

REPORT of the EXPEDITION 'SANTI ODNALEZC ORLA' 2017

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With some translation corrections and amendments by Jouke Spoelstra

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Introduction

On September 1st 1939, after the German invasion in Poland, ORP Orzel escaped German confiscation and sailed to the Estonian port of Tallinn. Here she was detained but managed to escape after some days and made her way to the UK, in accordance with her orders.

After an eventful voyage she arrived in Rosyth at October 14, and joined her sister submarine ORP Wilk and three Polish destroyers.

ORP Orzel was checked and prepared for combat to reinforce the British 2nd submarine flotilla in Rosyth. Between December 1939 and May 1940 she made 6 patrols in the North Sea, and enjoyed the success of sinking the German troop transport ship Rio de Janeiro during the German invasion of Norway.

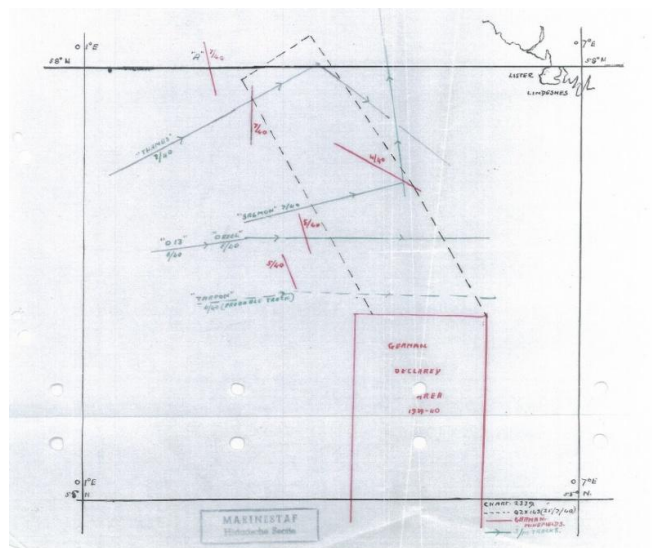
On May 23 Orzel departed for what was to be her last patrol. She was to report back in Rosyth on June 6, but nothing was heard from her again. On June 10th ORP Orzel was declared lost on patrol.

Search activities

In the years after, several attempts were made to find the wreck of the Orzel. Especially in the last decades a number of Navy Survey vessels (ORP Heweliusz, ORP Lech) as well as private vessels (m/v Imor, m/v Chieftain, m/v Blue Marlin, m/v Lamdash), with embarked search teams tried to find traces of Orzel. Sadly to no avail so far, though during one of the expeditions (ORP Lech, 2013) the British Submarine HMS J-6 was located and identified.

Main search area

The main search area in the first years was an area around the German minefields 16a and 16b. They were laid exactly in the route generally taken by the submarines under British command when sailing from their home base to the hunting grounds to the South and West of Norway. These minefields were held responsible for the loss of HMS Salmon, HNLMS O13 and ORP Orzel.



Map 1: British map Df 1/43 with tracks of lost submarines

New search area

Another theory is that ORP Orzel was mistaken for a German U-boat. On June 3rd 1940 a Hudson bomber patrolling the North Sea claimed to have attacked and sunk a German U-boat. After the war it was confirmed that at the given date, time and location no German U-Boat was in the vicinity. The only possible victim could have been ORP Orzel.



Map2: location of the possible Hudson attack at the end of the planned route for the Santi 2017 expedition (yellow square)

Report and findings of the 2017 expedition

From May 20 to June 9, 2017, we have completed the next stage of the 'SANTI Odnalezc Orla' expedition which aim is to search and locate the ORP 'Orzel', the Polish submarine that sank to the bottom of the North Sea while on patrol in May/June 1940.

Hudson attack site

As part of the expedition we continued the systematic bathymetric measurements that we started in 2015 in the immediate vicinity of the British aircraft attack at a submarine which we think may have been ORP Orzel on June 3, 1940. The attack took place about 120 nautical miles off the coast of Great Britain at a latitude corresponding to the approximate location of Edinburgh.

Additionally, in order to maximize the potential of the search, we have selected several interesting positions of possible wrecks on the route to the area of search, corresponding to the part of the potential return route of ORP Orzel from her last patrol, and also on our return route, which corresponds to the possible return route of ORP Orzel from the A1 sector in which she was to perform his duties until June 3, 1940.

The search in the immediate vicinity of the attack site consisted of a systematical search of the whole area of the sea bed of adjacent strips of about 300 meters in width, sometimes exceeding 34 km. Good weather conditions and excellent parameters of the unit from which we conducted the measurements allowed us to maximize the use of the modern MBB SeaBat T50-P, which we had thanks to the cooperation with the Gdansk Marine Institute.

During the 12 days in the immediate vicinity of the attack site, we were able to investigate approximately 900 km² of the North Sea bottom in detail, aiming to detect wreckage of the submarine up to 8 nautical miles from the center of the area. The total area surveyed since 2015-2017 is now already over 1000 km².

Additional sites

In addition, we have conducted bottom surveys of the sea bed in a number of smaller areas as potential ORP sites during the last patrol, which we had identified as possible wrecksites. (Several locations delivered by the

project O13 Still on Patrol, the search for the Dutch submarine HNLMS O13, lost on patrol between Dundee and the Skagerrak in June 1940).

Wreck of unidentified submarine (ID 3222)

In one such area, about 5 nautical miles from the route that the ORP Orzel could have taken on her return leg to her home base Dundee in June 1940 after the end of the operation, we have discovered a submarine wreck with parameters similar to the unit we were looking for. Detailed measurements with sonar of the found wreck allowed us to determine that the wreck has a length of about 88 meters and a width of about 7 meters, so this wreck is 4 meters longer than the searched ORP Orzel (L= 84 m.)

The query of archival materials and technical specifications of the submarines that operated and could have been sunk in that area, as well as the analysis of the wreck's technical parameters, made it possible to point out that the discovered submarine was likely to be the British HMS Narwhal, a mine laying submarine, type Grampus (also often indicated as type Porpoise). The ship departed on patrol on June 22, 1940 from her base in Blyth to the coast of Norway, where she was to lay a line of mines in the waterways used by the German navy.

She did not return from a patrol that would have ended on June 30, 1940. It was assumed that she sank in the vicinity of the Norwegian coast. Finding a ship near the route British submarines returning from patrols allows us to linking the cause of her sinking with the air attack of the German Do-17 Aircraft on an unidentified Allied submarine on July 23, 1940 in grid AN 4856. Also, damage to the ship in the form of lifting a substantial portion of the deck's deck between the fin and the stern of the ship is corroborating by the description of the air attack that resulted in the direct hit of a bomb in the hull area.

Other wreck finds

Of other smaller areas and places of potential wreck sites on the route to and from the surveyed area we surveyed around 40 locations. In addition to the mentioned submarine we were able to find and investigate 29 different wrecks.

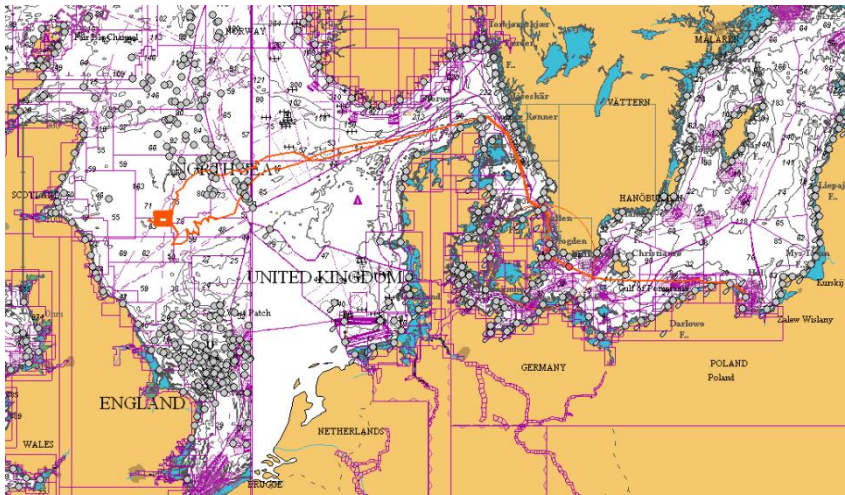
During the current expedition we have found another 4, unknown wrecks of ships in the immediate area adjacent to the site of the British air attack on June 3, 1940. This gives us a total of 10 shipwrecks and (including wrecks found in 2015). Unfortunately, none of the wrecks surveyed matched the technical parameters of ORP Eagle. This means that the navigational error of the air attack of is more than 8 nautical miles (the smallest distance to the boundaries of the area under investigation).

During this year's expedition lasting 21 days we sailed 3700 nautical miles and surveyed a total of 1090 km² of the North Sea. The plans, except for finding the ORP Orzel, were fulfilled by us in 100%, allowing us to exclude the hypothesis, that the ORP Orzel wreckage was in the immediate vicinity of the position pointed out by the British pilot Lockheed Hudson as the place of the attack on June 3 1940.

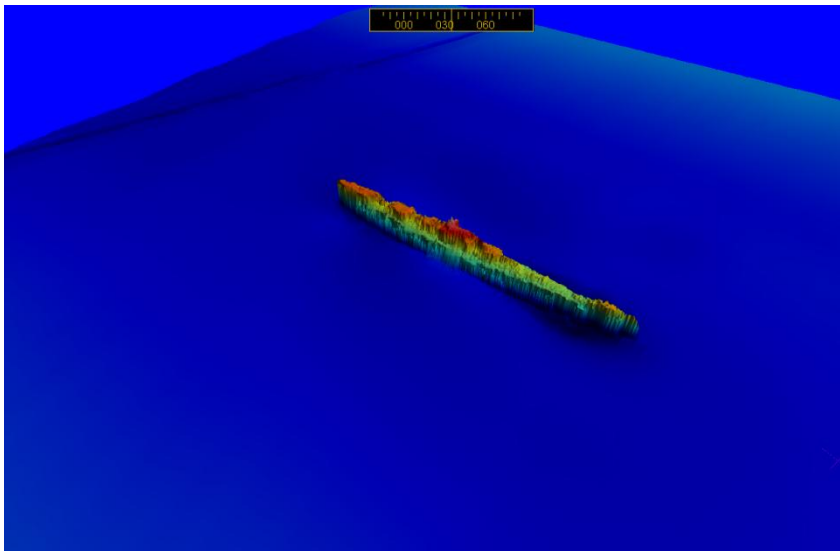
Outcome and intentions for the future

The results of our research allow us to start planning exploration activities that we intend to continue in the coming years, but based on somewhat different methodological assumptions. Further exploration, given the size of the area where the wreck might be, will be reduced to researching strictly selected wreck and obstacle locations and fishery fasts, which we will chose from our databases.

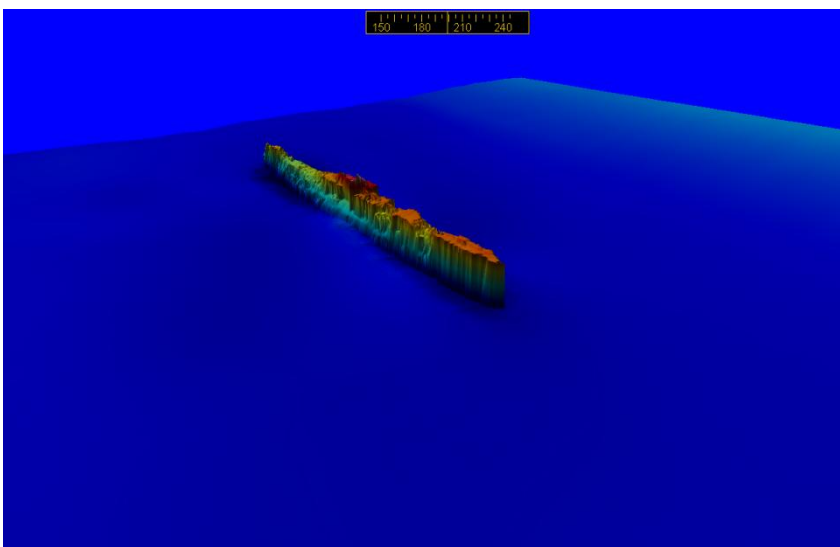
In summary, the scope of this year's expedition, as well as the number of wrecks found and surveyed, exceeded our expectations, allowing us to recognize the expedition as the most efficient of our missions.



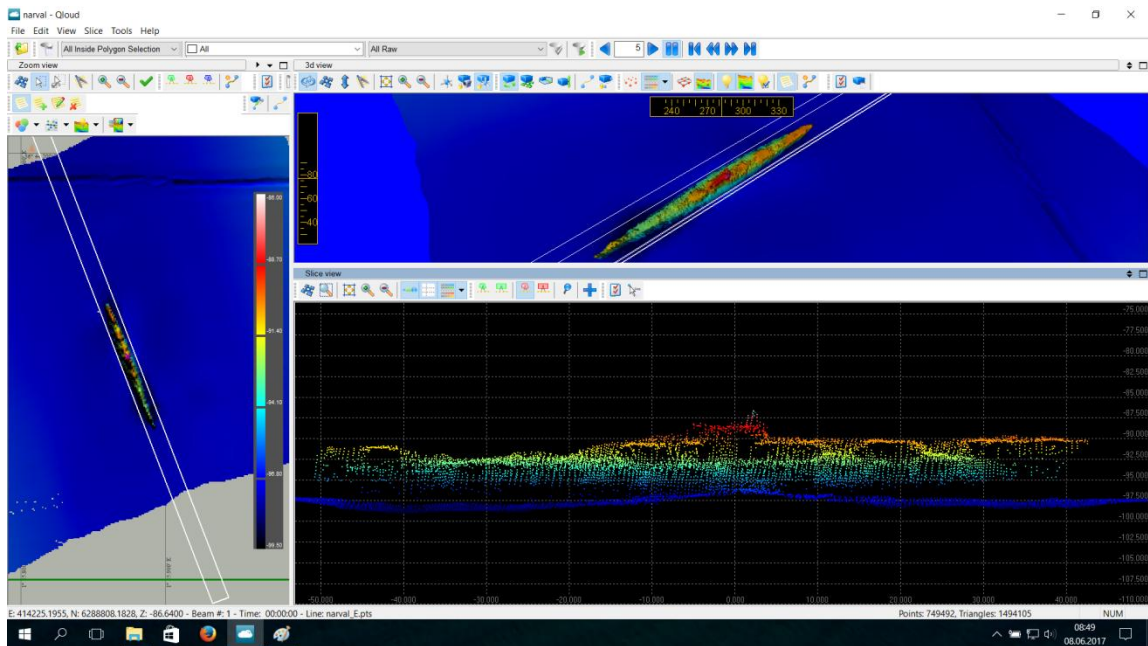
Picture 1: Route of m/v Mewo Navigator during the Santi 2017 expedition



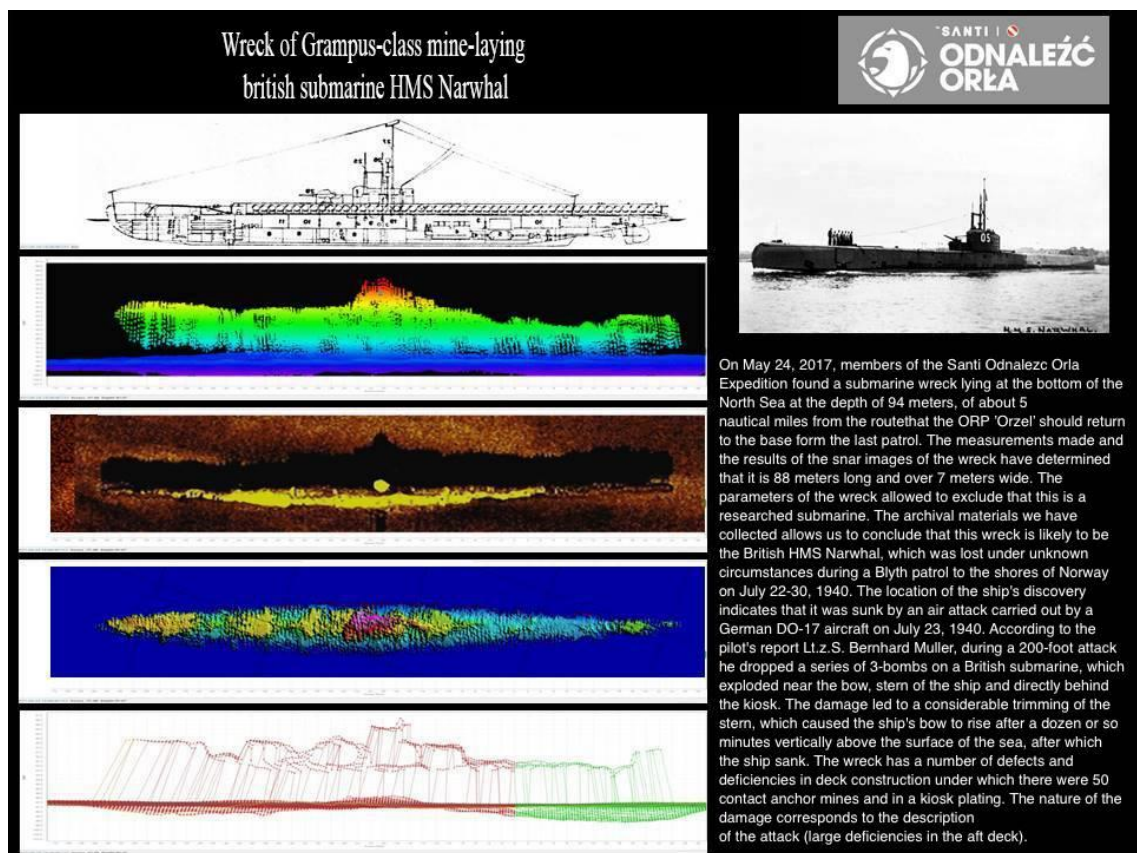
Picture 2: Image Port side of submarine wreck #30 (ID 03222)



Picture 3: Image Starboard side of submarine wreck #30 (ID03222)



Picture 4: Sonar overview of wreck #30 (ID 03222)



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Picture 5: Comparison of sonar images with the Grampus-class mine laying submarine