2024

ANNUAL REPORT 2024

Annual Report of the Maritime Archaeological Society for 2024

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2021 2030 United Nations Decade of Ocean Science for Sustainable Development

Federation of Finnish Learned Societies

United Nations Educational, Scientific and Cultural Organization

Under the patronage of UNESCO The Protection of the Underwater Cultural Heritage

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ANNUAL REPORT

The year 2024 was the 29th year of operation of the Maritime Archaeological Society of Finland (MAS). In accordance with its rules, the purpose of the society's activities is to promote maritime archaeological research, education and volunteer activities. To achieve its purpose, the Society conducts maritime archaeological research, organises training and seminars, and presents statements on issues concerning the field. The Society maintains contacts with its various stakeholders by participating in the activities of domestic and international organisations and scientific communities in the field. In order to promote knowledge of maritime archaeology, the society engages in publishing and information activities.

MAS is the first and so far the only Finnish scientific society accredited by UNESCO. In addition, our society is a member of the Federation of Finnish Learned Societies (TSV) and a community member of the Finnish Diving Association (SL). The society is a non-profit association and it has a Finnish police fundraiser permit and a preliminary decision from the tax authorities on corporate tax-exempt donations. In 2024, the society had about 203 personal members and seven community members.

ACTIONS 2024

As in previous years, the focus of the society's activities was on the implementation of a fieldwork camp and expeditions, as well as the organization of an active training and seminar program. At the beginning of the Board's term of office, the continuation of the strategy decided in 2019 and compliance with the Board's charter drawn up in 2020 were confirmed. The projects initiated by the previous Board regarding the conference publication of IKUWA7, the Porkkala and Archipelago Sea Wreck Parks, and the “Baltic Sea 3D Shipwreck Ontology” – therein also the **Lloyd’s Register Foundation** funded sub project of “Identifying Potential "Lloyd's" Shipwrecks on the Gulf of Finland” were also confirmed as goals for 2024 in the Board's first, i.e. organizing meeting on 14 January 2024.

IKUWA7

Wreck Parks of Finland

Foundation

SEA SMELL (Meren Havinaa) EXHIBITION IN NÖTÖ

Small photo: The hero of the work, Mikael Ahlavuo, in the middle and the society's adjutants at the opening of the exhibition in Nötö.

One of the absolute highlights of the 2024 operating year was the society's first own exhibition at the Nötö gallery in the Archipelago Sea. The exhibition, led and largely carried out by **Mikael Ahlavuo**, collected a comprehensive cross-section of the maritime history of the Archipelago Sea and the activities of our society. At the opening ceremony on Midsummer's Eve, the house was too full of people, but sparkling wine made room for everyone. The exhibition was carried out with a small budget, mainly printing costs, which received support from the **Swedish Cultural Foundation in Finland**. **Tuomas Auremaa** encouraged **Avion Interactive** Corp. to donate a large touch screen to our society for the exhibition, where the audience could view our 3D models independently. Hundreds of visitors visited the exhibition during the summer season, including Minister of Education **Anders Adlerkreutz**, who left a lot of positive feedback

The idea of the exhibition and the entire project are excellent examples of how, at its best, our society enables members to take the initiative. Mikael, and many of the other volunteer members who participated in the production of the exhibition are not members of the society's board or other officials. Mikael invited like-minded people together in the society's communication channels and started the project. **Kai Sundquist** applied for and received funding for it, and many other members contributed with photos, videos and 3D models. The Nötö exhibition was a shining example of self initiated volunteer work and encourages us to repeat Nötö's success in grander scale 2025.

UNESCO HIGHLIGHTED ONTOLOGY RESEARCH AS AN EXAMPLE

The members of the Convention for the Protection of the Underwater Cultural Heritage of the United Nations Education, Science and Culture Organisation (UNESCO) and its accredited NGOs met in Paris, where our Vice President **Vesa Saarinen** represented Finland. We presented our 3D ontology project on the wrecks of the Baltic Sea to UNESCO, where it was received with enthusiasm and our project was presented in UNESCO NGO projects as an example of extensive scientific volunteering. Garry Momber, the head of the NGO committee, wrote great recommendations for MAS, which we have used in fundraising

Vesa Saarinen at UNESCO

MAS PARTICIPATES IN THE MARITIME INDUSTRY FAIR

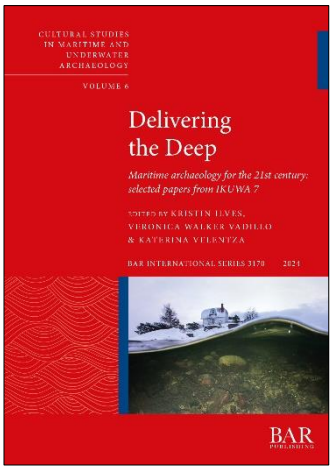
Vesa Saarinen offers VR experience from virtual diving to the "Diana" wreck

With the support of **SeaFocus** Inc, MAS was able to perform at the "Maritime Expo" maritime industry fair held in Turku in May. This was already the second time we were able to perform for the maritime industry operating in Finland. This is even more important advocacy work when the "Wreck Aquarium" initiative, which we have been promoting for a long time, is launched. As we learned from the history of the Maritime Museum of Finland, maritme industry's support is vital for an initiative that requires investments of tens of millions of Euros.

Visitor feedback has been positive, and the hosts are always amazed at how realistic visitors find our rather low-resolution wreck models, because VR glasses are not yet able to spin very heavy models. As the capacity of the devices improves, our content will come into its own even better, and the virtual dives of the future will probably be difficult to distinguish from reality – except that the visibility will naturally be better.

IKUWA7

The conference publication "**Delivering the Deep**" was published in the summer of 2024 as a so-called Open Access publication as planned and with the help of a grant from the **Weisell Foundation** for the purpose. Thanks to the efficient work of the editorial board led by **Kristin Ilves**, PhD, Professor of Maritime Archaeology at the University of Helsinki, the Society was mainly left with the role of financier and author of the foreword. The publication can also be found on the society's website.



The publication has been well received by the scientific community and has collected more than 10 citations in six months, which can be considered a very good achievement in the field.

MARITIME HISTORY DAYS

The 2024 Maritime History Days were held in Jyväskylä on 22–24 March. The theme of the conference emphasised the interactions between maritime and continental history and multidisciplinary approaches to the study of maritime history and cultural heritage. Maritime archaeologist **David Cleasby** gave a presentation on the significance of "bone wrecks" in filling the gaps in our maritime history. **Mikael Ahlavuo** tested one of the screens of the Nötö exhibition with the participants of the event.

DAYS OF SCIENCE AND A NIGHT TOO

Our society participated in the Night of Science again on 21.1. at the **House of Science and Letters**. We had been able to use the entire end of the hall, so we were quite visible with our screens and VR presentations.

We got a few new members, but unfortunately the age structure of the event at the House of Science and Letters is starting to be quite old, so hopefully the Science Days and Night will find premises closer to the city centre campus in the future and reach students as well.

INTERNATIONAL ACTIVITIES

In addition to UNESCO-related activities, international activities were executed this year by the society's poster ISBSA-17 at the conference in Naples and the facilitation of the Archipelago Sea section of the HelderTV company's Vrouw Maria documentary at the beginning of September. MAS volunteers prepared the mooring lines already in the summer and took care of everything from the preparation of the wreck and gas supply to transport and lunches – many of the members even appeared in the documentary. I do feel a little sorry for the Dutch when they didn't dare to go to the sauna and on the other hand even scolded Markku's modest cookings.

*An imaginative presentation of the wreck of the Vrouw Maria at a depth of about 40 meters based on a 3D model built by our society's volunteers under the guidance of **Samuli Haataja** :^)*

UNIVERSITY COOPERATION

As the **University of Helsinki** has invested in distance learning in recent years, the chair of our society has annually held online lectures in English on the role of volunteering in maritime archaeology as part of the lecture series of the Chair of Maritime Archaeology at the University of Helsinki. In addition, many archaeology students from different universities have participated in the "NAS intro" basic courses in maritime archaeology organized by our society.

The expeditions to the eastern Gulf of Finland and the Archipelago Sea, as well as the fieldwork camp, were also attended by undergraduate archaeology students from the University of Helsinki and Turku, who gained experience in quite diverse tasks during the camps. The goal is to further increase cooperation with students as well.

Research collaboration

In addition to research activities related to its own horizontal research strategy and initiatives, MAS and its volunteer divers also supported other academic research projects:

1. **"Lost Fleet" – Minna Koivikko'** s six-year post-doc research project on the wrecks of the Swedish Navy in Finland. The members of the society have been volunteer divers at Minna's excavations and fieldwork camps for several summers. Stella has served as a support vessel.
2. **Iron Age Landing Sites – Yann Irissou'**s doctoral dissertation on Late Iron Age landing sites in the Kimitoön archipelago. About half of MAS's 2024 fieldwork camp was used to inventory Yanni's research sites and inspect anomalies, as well as take dating samples. A small-scale test excavation was also carried out in Kyrksundet.
3. **Movements of the Battle of Riilahti – Sami Brchiscy**, as part of his master's thesis, Sami Brchisky studies the movements of the famous Battle of Riilahti. The society's volunteers have helped Sami in the investigations not only by diving, but also by using boat equipment and targeting ontology studies in the area.

Yann inventories the bottom sediment with a probe to locate the edges of the wreck area.

EDUCATION

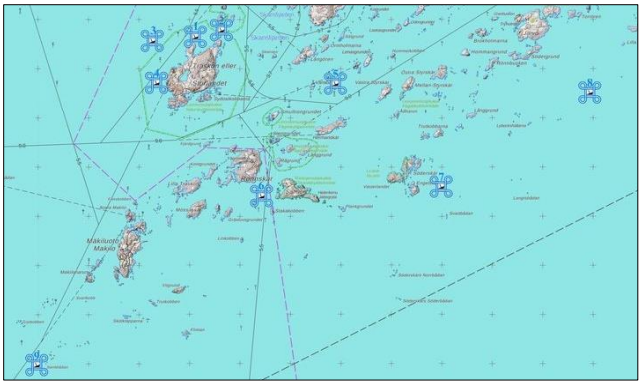
The courses of the **Nautical Achaeology Society** (NAS) were organized in 2024 and in the spring of 20.4. in Lahti and in the autumn 30.11. Suomenlinna. The NAS Intro courses had a total of almost thirty participants. The fieldwork portions of the NAS Part I&II were organized during the fieldwork camp under the guidance of **David Cleasby**.

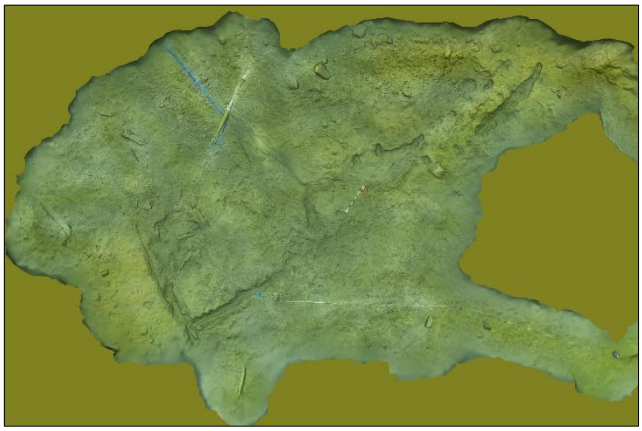
The content of the NAS-Intro course includes a two-hour training course held by **Maija Matikka** a representative of the Finnish Heritage Agency on the significance of legislation on underwater cultural heritage for divers and research in the field, as well as the role of the permit authority in supervising it. Completing the course is the minimum requirement for participating in the society's invasive fieldwork activities.

MAS also organized a Timing Seminar on 23.05. At the House of Science and Letters with the Finnish Heritage Agency, where the synergies of radiocarbon and dendrochronological dating, as well as strengths and weaknesses, were discussed. "Both are better" is probably the end result.

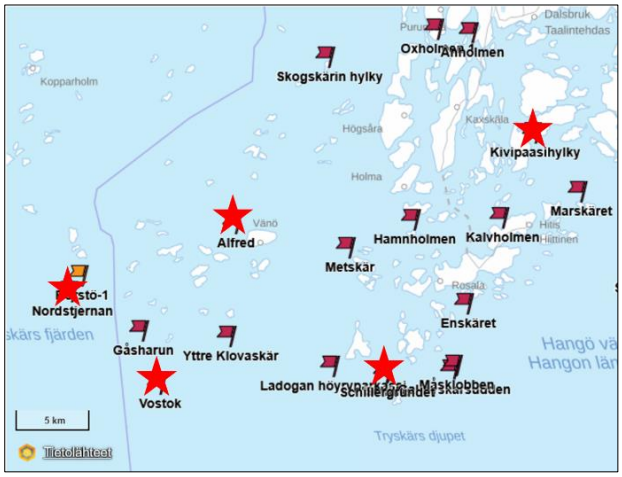
In the upper picture, David Cleasby teaches documentation at a fieldwork camp. The lower picture shows a drill sample from one of the wrecks of Suomenlinna.

PORKKALA WRECK PARK





Porkkala Wreck Park sites on the map and the excavation area of the "new wreck" with an "L" on the left side



Sites in the Archipelago Sea Wreck Park: Nordstjernan, Vostok, Alfred, Schiller and Kivipaasihylky. Only Alfred has a mooring buoy, the others only had a diving buoy installed for the time being.

The situation of the **Porkkala Wreck Park** had deteriorated dramatically in 2024. Almost all guide ropes and signs on the north side of Träskö. They had disappeared. The act seemed downright systematic, but the explanation probably lies in fishing and anchoring. Although the site is now marked on electronic nautical charts as a wreck park, it doesn't seem to help.

MAS has come to the conclusion that wreck parks need a ban on anchoring to protect them, which is also marked in the terrain if possible. Negotiations will be launched on the matter with Metsähallitus and Traficom.

In October, a weekend-long expedition was made to Träskönlahti and an L-shaped test ditch about 3-4 meters in each direction was dug. area of the "new wreck", but apart from the parts that stand out on the bottom, no larger entity was found.

ARCHIPELAGO SEA WRECK PARK

Based on the good experiences gained from the implementation of the Porkkala Wreck Park in 2018-2022, we started duplicating the same concept for the wrecks of the Archipelago Sea in 2023, as they are our most endangered targets for e.g. international antique thieves. During the summer 2024 fieldwork camp, we had time to buoy up to five wrecks (red stars on the map) thanks to the favorable weather. Nordstjernan, Vostok, Alfred, Schiller and Kivipaasihylky. A mooring buoy was installed for Alfred, as it is probably the most endangered of the wrecks in the Archipelago Sea due to the large number of visitors.

The intention is not only to "park" the wreck sites with guide ropes and boards for divers, but also to establish a website and social media presence for the Archipelago Sea Wreck Park. Diverse image, video and 3D material will be

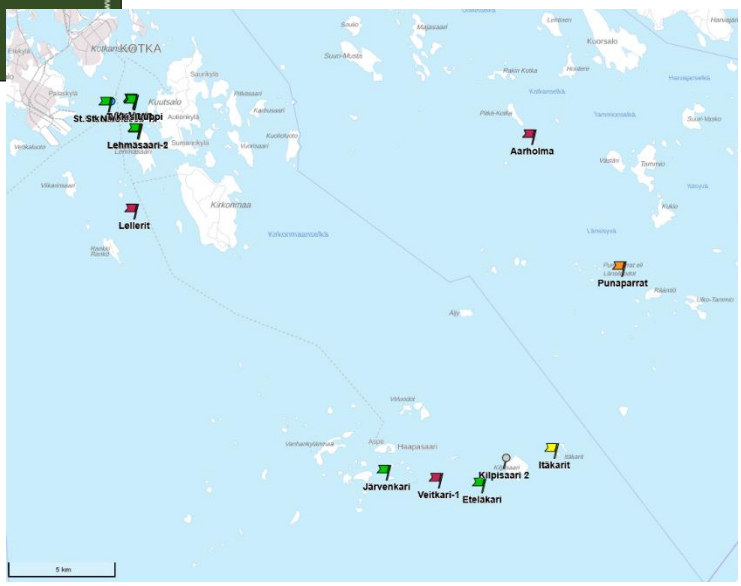
produced there from the werck sites. They offer the international audience the opportunity to literally immersive virtual diving experiences to our numerous world-famous wreck sites in the Archipelago Sea, without the visitor having to learn to dive or travel to the site.

The **Archipelago Sea Wreck Park** protects the valuable wrecks located in the area. By increasing local awareness and interest in the area's underwater cultural heritage and providing locals with an anonymous, non-governmental channel for reporting suspicious activity. The project to establish the wreck park is multi-year and will be carried out mainly by volunteers – with the support of our stakeholders, of course.

The Finnish Heritage Agency and the **Otto A. Malm Foundation** have started to support the establishment of the Archipelago Sea Wreck Park in 2023. It is hoped that the grant they awarded would act as an enabling catalyst in the same way as the funding granted to the Porkkala Wreck Park in its early days, which in the end represented only a fraction of the funding later collected by the park.

EASTERN GULF OF FINLAND EXPEDITION

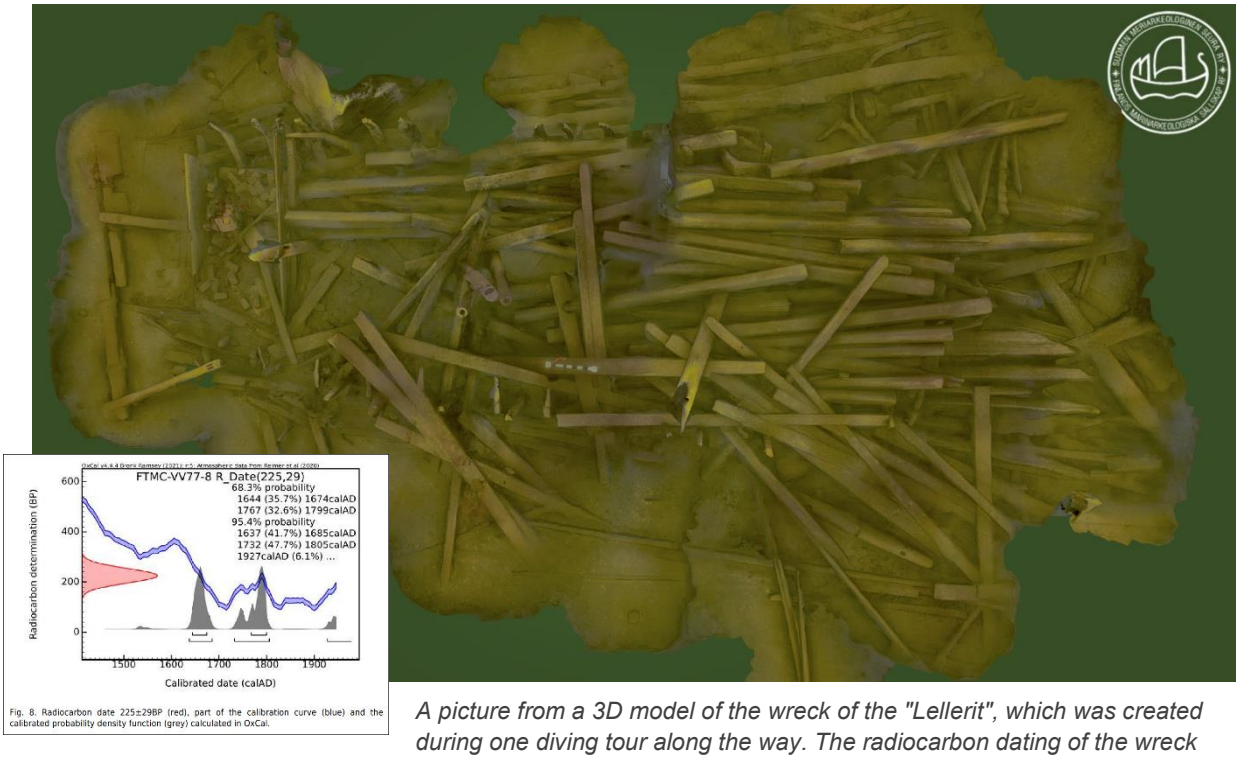
We decided to organize the expedition to the eastern Gulf of Finland on 24-27 May, because there are significantly fewer nature reserves in the eastern Gulf of Finland that have restrictions on movement in the spring compared to, for example, the Archipelago Sea. It was hoped that the visibility in the area might also be slightly better than at the end of the summer.



Destinations of the expedition: Lellerit, Veitkari, Eteläkari, Punaparrat and Aarholma. In addition, we dived at the wrecks of Lehmäsaari.

As usual, the trip was made with the support of DSV Stella and Maija. In addition, one of our member's Faster was an auxiliary boat. The aim of the trip was to study and model wrecks that had previously only been superficially observed, as well as to model and date the Aarholm wreck area, where the society originated 30 years ago. Several of the wrecks, especially the Punaparrat wrecksite could be one of those found in the Lloyd's Registry as it clearly originates outside the Baltic.

When the winds were favourable, we headed from Kotka towards Haapasaari, but on the way we stopped by to investigate **the wreck of the Lellerit** (MVID#1000022855), which was conveniently on the way. The wreck also offered a slightly shallower training target for the first dives of the season. The wreck of the Lellerit has been debated as to whether it was a merchant ship or a warship, or whether it could be related to the naval battle of Ruotsinsalmi. Our members estimate that it is neither, as the ship was probably just a cheap barge. There is no indication of sulfur or engine on the ship. It probably didn't have a cover either, because there is not a single deck beam or knee left in the wreck. The wreck's research website can be found at this link.



A picture from a 3D model of the wreck of the "Lellerit", which was created during one diving tour along the way. The radiocarbon dating of the wreck is quite vague due to the 1700s and 1800s: 161 uncal (i.e. 1789) ± 28, Oxcal calibration in the small picture.

In Haapasaari, we started working on **the wreck of Veitkari** (MVID#1000039852), which was surprisingly difficult to locate. The wreck had quite poor visibility after the storm, which fortunately improved a little on the second day so that a preliminary 3D model could be created. The wreck has many details referring to the early 1800s, such as the remains of a capstain on the deck, so the Oxcal calibration peak at the turn of the 1700s/1800s seems plausible. As can be seen from the model picture, the ship has been loaded with logs. An interesting detail is the stove located at the stern, so would there have been a small aft cabin on the ship? The ship has been at least mainly coniferous, two-masted, flat-seamed and, judging by the knees, at least mostly covered; However, judging by the cargo, the cargo hatches may have been large. The wreck's research website can be found at this link.

Another team at DSV Maija continued the investigations **of the Eteläkari wreck** (MVID# 1000022856), as a result of which new artefacts were mapped and photographed both inside and outside the wreck, but due to the short bottom time, the production of a 3D model requires at least one more day at the site. Bulk can be raw hemp, which is difficult to model because it has no structure and there is a huge mountain of it in the wreck. The new observations have been updated on the wreck's research website here.

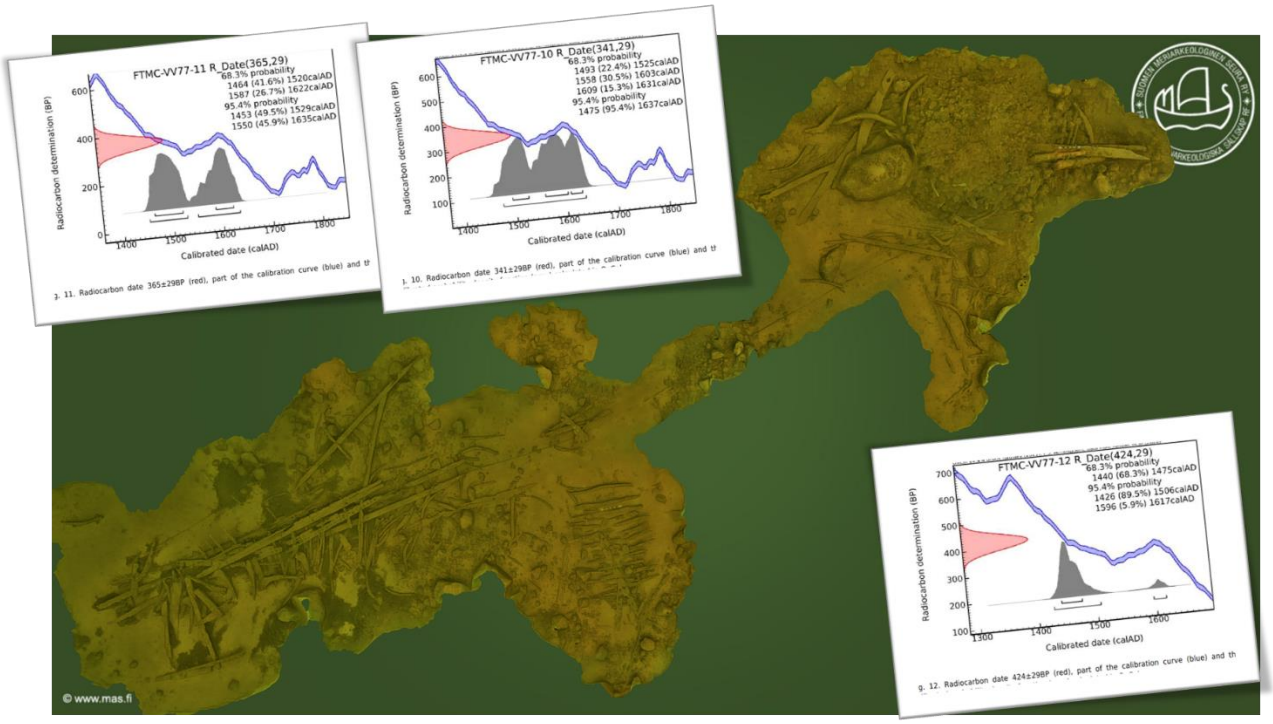
From Haapasaari we headed towards the islets of “the Red Beards”, on the east side of which there is a wreck called "**Punaparrat**" (MVID#1083). The information about the wreck of Punaparrat is very contradictory. Inspection dives carried out in the 70s indicate a well-preserved wreck, but the wreck is said to have been robbed in 1996 and suffered severe damage. The book "Wrecks in the Gulf of Finland and the Archipelago Sea", published in the same year, has a drawing of the wreck by Jari Hyvärinen (top right).

The wreck is so huge, over 40 m long, that we didn't even try to model it, but focused on observing its current state. It is difficult to identify the wreck as the wreck in the drawing above. It is significantly more fragmented than in the picture. There are hardly any weather deck left in the bow, there are a few boards at the stern. The wreck now leans much more on starboard, the side of which is already completely level with the bottom. When diving along the keel line, the port side is almost above the head in some places and it has started to collapse, so pieces of its beard can be found at the bottom. Therefore, we do not recommend diving on the inside of the port side – it can collapse.

The anchor play and anchor refer to a 19th-century ship, while the size and sturdiness may indicate that the ship is not from the Baltic Sea. The wreck's research website can be found at this link.

Hyvärinen's drawing at the top, in the middle of the port's beard and at the bottom the anchor play. Punaparrat wrecksite clearly needs to be cross checked with the Lloyd’s register to identify it.

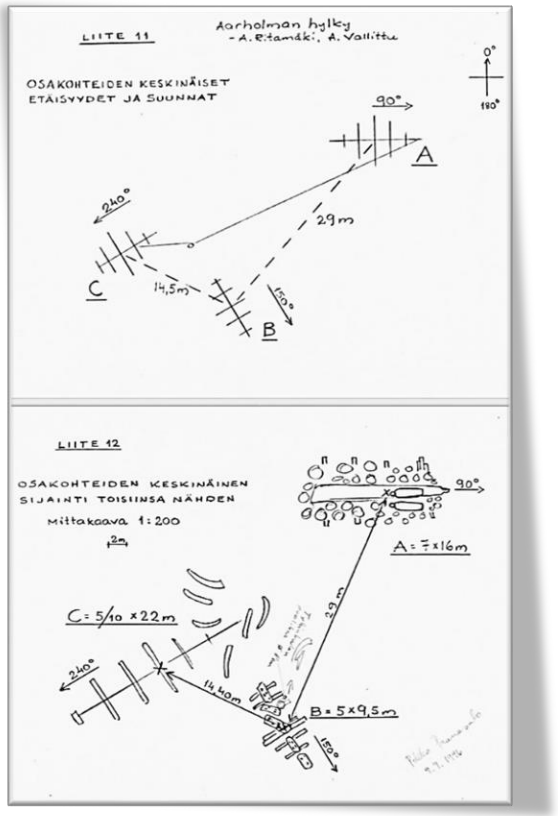
From the Red Beards, we headed to an idyllic evening at Tammio harbor, where the scenery was like from a 70's postcard. On Monday we moved to the societys's birthplace on the wrecks north of Aarholm.



The wreck(s) of Aarholm and the dating results of different parts A, B and C.

The wreck of Aarholma (MVid#1082) is of special importance to us, as the idea of founding our society was born during the maritime archaeology camps held there in the early 90s. Fittingly, we returned to the "crime scene" almost exactly 30 years later. The wreck has previously been associated with the naval battles of Ruotsinsalmi, but the new C14-AMS datings indicate a much older wreck – as well as the complete absence of iron and also the erosion of the wood material.

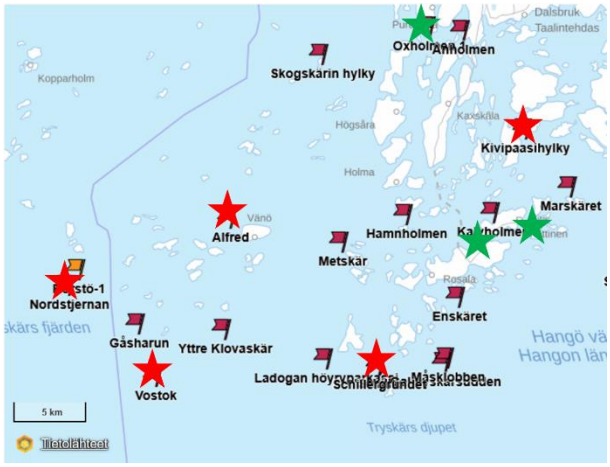
The C section was very strongly dated to the mid-1400s, which directs us to choose calibration peaks from the A and B samples that coincide with the turn of the 1400s/1500s. The ship seems to have been mainly oak and clinker built. It has been quite light in construction and mainly under ballast, which does not indicate a warship. It is a good question whether the cannons were part of the cargo, as there is nothing near them that refers to a carriage. Also, the location of the guns on top of the ballast does not correspond to their intended use. There are only three knees in the entire wreck area, so would the ship have only had a half-deck etc? In any case, it is probably one of our oldest wrecks from the early 1500s, under the ballast of which there may be well-preserved artefacts and ship structures. The wreck's research website can be found here.



Site plan of the wreck of Aarholm from 1994 and the naming of sections A, B and C. The guide rope installed at that time was still in good condition and stands out in the 3D model.

ARCHIPELAGO SEA FIELD WORK CAMP

The highlight of the summer, our fieldwork camp, which has been organized without exception since 2017, was at the turn of June and July 29.6.–7.7. Like last year, the fieldwork camp was held in the Archipelago Sea. This time the camp was mobile, so we relied on different ports near the wreck sites. In addition to our flagship DSV Stella, there was DSV Maija and several private vessels of our volunteers, which served as accommodation and auxiliary boats. The camp started and ended in Kasnäs, but sometimes we relied on Vänö and Örö harbours as well.



Map of the research sites of the summer 2025 fieldwork camp. Green stars are Yanni's research areas. The red stars are wreck park sites. Many red flag wreck sites were used for ontological research.

The program of the camp was twofold: in good weather, we were buillding the wreck park in the Archipelago Sea and continued our research on the 3D ontology of wrecks, but in windier weather, under **the supervision of Yann Irissou**, we carried out fieldwork supporting his doctoral research on Late Iron Age landings in the Archipelago Sea, such as an inventory in Jungfrusund and around Högholmen in Hiittinen, as well as test excavations in Kyrksundet, i.e. in the strait between Rosala and Hitinen. Many of the society's volunteers were able to get acquainted with the ejector pump for the first time. When sampling the quay structures at Högholmen, a new world record for underwater dendro samples was probably set: five sawing samples in one dive – with a chainsaw, of course. Yanni's research will be the subject of their own report and dissertation, so I won't go into them further here.

An important observation related to volunteer work was that "mud baths", i.e. inventories and anomaly inspections in coastal waters, must also be counterbalanced by tasks that offer meaningful diving. Vessel-specific teams must have the opportunity to choose their tasks and be able to carry them out independently. On the other hand, there must also be joint pancake parties and sauna baths so that changes in the program or, for example, diving couples can be handled in a good team spirit. I think our camp did an excellent job of balancing all these things**. The Lloyds' Register Foundation** supported our fieldwork activities 2024. The “Alfred” shipwreck was identified from Lloyd’s Register.

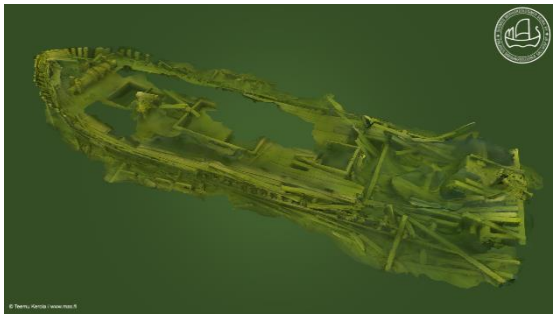
During the camp, the activities were spread out to as many as four different sites during the same day, so it is not possible to form a traditional chronological timeline of the course of the camp, but you have

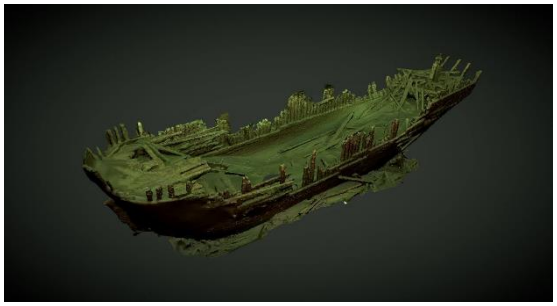
Photos from the researched sites and the port of Kasnäs, where the pancake party is currently taking place.

to settle for site-specific descriptions of the measures taken. At wreck park sites, operations were not actually carried out in wrecks, but outside them, at least two metres away as required by law, where the buoy weights were placed. The park sites will have similar park site websites as the ontology research websites, all of which can be found on the home page: www.mas.fi/hylkypuistot/saaristomeri.

Sites in the Archipelago Sea Wreck Park

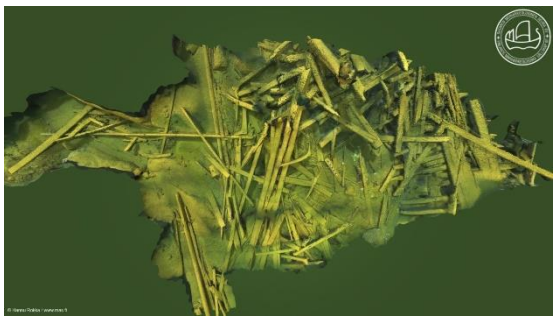
- The **Kivipaasi** wreck (MVID#1536) was installed with a diving buoy about 3-4 meters from the wreck on the starboard side next to a fallen mast. The wreck was photographed for 3D modelling, but there is not enough material due to poor visibility. Based on the erosion of the wood, it is likely that the wreck sank more than 100 years ago and is therefore a "solid ancient relic" (legal terms).
- The **Alfred** wreck (MVID#1552) got a mooring buoy about 15 meters from the wreck, by attaching it to a large rock to the west-northwest of the stern. The wreck was not modeled separately, because there are already 3D models of it made by Samuli Haataja and the Finnish Heritage Agency. The site is a well-known and much-visited fixed relic.
- A diving buoy was installed at **Vostok** wreck (MVID#1548) in the middle of the main part (shallow part) of the wreck, south of the wreck. The story of the wreck is known in detail thanks to eyewitnesses, i.e. the sea rescue vessel Assistanssi. The ship sank on 3 November 1910, which means that it must have sunk more than 100 years ago and is therefore a fixed relic in a legal status.
- The **Schiller** wreck (MVID#1515) got a dive buoy about 6 m north of the wreck. The history of this wreck is also well known, as the islanders rescued its entire crew. Schiller sank in 1911. The wreck must have sunk more than 100 years ago and is therefore a fixed relic.
- A dive buoy was installed at **Nordstjärnan** wreck (MVID#1650) in the northeast corner of the wreck area. The history of this wreck is well known as it sank on 10 December 1809. Thus the wreck is a "fixed relic" in legal terms. The 3D modelling of the wreck has begun, but still requires a lot of photography because the wreck area is very large.


KIVIPAASI WRECK


ALFRED WRECK


VOSTOK WRECK

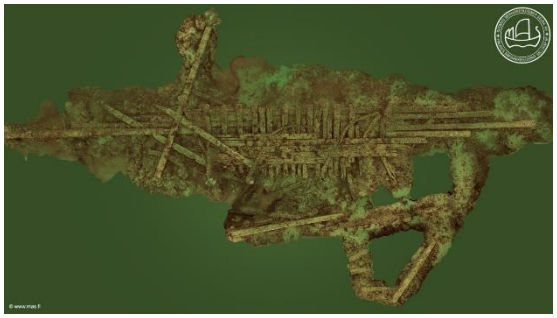

SCHILLER WRECK


NORDSTJERNAN WRECK

We had time to supplement the wreck ontology with non-invasive methods at the camp. All of these sites will have their own research home pages at www.mas.fi/fi/julkaisut/hylkykohteet-merialue address, so they will only be discussed very superficially here.

Ontology research sites

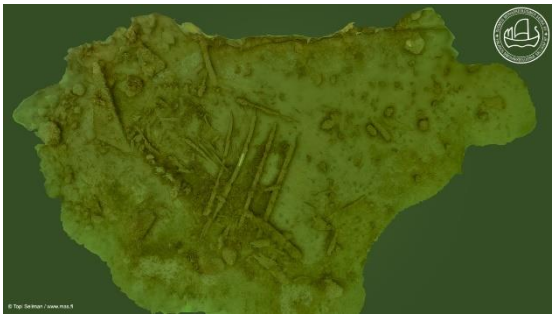
- The wreck of **Yttre Klovaskär** (MVID#1559) has dispersed over a large area southeast of the island. The larger entities are more than 100 m from each other, but they are clearly the same wreck. The preliminary C14 dating refers to the 1700s, so the wreck is in any case a "fixed ancient relic".
- the **Skogskär** wreck (MVID#1537) has already been C14-dated to the early 1800s, but during the camp it was photographed in better visibility conditions and a qualitatively better 3D model was obtained. Judging by the sturdy aft bulkhead, the ship may have originally been a so-called stern sump vessel. The wreck is a "fixed ancient relic".
- **Marskäret** (MVID#2513) The wreck, located in a very shallow, was reported to the Finnish Heritage Agency a couple of years ago. The wreck was 3D modeled and the preliminary C14 dating refers to a coniferous coastal ship from the mid 18th century. Thus, the wreck is legally a "fixed ancient relic".
- **Enskäret** (MVID#1522) The wreck was located in the early 90's when searching for the wreck of Båtskäret (the same). The wreck is made of oak and possibly clinker built (Alopaeus-92). The preliminary C14 dating strongly suggests the mid-15th century. Thus, the wreck is legally a "fixed ancient relic". The wreck is quite deep in the bottom sediments, where there were pits that appeared to be quite fresh, i.e. traces of tampering.
- **Vidskär** (MVID#2284) The wreck has been studied and artefacts have been recovered from it in the early 2000s, but it was only now that a 3D model of it was made. The wreck has spread over an area of more than one hectare, and not all parts are necessarily included in the model. The preliminary C14 dating points very strongly to the 14th century, the peak at the beginning of the century, hence it's clearly a fixed ancient relic. The wrecksite's research homepage can be found here.



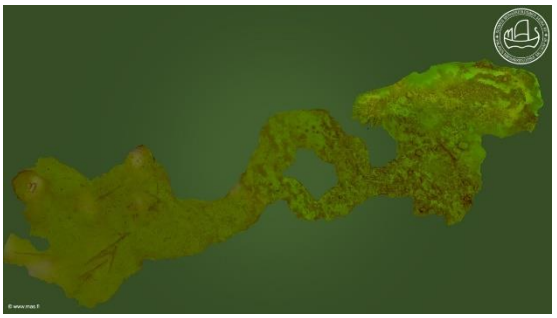
YTTRE KLOVASKÄR WRECK

SKOGSKÄR WRECK

MARSKÄRET WRECK



ENSKÄRET WRECK



VIDSKÄR WRECK

In addition, during the camp, check dives were made to the wrecks of Bränskär (MVID#1659) and Metskär (MVID#1512), the latter of which was considered whether the anchor outside its bow had broken further due to anchoring, for example. However, both wrecksites were largely unchanged.

3D model of Vrouw Maria from the front angle

On the wreck of the Vrouw Maria, only a couple of dives were made to try to photograph the side of the ship on the starboard side, under the rigging, because there is still a "hole" in the 3D model made by MAS at that point. Unfortunately, the visibility conditions were so bad that it was not much better to photograph in a difficult place than before.

On other dives, the bottom weights of the mooring lines were located and ropes were attached to them for the HelderTV facilitation trip. The coordinates of the bottom weights reported by Meritaito were extremely accurate.

ARCHIPELAGO SEA EXPLORATION

Our expedition, which was established at the end of August, headed to the Archipelago Sea 29.8.-1.9, because the intention was to carry out a test excavation at the wreck of Hamnholmarna and upgrade the mooring lines of the Vrouw Maria to proper Solas touvs, donated by Navidom Oy's vessels.

Researching the wreck of Hamnholmarna

At the Hamnholmarna wrecksite (MVID#1516), the first thing we noticed was that the previously upright sternpost, had fallen to the bottom. **David Cleasby** leading the work, we demarcated the location of the test ditch between two metal rods, approximately at the ship's "zero arc". The test excavation was assisted by **Sami Brchisky**. Bottom sediment was only removed to expose the surface of the lower structural elements. No excavation was carried out all the way to the bilge, because the objectives of the test excavation (determining the type of vessel and the requirements for further excavation) were achieved already.

The wreck was confirmed to be a ship made entirely of oak, at least primarily clinker built and equipped with a keelson. David's selection of the excavation line was so successful that the mast step on the zero arc was partially visible, but it was not touched either. At the mast step, a possible side support typical of cogs was detected. Attempts were made to take drill samples from the pig keel, but the dendroanalyses of both failed for different reasons. The research homepage is here.

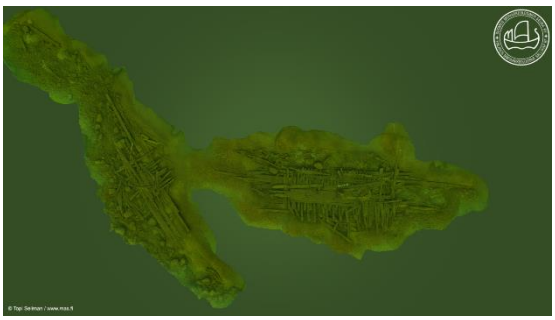
MAS's flagship DSV Stella anchored on the shore of Hamnholmarna. At the stern of the vessel, is a diver lift and next to it on the swimming platform an ejector pump and its suction hose. "No waves" signs are useful.

MAS has always received only positive feedback from local communities, and this time is no exception. One of the summer residents of the archipelago who visited our research vessel even went to get us gas for the pump and compressor when we nicely asked. Our activities are visible and, when the equipment is running, also audible, so you should always have coffee available and be ready to present the activities to curious people if they happen to come over.

The wreck of the Vrouw Maria or its mooring buoys were not dived during the expedition due to wind conditions. The finely prepared Solas touvs are waiting for the next summer in the port of Trunsö. Ontology research was promoted with two new wreck sites, the research website of which will be here.

- A preliminary 3D model was made of the wreck of **Brännskär** in Pargas (MVID#1659) and the surroundings of the wreck were inventoried for "parking". Based on the erosion of the wood material, the wreck seems to be more than 100 years old. In addition, tradition says that it sank in 1897, which means that the wreck is a legally a fixed ancient relic.
- The shallow parts of the **Gåsharu** wreck on Kemiönsaari (MVID#1547) on the south and southeast sides were comprehensively photographed and modelled. At least the flat-seam wreck, made mainly of coniferous wood and piled with strong copper rivets, dates to either the mid-16th or mid-17th century based on preliminary C14 dating, with the probability peak hitting the latter. In any case, the wreck is a fixed ancient relic of more than 100 years.

BRÄNNSKÄR WRECK

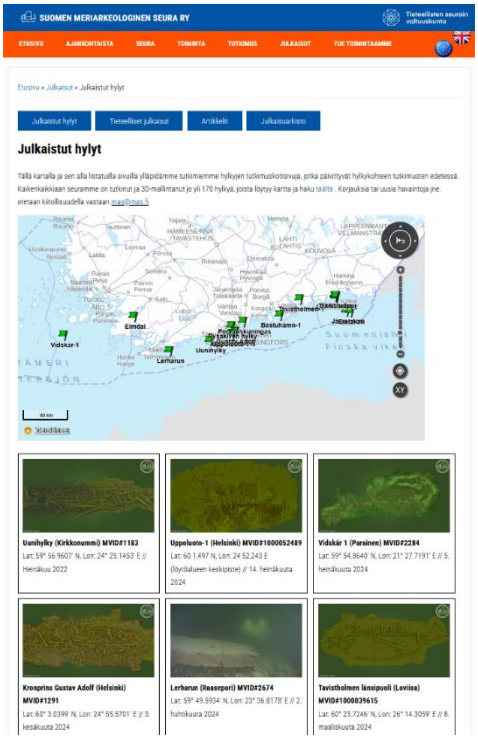


GÅSHARUN WRECKSITE

BALTIC SEA 3D WRECKSITE ONTOLOGY

The Maritime Archaeological Society has chosen the formation of a 3D ontology of the wrecks of the Baltic Sea as the society's own research strategy. In this context, ontology refers to its semantic significance in information science for researchers in the field, for whom it enables them to define an enlightened field of research, classify observations and, at best, identify the general principles behind them. By the 3D ontology of wrecks, we mean the photogrammetric imaging of underwater cultural heritage sites and the creation of a virtual 3D model of the site, as well as the taking of a preliminary, scientific dating sample. Our research activities can rightly be called basic research in the field, which, with the help of digital twins formed from wrecks, answers the questions what, where and when.

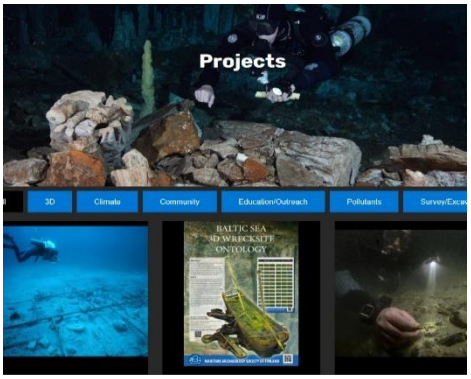
At the time of writing, the Finnish Heritage Agency's Ancient Relics Register contains 2467 underwater cultural heritage sites, of which 1847 are ship wrecks. Unfortunately, the site information in the Ancient Relics Register is so incomplete or even contains incorrect information that it is not possible to judge the feasibility of many research topics – not to mention content analyses. Our research strategy also aims to remedy this problem through active exchange of information with the Finnish Heritage Agency.



The directory page of the wrecks' homepage www.mas.fi site.

Naturally, we have started with sites in the Gulf of Finland and the Archipelago Sea, which are located in Finland's territorial waters, but in accordance with the principles of open science, we share the results of our work internationally and try to inspire our sister societies in different parts of the Baltic Sea to join us. Our society held two virtual workshops on the topic and also set up an English-language homepage for the project. Dr. Minna Koivikko presented the Society's poster on the subject at the ISBSA17 Conference in Naples.

Due to the accessibility of the research results, we have started to establish separate research homepages for all wreck sites investigated by MAS. A summary of the current state of research at the wreck site, previous research history, and links to scientific source materials in the MAS portal and the Ancient Relics Register will be collected on the basis of all observations and data types related to the site. The research homepage is also printed as a PDF at the same time. research report of the wreck site to the Finnish Heritage Agency.



3D ontology of Baltic Sea wrecks project on UNESCO NGO projects website

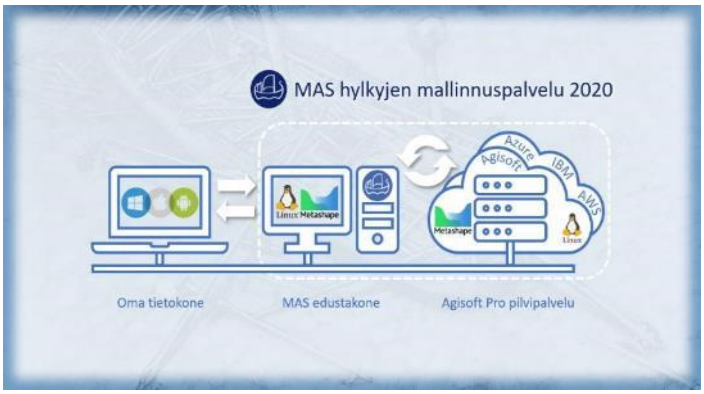
During 2024, our society's volunteer divers collected material from 24 different wreck sites to complement the 3D ontology of the wrecks. All of them resulted in successful AMS radiocarbon dating. The 3D modelling of four sites is still in progress. Key achievements in 2024 are likely to include doubling the number of known, potentially medieval wrecks based on preliminary radiocarbon dating. We also consider it important that our ontology research is accepted as a UNESCO NGO project. All in all, our society's volunteers have already made 3D models of more than 180 wrecks in the Gulf of Finland and the Archipelago Sea.

WRECK 3D MODELING SERVICE

Based on the encouraging results of previous years, the Society's Board decided to continue the Society's remote IT services to support the implementation of its own research strategy. The modeling server acquired in 2021 was upgraded to more mass storage, now by more than 20TB. With a previously upgraded processor and two powerful 3D graphics cards, the server can handle even the most demanding modeling tasks in a reasonable time frame.

For the time being, only the Agisoft Metashape software is used in the modeling, for which MAS has received a significantly cheaper Academic license.

The MAS modeling server is available to all members, and it has already been used by a couple of dozen volunteers. All the most demanding processing of materials containing tens of thousands of images, such as Borstö1 and Vrouw Maria models, has been done by utilizing the MAS modelling server.



MAS members have access to a powerful modelling computer remotely from almost any device.

OPEN SCIENCE, DATA AND PUBLIC DATA REPOSITORIES

Our society is committed to following the "open science policy" defined by the Ministry of Culture and Education, the Academy of Finland and the Federation of Finnish Learned Societies (avointiede.fi). This means that all data collection, processing and production related to the society's activities is open to everyone. In addition, both the source materials and the results are openly available in the MAS portal. Internationally, this policy is known as "Creative Commons"".

In practice, this means that AV, side scan sonar, geospatial data and other material taken in the MAS operations must be delivered to the MAS open data repository with shared copyrights. To share information, we have set up a MAS portal where members and partners can upload materials and where everyone can freely download materials for non-commercial use. The source materials of all 3D modelled wrecks are available in the portal.

MAS-portal (https://mas.mikrojebe.fi)

For the general public, our modelling work can be seen via Sketchfab (https://sketchfab.com/mas-fi/models), where they can virtually dive into the wrecks by following the annotations made on the models, i.e. virtual signs. Models uploaded to Sketchfab can also be freely 3D printed or included on their own pages. The goal is to supplement the wreck articles on the society's website (mas.fi) so that each 3D modeled wreck would have its own research home page, to which all research information related to the wreck would be linked.

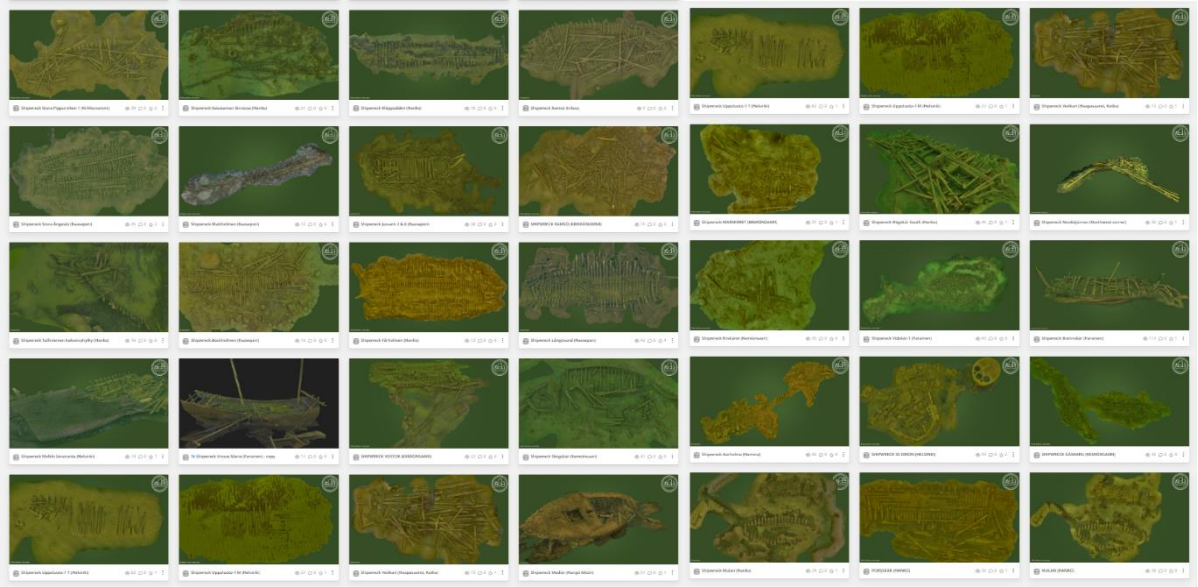
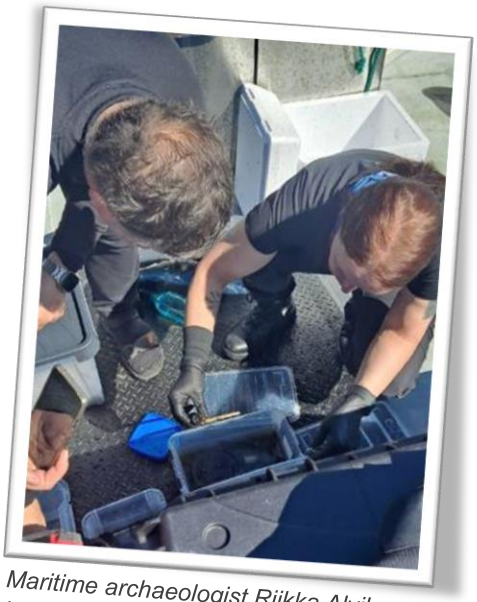


Photo from MAS Sketchfab site, where you can already find more than 180 3D models of different wreck sites

CO-OPERATION WITH THE FINNISH HERITAGE AGENCY



Maritime archaeologist Riikka Alvik interprets the finds for volunteer divers.

Our society worked closely with the Finnish Heritage Agency in 2024. We updated the location and destination information of numerous wrecks and confirmed false observations to be removed from the Ancient Relics Register.

MAS facilitated a filming trip for HelderTV, which is making a documentary about the art treasures of the Vrouw Maria wreck, with Dutch maritime archaeologist Martin Manders in cooperation with the Finnish Heritage Agency. MAS volunteers crewed Stella's in the Archipelago Sea for five days.

The participation of the Maritime Archaeology Unit of the Finnish Heritage Agency in the society's expeditions is an excellent example of effective cooperation between the third sector and the authorities. Feedback from MAS members is that it is the "very best" and most effective stakeholder cooperation carried out by the Finnish Heritage Agency's maritime archaeologists. MAS volunteers meet professionals at work and learn to cooperate with them.

CLUB NIGHTS AND OTHER SOCIAL ACTIVITIES

Club evenings continued to be held as hybrid events at the request of the members. This has clearly increased the participation of our members outside the Helsinki metropolitan area. Actual club evenings were held seven times during the spring and autumn seasons. In addition, we held several planning meetings for the expeditions and the fieldwork camp that were open to everyone. We participated in the Finnish Heritage Agency's excavation season presentations at both the Maritime Archaeology and Science Days. In connection with the autumn meeting, we also held an overview of the results of the fieldwork, not forgetting the Christmas parties, which have already become a tradition. In other words, the social program organized by the society has been available at least once a month.

SOCIETAL IMPACT

With the UNESCO accreditation, our society also has social tasks in promoting the protection of underwater cultural heritage as well as scientific openness and freedom. Through our research strategy, we have become embarrassingly aware of the poor archiving possibilities and subsequent accessibility of digital source material in the humanities. Similarly, in our opinion, the reform project of the Antiquities Act has taken off in completely the wrong direction during the previous government. Our society is also responsible for promoting the ratification of the UNESCO Convention for the Protection of the Underwater Cultural Heritage in Finland and the other Nordic countries. To promote these issues, our Chair was in contact with the Permanent Mission of Finland to UNESCO, the Ministry of Education and Culture, and Minister Multala on several occasions. The reform of the Antiquities Act was halted, but all the other issues still require a lot of advocacy work.

Minister Sari Multala

STATEMENTS

The board of our society renewed a statement for the working group preparing the reform of the Antiquities Act, which emphasised that the criminality of the antiquities offence should be raised to the level of protection of protected animal species so that each offence would have a minimum punishment that would exceed the threshold for investigation by the police as they prioritise their resources. We strongly criticised the change in the drafting of the Act in 2023 to reflect the bureaucracy of the Finnish Heritage Agency rather than the actual needs of the sector. According to several legal experts, the old law also offers better protection for underwater relics than the proposed law reform.

OTHER STAKEHOLDER CO-OPERATION

The Maritime Archaeological Society has been actively involved in the development of the archaeological operating environment in the Archaeology 2.0 project led by the Finnish Heritage Agency, as well as in the environmental authorities' inventory programme for the diversity of underwater marine nature, and in the maritime spatial planning working group led by the Government. Our goal is to make the utilisation of underwater cultural heritage part of the various maritime or "blue" strategies of public administration, and at least in terms of maritime spatial planning, we have succeeded in this.

Areas of influence of maritime spatial planning

OTHER ACTIVITIES

A significant part of our society's stakeholder activities is hardly visible outside the society's board. During 2024, our society's representatives maintained relationships with many different parties, both in the public and private sectors, e.g. Maritime Safety, the Finnish Heritage Agency, the Finnish Transport Infrastructure Agency, the Finnish Navy and Guard, Metsähallitus, the Ministry of the Environment, the Finnish Environment Institute, various universities and international actors in the field, such as NAS and the IKUWA7 steering group – not forgetting other scientific societies or the Turku Forum Marinum and the Kotka Maritime Centre Vellamo. Our society's activities are therefore very highly networked

DISSEMINATION AND REPRESENTATION & INFORMATION ACTIVITIES.

Our society was active in raising awareness of maritime archaeology. During the year, we held several presentations on our activities that were open to everyone.

On the Night of Science on 25 January, we held a 3D stand at the House of Science and Letters. We reached dozens of people on site.

At the Finnish Heritage Agency's excavation days on 15-16 February, we gave a presentation on the results of the fieldwork period and reached hundreds of people on site and on the lines.

Newspaper articles about our activities were published during the year in both national and local newspapers. We reached the most audience **through** Facebook.

At the Maritime History Days 22.-24.3. In Jyväskylä, David Cleasby gave the society's presentation and Mikael Ahlavuo presented the poster of Nötö exhibition.

At our annual meeting on 27 March, an overview of our activities for the previous year was given. We reached dozens of our members at the event and its recording.

At the annual meetings of the member clubs, we held presentations in Turku, Tampere and Lahti, reaching hundreds of divers and gathering new members.

At the Navigate fair on 15-16 May, we reached hundreds of representatives of the maritime industry and gained excellent visibility in the Finnish maritime cluster

Our club nights, which were held seven times throughout the year, typically had about half a hundred participants on-site and online.

At the Warships Resting in Peace conference in Suomenlinna on 3-5 June, Markku Luoto gave a presentation on a 3D model of the wreck of Gustav Adolf.

The opening of the Nötö exhibition was held on 21 June, and the event was a success. We reached hundreds of summer residents and received positive feedback.

On the media and visit day of the fieldwork camp on 4 July, we presented our activities to the public.

In HelderTV's documentary program, our society's activities are well presented. Now YLE has also bought the documentary, and it will also be shown in the autumn.

At the Bottnisk Kontakt conference, our chairman gave a presentation on the scientific activities of our society. There we reached a very international audience.

At the ISBSA17 conference on 21-25 October in Naples, Italy, Minna Koivikko, PhD, presented the Society's poster ”Baltic Sea 3D Wrecksite Ontology”.

In connection with our autumn meeting on 31 October, we gave an hour-long presentation on our results for the past season and reached dozens of our members.

At the Baltic Sea 3D Wrecksite Ontology virtual workshop on 27 November, we reached out to other actors in maritime archaeology in the Baltic Sea region.

Three member letters , i.e. more extensive overviews of our activities, were sent during the year and six shorter member newsletters about future activities. Hundreds of posts were published on Facebook about industry news and events, which reached thousands of followers. In the use of active members, Signal established its position so that about half of all members of the society are now also in our Signal groups.

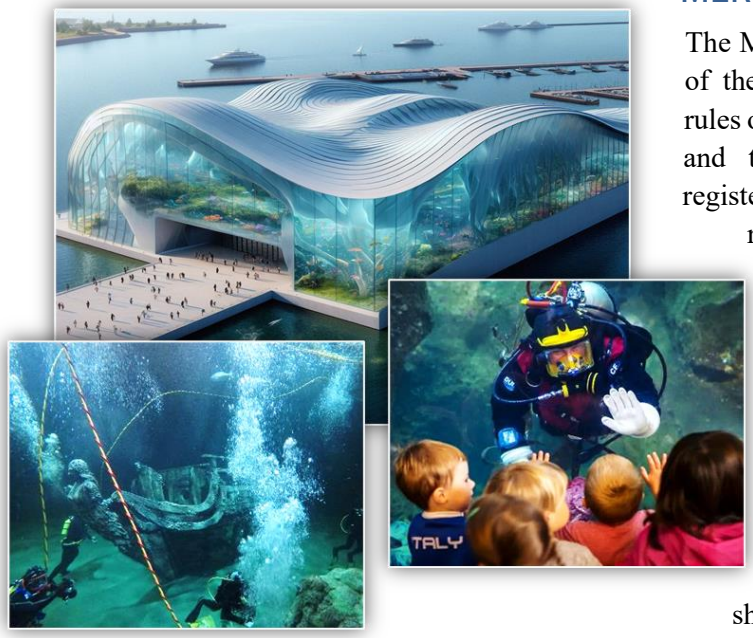
EQUIPMENT

During 2024, the society mainly acquired various supplies for the establishment of the wreck park and the taking of timing samples related to both the fieldwork camp and expeditions. The only major investment was the acquisition of an automatic gas distribution system, which was financed from the proceeds of the HelderTV facilitation.

In the spring, Stella's painting work was organized on several days, in which the society's volunteers participated commendably. The aim is to do the same every spring from now on.

MERIARKEOLOGINEN INSTITUUTTI

The MAS board has promoted the establishment of the Institute of Maritime Archaeology. The rules of the society have been changed as required and the auxiliary business name has been registered in both the association and trade registers. The board of the society has appointed an executive director for the institute and created a preliminary roadmap for the establishment of a wreck aquarium presenting the institute's activities and results, as well as a marine archaeo-logical research unit. The first goal is to create an immersive 3D exhibition on the subject, so that the results of our work can be shown. We are currently in negotiations to put together a project consortium.



Visions of the Wreck Aquarium by artificial and natural intelligence

AWARDS

The Board of the Finnish Maritime Archaeological Society decided to invite **Vesa Saarinen** as the third honorary member of the Society for his long-term and invaluable contribution to the Society's activities.

Mikael Ahlavuo was awarded the Society's Silver Medal of Merit for starting our own show activities, among other things.

The chairman of the society, Markku Luoto, congratulates Vesa Saarinen on his honorary membership at Vesa's 70th birthday

BOARD AND SOCIETY MEETINGS

During 2024, the Board of Directors convened a total of nine times, in addition to which matters were discussed on the Board's own Signal channel and in emails. The facilities for meetings were provided free of charge by the House of Science and Letters or the Lost Fleet project in Suomenlinna. It was also possible to participate in almost all meetings remotely, and often remote participation was more abundant than arriving in person.

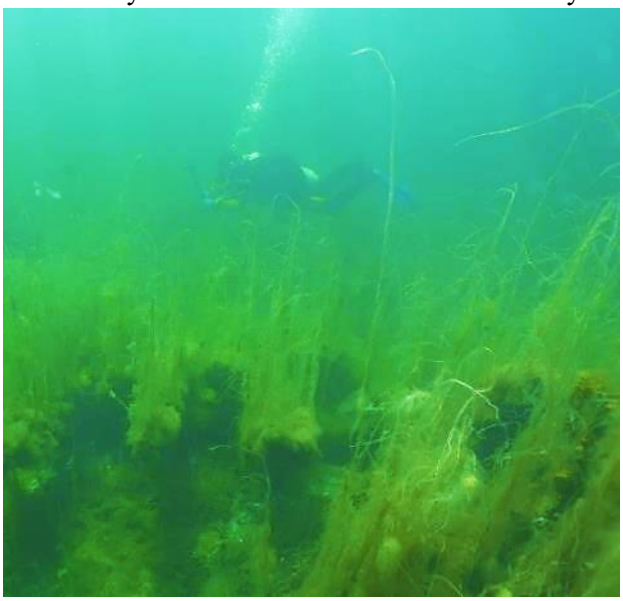
In 2024, the Board of Directors has consisted of the following persons: Markku Luoto (Chairman), Vesa Saarinen (Vice Chairman), Juha Hakala (Treasurer), Hannu Rokka (Agent), Kalle Virtanen, Kaj Enholm, Ari Pajunen, Emma Barrow, Kati Laasonen, Sami Brchisky, Ekku Pinola, Sanna Siltanen and Rupert Simon as a deputy member. The performance auditors are Seppo Roivainen and Sanna Paukku.

The annual meeting was held on 27.3.2024, where the society's annual report and financial statements were approved, and the society's board for 2023 was discharged from liability. On 31.10.2024, the society's autumn meeting was held, where the society's chairman and board for 2025 were elected and the preliminary action plan for 2025 was presented.

REALIZATION OF SUSTAINABLE DEVELOPMENT

Our society is committed to following the principles of responsibility, openness, and scientific ethics in all its operations. According to our rules, we are an association open to everyone and our members, i.e. the volunteers participating in the activities, represent a wide range of cultural, religious and gender diversity. Almost all of the expeditions and fieldwork camps have involved foreigners or volunteers with a foreign background, all the way from Somalia to Canada.

The society's board of directors is democratically elected in its entirety every year. The society's board meets regularly about every other month, and the members have the opportunity to raise matters for the board based on the society's rules. Our society is committed to the principles of the Federation of Finnish Learned Societies related to equality, safety and ethics in science and research. Personal financial situation should also not affect the opportunities to participate in activities, as members can request an exemption from the participation fees from the MAS board.



Our society's volunteer diver documents aquatic biotopes on the wreck of Utö's Vrakgrundet.

When we move around in nature, we take care of the appropriate treatment of waste and wastewater and delivery to waste stations, i.e. we do not burden the waste management of the archipelago at all. In general, we only leave air bubbles in the sea and only take photos of it. Our activities do not disturb marine flora or fauna, as we only dock in natural harbours in case of emergency, otherwise we float far away from islands, islets or shallows – especially if there is life on them.

Our diving support vessels are vessels that move slowly at hull speed, so they do not harm seals, for example. Sound pollution from ships, both on and under the surface, is low. On all our dives, we remove plastic and other debris that has sunk from the bottom, as well as old, disused research equipment. In addition, we participate in beach clean-up operations and report sightings of rare or endangered aquatic biotopes. Our society is involved in the inventory programme for underwater marine biodiversity led by the environmental administration (VELMU).

We aim to reduce the carbon footprint by connecting the research vessels to shore power and turning off the internal combustion engines whenever possible. We avoid all disposability in our operations, invest in durability and quality, and recycle many objects for reuse in the structures of wreck parks or in research equipment. In terms of mobility, we coordinate carpooling and maritime transport of heavy equipment. Food supply is usually handled centrally from primary production ingredients instead of convenience foods, which contributes to reducing waste and the carbon footprint of food processing. Our chefs take plant-based and special diets into account.

SUPPORT AND SUPPORTERS

During the past year, MAS has applied for and received a money collection permit from the police and a so-called "money collection permit" from the Tax Administration. a naming decision, on the basis of which companies and other organisations can use the donation deduction in their taxation when it comes to an amount of €850 – €50,000 to support our society's activities.

The following parties have supported the society's activities or goals:

Given to the annual meeting of the Finnish Maritime Archaeological Society on 31.3.2025 approved by the Board.
On behalf of the Board,

Markku Luoto, chairman