

DALARC) IVE PARK

A diving experience unique in the world

In the waters off Dalarö lies a world of history waiting to be explored. Here you find shipwrecks dating back to the 17th century, preserved in nearly perfect condition. At Dalarö Dive Park, divers and non-divers alike can take part of this unique cultural heritage.



This brochure has been developed by employees at the Maritime Museum, a part of the Swedish National Maritime and Transport Museums (SMTM) within the framework of the EU Interreg Central Baltic project BALTACAR (Baltic History Beneath the Surface).

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A diving experience

The Baltic Sea is one of the world's busiest seas. Ever since the great Ice Age, it has been home to nearly unceasing human activity and maritime trade. Around the Swedish coast alone there are an estimated 20,000 shipwrecks or more. Throughout history Dalarö has served as an important maritime hub, making Dalarö Dive Park into a huge underwater museum.

unique in the world

Thanks to a unique combination of brackish water, cold, darkness and low oxygen levels in the Baltic Sea, materials – even wood – can be preserved in almost perfect condition. Dalarö Dive Park contains many well-preserved wrecks dating all the way back to the 1600s, making diving in Dalarö Dive Park an experience you simply cannot find almost anywhere else in the world.



Dalarö is a small coastal community an hour's drive from Stockholm. It is a popular tourist attraction during the summer season. In past centuries, Dalarö held a strategic position as a customs station and was important in the defence of Stockholm. The waters surrounding Dalarö contain many well-preserved shipwrecks from the 17th century to the present day, making it popular with divers. In this booklet we present seven of those wrecks.

About Dalarö

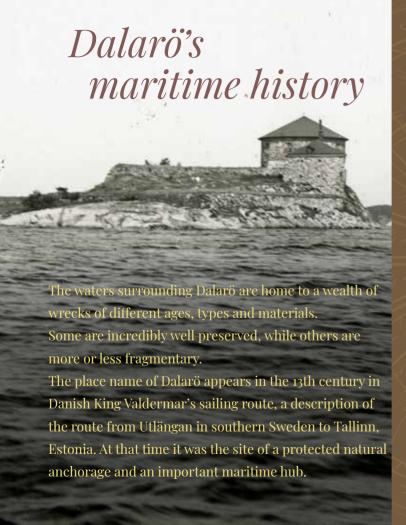
- 1. Anna-Maria
- 2. The Jutholmen Wreck
- 3. Riksäpplet
- 4. Gröne Jägaren
- 5. Ingrid Horn
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Wreck diving in Sweden

Ships that sank before 1850 are considered ancient monuments and are protected under the Heritage Conservation Act. Wreck diving is generally allowed, but divers are not allowed to touch or cause damage to a wreck. A diving ban can be used to prohibit diving near wrecks considered to have a unique cultural historical value in order to reduce wear and tear.

Diving in Dalarö Dive Park

Among the wrecks in Dalarö Dive Park there are three wrecks that used to have a diving ban: the Dalarö wreck, Anna-Maria and the Jutholmen wreck. So to make these wrecks available, Sweden's first maritime cultural reserve was created in 2014. That made it possible to visit those wrecks under guidance of an approved diving guide. More wrecks can become a part of the maritime cultural reserve in the future.

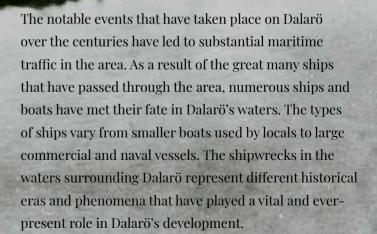


As early as 1565, the navy built a repair yard a few kilometres south of Dalarö. At the beginning of the 1680s, Dalarö, in addition to Stockholm and Karlskrona, was used as a main base for the Swedish navy. The first military defence facility was built in 1623. However, it was replaced in 1656 by Dalarö Fortress, south of the community, which was used until 1856 when the military left the island.

In 1636, Dalarö was designated a customs collection point, and the community became the outermost customs station for vessels bound for Stockholm. This meant that all ships bringing imported goods into Stockholm or northern ports would pass Dalarö to pay customs duties on their cargo. The current customs house was erected in 1788.

To secure vessel traffic to and from Stockholm a pilot station was established on Dalarö during the 17th century, and in 1676 the maritime pilots got their own house on the island of Jutholmen.

As an established customs collection point, Dalarö became more significant, and a more organized society rapidly grew around the customs operations. Taverns and inns were an important part of the transport system in rural and coastal areas, and access to food and accommodation were needed for a comfortable journey. In 1638, the tavern Dalarö Krog was built in the harbour. The tavern business continued right up to 1890, when the tavern burned down.



Anna-Maria

"Take care with fire." With these words, Philip Bewe left the frozen fluyt and headed off to the tayern. One hour later, the ship sank following a raging fire. Ever since the 1950s, the wreck in Dalarö's harbour has been well known to locals. The wreck was often referred to as Saltskutan ("Salt Ship") and was believed to be the remnants of a barge carrying a cargo of salt which sank at the end of the 19th century. Today, Saltskutan's secret has been revealed. With the help of archaeological documentation and accurate archival studies, the ship has been identified as the fluyt ship Anna-Maria, which sank on 6 February 1709. The discovery revealed an exciting story about what happened.

Anna-Maria, 38 metres long and 8 metres wide, was built during 1693–1694 in Amsterdam upon commission by a group of ship-owners and merchants from Stockholm. The ship made her maiden voyage to Setubal in Portugal, where she was loaded with salt to be shipped to Stockholm.

 BUILT
 LENGTH

 1694
 38 METRES

 DEPTH
 WIDTH

 13-20 METRES
 8 METRES

 SANK
 SHIP TYPE

 1709
 FLUYT

Anna-Maria locked in ice

In November 1708, she had been loaded with cargo for delivery to Lisbon. But when the ship arrived at Dalarö, she was unable to continue the journey. Because of the unusually cold winter, ice had begun to form and the skipper decided to lay up Anna-Maria for wintering. Five men from the crew remained on board as guards: the able seamen Bewe, Erson, Sigfredsson and Simonsson as well as the cook, Hindersson, To cope with the harsh cold, the ship's fireplaces were lit. The guards' sole occupation, in addition to seeing to the ship, was sitting at the relatively warm tayern with the other ship guards and drinking cheap beer.

A fatal night at the pub

After morning prayer and breakfast on 6 February 1709, Bewe went ashore to purchase spirits, bread rusks and meat. The previous day, he had dined with his comrades on another winterized ship. A plan was hatched that Bewe would buy more rounds the following day. After dinner aboard Anna-Maria, the company went to the tavern, which was only "two musket shots away" from the harbour. The four other crew members remained on the ship with instructions to take care with the fire. It did not take long, however, until the four left the ship and joined the others at the tavern.

"Fire!"

After an hour of beer drinking and conversation, cries of "Fire!" were heard from the harbour. The guards from the other ships had detected smoke and alerted those nearby. As the tavern guests raced toward the harbour, they were met by the sight of flames rising from Anna-Maria. A fire was raging in the hold between the cabin and the mizzenmast where firewood was stored, and when the aft hatch was opened thick black smoke billowed out. The guards who discovered the fire had tried to extinguish it, but the ship could not be salvaged. With a crackling hiss, Anna-Maria was swallowed up by the ice.



8 days of water and bread in prison

During the legal proceedings following the fire, the five seamen were considered to have neglected their duty as they all left the ship without supervising the fire. However, the ship-owners of Anna-Maria asked the court not to pass a sentence that would lead to shame or disgrace, but would instead give them a bit of a slap on the wrist. Bewe, Erson and Sigfredsson were sentenced to four days' imprisonment with only water and bread to eat. Simonsson and Hindersson, who were last to leave the ship, were sentenced to eight days' imprisonment with water and bread. The punishments were considerably mild relative to the damage caused.

The Dalarö Wreck When divers found a wreck at Edesön in the spring of 2003, their discovery triggered a thrilling hunt to identify it. Today it is believed that

the wreck is the remains of the ship Bodekull, which sank in 1678.

The divers contacted the Maritime Museum and contributed a collection of salvaged objects, including a wine bottle bearing a seal that was identified as likely being an English noble weapon. The shipwreck was dated using dendrochronology and tree-ring dating. One of the samples showed that the oak was felled after 1643 in Northumberland, England. The other salvaged finds have also been dated to the middle or the second half of the 17th century.

The wreck on the seabed north of Dalarö measures about 20 metres long and is carvel-built (the hull's planks lie flush rather than overlap). The stern's design indicates that the ship was built according to English tradition. On the seabed, in front of the heavily bent stem, lies a figurehead depicting a lion. The bowsprit has fallen and lies with its outer end resting on the seabed fore of the hull, while the inner end rests on the bow railing.

> BUILT 1659-61 DEPTH

30 METRES

1678

LENGTH

CIRCA 20 METRES

WIDTH 5.5 METRES **SHIP TYPE** UNKNOWN

The wreck's condition

The sides of the hull are severely caved in, meaning that its maximum width is slightly above the waterline. Several deck levels have been observed, including a main deck and a forecastle. The forecastle has completely collapsed and now rests on the main deck. Several household utensils have been found in the area under the forecastle, possibly indicating that the area was used as a living space.

On deck there are two pumps, placed directly aft of the mainmast. Two anchor wheels can be found on the main deck, one a horizontal windlass and one a vertical windlass. There are two gaps in the main deck, a major one between the mainmast and the windlass and a smaller one aft of the mainmast.

The lower mast sections of the mainmast and foremast are in their original positions, and the ship likely had another mast aft, a mizzenmast. The rudder, with the tiller, is pushed all the way to port. On the starboard side are two grindstones and a stack of bricks which might be the remnants of the galley.



Recent research has shown that the Edesön wreck might be the ship Bodekull, which sank in 1678. The ship was built around 1660 as a landing ship intended to be part of a fleet that would invade Denmark. Following the death of King Karl X Gustav in 1660, the invasion plans were abandoned and the newly built ships, including Bodekull, were refitted for other purposes. Bodekull is believed to have served as a cargo ship along the east coast. When she sank, the ship was en route to Kalmar and laden with flour that was ground at Fagerholm's Mill.

3D reconstruction

In recent years, marine archaeologists at the Maritime Museum have meticulously photographed the entire wreck to allow 3D imaging of its remains. This offers non-divers the opportunity to experience what it's like to dive on the wreck.

Gröne Jägaren

The crew's carelessness would prove fateful in the sinking of the warship Gröne Jägaren in 1676 just south of Dalarö Fortress. The ship settled at 30 metres' depth.

When some warships became too old they were converted into ships for other uses, such as fireships. These ships served a unique purpose during combat missions at sea. The fireship would sail fully loaded with combustible materials, such as gunpowder, near enemy ships. When in the right position, the ship and its cargo would be ignited. The crew would abandon the ship as quickly as possible, and then the ship would drift the final distance toward the enemy where it would explode and ignite the enemy ship.

Gröne Jägaren was built in Sundsvall in 1652 and purchased for the Swedish Navy the same year. During the naval campaign of 1675–76, however, it was relegated to a sixth-class ship and served as a fireship.

BUILT 1652 DEPTH 30 METRES

27 METRES
WIDTH
7 METRES
SHIP TYPE

LENGTH

1676

WARSHIP, FIRESHIP



Battle of Öland

In 1676, Gröne Jägaren took part in the Battle of Öland against the united Danish-Dutch naval fleet. The Swedish Navy suffered a crushing defeat at the battle, and the remaining fleet withdrew to the north in a state of panic after the loss. Gröne Jägaren, together with Riksäpplet, was successful in reaching Dalarö.

Storm at Dalarö Fortress

Soon after the ships anchored in safety near the fortress, a raging storm broke out. During the storm Riksäpplet tore herself from her moorings, drifted to a skerry just south of Aspö and sank to a depth of 16 metres, with her masts remaining above the water's surface. The fleet crew at the fortress immediately set to work salvaging the 90 or so guns that Riksäpplet carried on board.

A devastating fire

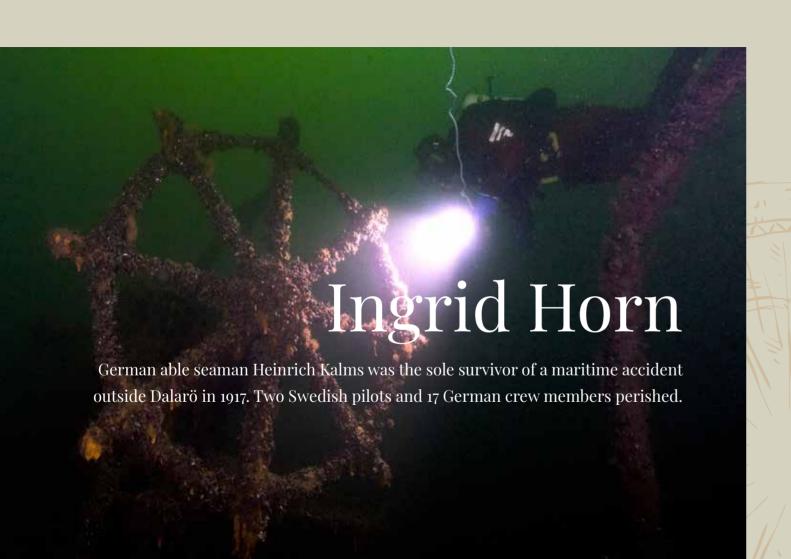
While the salvage efforts were underway, Gröne Jägaren lay moored at the Kycklingarna skerries just south of Dalarö Fortress. And then it happened. The fully loaded fireship caught on fire – probably due to carelessness – and exploded. Following the devastating fire that ensued, the ship sank and found its final resting place nearly 30 metres below the surface. 18 crew members died in the accident.

Gröne Jägaren rediscovered

Gröne Jägaren was discovered in 1921 but its position remained long forgotten until the 1950s, when Anders Franzen and his diver Paul Fahlen rediscovered the wreck. They carried out a survey together with staff from the Maritime Museum in Stockholm. The navy's submarine rescue ship, Belos, provided assistance during the survey. Several objects were salvaged including the ship's windlass, which is now part of the Maritime Museum's collections. The survey's results were published in the 1955–56 Maritime Museum Yearbook.

Divers who visit the wreck today are greeted by a hull in an upright position and a prow that sticks up almost three metres above the seabed. The stern, which is in a more deteriorated condition than the bow, contains the remains of a fireplace. The planking has crashed down on the top of the hull, while the frames still remain relatively intact. Around the wreck can be found parts of the rig and other parts of the ship that collapsed.

In recent years, questions have been raised about whether the ship at the Kycklingarna skerries is really the ship built in Sundsvall in 1652. Future research can hopefully determine whether the wreck is indeed Gröne Jägaren.



The steamer Ingrid Horn, nearly 90 metres long, was launched in Rostock in 1901. During World War I, the steamer travelled between Luleå and Germany carrying iron ore for the German war industry. To avoid hostile submarines in the Baltic Sea, the ship often took protected inshore routes.

Under hazy weather conditions, the ship collided with the Swedish steamer Bergvik in 1917 outside the island of Tuklo, south of Dalarö. Ingrid Horn sank swiftly and 19 men, including two Swedish pilots, died.

BUILT 1901 DEPTH

24-40 METRES

K SHIP TYPE

1917 CARGO STEAMER

LENGTH

88 METRES WIDTH

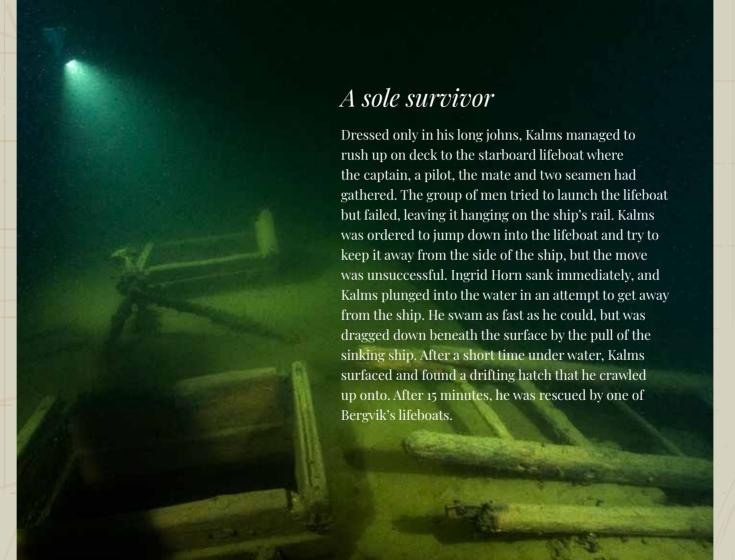
12 METRES

Fog envelops Dalarö

It is a dark and unusually foggy night. Just south of Dalarö, as the Swedish cargo steamer Bergvik travels at full speed ahead toward Dalarö, a white light is suddenly sighted from the navigation bridge. The pilot gives immediate orders to reduce the speed to half ahead. After both the pilot and the captain study the light using their binoculars, they determine that it is coming from a ship at anchor. The ship's speed is slowed even more. As Bergvik approaches the white glow, the pilot suddenly sees a faint red light. He then realizes that a ship is approaching and there is an immediate risk of collision.

Full astern!

The captain orders full astern – but it's too late. Bergvik's pointy prow strikes Ingrid Horn's port side, just fore of the bridge, making a nearly three-metre deep gash in the side of the ship. Bergvik manages to quickly free itself but sustains substantial damage to the bow. However, Ingrid Horn sinks almost immediately. Bergvik anchors at the scene of the accident and launches its lifeboats to search for survivors. Only one crewman, 20-year-old Heinrich Kalms, is found. He had been sleeping but was awakened in the nick of time by the cries of a comrade warning of the imminent collision.





Even keel and intact

Today the ship rests upright on an even keel and remains relatively intact on the steeply sloping seabed, almost right in the middle of the fairway towards Stockholm. The stern lies at the most shallow depth, with its upper sections at 24 metres, while the bow rests at nearly 40 metres' depth. On the port side fore of the bridge is a hole about two metres wide where Bergvik's bow was struck. Since the ship's discovery, some objects have been salvaged including the ship clock and the binnacle. At Dalarö Cemetery there is a memorial stone commemorating the dead, erected by the shipping company that owned Ingrid Horn.

The Jutholmen Wreck During 1970–74, the Maritime Museum conducted one of their biggest shipwreck

During 1970–74, the Maritime Museum conducted one of their biggest shipwreck surveys ever of a wreck at the tiny island of Jutholmen, just outside Dalarö.

In the spring of 1965, when 95-year-old Dalarö resident Oscar Ekblom recalled that in his youth he had heard about a ship collision in the fairway next to Jutholmen, just outside Dalarö, it immediately sparked the interest of a group of divers. The group soon got hold of some boats and scuba gear, and set off on their search. They began searching near the small lighthouse on Jutholmen, and met with success after just three soundings. There were traces of black oak on the lead line when it was brought up to the surface.

The divers quickly put on their gear and slid down into the dark waters.

When they resurfaced, they announced that they found a wreck a few tens of metres away from the lighthouse. Several more dives followed this first one and many objects were salvaged, including coins that could be dated to 1660–85.

LATE 17TH CENTURY

12-16 METRES

CIRCA 1700

LENGTH 24 METRES

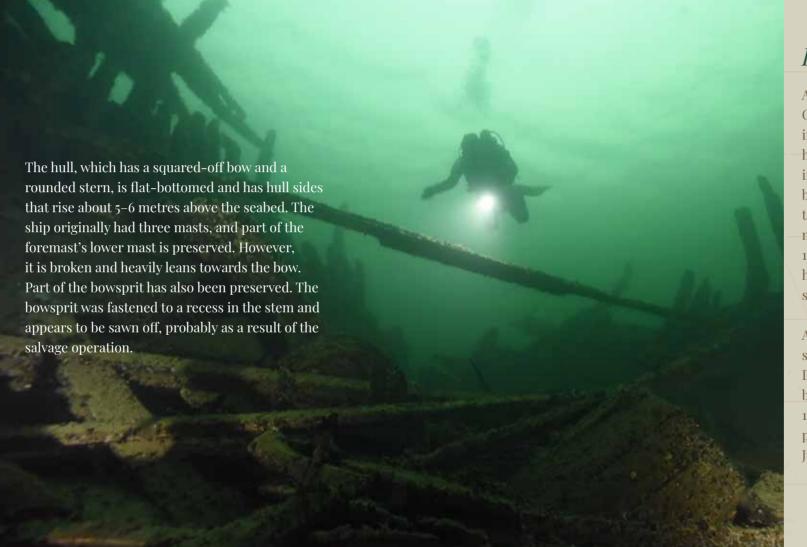
WIDTH 5.5 METRES SHIP TYPE

SHIP TYPE LIKELY A FLUYT

A first inspection

The group reported their discovery to the Maritime Museum, which inspected the site in July 1966 and found that it was a carvel-built rounded ship about 25 metres long, 5.5 metres wide and built in oak. The museum divers could also confirm that the hull was fragile, especially in the aft section.

The Maritime Museum's 1970–74 investigations involved carefully measuring the wreck, and nearly the entire interior of the hull was laid bare. A great many finds and ship artefacts were discovered, and then salvaged, documented and eventually preserved



Identification

Armed with the investigation results, the Finnish historian Christian Ahlström made an attempt to identify the ship in 1974. He based his attempt on three key facts: the vessel had sunk in 1700 or soon thereafter; the cargo consisted of iron and tar but objects of foreign provenance were also on board; and the cargo had been salvaged relatively soon after the sinking. Ahlström found information in the archives that mentioned a merchant from Stockholm, Johan Lohe, who in 1700 had been involved in a diving operation in Dalarö. Lohe had hired a diver to salvage a ship he co-owned that had sunk at Dalarö.

After he reviewed the archives, Ahlström concluded that the sunken vessel outside Jutholmen could be the Dutch ship De Vrede from Amsterdam. The ship, loaded mainly with bar iron and iron pieces, had sunk at Dalarö in September 1700 en route to Amsterdam. Curiously, the identification proposal has not had any impact, which is why the wreck at Jutholmen is still considered unidentified.

Riksäpplet The beautiful gate of Stockholm City Hall's northern vault is made from bog oak.

Parts of this so-called black oak are said to originate from the wreck of the warship Riksäpplet, which sank off Dalarö in 1676.

In the autumn of 1659, the keel was added to a new warship at the naval shipyard at Stigberget in Gothenburg. The master ship builder was the Englishman Francis Sheldon, who was in charge of the navy's shipbuilding operations in Gothenburg. The ship was launched in March 1661 and completed in September 1663.

On the poop deck was a gilded carved apple that bore the ship's name, Riksäpplet. When the winds became favourable, the ship departed Gothenburg for the long journey toward Stockholm.

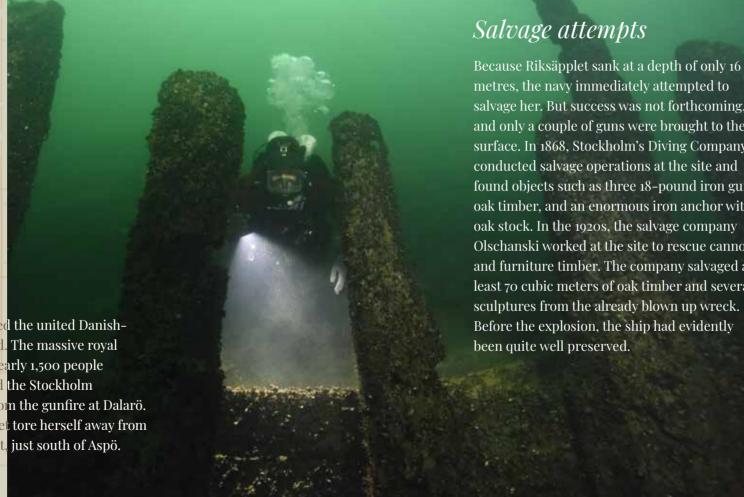
> LENGTH BUILT **48 METRES** 1659-63 WIDTH DEPTH 12 METRES 7-16 METRES **SHIP TYPE** 1676 WARSHIP

An apple out of commission

After its arrival in Stockholm the ship lav inactive until 1674, when it was sent off to pick up King Karl Xl's uncle with a consort from Holstein. The following year, the fleet set sail for an encounter with the united Danish-Dutch navy. Riksäpplet had 84 guns on board. The expedition, however, turned into a major fiasco when the ships returned after only 10 days of sailing. It had only managed to make it to the Karlsöarna islands outside Gotland, when it had to turn back home because of the ravaging diseases on board.

Protected by Dalarö Fortress

In 1676, the navy was ready for a new expedition. It encountered the united Danish-Dutch fleet at Öland, and the Swedes were crushingly defeated. The massive royal warships Kronan and Svärdet went down in the battles, and nearly 1,500 people perished. The remaining ships fled to the north. Some entered the Stockholm archipelago, including Riksäpplet, which sought protection from the gunfire at Dalarö. But in a tempestuous storm shortly after her arrival, Riksäpplet tore herself away from her moorings and ran aground on a skerry, today called Äpplet, just south of Aspö.



Salvage attempts

metres, the navy immediately attempted to salvage her. But success was not forthcoming, and only a couple of guns were brought to the surface. In 1868, Stockholm's Diving Company conducted salvage operations at the site and found objects such as three 18-pound iron guns, oak timber, and an enormous iron anchor with oak stock. In the 1920s, the salvage company Olschanski worked at the site to rescue cannons and furniture timber. The company salvaged at least 70 cubic meters of oak timber and several sculptures from the already blown up wreck. Before the explosion, the ship had evidently been quite well preserved.

An exploded wreck

Today, the ship's ribs protrude from the seabed at varying heights. Its primary remains consist of the stern and a large section of the port-side frames. Some of the frames measure 2-3 metres high, and the planking remains as well. On the starboard side, the frames protrude a few decimeters at the most. However, stems, kelson and masts are missing. The interior is buried by a huge amount of wreckage, especially fore and aft. Among this can be distinguished the remains of the galley, barrels and various types of cordage. The strait between Aspö and the Äpplet skerry contains more parts of the wreck that many people have not yet seen.



The Koster wreck is a popular destination for scuba divers despite its location, which is prone to unstable weather. The wreck's transom and rigging indicate that it is a galeas. The ship is about 22 metres long and exceptionally preserved, with a deck full of objects like coffins, clay pipes, earthenware and rigging details. A small rowing boat that was part of the ship remains amidships. Along with the bowsprit and other spars, the masts lie on the seabed surrounding the wreck.

A collapsed deckhouse can still be made out with a galley caved into its front wall. One of several original coffins can still be discerned. A collection of smashed glass bottles are visible, as well as clay pipes, rigging details, earthenware and a small box containing a horn.

Between 1752-1763

DEPTH 34 METRES

LENGTH

22.5 METRES

WIDTH

7.4 METRES

SHIP TYPE CARGO SHIP

The wreck's condition

The aft deck is partly decayed, exposing the cabin below it where remnants of what is possibly decorative furniture can be discerned. A large horizontal windlass can be found in the prow.

There are two hatches on deck, a large one aft of the mainmast and one aft of the windlass. The stem has come off and rests on the seabed along with what is likely the bowsprit. On the seabed outside the starboard bow is an admiralty-pattern anchor.

The Concordia from Stralsund?

A review of the archive data on shipwrecks in the area and the time period in question indicates that the wreck might be the galeas Concordia from Stralsund. The ship was laden primarily with malt, and capsized and sank during a rough storm in 1754 outside Älvsnabbenudden. The crew of eight men died in the accident, including skipper Joachim Lemcke, in addition to nine passengers and the pilot.

There is, however, another theory: the Concordia might be the wreck resting at Cape Hundudden at Älvsnabben, the so-called Älvsnabben wreck. To pinpoint the identity of the Koster wreck, the wreck and its cargo must be examined more closely.

A looted wreck

Since wreck diving on the Koster wreck is not regulated by diving guide requirements, and because there are so many objects on deck, the wreck has suffered both accidental and deliberate damage as well as looting. Objects that it once contained are gone or have been moved; coffins that once stood in the remains of the deckhouse are broken, their contents lost forever. This is a shame for many of the amateur divers who do use caution and want to experience this frozen moment of history as it was, in all its rich details.

Text and images

Cover

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A world-unique diving experience Image: Jim Hansson/SMTM

Diving in Dalarö Dive Park
Text: Pernilla Flyg/SMTM
Image 1: Dalarö Information
Image 2: Mikael Fredholm/SMTM

Maritime Museum

Dalarö's maritime history
Text: Göran Ekberg/SMTM
Image 1: Bertil Anderson/The Maritime
Museum
Images 2 and 3: Unknown/The

Anna-Maria Text: Göran Ekberg/SMTM Images 1, 2 and 3: Jim Hansson/SMTM The Dalarö wreck

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Gröne Jägaren

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Image 4:3D rendering Jim Hansson/SMTM

Ingrid Horn

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Riksäpplet

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The Koster wreck

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Images 1, 2, 3 and 4: Jim Hansson/SMTM

This brochure has been developed by employees at the Maritime Museum, a part of the Swedish National Maritime and Transport Museums (SMTM) within the framework of the EU Interreg Central Baltic project BALTACAR (Baltic History Beneath the Surface).

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Dalarö Dive Park offers opportunities for divers and non-divers alike to experience this unique cultural heritage. For more information, please visit www.dalarodivepark.com