of DSV Maija. The expedition was attended by 16 volunteers from our society and two visitors from the Nautical Archaeology Society.

The most important benefits of the expedition were photogrammetric imaging of the wrecks mentioned above, observing visible objects and taking soap samples from previously undated wrecks. All photos and video material taken during the trips have been stored in the MAS portal: mas.mikrojebe.fi, to which the Finnish Heritage Agency also has free access. In accordance with the Declaration of Open Science signed by the MAS, all material can be freely utilised in the so-called Open Science Declaration. Creative Commons (attributed, noncommercial, share-alike) license. In addition, videographers annotate the footage they have filmed, and these annotations can also be found on the MAS portal.

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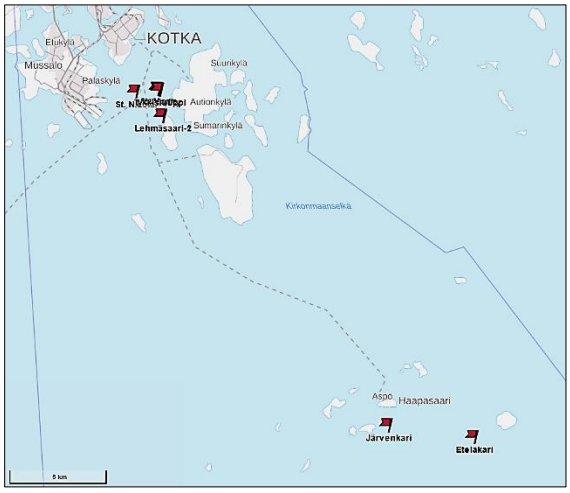
Description of the expedition (from the MAS activity report)

This year, the August expedition 25–28 August focused on the eastern Gulf of Finland, the wrecks of the Haapasaari Islands and the Swedish Strait in Kotka. The trip was made with DSV Stella and Maija. In addition, one of our members, Faster, served as an auxiliary boat. In addition to our members, there were a couple of NAS reinforcements: Alistair Cott from England and Giulia Grimaldi from Italy. Both also fared well in the poor visibility of St. Nicholas, reporting that it was not much different from the conditions of wrecks explored in English estuaries.



The aim of the trip was to study and model previously only superficially observed wrecks, and to make check dives to St. Nikolai and other wrecks of the battles in Ruotsinsalmi to see if details or artifacts that needed more detailed modelling could be found.

Figures 1 and 2. The map shows the destinations of the August expedition in Haapasaari and Ruotsinsalmi. In the lower picture, objects raised on the wreck of Eteläkari, i.e.

As the weather was favourable, we decided to start with the outer wreck, the wreck of Eteläkari (MVID#1000022856), which is deeper than indicated in the preliminary information, i.e. the wreck extends all the way to a depth of 42 m.

A soap sample was taken from the wreck of Eteläkari, which revealed the wood to be oak and tentatively dated the wood material of the wreck, most likely to the 1700s. The wreck is full of soft bulk cargo, of which we did not get a sample this time. There was only time to make a 3D model of the wreck of part of the port, which is still standing.

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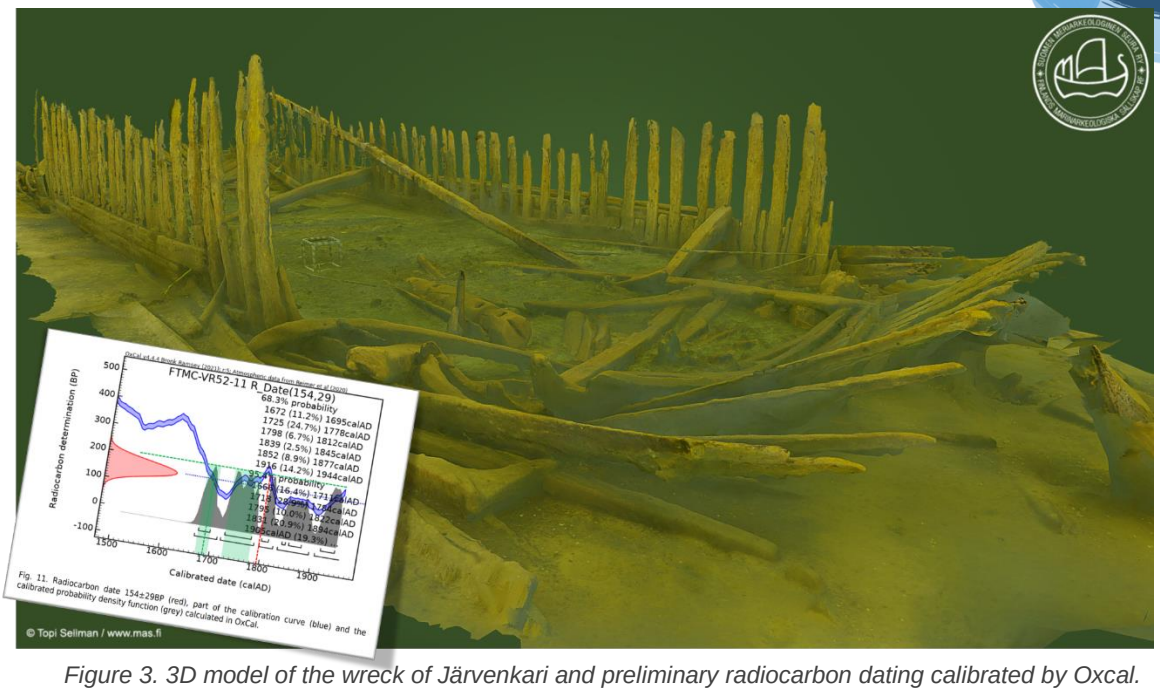

Figure 3. 3D model of the wreck of Järvenkari and preliminary radiocarbon dating calibrated by Oxcal.

When the wind rose, we moved to the wreck of Järvenkari (MVID#1131), from where we were able to make a good 3D model and take a preliminary radiocarbon dating from the soap sample, which also most likely goes back to the 1700s. The wreck of Järvenkari is interesting in terms of its structure, as such a vessel built of thin plank-like arches has never been encountered before. The preliminary "radiocarbon footprint" of the wreck is very similar to that of the wrecks on Cow Island, so it may be that the ship was part of the Russian fleet that participated in the naval battles in the Swedish Strait.

The MAS homepage of the wreck is: https://www.mas.fi/fi/julkaisut/hylkykohteet-merialue/jarvenkari-haapasaaret-mvid1131

An oval metal object was located a few tens of meters outside the wreck, which aviation enthusiasts have identified as a Soviet FAB100 aerial bomb from World War II. The bomb has been reported to the Kymenlaakso police and asked to exercise caution in defusing it so as not to damage the wreckage.

As the storm continued to worsen and the forecast became very gloomy, we decided to evacuate to the Port of Kotka, where Maritime Centre Vellamo kindly offered us berths. From there, we inspected the wreck of St. Nicholas (MVID#1108), where, despite the non-existent visibility, we could see that the wreck still contains coins and other loose items such as buckles for shoes and belts, musket and cannon balls, bottles, etc. There is already a 3D model of the wreck commissioned by the Finnish Heritage Agency, so no attempt was made to model it.

Next, we focused on modelling and sampling the wrecks west of Cow Island (MVID#1121 and MVID#2442), from which we were able to make fairly good 3D models and take soap samples for radio-carbon dating. The MAS homepage of the wrecks is:

https://www.mas.fi/fi/julkaisut/hylkykohteet-merialue/lehmasaaren-lansiranta-1

https://www.mas.fi/fi/julkaisut/hylkykohteet-merialue/lehmasaari-lansiranta-2

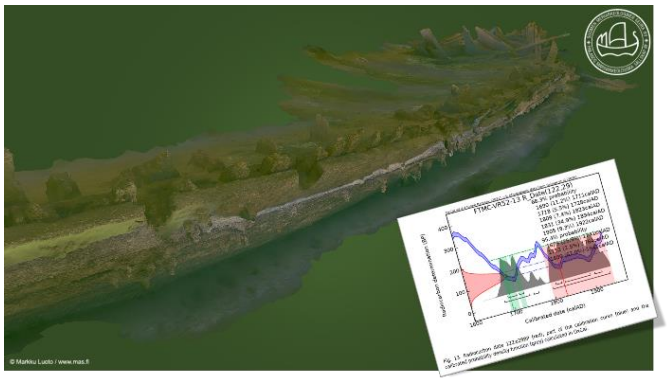

Figure 4. Cow Island West Shore 1 – image of a 3D model from the port side towards the stern and Oxcal

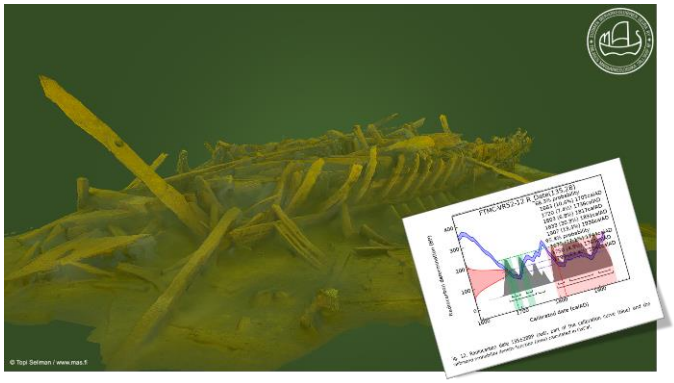

Figure 5. Cow Island West Shore 2 – image of a 3D model from the port side towards the stern and Oxcal

The wrecks on the western side of Cow Island have been found and catalogued separately, but they appear more like halves of the wreck, i.e. the wreck. "Number one" appears to be the stern half of the ship and "number two" appears to be the bow side. The preliminary interpretation of our companions on the expedition is that it is most likely the halves of a ship that was shipwrecked in the Second Naval Battle of Ruotsinsalmi in 1790.

The structures of wrecks have certain similarities, such as a flat-seamed structure, structures with ashes on the inner edges, and a building material (coniferous). Even with timing samples taken from shelves, the radiocarbon age difference is only about 13 years. According to historical sources, these may be parts of the wreck of the Russian ship "Tikhvin", built in 1775, since the ship was 43 m long and these wrecks (MVID# 1121 and 2442) refer to a ship of the same size in total.

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On the last day of the expedition, we made inspection dives to the sites north of Cow Island: Artillery Sloop (MVID#1116), Dinghy Wreck (MVID#1114) and St. Maria (MVID#1109), the first two of which have already been modelled by the Finnish Heritage Agency. St. Maria's remains are spread over such a wide area that modelling it using photogrammetry would require a study of its own. The cannon on the sliding platform of the dinghy wreck was modeled separately due to its uniqueness.

In addition, side sonar was used to search for the wreck of Kilpisaari-2 (MVID# 2507), of which no trace was visible in the given area south of Piltarinniemi in Kilpisaari. Similarly, the wreck of Veitkari-1 (MVID#1000039852) was searched, and even it did not get a very good observation (one potential anomaly) in the given coordinates. There was no diving in either place.

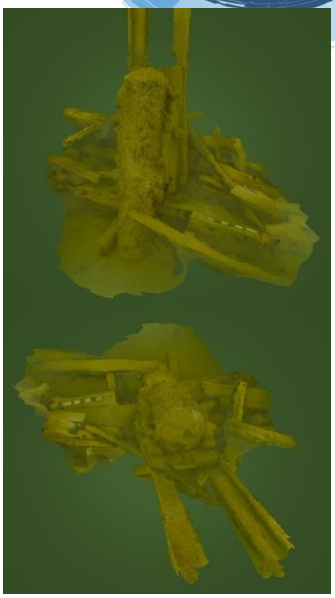

Figure 6. The dinghy wreck cannon "in situ" and on the other hand from the point of view of the shooter, in this case from a bird's eye view.

Espoo 27. 3. 2024, on behalf of the Society's explorers,

Markku Luoto, Chairman David Cleasby, Msc, Chief Marine Archaeologist

Attachments and links to online versions

Eteläkari_MVID#1000022856_2024-03-26_mas.fi-b.pdf

Järvenkari_MVID#1131_2024-03-26_mas.fi.pdf

Lehmäsaari_länsiranta-1_MVID#2442_2024-03-26_mas.fi.pdf

Lehmäsaari_länsiranta-2_MVID#1121_2024_03_26_mas.fi.pdf

Lehmäsaaren_pohjoispuolen_hylyt_St-Maria_Jollahylky_Tykkisluuppi_2024-03-26_mas.fi.pdf

St-Nikolai_MVID#1108_2024-03-26_mas.fi-b.pdf