

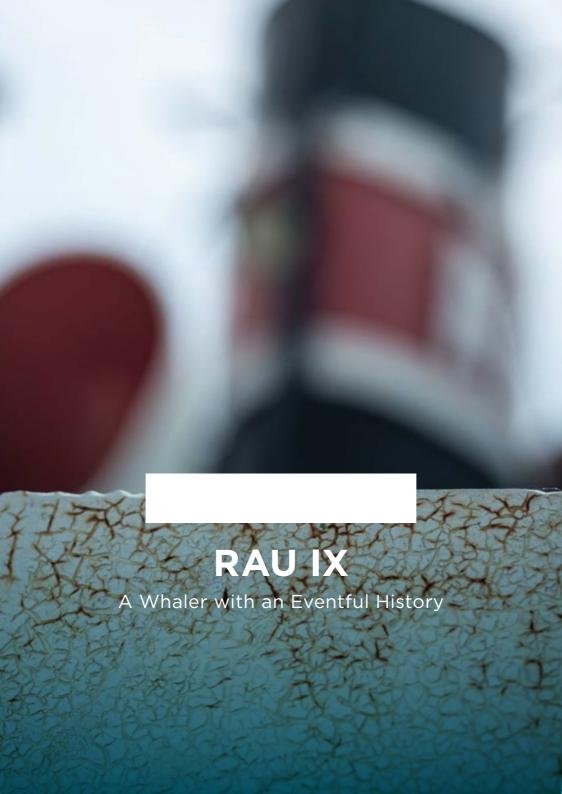


RAU IX

A Whaler with an Eventful History

A Leibniz research museum





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The World of the Whalers in the Antarctic

The Rau IX is a beauty, but only on closer inspection. Alongside the other ships in the museum harbour, for example the Nordische Jagt Grönland or the tugboat Stier, it might look unremarkable at first sight. However, anyone who goes on board the vessel will experience maritime history with all the senses. And the Rau IX also serves as a reminder of how mankind once treated nature and the ocean.

The history of the whaling steamer Rau IX is also about how human beings interfered with an ecosystem and damaged it. On vessels like this one, men were at sea for months on end to hunt whales in the Antarctic. Documents in the archive of the German Maritime Museum (DSM) provide evidence of the ruthless efficiency that characterized their work at the icy end of the world. Back then, our present-day standards for the protection of the environment and the species played no role whatsoever.

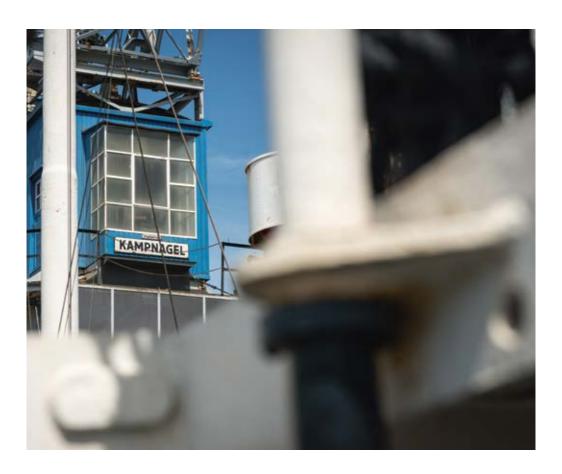
In the chapter "Interests", the scientist Ole Sparenberg explains why the ship was launched in Wesermünde (present-day Bremerhaven) in 1939. The Nazis were pursuing a plan to close the "Fettlücke" ("fat gap") in the public food supply with what they thought of as the inexhaustible resources of the ocean. They envisioned using whale oil to produce margarine. It was the margarine manufacturer Rau who had the Rau IX built. The goal was independence from goods from other countries – but it was never reached. In his contribution, Sparenberg gives insights into why the "Nazi dream of fish & ships" failed.

Dennis Niewerth examines the ship's materiality. Among his tasks at the DSM is to digitize the museum's ship models for virtual space. This is pioneer work, and is not yet carried out in many museums. In the chapter headed "Materiality", you'll learn about his search for the right method, and how his understanding of details on the "real" Rau IX has changed.

Anyone who boards the 46-metre-long ship as a visitor, anyone who experiences the confinement of the passageways and cabins first-hand or climbs down to the engine room, gains an impression of the many deprivations that distinguished life on board for the crew. The whalers suffered

their way through cold, storms and hard work. "Sometimes it's not easy to delve into the bloody business", says scientist Charlotte Colding Smith. She devoted herself to the chapter on "Perception".

This booklet brings maritime history on board the *Rau IX* alive.





The Nazi Dream of Fish & ShipsDr Ole Sparenberg

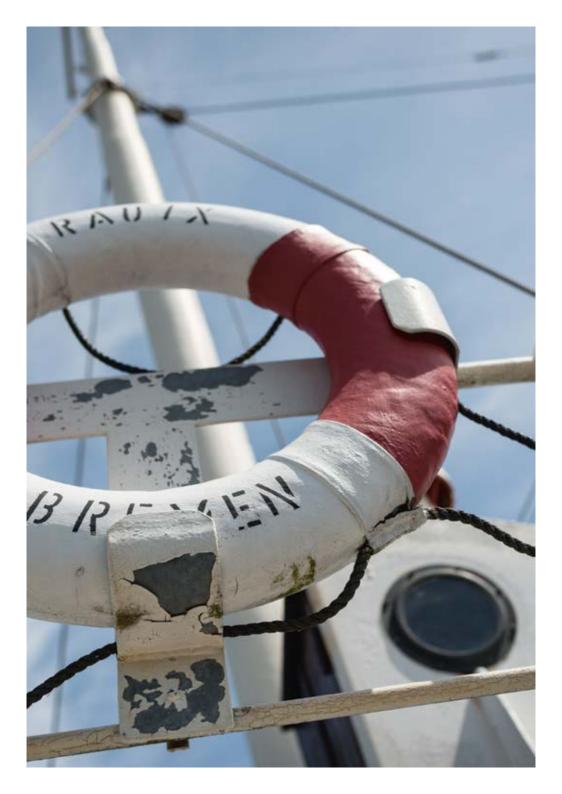
Why did the Nazis turn to whaling? Historian Ole Sparenberg looks back at an era when the sea was considered a "German colony" with inexhaustible resources – and propaganda bore some other strange fruits as well.

During the Third Reich, Joseph Goebbels's propaganda machinery issued a consumer order. "German, eat more fish! You'll save the Reich foreign currency!", posters and ads proclaimed. It sounds strange, but it was no joking matter. The Nazi regime's preparations for war made it necessary to save foreign currency and avoid imports to the extent possible. To that end, the authorities intervened in all areas of life – not least of all in the population's eating habits.

Among other things, the regime founded a kind of "frugality cult". The latter even applied to such aspects as harvest residues, kitchen refuse and the thickness of potato peels. The measures became ever more bizarre. Housewives, for example, were advised to cook with metal spoons rather than wooden ones. According to this odd – but entirely serious – recommendation, wood absorbed too much fat.

In 1936 and 1937, the Nazis rationed butter and other edible fats. The "good butter", as it was called in the vernacular, disappeared from the dining tables, and if there was any fat at all on people's bread or in their pots and pans, it was margarine. In view of the shortage, economy and nutrition experts coined the term "Fettlücke" ("fat gap"). To close this gap, the Nazis turned to the oceans – and to fishing and whaling.

Those in power had come to realize that domestic resources could not provide all the raw materials needed, or replace all food imports. Agricultural production could not be increased without fertilizers and fodder from abroad. In the long term, the conquest of new "lebensraum in the east" was to solve the problem. And in the short term, the authorities saw a solution in the expanses of the world's oceans. They operated on the assumption that this resource was "inexhaustible" and the production of fat and protein from



fish and whales could be increased at will. In cases where German fishing and whaling ships were travelling international waters, the catch did not represent an import. The material and manpower came from the Reich, and the costs were incurred in reichsmarks.

In 1901, a German chemist had succeeded in hardening animal fats and vegetable oils. From then onwards, margarine was made from whale oil, a cheap fat for the simple folk. And in the dreams of the Nazi leaders, the means of obtaining this cheap fat seemed unlimited. They thought of the oceans as fallow, little-used and unclaimed territory there for the conguering - it was an image that pleased the Nazis. Terms such as "German colony" and "raw materials province" came into use to refer to the sea. Even in the 1930s, though, there were some who disputed the conception that these resources would - miraculously - never dry out. The National Socialists pointed to the vastness of the Antarctic Ocean and to the "sustainability" (to use a popular term of the present) of German whaling. The Four-Year Plan announced in 1936 provided for a substantial increase in the consumption of fish and whale fat, which would ease the burden on agriculture accordingly.

In order to guarantee that the competition with other nations would not lead to the overexploitation of the resources, the Nazi regime pursued a strategy entirely different from its otherwise extremely aggressive foreign policy. It was Germany's entry into the whaling industry that gave rise to the 1937 International Convention for the Regulation of Whaling in London and the follow-up conference of 1938. The German government was at the bargaining table from the start, and lost no time in turning the regulations into domestic law. The concern was great that the newly tapped maritime source might run dry as quickly as it had sprung. What is more, to be successful, it was important to get along with other nations.

It was deemed particularly important to cultivate good relations with Norway. Not only did Norwegian harpooners - the best of their profession - work on German ships. Germany also imported whale oil from the Scandinavian country and was dependent on ships purchased or chartered from Norway. Regardless of how strongly the propaganda emphasized the "German character" of whaling, international relations also brought obligations in their wake. These were settled not with foreign currency, but with the supply of high-quality industrial goods.

The British-Dutch Unilever corporation was behind five of the seven whaling fleets operating for Germany. The others belonged to the detergent manufacturer Henkel, who likewise had an interest in whale oil, and the margarine producer Walter Rau, who cultivated

close contact to the Nazi leadership. The 1936/37 season was the first in which three whaling fleets put to sea for Germany. In every year that followed until the war began, new ships joined them. The regime supported the undertaking by providing the steel and other raw materials required for building ships, and making shipyard capacities available.

The fish and whale trend did not go down particularly well with the consumers. Whale meat in cans? Not tasty. Despite the tense economic situation, the Germans' willingness to go along with the plan left something to be desired. Nonetheless, the people did not grumble, to say nothing of questioning their loyalty to the political leadership. When Hermann Göring - one of the regime's leading politicians - proclaimed in October 1936 that the new Four-Year Plan meant a shortage of meat but provided for a sufficient supply of fish, the public acknowledged it with a collective shrug. After all, the plan served the purpose of "ensuring German honour" and "German life".

There was one catch to the Nazis' new fascination for whaling and deep-sea fishing: both were viable only in times of peace. It was clear that England, the naval power, would block the German Reich's access to the high seas. The investments of the years 1936 to 1939 in ships and infrastructure accordingly failed to pay off when the global con-

flagration began. That also applied to our museum ship *Rau IX*. Hardly was its construction completed than it was called back to the shipyard – to be converted for war service. It would be several years before it travelled to the Antarctic for whaling, now under the Norwegian flag.

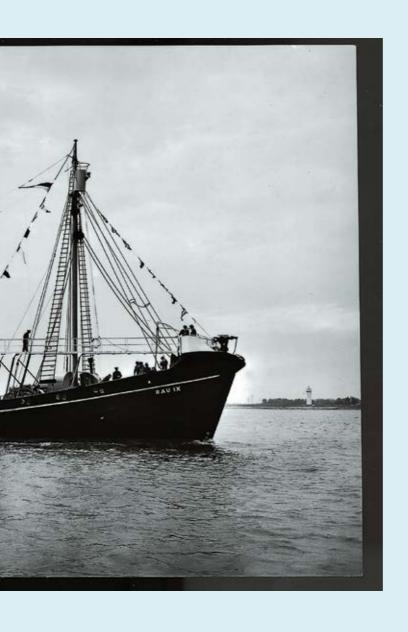
Many of the vessels launched in the Nazi period for the purpose of fishing or whaling were scuppered during the war or hit a mine. Of those that survived the war, the victorious powers claimed a large proportion for their own use. So all that remained of the Third Reich's whaling fleets was experience, but that was much in demand in the 1950s. For his Olympic Challenger fleet, the Greek shipowner Aristoteles Onassis preferred to sign on sailors who had been on a whaler to the Antarctic. In the shortage economy of the post-war years, the wellpaid jobs were highly coveted, even if the conditions on board the ships were cramped and the work extremely hard. Now it was converted U.S. Navy corvettes that set out from Hamburg for the other end of the world to hunt whales.

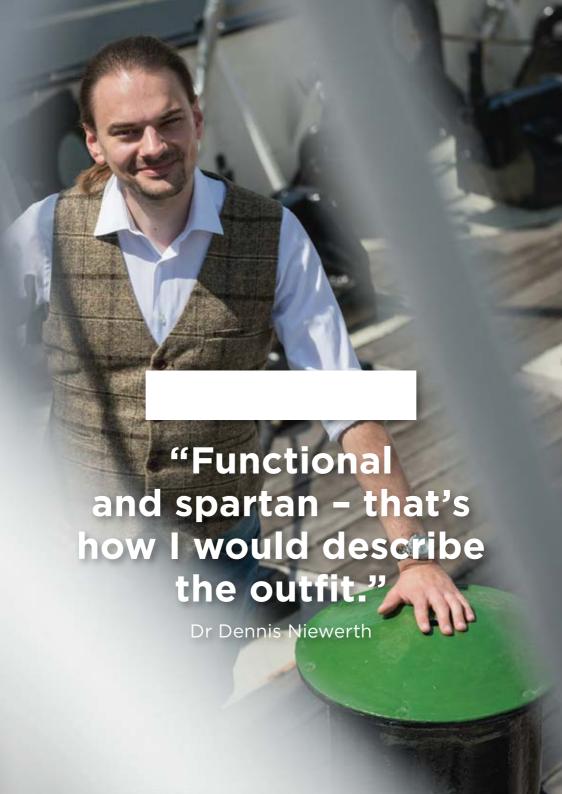
Onassis sold his whaling fleet to Japan in 1956 after legal conflicts with the Norwegian whaling association. The last "German" chapter in the history of whaling thus came to an end.



Dr Ole Sparenberg, born in 1976, grew up in Oldenburg in Northern Germany and came in contact with maritime industry at a young age. His father went to sea as a tanker captain. The historian works at Saarland University.







A Ship Model Dr Dennis Niewerth

The scientist Dennis Niewerth has a special task: he records the museum's ship models digitally for virtual space. That's pioneer work for which the right method is still under development. Niewerth says: it gives you a whole new sensibility for details, and a whole new way of looking at things.

To this day, the history of the whaling steamer Rau IX is fraught with secrets. What we know for certain is that it was built in 1939 in the legendary Seebeck shipyard in Bremerhaven. The Rau IX is 46.11 metres long, 8.2 metres wide and has a draught of 4 metres. It has a strongly protruding stem that displaces the water rather than cutting through it, a type of construction known as the "Maierform". The resistance in the water was to be as low as possible to improve the ship's manoeuvrability. The Rau IX was not particularly fast: the 1600 HP engine achieved a maximum speed of 14 knots.

Functional and spartan – that's how I would describe the outfit. The forward companionway leads to the rooms of the crew "before the mast", right aft of the stem. In bad weather with breaking seas, it can't have been much fun to climb in or out on those steps. There is one cabin for nine men which also served as a common room. The only crew member to have a tiny cham-

ber to himself here at the fore was the boatswain.

The Rau IX's bridge and wireless room are located approximately amidships. The captain and his helmsman had their rooms right beneath them, and the ship's master could communicate with the bridge by way of a speaking tube. Another level down are the galley and the mess. The quarters of the other officers and the radio man were further astern. Here again, the rule of thumb applied: the higher the rank, the larger the chamber.

The engineer had his cabin adjacent to the engine room. A kind of porthole enabled him to observe the engine: a low-pressure one, which was particularly quiet so as not to scare off the whales. Like nearly all other engines, this one was also powered by steam, which was generated by an oil-burning boiler. There was also a small diesel engine intended for use only in the event of a major problem with the main engine.



The Rau IX belonged to the fleet around the mother ship Walter Rau, and it was scheduled to accompany the third whaling expedition to the Antarctic. Owing to the outbreak of war, however, that voyage never took place. Less than twelve weeks after its launch, the German Navy chartered the vessel and ordered it back to the shipyard. There it was subjected to structural alterations – now it was no longer to hunt whales but submarines. It went into service on 7 August 1940.

That date marks the start of a very eventful phase in the ship's history, and one in which it underwent several changes of name and location. Under the designation *UJ D* and later *UJ 1212*, the *Rau IX* belonged to the 12th submarine-hunting flotilla until 1944 before being ordered to Norway. As the *NH 06* it was then assigned to the har-

bour protection flotilla in Hammerfest. After the war, which it survived undamaged, it was used to clear mines.

In 1948, the ship originally bearing the name Rau IX was turned over to Norway along with its mother vessel Walter Rau. As the Krutt, it served its originally intended purpose - whaling - in the Antarctic for twenty years. In this capacity it operated first under British flag and then under Norwegian, having meanwhile passed into the possession of an owner in Oslo. Then, under the name Hvalur V, it hunted small whales around Iceland, and finally, as the Heykur, fulfilled the same function off the Faroe Islands in the Norwegian Sea. When whaling was no longer a profitable industry, the Rau IX returned to Bremerhaven - thirty years after its launch. The Kuratorium Schifffahrtsmuseum Alter Hafen purchased

the vessel and had it reverted to its original condition. Since 1969 it has moored as a museum ship in Bremerhaven under its old name *Rau IX*, and since 1972 it has no longer been listed in the Lloyd's Register.

I'm very well acquainted with this ship – and not only because I pass it every day on my way to the museum. You could even say I know every nook and cranny of it because, for some time now, I've been working with the shipyard model in the framework of the project "Ship Models as Knowledge Stores for the Investigation of Maritime Heritage". We have approximately 3,000 models in the museum holdings. They can help us explain the

technical, social and economic development of shipping. In cooperation with the Bremerhaven University of Applied Sciences, we're now 'feeding' the models into a computer. Later they'll be retrievable as 3D models on smartphones, tablets and PCs. No special software will be necessary, just a common internet browser. We plan to make the data available on two channels: on the website for viewing at home, and in our exhibition by way of Wi-Fi and computer terminals. When we're finished, people will be able not only to board the Rau IX and other ships in the harbour basin physically in front of the museum, but also to explore them from almost anywhere in the world.



We've long studied the matter of how best to digitize a ship model. We had to experiment and try out various technologies to arrive at a solution. Initially, we thought the simplest way was to convert normal photos into a 3D image. By this method, the ship is photographed from every possible perspective; afterwards, a computer program "builds" a model from the photos. Before long, however, we realized that this was not a viable solution. Surfaces can be represented very well by these means, but not details. Nor did the idea of using a laser gun with a tracker solve all our problems: that technique registers neither colours nor textures.

The best method proved to be one using a so-called sidelight scanner, a system with two cameras and a projector. This is the only means of capturing the model in such a way as to do justice to the subtle details of a ship's construction. We tested the method on a model of a Roman merchant vessel – and it worked. Even the tiniest details of the rigging and superstructures were discernible in micrometre range. The technique has only one disadvantage: gaps can come about when the camera does not record a concealed place.

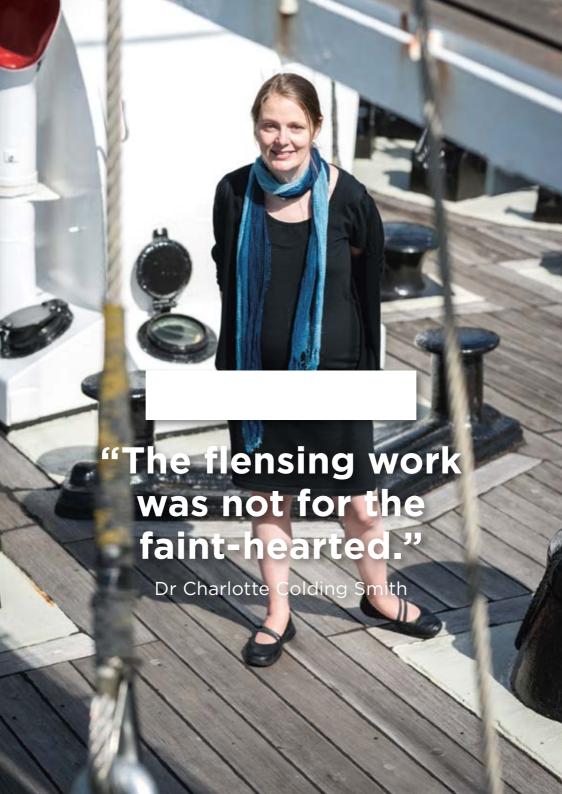
It took us four weeks to scan the shipyard model of the *Rau IX*. It was fascinating to see the ship on the computer and then visit the original. It opens your eyes for details and gives you a whole new perspective on the ship. I also tried using a computer tomograph (CT) belonging to the University of Bremen's MAPEX Centre. We put the entire model in the tube – which means a model can't exceed a certain size. We tested this technique on a broken toy submarine of the imperial era and it allowed us to see into the interior. Gears and springs were visible. We could recognize precisely which components of the model had broken.

Now we plan to work our way through the holdings and digitize the models ship by ship. We hope to do about 50 in the first two years. I find the combination of the real-life experience of the exhibition objects and their augmented reality versions quite captivating. It turns the museum into a place that stimulates the imagination. The objects begin to relate - to "talk" - to each other.

The museum visitor takes a journey through the past. What a suspenseful way of making science something you can experience – and of going on board our *Rau IX*.



Dr Dennis Niewerth, born in 1985, is a native of Essen. He wrote his doctoral thesis on virtual museums. He also concerns himself with ship models in his private life: he's building the battleship *Prince of Wales* on a scale of 1:570.



Hunters and the HuntedDr Charlotte Colding Smith

As a scientist, Charlotte Colding Smith finds the research on the museum ship *Rau IX* interesting. As an environmentally conscious citizen, she sometimes has a lump in her throat. Among other things, the documents show how the large whale species in the Antarctic were nearly rendered extinct. And how hard life on board the whalers was.

From the scientific viewpoint, it's suspenseful to study the records on the Rau fleet. No doubt about it. But I'm also keenly aware of the environment. The protection of nature is something very close to my heart. And from that perspective, it can be very oppressive to examine the logbooks and whaling statistics of the fleet. Often it's just numbers and matter-of-fact memos, but together they paint a picture – a bloody picture.

Especially a brown notebook called the "catch journal" in the holdings of the German Maritime Museum (DSM) archive bears clear testimony. It was in this book that a record was kept of the work performed on the factory ship *Walter Rau*. One column is headed "whales caught and processed". A great number of blue whales turn up in these columns. The majority of the animals killed were more than 25 metres long. You leaf through the book page by page, do the addition figure by figure, and the number you arrive at

in the end is 1,700. That was the quarry for a single voyage, from 5 October 1937 to 22 April 1938.

You gain an impression of how a large proportion of the Antarctic whale population was nearly wiped out.

The photos and films that have come down to us from those days also convey a clear image. Particularly the flensing (whale-skinning) work carried out on the deck of the factory ship Walter Rau was a bloody trade and not for the faint-hearted. There is no evidence, however, of visitors having negative feelings towards the museum ship. They know that what they are looking at is a historical exhibition object. Incidentally, there was already an awareness of the ecological damage brought about by whaling as early as the 1920s. At that time, however, economic interests were more important than any misgivings that might have crossed someone's mind.

Hardly had it been built to completion in 1939 than our museum ship Rau IX was ordered back to the dock to be converted for use in war service. From first-hand reports, we know what everyday life on structurally identical ships en route in the Antarctic was like. Eight whalers accompanied the large factory ship, the Walter Rau. They went hunting in the Antarctic summer (our winter). Each of the small ships could accommodate a crew of 15.

Thanks to its low-pressure engine, the whaler didn't make much noise as it moved through the water and approached the whale. A whale is a mammal and has to rise to the surface for air at regular intervals. Its exhalation, the so-called blow, revealed its position to the hunters. As the ship moved in on the whale, the marksman hurried across the flying bridge to the harpoon gun at the bow. Usually he was a Norwegian, because – owing to their longstanding experience – the whalers of that country were known as the best of their profession.

Now the gunman waited for a favourable moment, and then fired his harpoon at the animal. The barb anchored itself in the whale's flesh, and from this moment onwards, the ship and its quarry were connected by a rope 1,200 metres in length. With the aid of a steam winch, this rope had to be kept at a constant tension. The whale tried to dive, and often resisted fiercely. To prevent the line from tearing as

the animal thrashed about, it was suspended from a steel cable connected in turn to a set of strong springs known as an accumulator. The size of this component serves as an indication of the forces that were in effect. A full-grown blue whale is more than 30 metres long and weighs more than 130 tons.

The whale cadaver was pumped up with compressed air to keep it afloat. The tailfin was cut off because it might otherwise act as a propeller, and the cadaver was made fast to the bulwark hawseholes. Then the cadaver was towed to the Walter Rau, which sent out a radio beam at regular intervals, and hauled on board its deck at the stern. Measuring more than 100 metres long and 22 metres wide, the factory ship was like a huge slaughterhouse. There the whales were flensed - that is, stripped of their skin and blubber -, and cut and sawn into pieces. The latter slid down to the hold, the actual factory hall, through holes. The workers below deck turned them into whale oil, meat preserves, fodder, meat extract and other by-products. The factory could process up to 100 tons an hour: its most important product was the whale oil, which was collected in tanks in the hull. (For more about how the whale oil was used, see the chapter "Interests".)

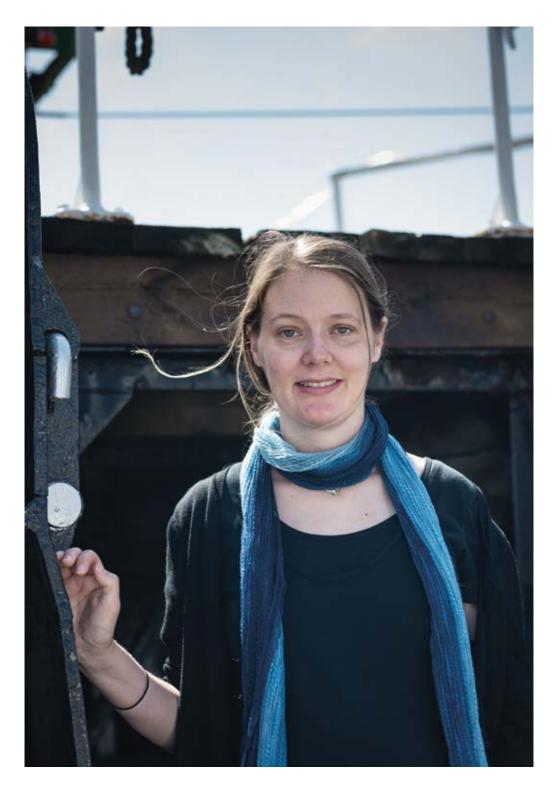
For the crew, life on board a whaler was hard and full of deprivation. The men were at sea for up to eight



months at a time, during which period they called at a port only once to take on fuel and provisions. They struggled with the storms that raged in the unpredictable waters of the Antarctic. They suffered from the cold. They had to cope with the cramped conditions on the very functionally constructed ships that offered next to no scope for privacy. Every centimetre of the Rau IX was designated for workspace or the storage of provisions and spare parts. Any museum visitor who boards the ship today will soon have an impression of how this must have felt. You also have to try to imagine travelling with as many as 14 other men in an environment hostile to human life as opposed to simply stepping back onto the pier of the DSM museum harbour.

"The longer the journey took, the more often did differences of opinion arise. It was par for the course for someone to get a bloody nose, but all in all we got along well. We owed that in part to our workload: we didn't have time to fight. Even the Christmas celebrations were usually cancelled", Captain Hermann Gerdau later reminisced about his time on a whaler of the Onassis fleet in the 1950s. And the converted U.S. corvettes used at the time were even a bit larger than our museum ship *Rau IX*.

It wasn't just working in the cold on deck that was gruelling. The heat in the boiler house must also have been hard to bear. If there was a leak in the rear pipe system of the boiler, a crew member had to crawl in through the blown-out fire hold to patch it. As a



safety precaution, a rope was tied to his foot. That way, he could be pulled out if his strength failed due to the heat.

And the whale hunt itself left a mark on many of the men. "I'm convinced that no one would have been capable of killing a whale if it had been able to scream out its pain", the former whaler Gerdau wrote in his memoirs. Dr Charlotte Colding Smith, born in 1981, is a native of Copenhagen. She grew up in Australia and came to Germany by way of a scholarship. She earned her doctorate in Melbourne, Australia, and then joined the staff of the DSM. She lives with her family in Erlangen.

Rau IX

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Concept and idea: Ankerherz Verlag GmbH

Texts: Stefan Kruecken

German-English translations: Judith Rosenthal

Title illustration: Hans Baltzer

Photos: Axel Martens, except p. 12/13: DSM Archives

Design: Daniela Greven

Corporate Design: GfG/Gruppe für Gestaltung



VOLUME 03 /

A Whaler with an Eventful History

In a state of change: the German Maritime Museum – Leibniz Institute for Maritime History – is presently redesigning its exhibition in close correspondence with the research and exhibition programme "Man & The Sea". A number of important objects play a key role here and are also featured in a series of booklets.

In each booklet, experts take a look at the respective object from three research perspectives – "Interests – Materiality – Perception" –, ask it questions and shed light on its fascination.

German Maritime Museum

Leibniz Institute for Maritime History Hans-Scharoun-Platz 1 · 27568 Bremerhaven T +49 471 482 07 0 · info@dsm.museum

www.dsm.museum

Supported by Förderverein Deutsches Schiffahrtsmuseum e. V.





