



# ORP ORZEŁ



INSTITUTE OF  
NATIONAL  
REMEMBRANCE

# ORP ORZEŁ

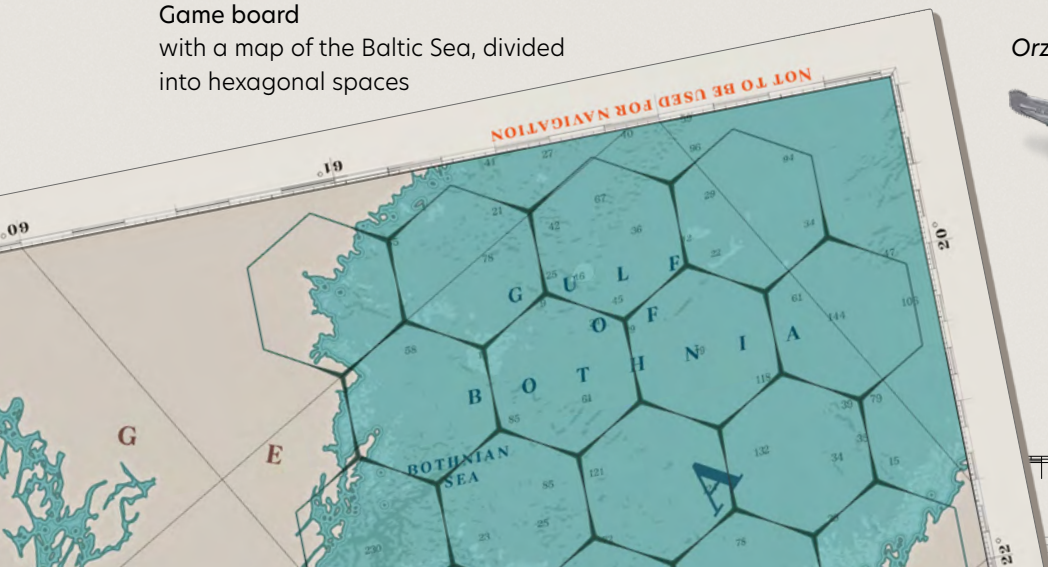
12+  
2  
20 MIN

ORP Orzeł\* is a game for two players. Each player has a different goal. The Polish Navy player must guide the escape of the submarine Orzeł from the Baltic Sea to the North Sea. The Kriegsmarine (German Navy of the Third Reich) player must sink Orzeł and her crew before they leave the Baltic Sea.

\* "Orz" sounds like the middle of "erosion", "e" sounds like "e" in "yes", "ł" sounds like "w" in "water". IPA: [ɔʐɛw].

1939. After the outbreak of World War II, ORP Orzeł left her designated place in the Gdańsk Bay. Orzeł's commander, complaining of health problems, directed the ship to Tallinn, the capital of Estonia. There, on September 15, the unit was interned by Estonians. The Polish crew, however, decided to escape to Great Britain and continue the fight against Germany. However, they will have to avoid detection by the German air force and attacks by Kriegsmarine torpedo boats...

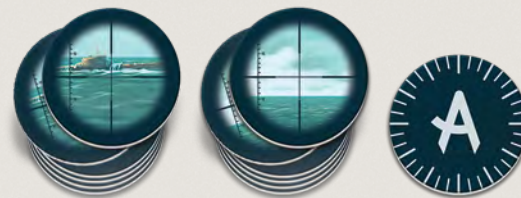
Game board  
with a map of the Baltic Sea, divided into hexagonal spaces



Orzeł miniature figure



12 Orzeł movement tokens



Revealed  
6 with  
a submarine  
image

Revealed  
6 with  
empty sea

Hidden

4 Kriegsmarine ship tokens



8 Kriegsmarine minefield tokens

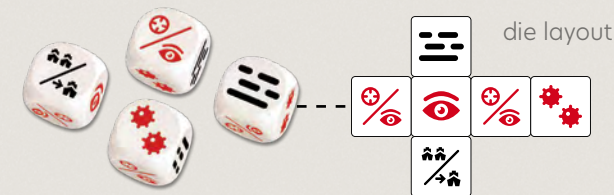


Revealed  
4 with  
a minefield

Revealed  
4 empty

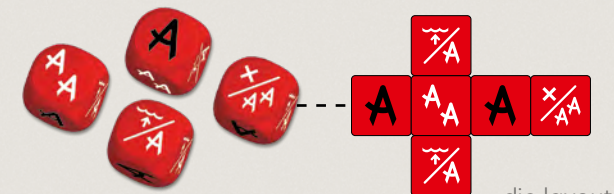
Hidden

4 white Kriegsmarine dice



die layout

4 red Polish Navy dice



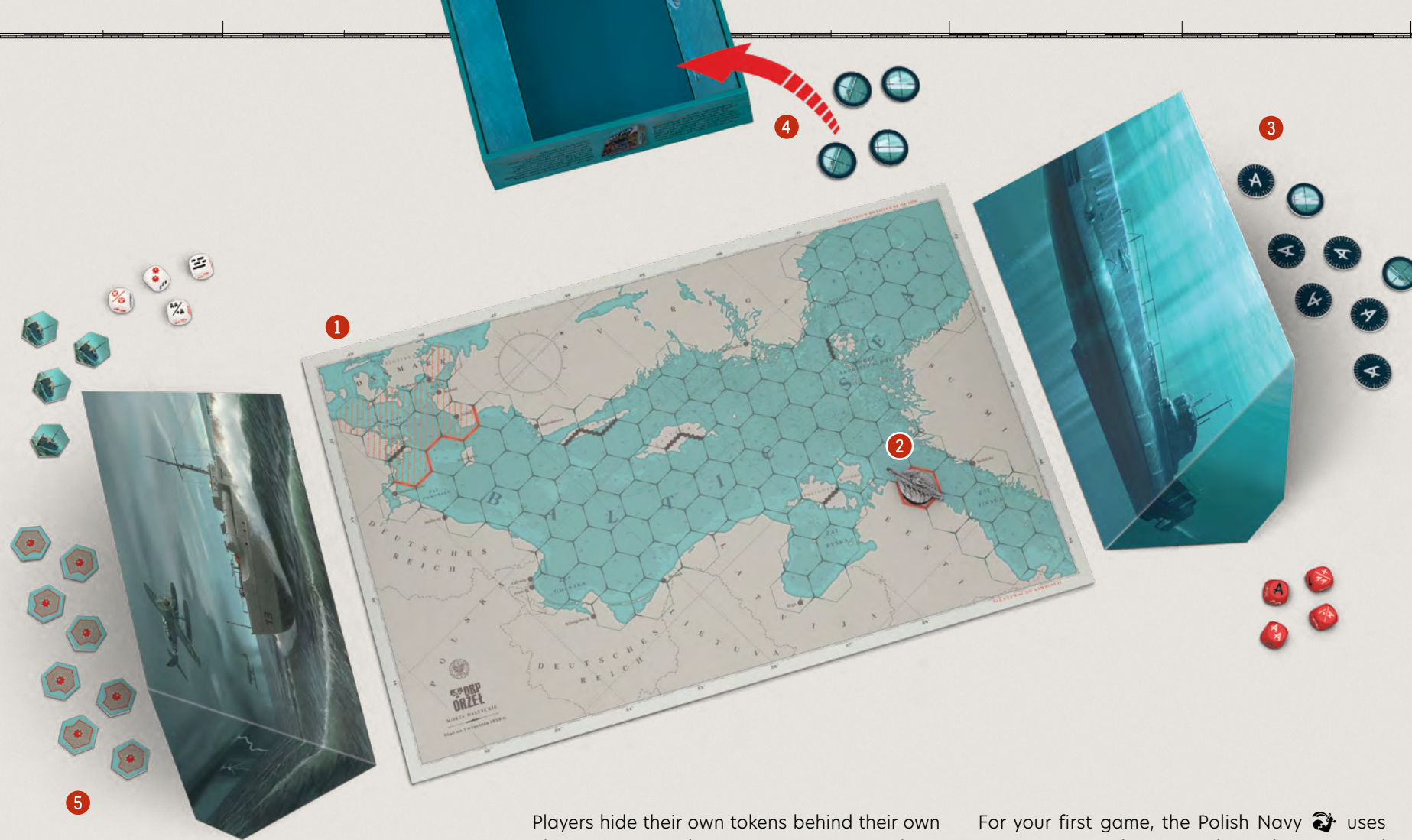
die layout

2 cardboard player screens



## Game preparation

- 1 Place the board in the middle of the table. Assign sides to players by choice or randomly.
- 2 Place the *Orzeł* miniature in Tallinn (with an orange outline).
- 3 The Polish Navy 🇵🇱 player receives:
  - ◆ 4 red dice,
  - ◆ **8 movement tokens: 4 with a submarine and 4 with empty sea.**
- 4 **Return the remaining movement tokens to the box, as they will not be used.** They are extras.
- 5 The Kriegsmarine 🇩🇪 player receives:
  - ◆ 4 white dice,
  - ◆ 8 minefield tokens: 4 with a minefield and 4 empty,
  - ◆ 4 Kriegsmarine ship tokens.



Players hide their own tokens behind their own player screens, so the opponent cannot see them.

For your first game, the Polish Navy 🇵🇱 uses 10 movement tokens: 5 with a submarine and 5 with empty sea. Return the rest to the box.

## Game goal

Each player has a different goal.

The Polish Navy 🇵🇱 player wants to guide *Orzeł* toward the Danish straits to ultimately reach Great Britain, in accordance with the order of Fleet Command of September 14, 1939.

The Kriegsmarine 🇩🇪 player wants to find and sink *Orzeł* before she leaves the Baltic Sea.

## Sequence of play

The game continues through rounds, until the moment when one player achieves their goal.

Each round has three phases:

1. Roll dice.
  - First the Polish Navy 🇵🇱 player rolls dice,
  - then the Kriegsmarine 🇩🇪 player rolls dice.
2. Do actions shown on dice.
  - First the Polish Navy 🇵🇱 player does actions,
  - then the Kriegsmarine 🇩🇪 player does actions.
3. Set *Orzeł*'s new position.

**The players always follow this order.**

## Roll dice

Players roll their dice to determine what actions they will be able to do in the second phase of the round.

The dice have various symbols, each of which represents an action. Players do actions only after both players have rolled their dice. A later rule section describes the actions in detail.

### Actions of the Polish Navy 🇵🇱



Surface



Set a course



Break contact

### Actions of the Kriegsmarine 🇩🇪



Lay mines



Send a ship on patrol



Prepare a ship



Search



Attack



Fog (no action)

### Dice rolls of the Polish Navy 🇵🇱

The Polish Navy 🇵🇱 player rolls their dice first.

- The player rolls all their dice.
- After each roll, the player **MUST set aside at least one die.**
  - If any dice show a black symbol, **the player must set aside one of these dice.**
  - The player may set aside more than one die. **The player may not set aside two or more dice showing the same result.**
- After setting aside dice, re-roll the remaining dice.
- Dice which were set aside cannot be re-rolled this round.
  - It is legal to set aside a die with the same result as dice set aside from earlier rolls this round.
  - A player stops rolling after all their dice have been set aside. (Thus a player may roll at most 4 times.)

**Note: Two faces with different numbers of the same symbol are considered different results.**



Example: First the Polish Navy 🇵🇱 player rolls all 4 dice, getting the result shown below. It is not legal to set aside multiple dice with the same result, so in this case the player has three options: set aside one <sup>A</sup>A, or set aside one <sup>2</sup>A, or set aside one of each (one <sup>A</sup>A and one <sup>2</sup>A). The player decides to set aside one of each.



Example continued: The Polish Navy 🇵🇱 player re-rolls the two dice which were not set aside. The result is two identical black symbols <sup>A</sup>A. The player must set aside one of them (it is illegal to set aside two identical results) and re-roll the other one.



After re-rolling this final die, its result **must** be set aside, regardless whether the player likes its result.

Example continued: The Polish Navy 🇵🇱 player sets aside their last die after their third roll, thus ending their dice rolling.



dice set aside

## Dice Rolls of the Kriegsmarine 🇩🇪

The Kriegsmarine 🇩🇪 player rolls after the Polish Navy 🇵🇱 rolls are finished. The Kriegsmarine 🇩🇪 player sees the final Polish Navy 🇵🇱 dice results.

**The Kriegsmarine 🇩🇪 player rolls and re-rolls following the same rules as the Polish Navy 🇵🇱 player.**

After both players have finished rolling dice, players proceed to the Do Actions Phase.

## Do Actions

Each player has available actions shown as symbols on their dice results. Each **symbol** gives one action. Some die results show 2 identical symbols, so the player does such a die's action twice (but is free to do other dice's actions in between those two actions).

**Note: Knowledge of the detailed rules of each action is not necessary to understand the general principles of their execution. Details of each player's actions appear in later rule sections.**

**Each action is done as many times as its symbol appears on a player's dice results.** Unlike when rolling dice, a symbol's color has no meaning when doing actions.



**A player MUST do all the actions shown on their dice. Exception:** Dice with selectable actions give a choice.

## Results with a choice

Some dice results show different symbols, separated by a diagonal line. When doing such a die's action, the player chooses to do the symbol (or symbols) on only one side of the line and skips (ignores) the other side of the line.

The player can make this choice after doing other dice actions, but when they do actions for this die, exactly **one of the two options MUST be done.**



Example of die result with a choice:

**1 × Break contact X**

or

**2 × Set a course A**

The player **must** choose to **Break contact X** once, or to **Set a course A** twice.

## Order of action execution

**Unless otherwise stated, a player may do their actions independently in any order.**

After doing each die's action, set the die aside, to remember that it has been used.

*Example: With these 4 dice results, the Kriegsmarine player does actions:*



- 1 First, they do **Fog ☁️** and set this die aside.
- 2 Then they **Search 👁️** and set this die aside.
- 3 Then they do a die with two possible actions: they choose to **Send a ship on patrol 🚢** twice (ignoring Prepare a ship →🚢) and set this die aside.
- 4 Finally, they choose to **Search 👁️**, (ignoring **Attack ⊕**) and set their last die aside.

*The Kriegsmarine player has now finished doing all the actions of their 4 dice.*

## Polish Navy Actions

The Polish Navy player does actions first.

The Polish Navy player can do actions in any order, **except that Surface must be done after all other actions.**



### Surface

*The sub rises to the surface after dark and ventilates to refresh its air. Also, batteries are recharged. The night break also allows the tired crew to rest.*

If the Kriegsmarine player has no empty sea movement tokens, then it is illegal to do this action. Therefore, **Surface** always appears as one of two possible choices.


**After doing all other actions:** For each **Surface** symbol, the Polish Navy player takes back one empty sea movement token from the Kriegsmarine player (see **Search**) and hides that movement token back behind the Polish Navy player's screen.

**A movement token with a submarine that was removed from the game (see **Attack**) cannot be taken back with this action.**




## Set a course




The captain gives an order to set a new course for the vessel.

For each **Set a course** **A** symbol (black or white compass), the Polish Navy  player takes a movement token from behind their screen and places it face down (with compass visible) in a sea space (empty or with a minefield token).



The movement token must be placed in a space adjacent to:

- Orzeł
- or any other movement token.

The Polish Navy  player chooses whether to place a token with a submarine or with empty sea, but does **not** show it to their opponent!

Example: With these 4 dice results, the Polish Navy  player may **Set a course** **A** 6 times (ignoring **Surface** ), or **Set a course** **A** 5 times and then (afterward) **Surface**  once.



The Polish Navy  player decides to place 6 movement tokens (and not surface). The Polish Navy  player places 6 movement tokens as shown; as required, all are continuously connected back to Orzeł.



Each movement tile placed must be adjacent to Orzeł or reach Orzeł through a continuous chain of other movement tokens.


Example of **illegal** placement: The red-highlighted movement token is **illegally** placed. It does **not** touch Orzeł directly or through a chain of other movement tokens.



**Exception! Spaces separated by a thick jagged line are not considered adjacent to each other!**





Example of **illegal** placement: The red-highlighted movement token is **illegal**: it is **not** considered adjacent to the movement token northwest of it, because a thick jagged line separates the two spaces.




A movement token **cannot** be placed in a space occupied by another movement token, a Kriegsmarine  ship, or *Orzeł*. **A movement token may be placed in a space with a minefield.**



If a movement token is placed in a space with a minefield, first turn the minefield face up to reveal it, and then:




- If the revealed minefield token shows a minefield, the Polish Navy  player does not place the movement token, but instead reveals it to the Kriegsmarine  player.
  - If the movement token shows a submarine, remove the token from the game permanently (return it to the box).
  - If the movement token shows empty sea, place it on the table in front of the Kriegsmarine  player.
- If the revealed minefield token is empty, the Polish Navy  player places the movement token face down in that space, without showing the other side of the movement token.
- Remove the minefield token from the map and from the game (regardless whether it had a minefield or not).



If the Polish Navy  player has fewer movement tokens than the number of desired **Set a course A** actions, then they do as many as they can.




## Break contact

*The submarine crew manages to spot German units before they spot the submarine. Orzeł dives to avoid detection. German cutters are moving away ...*

For each **Break contact X** symbol, the Polish Navy  player removes a Kriegsmarine  ship that is adjacent to a movement token or *Orzeł*. Place the removed ship in front of the Polish Navy  player.

*Example: In the situation below, the Polish Navy  breaks contact X, and so may remove a Kriegsmarine  ship that is adjacent to a movement token or *Orzeł*. In this case, there is one eligible ship. The other ship (orange-highlighted) cannot be removed, since it is not adjacent to a movement token or *Orzeł*.*



If no Kriegsmarine  ship is adjacent to a movement token or *Orzeł*, then it is illegal to do this action. Therefore, **Break contact X** always appears as one of two possible choices.



## Kriegsmarine ⚓ actions

The Kriegsmarine ⚓ player does actions second, after the Polish Navy 🇵🇱 player has done all their actions.



### Lay mines

**(Do before other actions, except Send a ship on patrol 🏠):** For each Lay mines ⚓ symbol, the Kriegsmarine ⚓ player takes a **minefield token** from behind their player screen and places it face down in any empty map space.

A minefield token must be placed in an **empty** space (without another minefield token, movement token, Kriegsmarine ⚓ ship, or Orzeł).

The Kriegsmarine ⚓ player chooses whether to place a token showing a mine (a real minefield) or empty sea (a bluff), but does **not** show it to their opponent!

The Kriegsmarine ⚓ player has 8 minefield tokens to place during the game, and receives no more during play. If the Kriegsmarine ⚓ player has no more minefield tokens to place, this action has no effect.

The Kriegsmarine ⚓ player does actions in any order, **except that Lay mines ⚓ and Send a ship on patrol 🏠 must be done before all other actions.**

**Minefield tokens already placed on the map cannot be repositioned!**

*Example: Several possible empty map spaces where the Kriegsmarine ⚓ player may place a minefield token.*



### Send a ship on patrol

*Kriegsmarine Command sends torpedo boats (Schnellboots) on patrol.*

**(Do before other actions, except Lay mines ⚓):** Each time the Kriegsmarine ⚓ player sends a **ship on patrol 🏠**, they put a Kriegsmarine ⚓ ship in an empty map space.

**A ship token may only be placed on a space adjacent to:**

- Orzeł
- or a Polish Navy 🇵🇱 movement token,
- or another Kriegsmarine ⚓ ship that was just added in the immediately previous action.

A ship must be placed on an empty space (without another Kriegsmarine ⚓ ship, minefield token, movement token, or Orzeł).

*Example: The Kriegsmarine ⚓ player can place a ship token only in any of the green spaces, which are each empty spaces adjacent to Orzeł or Polish Navy 🇵🇱 movement tokens.*



Example: The die result shows two **Send a ship on patrol** 🏠 symbols, so after placing one ship, the Kriegsmarine 🇩🇪 player places a second ship. In addition to the green spaces, it can also go next to the already-placed ship. The player decides to place the second ship next to the ship they just placed.



The number of ships is limited. After placing all ships, the Kriegsmarine 🇩🇪 player does not receive more.

If the Kriegsmarine 🇩🇪 player has no more ships to place behind their own player screen, they may move a ship from one map space to another map space, which must meet the same placement requirements.

If the Kriegsmarine 🇩🇪 player has no ships to place or move when sending a **ship on patrol** 🏠, the action has no effect.

### ➔🏠 Prepare a ship

After returning from patrol, the crew prepares their torpedo boat to go to sea again.

For each **Prepare a ship** ➔🏠 symbol, the Kriegsmarine 🇩🇪 player takes back a ship token from the Polish Navy 🇵🇱 player (see **Break contact** ✕).

If the Polish Navy 🇵🇱 player has no Kriegsmarine 🇩🇪 ship tokens, then it is illegal to do this action. Therefore, Prepare a ship ➔🏠 always appears as one of two possible choices.

### 👁️ Search

German sailors have spotted the enemy submarine! The enemy's position is transmitted by radio to other units.

For each **Search** 👁️ symbol, the Kriegsmarine 🇩🇪 player reveals one face-down Polish Navy 🇵🇱 movement token on the map, turning it face up:

- If the movement token shows a submarine, it stays in its space, face up.
- If the movement token shows empty sea, remove it from the map and place it in front of the Kriegsmarine 🇩🇪 player.

If there are no face-down movement tokens on the map, then this action has no effect.

Example: The Kriegsmarine 🇩🇪 player **Searches** 👁️ twice. They choose and reveal one movement token, which shows a submarine, so it stays face up in its space. They choose and reveal a second movement token, which shows empty sea, so it is removed and placed in front of the Kriegsmarine 🇩🇪 player.





## Attack

Torpedo boats and planes bombard the area where the submarine was recently observed. Kriegsmarine seamen search for oil on the water, which could indicate a crack in the hull and the sinking of the enemy ship.

For each **Attack** ☒ symbol, the Kriegsmarine ☒ player selects one face-up Polish Navy 🇵🇱 movement token showing a submarine and removes it permanently from the game, returning it to the box.

**The Orzeł miniature and face-down (compass visible) movement tokens cannot be removed by Attack!**

If there is no face-up submarine token, then **Attack** has no effect.

*Example: Earlier, the Kriegsmarine ☒ player did **Search** 👁 and revealed a Polish Navy 🇵🇱 movement token showing a submarine. Now the Kriegsmarine ☒ player **Attacks** ☒ and removes this movement token permanently from the game!*



## Set Orzeł's new position (only Polish Navy 🇵🇱 player)

After the action phase is done, the Polish Navy 🇵🇱 player sets Orzeł's new position.

First, check whether any movement tokens are no longer linked (directly or by a chain of tokens) to Orzeł. (Some tokens may have been removed by Kriegsmarine ☒ **Search** 👁 and **Attack** ☒ actions, disconnecting other tokens from Orzeł.) Remove all unlinked movement tokens and place them behind the Polish Navy 🇵🇱 player's screen.

**It does not matter now whether movement tokens are face down or face up.**

*Example: The red-highlighted token has become unlinked from Orzeł. (It is not adjacent to Orzeł, nor to a chain of tokens that reaches Orzeł.) So this token is removed and returned to the Polish Navy 🇵🇱 player's screen. The remaining 3 movement tokens are all linked to Orzeł, as shown by the dotted red lines linking them.*



## Fog

*Due to unfavorable weather conditions, sea reconnaissance is ineffective.*

Fog has no effect. It simply hinders the operations of the Kriegsmarine ☒.

## Move Orzeł to a new space

Then the Polish Navy 🇵🇱 player **may** move *Orzeł* to any selected empty space adjacent to a movement token on the map (face up or face down).

If *Orzeł* moves, it must go to an **empty** space (without a movement token, Kriegsmarine 🇩🇪 ship, or minefield).

*Example: In the situation below, the Polish Navy 🇵🇱 player may move Orzeł to one of the green spaces.*



If there are no movement tokens on the map, *Orzeł* **may** move to any empty space adjacent to its current location.

*Example: In this situation, there are no Polish Navy 🇵🇱 movement tokens on the map, so Orzeł can move to one of the adjacent (green) spaces.*



## Remove movement tokens from the map

Next, remove **all remaining movement tokens** from the map and put them behind the Polish Navy 🇵🇱 player's screen. (Minefield and ship tokens remain on the map.)

This round is now over, and the next round begins, with the Polish Navy 🇵🇱 player rolling dice!

## End of the game

The game ends immediately when either side fulfills their victory condition:

The Polish Navy 🇵🇱 player wins by moving *Orzeł* to any space close to the Danish straits (marked with orange shading).

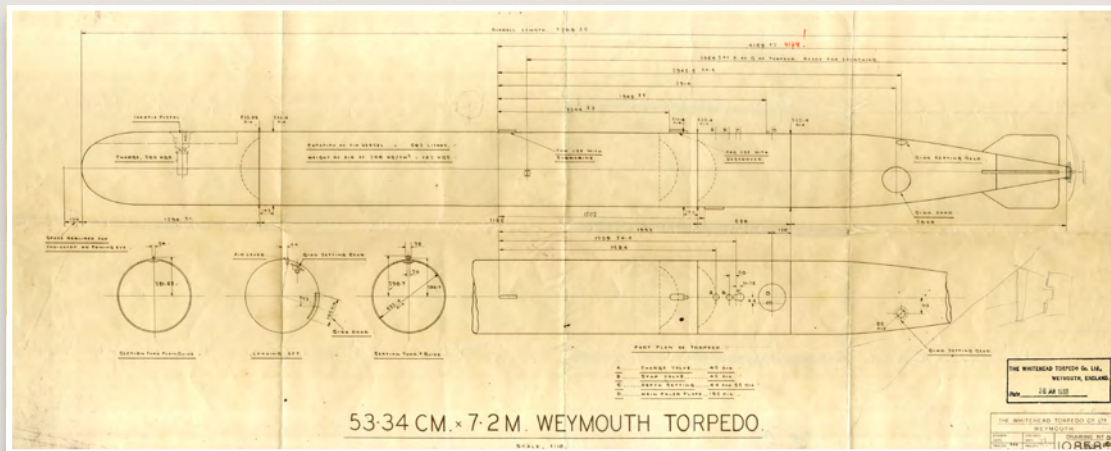


The Kriegsmarine 🇩🇪 player wins by permanently removing from the game all of the Polish Navy 🇵🇱 movement tokens showing a submarine.

## Designer's notes

*Orzeł* was very lucky to reach Great Britain. The random element present in the game is to remind you how various surprises could have caused *Orzeł's* escape to fail. Collisions with underwater obstacles and equipment failures resulting from wear and tear could each have abruptly ended the escape catastrophically, despite the persistence and fortitude of the Polish sailors.

Time is against the Polish Navy player, who quickly loses movement tokens, representing the declining state of the ship's condition and supplies. Regardless of the damage caused by navigation errors (due to the lack of maps) or enemy bomb explosions, sooner or later the ship's mission would have ended due to equipment failures or fuel running out. There was no friendly port in the Baltic Sea where *Orzeł* could repair or refuel. So there is no other way to win than to move to the goal as quickly as possible, ignoring losses. ♣



Collection of Mariusz Borowiak

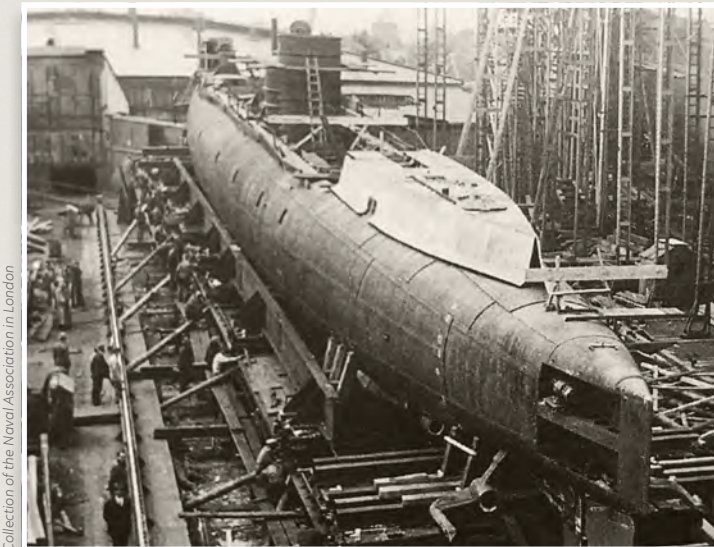
Technical drawing of a British 21-inch torpedo. This type of submarine weapon was used by two Polish *Orzeł*-class submarines: *Orzeł* and *Sęp*.

Mariusz Borowiak

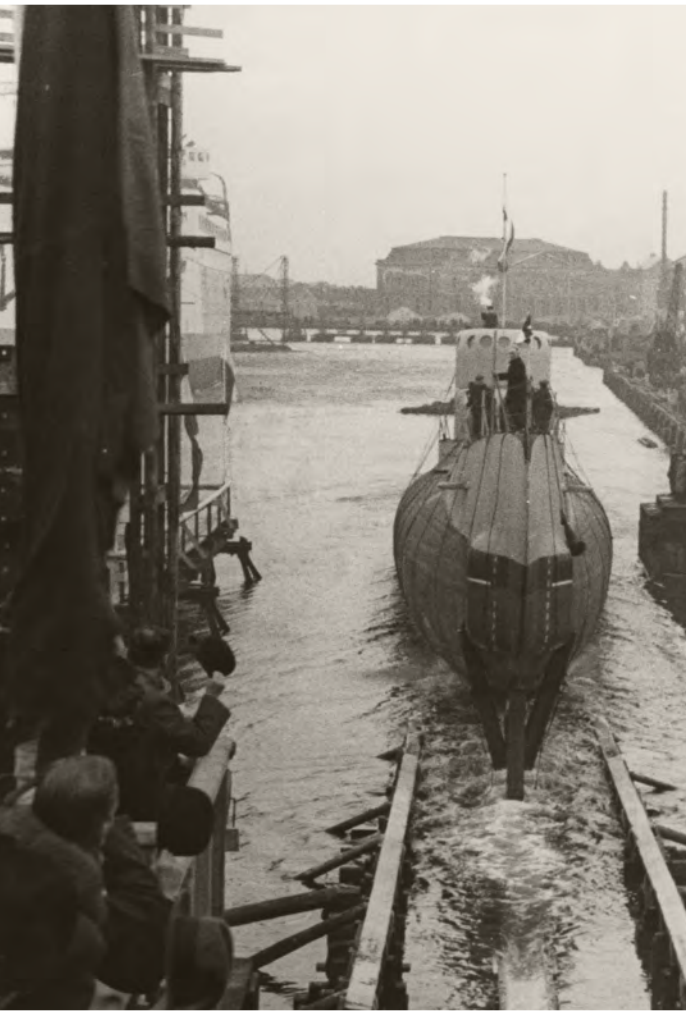
## ORP\* *ORZEŁ* THE STORY OF A LEGENDARY SUBMARINE

In the years 1933-1934, the Naval Directorate in Warsaw, as part of a fleet expansion program, made efforts to obtain permission to order new submarines. At this time, they were intended to be large ocean vessels with classic propulsion and torpedo equipment, without mine-laying capability, in contrast to the French-built miners introduced in 1931-1932 with the ability to lay *Wilk* mines: *Ryś*, *Wilk* and *Żbik* (Lynx, Wolf and Wildcat). However, only in January 29, 1936, in The Hague, did Jerzy Świrski, head of the Naval Directorate and representing the Polish government, sign a contract for the construction of two torpedo submarines. According to earlier arrangements, the ships were to be built in two Dutch shipyards: *Orzeł* (Eagle) in the shipyard NV Koninklijke Maatschappij "De Schelde" in Vlissingen, and *Sęp* (Vulture) in Rotterdamse Droogdok Maatschappij in Rotterdam. The Dutch shipyards ensured not only strong armaments and high speed, but also innovations in technology and construction.

\* Okręt Rzeczypospolitej Polskiej, "Vessel of the Republic of Poland"



The Polish submarine *Orzeł* on the slipway at the Dutch shipyard Vlissingen in July 1937. The start of the deck construction.



The National Digital Archives (NAC)

The submarine ORP Orzeł's launch in Vlissingen.

On January 15, 1938, *Orzeł* was launched. The christening was performed by Jadwiga Sosnkowska, the wife of Maj. Gen. Kazimierz Sosnkowski, minister of military affairs in 1923–1924. The ceremony attracted many invited guests and an audience. An unusual situation occurred during the ceremony: after the brake cable was released, the ship did not slide down the ramp. The problem was that a severe frost had thickened the grease on the rails. Summoned tugboats failed to move the vessel, and additional help from two locomotives was needed to get her moving, whereupon the sub finally slid into the water.

After the official ceremonies, *Orzeł* stood at the equipment dock, where work installing ship equipment and armaments continued for over half a year. Diving trials were carried out in two areas: north of the coast of Scotland, and in Oslofjord, at a Norwegian naval base in Horten. During the many weeks of testing, the vessel's surface, underwater, and diving speeds were assessed, and torpedoes were fired. On January 26, 1939, the last test was made, to decide about accepting the ship. The six-person acceptance committee assessed the ship favorably, acknowledging her benefits.

On February 2, 1939, *Orzeł* was officially commissioned in the shipyard, and the Polish war flag was solemnly raised. Cdr. Henryk Kłoczowski took command of the ship. On February 10, during a Polish Navy holiday, *Orzeł* was assigned to the Submarine Ships Division. This unusually solemn ceremony and official visit aboard the

## Henryk Wincenty Kłoczowski (1902–1962)

Henryk Kłoczowski was born on October 1, 1902, in St. Petersburg. On April 1, 1920, he was accepted as a private in the Polish Army; he was assigned to the Pinsk Flotilla—he participated in the Polish-Bolshevik war on the Dnieper, in the First Naval Battalion. In 1921–1923, he was a student of the Wielkopolska School of Officers. On March 1, 1922, he was promoted to Sub-Lieutenant. In May 1923, he enrolled in the III Provisional Course for Officers. In May 1924, he was appointed naval Lieutenant; he served in the Vistula Flotilla as the first officer of the monitor *Horodyszcze*. In 1925, he attended the École des Officiers Torpilleurs in Toulon, then in 1926—the École de Navigation Sous-Marine in Toulon. In 1927, he became a lecturer at the School of Marine Specialists in Świecie. From March 1, 1930, to December 1931, he took part in the construction of the submarine *Wilk* (Wolf), and served as a submarine officer in her first crew. On January 1, 1932, he was promoted to Lieutenant Commander. From December 1931 to April 1932, he served as second-in-command, and from December 1932 to July 1938, as commander of the submarine ORP *Żbik* (Wildcat). On January 1, 1936, he was promoted to Commander. In August 1938, he began participation in the construction of *Orzeł*, and from February 2, 1939, to September 14, 1939, he was her first commander. From September 15, 1939, to August 1941, he was interned, and after the occupation of Estonia by the Soviet Union, he

was imprisoned in a prisoner-of-war camp in Kozielsk, from which he was sent to the Polish Armed Forces organized in the USSR by General Władysław Anders. As a major, he was the commander of the pilots and sailors assembly station in Kołubanka. In the spring of 1942, he arrived in England without any assignment. On August 3, 1942, the Polish Maritime Court in London sentenced him—for cowardice in September 1939—to demotion to the rank of seaman, 4 years in prison, and expulsion from the Navy. All the charges against him were based on written testimonies of officers and other crew of *Orzeł* in 1939. This sentence was never carried out. He then enlisted in the Polish Merchant Navy, in which he served on the cargo ship *Narocz* (Lake Narach) as second officer. He made several cruises off the east coast of Great Britain. From August 1943, he sailed on ships under the flag of the United States—as the second officer on the freighter *Eliphalet Nott*, on which he travelled 13 times in Atlantic convoys. After the war, he remained abroad, briefly lived in Canada, where he ran a chicken farm in Keswick, and then in the United States. He worked at the submarine shipyard in Portsmouth, New Hampshire. He died of a heart attack on October 1, 1962.



Naval Museum in Gdynia



Collection of the Naval Association in London

Guests of honor during the ceremony of *Orzeł*'s launching on January 15, 1938. In the foreground, Lt Cdr Seweryn Bukowski stands by Jadwiga Sosnkowska, who christened *Orzeł*. On the right (in civilian clothes) stands Rear Admiral Jerzy Świrski, chief of the Navy, 1925-1947.

ship, which had been in Oksywie since February 7, was attended by General Kazimierz Sosnkowski, Rear Admirals Jerzy Świrski and Józef Unrug (Fleet Commander) with his staffs, President of the General Board of the Maritime and Colonial League General Stanisław Kwaśniewski, representatives of civil authorities and an audience of nearly 30,000!

General Sosnkowski, welcoming the ship in Gdynia on behalf of the state authorities, informed that *Orzeł* was built for 8.2 million złoty, paid by Poles to the Maritime Defense Fund, demonstrating their patriotism. In fact, only 615,000 złoty were collected for this purpose by mid-August 1939.

The ship had a very modern construction, including her frame moved to the outside of the hull to create more space inside without increasing its diameter. The welding used for the conning tower and parts of the outfit equipment reduced the structure's weight and also increased its strength. All flaps, hatches, rudders and periscopes were moved by hydraulic motors (instead of manually or with less efficient electric motors).

On March 23, 1939, a partial mobilization was announced for the submarines and surface ships of the Polish Navy. From this moment on, the fleet began several months of more strenuous training. During patrols, they laid mines, fired torpedoes, shot cannons and machine guns, and executed training drills underwater and on the surface. They practiced torpedo loading and unloading. Life at sea was very different from land-based duties. Shifts on the submarine *Orzeł* lasted four hours,

## Jan Grudziński (1907-1940)

Jan Grudziński was born on December 3, 1907, in Kiev. In 1925, he graduated from the First Cadet Corps in Lviv. He was a student of the Navy Officers School in Toruń. On August 15, 1928, he was promoted to Sub-Lieutenant; he served in the naval cadre in Świecie as a commander of a platoon of cadets in the reserve from the Maritime Academy in Tczew. In 1929, he was assigned to the Pinsk Flotilla. On January 1, 1931, he was promoted to Lieutenant; in the same year he was the commander of the coastal artillery company on Hel. From March 12 to October 1934, he attended the First Course of Underwater Weapons Officers. From December 1, 1934, to January 22, 1935, he was commander of the mine group on *Smok* (Dragon). On January 1, 1936, he was promoted to Lieutenant Commander. From January to May 1937, he attended the Second Course of Underwater Officers. In July 1938 he was sent to build *Sęp* in the Netherlands. In November 1938, he was commander of the torpedo boat *Kujawiak* (inhabitant of Kujawy). From April to May 1939, he was second-in-command of *Sęp*, and then from June 1 to September 15, 1939, second-in-command of *Orzeł*. On September 15, he took command of the ship in Tallinn after Captain Kłoczowski disembarked. From September 15, 1939, to June 8, 1940, he was the commander of *Orzeł*; among his accomplishments was moving the interned unit out of Tallinn. He was decorated with the cross



Recewński Library in Poznań

of *Virtuti Militari*, V Class, by General Władysław Sikorski in Dundee, as well as the British Distinguished Service Order, the Polish Cross of Valor, and the Polish Navy Medal. From December 1939 to May 1940, he took part in all of *Orzeł*'s patrols in the North Sea. Posthumously, he was promoted to Lieutenant Commander and decorated with the *Virtuti Militari*, IV Class.

### Comparison of tactical and technical data of *Orzeł* and other submarines of the Baltic States

Name	<i>Orzeł</i> Poland	Type IXB Germany	<i>Stalinet</i> USSR	<i>Sjölejonet</i> Sweden
Launch year	1938	1939	1936-1938	1936
Length [m]	84	76.5	77.8	62.2
Width [m]	6.7	6.8	6.4	6.2
Draft [m]	4.17	4.7	4.04	3.4
Water displacement [t]	1110	1051	840	580
Underwater displacement [t]	1473	1178	1070	760
Combustion engines [horsepower]	2×2370	2×2200	2×2000	2×1500
Electric motors [horsepower]	2×550	2×500	2×550	2×500
Surface speed [knots]	19.4	18.2	19.5	15-16.2
Underwater speed [knots]	9	7.3	9.6	10
Surface cruise range [Nautical Miles / knots]	7000/10	12000/10	8200/10	-
Maximum depth [m]	80-100	230	80-100	-
Armament: artillery and anti-aircraft [cal. mm]; torpedo tubes	1×105, 2×40, 2×13.2 (2×7.7 in Great Britain); 12 torpedo tubes, 550 mm, 20 torpedoes	1×105, 2×40; 6 tubes, 22 torpedoes	1×100, 1×45; 6 tubes, 12 torpedoes	2×40; 6 tubes, 10 torpedoes
Crew	60	48-56	47	32-38

Sources: M. Borowiak, T. Kasperski, U-Booty typu IX. Oceaniczna broń podwodna Hitlera, *Oświęcim* 2018; Les Flottes de Combat 1940, *Paris 1940*; Les Flottes de Combat 1940-1942, *Paris 1942*; Les Flottes de Combat 1947, *Paris 1947*; D. Miller, *Submarines of the World, London 2002*; A. Preston, *Jane's Fighting Ships of World War II, New York 1989*; Weyers, *Taschenbuch der Kriegesflotten 1940, München-Berlin 1940*.

followed by eight hours of free time, then a return to duty. In practice, no one lay in bed while off duty, because there was always something to do.

Submarine crews received intensive training, of which the commander of the Submarine Ships Division, Cdr Aleksander Mohuczy, was undoubtedly pleased. He believed that continual time at sea would help his submarine crews get well acquainted with their equipment and improve their skills and efficiency. On July 17, the division commander moved his command pennant from *Wilk* to *Orzeł*.

In case of war with Germany, the Submarine Ships Division developed an action plan for submarines on August 24, 1939. The plan (code-named "Worek", i.e. "Sack") was generally defensive and involved defending the approach to Gdynia and Hel. It would deploy ships in a star formation around the Hel Peninsula and in the western part of the Gulf of Gdańsk, giving them a chance to launch torpedo attacks on German combat units if they fired at Hel or made landings.

*Orzeł* and *Sęp* had a designated "open" sector. The weak point of this plan was the awareness that these units would not join the action. Their size increased the risk of detection in shallow and closed waters by surface combat units cooperating with Luftwaffe aviation.

At the beginning of World War II on September 1, 1939, *ORP Orzeł* stood moored in basin No. 1 of the War Port in Oksywie. The designated patrol zone of the eighty-meter "underwater cruiser" (as *Orzeł* was called, because of her great equipment



The National Digital Archives (NAC)

A military flag being raised for the first time aboard *ORP Orzeł*, on February 2, 1939. The photo shows seamen Olejnik (left) and Koprowicz. In the background is a large commercial Dutch ship *Bantam*.

#### Officers of *ORP Orzeł* on September 1, 1939.

Ship's commander	Cdr Henryk Kłoczkowski
Lieutenant commander	Lt Cdr Jan Grudziński
Navigation officer	Sub-Lieutenant Marian Mokrski
Gunnery officer	Lieutenant Andrzej Piasecki
Chief engineer	Lieutenant Florian Roszak
Second engineer	Sub-Lieutenant Stanisław Pierzchlewski





Disposition of Polish submarines in the first days of the war as part of operation "Worek".

O – ORP Orzeł, R – ORP Ryś, S – ORP Sęp,  
W – ORP Wilk, Z – ORP Żbik.

and armament) was bounded by coastline on two sides, and by the shallow Bay of Puck on a third side. *Orzeł* could remain away from base for three months.

After reaching her patrol zone, for most of the first day of the war, *Orzeł* patrolled very deep, only occasionally rising to periscope depth. On September 2, she continued patrolling her sector underwater. Only once in her vicinity did air bombs explode, but safely far away, without causing any damage to the ship. Only after it became dark, *Orzeł* surfaced near Jastarnia to recharge her batteries. On the third day of the war, before dawn, Lt Cdr Kłoczkowski, disagreeing with Rear Admiral Unrug, decided to leave the sector assigned to him in the plan "Worek". Kłoczkowski believed that in the open sea *Orzeł* would be more likely to meet Kriegsmarine units—but he did not know that Grand Admiral Erich Raeder, the commander-in-chief of the German Navy, had ordered the withdrawal of all major ships from the Baltic Sea. They were no longer needed there, and the United Kingdom was a threat. Meanwhile, on the same day, *Orzeł's* commander submerged the ship near Jastarnia to rest at the bottom for many hours, instead of patrolling at periscope depth. During the day, four explosions were reported in the vicinity of the submerged ship; it was probably an attack by Luftwaffe aircraft.

At night, *Orzeł's* commander decided to leave the occupied sector. Disregarding Unrug's orders, he decided to go north. On September 4, the ship remained until morning at the latitude of the Hel

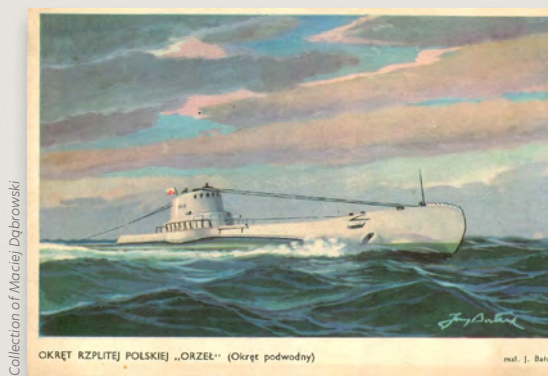
peninsula. Then she submerged in the Gulf of Gdańsk, and then northeast of Hel, where she was the target of several depth charges. Fortunately, the explosions did not cause any serious damage. At noon, when *Orzeł* was at a depth of 40 m, she was again targeted by depth charges by Kriegsmarine chasers in pursuit. Kłoczkowski gave an order to disengage from the enemy and submerge to a depth of about 70 m. 45 minutes later, while attempting to rise to periscope depth, *Orzeł* was attacked again. There were ten explosions, causing minor electrical equipment failures.

Kłoczkowski headed north to search for enemy ships sailing with cargo from the Soviet Union in areas less guarded, where submarines could operate. It was discovered that *Orzeł's* negative tank was damaged, hindering her ability to submerge and maneuver underwater. Naval command was informed of the damage. But Unrug forbade Kłoczkowski from entering Hel because of the bombing of the war port. In these circumstances, the commander decided on his own initiative to leave the sector completely and free himself from the orders of the Submarine Ships Division commander. Shortly thereafter, a message was sent to Hel, in which *Orzeł's* commander informed about leaving the dangerous area and commencing operations against the enemy's transports.

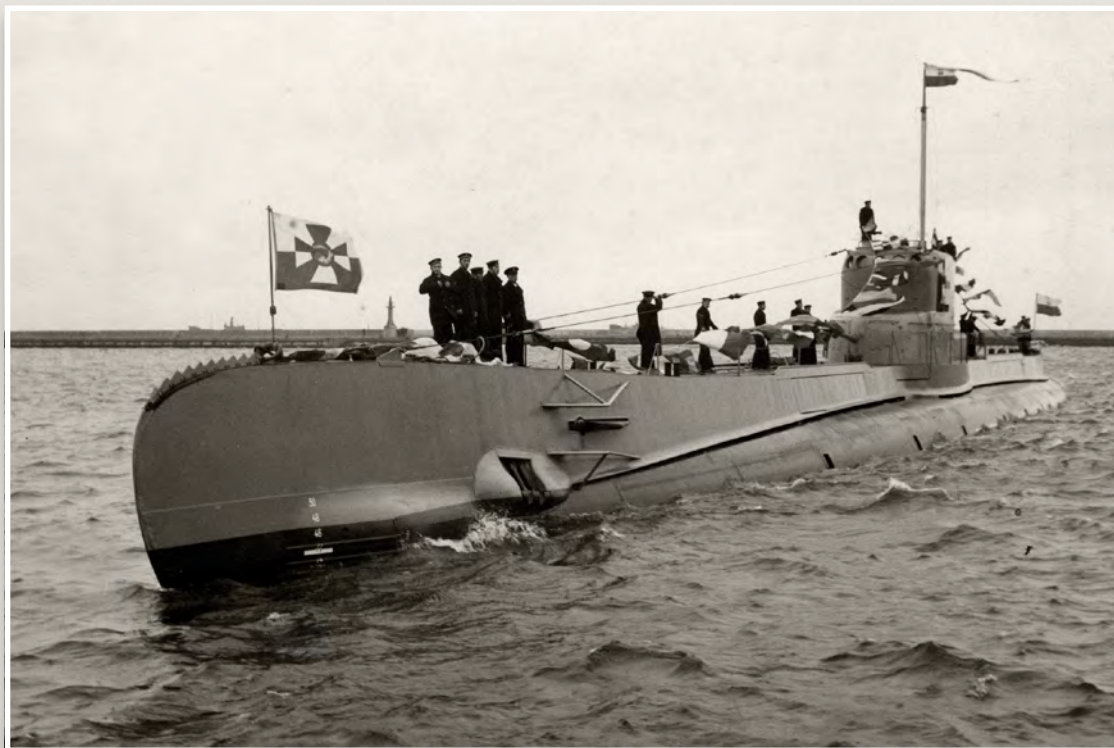
On the morning of September 5, *Orzeł* headed north, submerged, towards the Swedish island Gotland. Several bombs were dropped from the air near the ship. After 11 hours, *Orzeł* surfaced and started charging batteries. She reached Gotland

on the night of September 5–6. On September 6 and 7, no enemy contact occurred. The ship was cruising along the Swedish coast of Gotland. Meanwhile, new orders issued by the fleet commander were in force. *Orzeł* was ordered to take a position near Piława (then German Pillau, now Russian Baltiysk). But "Kłocz"—as the commander of the "pride of the fleet" was nicknamed—did not inform Unrug that he was not going to operate in the designated sector, but intended to go even farther north in the following days.

On the eighth day of the war, *Orzeł's* commander began to suffer disease symptoms—typhoid fever or appendicitis were suspected. (Several sailors were also diagnosed with some sort of skin disease.) On September 10, Captain Mohuczy consulted with RAdm Unrug; they decided to leave Kłoczkowski at a neutral port



Propaganda postcard of the Maritime Defense Fund showing *Orzeł*, painted by Jerzy Bałuk.



The National Digital Archives (NAD)

The submarine ORP Orzeł officially entering the port of Gdynia on February 10, 1939.

and continue under command of Lt Grudziński, or—ultimately—to return to Hel under cover of night to change commanders. Addition, the ship's condition had worsened—another failure was found, this time a cylinder in an electric compressor.

After midnight on September 11, *Orzeł* did not respond to a repeated call from naval command.

On September 13, Kłockowski rejected the proposal that he disembark and be replaced by Grudziński. Instead, he decided to go to Tallinn in Estonia. The commander ignored his officers' suggestion to go ashore in Sweden by boat, not at a port. On September 14, in the evening, *Orzeł* arrived at the Tallinn roadstead.

## Florian “Florek”, “Trzonek” Roszak (1912-1940)

Roszak was born on April 17, 1912, in Westenfeld, Germany. His father decided that the Roszak family should return to Poland, where they settled in Jarocin. He first attended elementary school in Kotlin, and then Tadeusz Kościuszko High School in Jarocin. In 1931, he passed his exams and began his education at the Navy Officers School in Toruń, in the Technical Department. On August 15, 1934, he was promoted to the rank of Sub-Lieutenant in the technical corps. From April 1935 to July 1, 1936, he attended the First Application Course for Sub-Lieutenants in the Technical Department. After completing the course, he served in the Submarine Ships Division. From July 1936 to 1937, he served as second engineer on ORP *Ryś*. From 1938, he served as chief engineer on *Żbik*. On March 19, 1938, he was promoted to the rank of Lieutenant. From July 1, he served as chief engineer of the submarine *Sęp*, under construction. On January 1, 1939, he became chief engineer at ORP *Orzeł*. From 1 September, he was still chief engineer during *Orzeł's* daring escape from internment in Tallinn to Great Britain. On May 23, 1940, he departed on *Orzeł's* final combat patrol to the North Sea, sent to an area west of the Skagerrak strait, south of Norway. He was posthumously promoted to Lieutenant Commander. Roszak's property was given to the Consulate General of the Republic of Poland in London in March 1945.



Collection of Mariusz Borowick

He was awarded the British Distinguished Service Cross (DSC) and the Polish Cross of Valor and the Navy Medal. A symbolic grave for Roszak is located in the Jarocin cemetery; his name appears on a plaque commemorating fallen graduates at the Tadeusz Kościuszko High School in Jarocin.



Collection of Mariusz Borawick

Welcoming full-dressed Orzeł in Gdynia, February 1939.  
View of the midship and conning tower.

Soon, the officers' worst fears came true: after Lt Cdr Kłoczkowski and Seaman Marian Barwiński disembarked (to go to a hospital), on the afternoon of September 15, Estonian authorities notified Lt Grudziński that *Orzeł* was being interned. The pretext was the presence of the German commercial ship *Thallata* in the port, which was to leave for sea that day; according to maritime law, this automatically forced an enemy ship to stay in port 24 hours longer.

On September 16, the Polish submarine was towed deeper into the harbor, and Estonian forces began to disarm her. Lt Grudziński ordered—unknown to the Estonians—the destruction of all

secret documents, a logbook, a codebook, and a map with marked minefields. The ship's files were burned. The Estonians managed to confiscate the ship's log and sea charts (these documents have never been recovered) and removed the Polish flag from the flagpole. After confiscating small arms, they began to disarm guns and unload torpedoes. On September 16 and 17, artillery armament and 14 torpedoes were removed (four torpedoes were left in the torpedo tubes, and two spares). Despite this, the Polish sailors managed to successfully sabotage the Estonians' activities, e.g. SLt Andrzej Piasecki (who had become the new second-in-command of the ship) secretly cut the cable to lift torpedoes, which interrupted their further unloading.

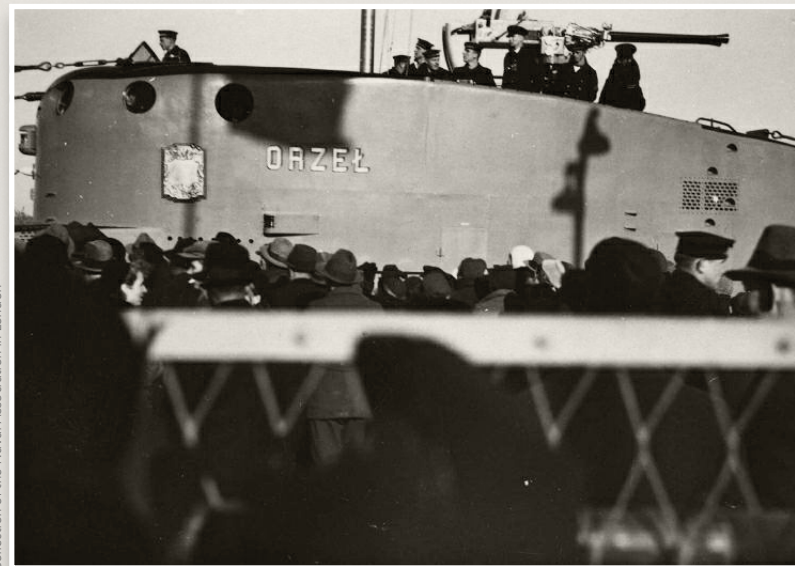
The Poles, opposing the internment, developed a plan to escape with *Orzeł* from Tallinn. It took two days to get out of the port. On the night of September 17-18, Lt Grudziński gave the signal to escape. At around 3:00 a.m., after incapacitating two sentries (who were taken on board) and cutting the power supply to the harbor's lighting, the engines were started. Although the Estonian coastal battery began firing at *Orzeł*, and ships and planes began searching, *Orzeł* escaped.

Four Estonian warships were assigned to pursue *Orzeł*. Warships of the Soviet Union's fleet soon joined the hunt. The Russian News Agency TASS reported, deceiving the public, that on September 26 *Orzeł* torpedoed and sank the Soviet transport ship *Metallist* in the Narva Bay. In addition, it was reported that on the night

of September 27-28, the Soviet motor freighter *Pionier* (665 GRT) was attacked by torpedoes launched by a submarine, which luckily missed. Reading between the lines, one could infer that the attacker was *Orzeł*.

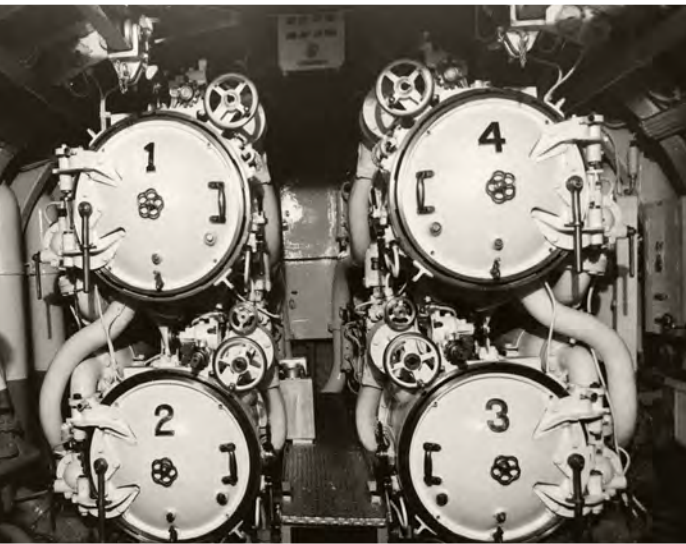
The escape started an almost month-long Baltic odyssey. Lt Cdr Grudziński decided to stay on the southern Baltic Sea and look for a target for the six torpedoes that had been saved from being confiscated. Rear Adm Unrug was notified by radio about the ship's escape and the plan to go through the Danish Straits to Great Britain (no reply was received). The lack of codebooks and navigational charts was reported. Sub-Lieutenant

Marian Mokrski used a German list of lighthouses, which the Estonians had overlooked, and his knowledge of the basin to make provisional navigation maps of the Baltic Sea and the Danish Straits. Sub-Lieutenant Stanisław Pierzchlewski worked with him on this task. Mokrski used the blank side of Map 3 (Jastarnia), which the Estonians had not taken, issued by Poland's Naval Hydrographic Office. On the 90×50 cm sheet, he plotted a map from longitude 25° E to 6° E and from latitude 60° N to 54° N. Thus, the map covered the entire Baltic Sea region in which *Orzeł* was to operate and which was to pass on her way to Great Britain. Then, from the list of lighthouses,



Collection of the Naval Association in London

Commemorative inscribed plaque on *Orzeł*'s conning tower, commemorating the participation of Polish society in the construction of the largest ship of the Second Polish Republic in 1936-1939 in the Netherlands. The Bofors 40 mm anti-aircraft autocannon is visible in its watertight "well" on the conning tower.



Collection of Mariusz Borowick

Forward torpedo room with four torpedo tube doors.

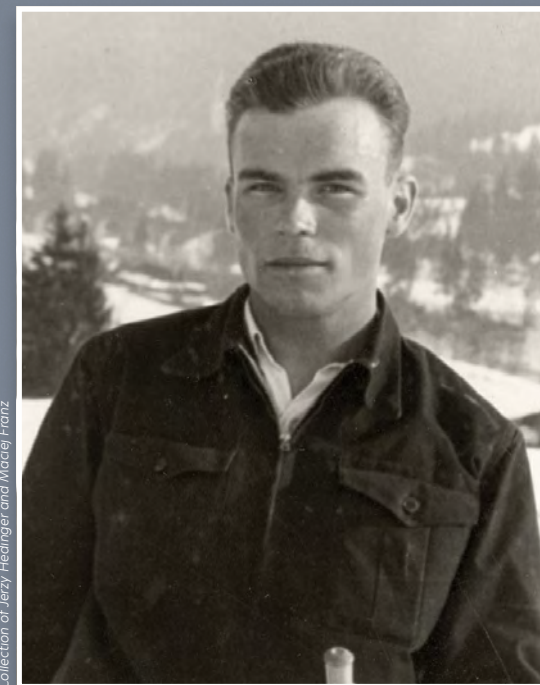
Mokrski marked the lighthouses and buoys that were on the intended route.

On 19 September, Germans announced on the radio and in the press that *Orzeł's* crew abducted and murdered two Estonian guards, and then threw their bodies into the sea. That is why Grudziński, after approaching the shores of Sweden, decided to land near the coast of Gotland. *Orzeł* cruised the Baltic for the next few days. On October 1, an armed merchant ship under the German flag was spotted between southern Gotland and Öland, probably heading for Liepāja. While preparing to take a position for a torpedo attack, *Orzeł* suddenly ran aground. Then a German seaplane Heinkel He 115 approached from the south. But *Orzeł*, which had been struggling to get off the shallows for a while, finally managed to slide into the water. The plane dropped bombs, but without success. (Mokrski then marked this place as "Shoal of Fear" on his map.) Meanwhile, the merchant ship managed to escape and was out of reach of Polish torpedoes.

*Orzeł* spent the next six days between the Swedish islands of Gotland and Öland. This area was heavily patrolled by German planes and surface ships. Grudziński decided not to attempt a torpedo attack on the destroyers and chasers, considering it too risky due to their speed and frequent course changes. *Orzeł* was not in a good state—a defect in the directional rudder had been discovered. Drinking water was in short supply, and fuel was rapidly running out. Some sailors were sick, mainly from the canned food. The crew was physically and mentally exhausted. Being in

## Marian Tadeusz Mokrski (1915-1940)

Mokrski was born on January 16, 1915, in Lublin. He graduated from the Junior High School Hetman Zamoyski in Lublin, then studied at the Navy Officer School in Toruń, graduating in the autumn of 1936 as the second highest in his class. He began service in the navy as a sub-lieutenant. From November 1936 to February 1937, he audited a course, then served in the Cadre Fleet in Gdynia as a platoon commander. From March 1937, he was a watch officer in the Submarine Ships Division. In 1937-1938, he was assigned to a nine-month training cruise aboard the French cruiser *Jeanne d'Arc* as part of the Ecole d'application des Enseignes de Vaisseau. After returning from France, he was assigned to the Destroyer Division as second gunnery officer on *ORP Burza* (Storm), then on her sister ship *Wicher* (Gale). In October 1938, he was assigned to the Submarine Ships Division on *ORP Wilk*. From November 15, 1938, to April 15, 1939, he audited the 4<sup>th</sup> level Underwater Operations Officers' Course. From May 1, 1939, navigation officer on *Orzeł*. After the ship was interned in the port of Tallinn, he actively participated in the ship's escape to Great Britain. He developed the famous map of the ship's passage through Øresund (in the Danish Straits). From 1940, he was gunnery officer on *Orzeł* during all her convoys and patrols in the North Sea. On April 8, 1940, *Orzeł* torpedoed the German transport ship *Rio de Janeiro*. On June 8, 1940, Mokrski and the



Collection of Jerzy Hedinger and Maciej Franz

rest of the crew were declared missing after the ship did not return from her seventh patrol in the North Sea. He was decorated with the Cross of Valor and the Navy Medal. On August 21, 1946, the British Admiralty awarded him posthumously the Atlantic Star Ribbon and 1939-45 Star Ribbon. Mokrski's original maps are in the Polish Institute and Sikorski Museum in London.



Collection of the Naval Association in London

ORP *Orzeł*'s trip through Øresund—a part of the navigation map reconstructed from memory by Sub-Lieutenant Marian Mokrski after the ship's escape from Tallinn in September 1939.

a state of alert almost constantly for five weeks surely impacted their emotional state.

On October 7, Lt Grudziński made the risky decision to attempt to break through the Danish Straits to Great Britain. There were no maps, which are essential when crossing shallow straits, full of difficult to navigate shoals. *Orzeł* was facing a hard crossing through Øresund. Moving very carefully along the Swedish coast, on the night of October 7–8, the ship approached the Smygehuk lighthouse. These waters were patrolled by Swedish and German units. Only the next day at 9:35, being at the latitude of Trelleborg, she surfaced to charge batteries and ventilate the sub. Afterward, the Poles had to stay underwater for a dozen hours. At 19:45 *Orzeł* reached the entrance to Øresund at the Falsterboev lighthouse. On Mokrski's Baltic map, this route was marked with three new names: "Marian's Route", "Bear Pass" and "Cape of Good Hope". On the surface, the ship carried a Swedish flag, which was made of a sheet painted with oil paints. To confuse the opponent, metal letters with the ship's name were also removed.

On the morning of October 11, *Orzeł* reached Skagen and reconnoitered these waters for the next day. However, no German ships were among the vessels along the shipping routes through the strait of Skagerrak. A moment of terror came when, 15 nautical miles from the lighthouse at The Skaw, the submerged *Orzeł* entered a minefield. The sound of mine mooring cables scraping along the passing sub must have increased every

crew member's heartbeat, but fortune once again smiled on *Orzeł*.

On October 12, the commander plotted the Firth of Forth in Scotland on the map, based on the navigation officer's calculations. The Poles' nearly month-long odyssey was entering its final chapter: crossing the North Sea to Great Britain. Due to a radio failure, they could not establish communication with the allies or announce their arrival.

Finally, at dawn on October 14, after intense repair efforts, the radio was again functional. The ship was at the latitude of the Firth of Forth when, due to the lack of codebooks, *Orzeł* sent an unencrypted message in English:

*"Supposed position 0630 on appointed place for Polish Navy. Beg permission entrance and pilot, but have no chart. Orzeł"*

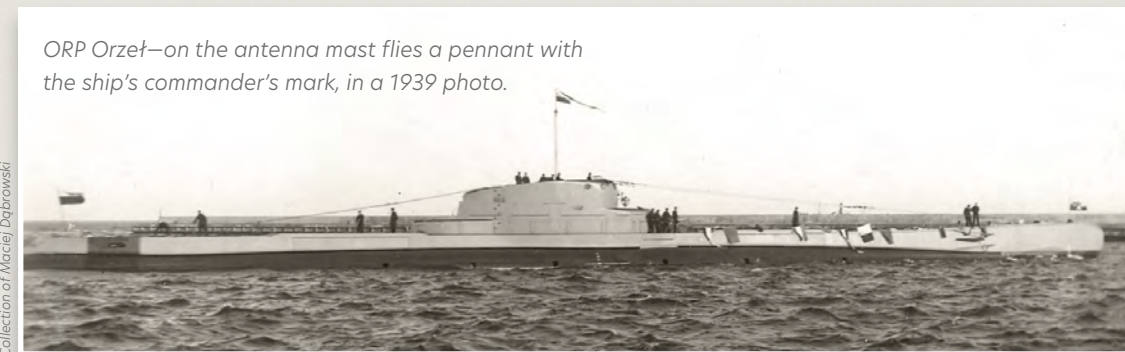
After receiving the message, the English were initially convinced that it was a German trick. For

confirmation, the destroyer HMS *Valorous* went out to meet *Orzeł* east of the small Isle of May. When the Polish ship was finally found, she was led to the Royal Navy Dockyard Rosyth. Thus ended *Orzeł*'s legendary September–October odyssey, which lasted 44 days.

"Their spirit is magnificent, and what they have done ranks with the famous feats of the war," Cdr Stephen Wentworth Roskill, Deputy Chief of Intelligence of the British Admiralty, reported about *Orzeł*'s Baltic odyssey in October 1939.

English newspapers wrote about the Polish crew's daring escape. Meanwhile, *Orzeł* was sent for repairs to the Caledon Shipyard in Dundee. For one and a half months, workers sealed leaks in ballasts and tanks, repaired the damaged conning tower and bow, and repaired the jagged propeller blades. On November 16, General Władysław Sikorski, Prime Minister of the Republic of Poland and Supreme Commander, visited the sailors at the shipyard and decorated

ORP *Orzeł*—on the antenna mast flies a pennant with the ship's commander's mark, in a 1939 photo.



Collection of Maciej Dąbrowski

Lt Grudziński with the Silver Cross (Class V) of the *Virtuti Militari*, and the remaining 4 officers and 16 crew members with Crosses of Valor. The British were equally impressed by the heroism of the officers and senior NCOs—Lt Cdr Grudziński was honored with a high Distinguished Service Order, Lt Roszak received a Distinguished Service Cross, and Petty Officers Józef Stelmaszyk and Wacław Foterek received the Distinguished Service Medal.

On December 1, 1939, *Orzeł* left Dundee and returned to Rosyth. She joined the combat units of the 2<sup>nd</sup> Submarine Flotilla, receiving the British

pennant number 85A. A British liaison officer was assigned to the ship, who joined the main crew and was to participate in combat operations. Lieutenant Commander David Alexander Fraser first received this assignment, and a little later two other Englishmen joined him: radio operator Petty Officer Leslie William Jones and signaller Petty Officer Walter Fordyce Green.

*Orzeł* was not fully armed, so began patrolling in coastal British waters with some tasks atypical for submarines. Before Christmas, *Orzeł* twice escorted commercial ships on short routes between ports of northern Scotland—from the



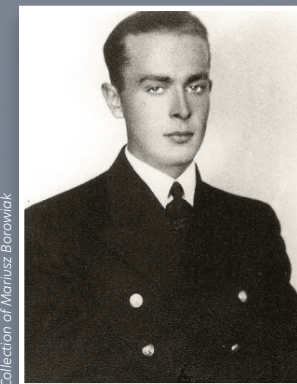
General Władysław Sikorski decorates officers and petty officers of the Polish submarines *Orzeł* and *Wilk* aboard *Orzeł* in dry dock, in a photo from November 16, 1939.

Naval Museum in Gdynia

## Stanisław Pierzchlewski (1916–1943)

Pierzchlewski was born on January 11, 1916, in Koło. After elementary school, he attended the Tadeusz Kościuszko High School in Kalisz. On July 2, 1934, he passed the exams and became a student of the Navy Officers School in Bydgoszcz. On October 15, 1937, he was promoted to Sub-Lieutenant in the technical corps. From October 15 to December 15, 1937, he served as a watch officer on the training and transport ship *ORP Wilia*. After completing the application course for midshipmen on March 20, 1939, he was assigned to the submarine *ORP Orzeł* as a supernumerary chief engineer. In September 1939, he took part in the ship's combat operations in the Baltic. On March 6, 1940, he assumed the duties of second engineer on the destroyer *ORP Burza*, serving until May 1941. On

May 3, 1940, he was appointed Lieutenant. On May 22, 1941, he became chief engineer of the escort destroyer *ORP Krakowiak*. On September 20, 1942, he became chief engineer of the destroyer *ORP Orkan*. On May 3, 1943, he was promoted to Lieutenant Commander. He was killed in the North Atlantic when *Orkan* was sunk by an acoustic torpedo launched by the German submarine U-378. He was awarded twice with the Cross of Valor and three times with the Navy Medal.

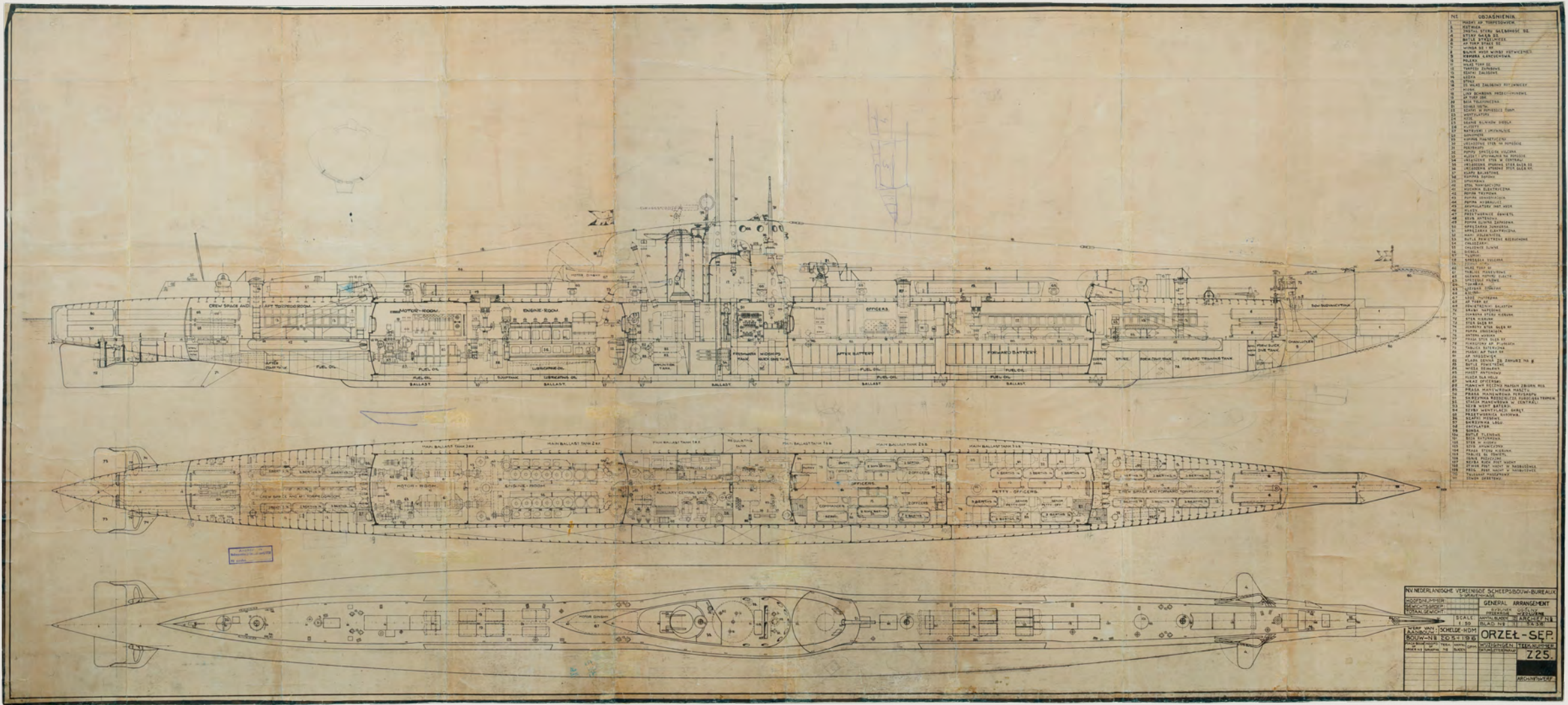


Collection of Mariusz Borowick

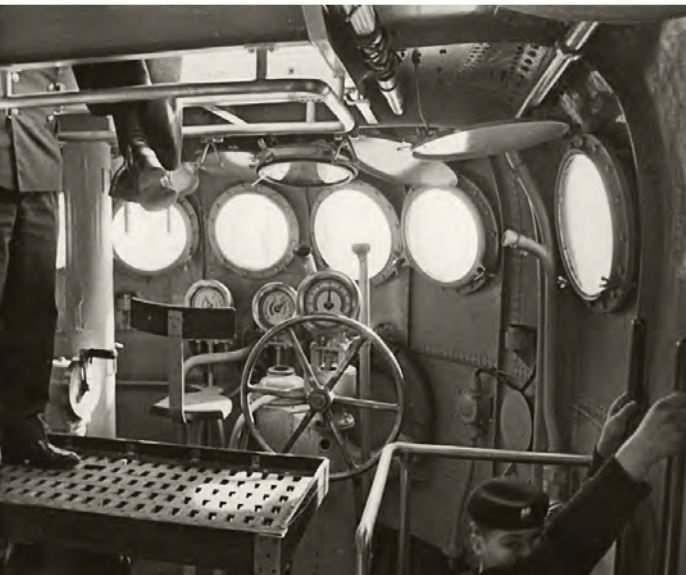


Collection of Mariusz Borowick

Seamen from submarines *ORP Wilk* and *ORP Orzeł* in Gdynia-Okpywie, in a 1939 photo.



Original photocopy of the technical plan of the submarines ORP Orzeł and its twin ORP Sęp, made in the Netherlands right after the ships were built in the late 1930s.



Collection of Mariusz Barowiak

Inside the conning tower of an Orzeł-class submarine.

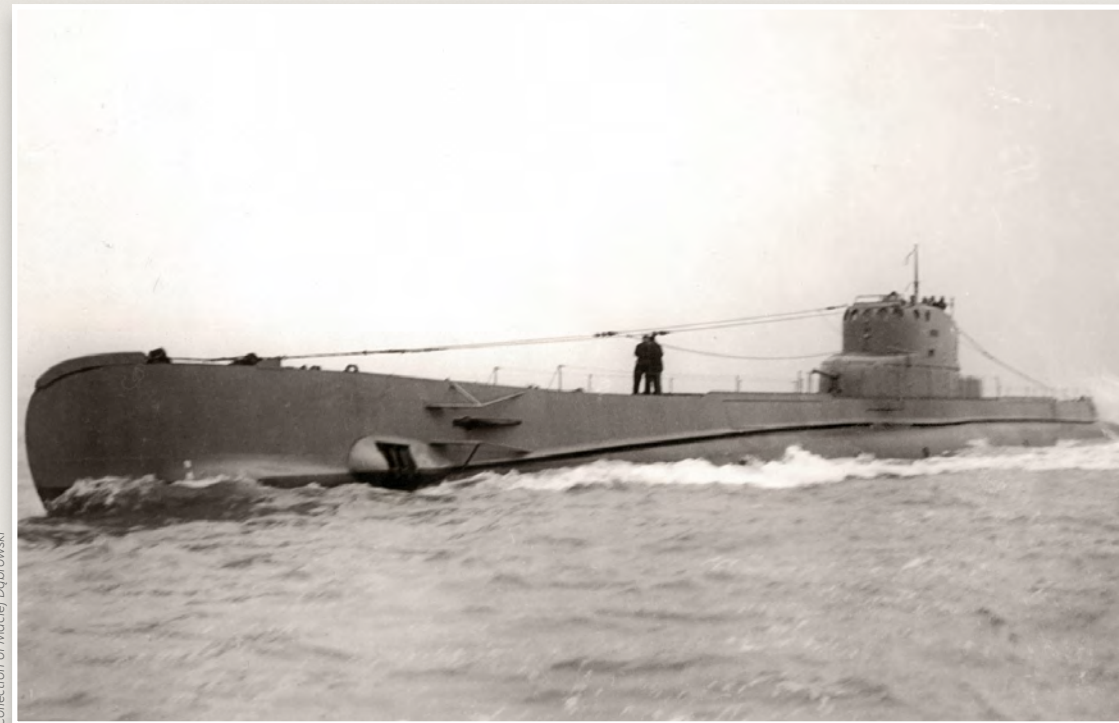
east coast port of Methil to the mouth of the River Clyde on the west.

ORP *Orzeł* resumed combat operations on December 29. She was protecting a convoy code-named ON.6 (Nor), heading from the port of Methil north of Edinburgh to Bergen in Norway. *Orzeł* and 11 additional British ships were escorting. After passing the Orkney and Shetland Islands on December 30–31, the convoy—with no losses—reached its destination on January 1, 1940.

A few hours later, a new convoy—HN.6—left for Scotland. On 4 January, this convoy with valuable cargo reached its goal. Then *Orzeł* returned to Rosyth.

January 18, 1940, is considered a breakthrough in the Polish sub's operations in Great Britain—*Orzeł* first set off on her own for a combat patrol. Before heading to sea, her torpedo tubes were adapted to British 21-inch torpedoes. The ship's task was to occupy a designated patrol point and observe the Norwegian islands of Skudesnæs (now Skudenenes). During this patrol, 21 merchant vessels were observed cruising in the area, but no Kriegsmarine or other German vessel appeared. On January 27, *Orzeł* finished her patrol and returned to the base at Rosyth.

A second lone patrol in the North Sea began on February 10. Lieutenant Keith D'Ombrian Nott joined the crew, replacing Lieutenant Commander Fraser as a liaison officer. Nearby, four Royal Navy submarines were conducting essential operations; there was also a British minefield in the area. Increasing numbers of German and neu-



Collection of Maciej Dąbrowski

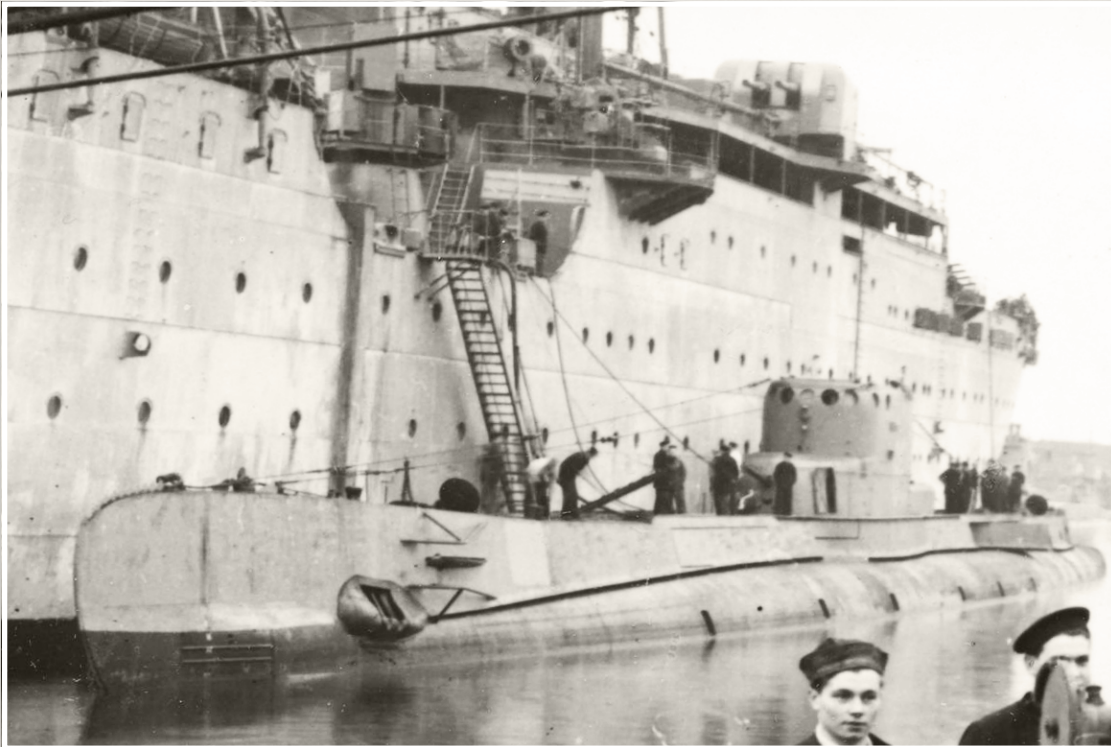
ORP *Orzeł*.

tral merchant ships were expected in Norwegian territorial waters, particularly around the ports of Lindesnes, Kristiansand and Hanstholm. En route, *Orzeł* hydrophone\* operators registered ten distant underwater explosions. After reach-

\* The term passive sonar is used today; the technology detects and locates other watercraft based on the sounds they make.

ing their assigned location, they received an order to proceed to another patrol zone E1 (near the coast of Denmark). The ship arrived in this area on February 15, and the only notable event was sighting an unidentified merchant ship heading south. On February 16, *Orzeł* received an order to go to Fossingfjord and take a new position. Six merchant ships were identified, three of which were identified as Danish vessels. *Orzeł* broke off





Polish Institute and Sikorski Museum in London.

At the base in Rosyth. ORP Orzeł is moored to the depot ship HMS Forth.

observations at Fossingfjord because of a new order to return to area E1. On February 21, she left the area and headed back to the Rosyth base.

Just before the end of the cruise, on the night of February 22–23, *Orzeł* was near the Isle of May, at the entrance to the Firth of Forth. It was a dark night. Suddenly, a British reconnaissance bomber Short S.25 Sunderland appeared unexpectedly.

The watch officer gave the order to immediately launch a reconnaissance flare. Among aviators, it was commonly believed that everything that moves on the water and has no chimneys is a German U-Boot! It was nerve-wracking for *Orzeł*'s crew: any moment, the plane might unwittingly make a fratricidal attack. Fortunately, everything ended well, and *Orzeł* returned from patrol on February 23.

On February 26, King George VI and his wife Elizabeth visited the base of the 2<sup>nd</sup> Submarine Flotilla. Lt Grudziński had the opportunity to meet the King.

On March 5, *Orzeł* left Rosyth to patrol near Jøssingfjord. From March 7 to the morning hours of March 10, many fishing vessels were observed during the patrol. In addition, the crew registered up to 42 distant, unidentified underwater explosions.

On the evening of March 10, *Orzeł* was ordered to approach the Danish coast to search and intercept the German steamer *Helene Russ* (993 GRT). The next day, in the indicated area, *Orzeł* encountered two ships heading north about 6 nautical miles away. The commander issued an order to change course and approach them. Unfortunately, due to very poor visibility, contact was quickly lost. It was probably the hunted ship, along with a destroyer or torpedo boat escorting.

Roughly an hour later, another illuminated ship at 56° 49' N and 08° 10' E was noticed on the port side, at a distance of about 370 m. The ship was heading dangerously toward *Orzeł*, on a possible collision course, so Lt Grudziński issued an order to change course away from the unidentified freighter and only attack her afterward, but contact was lost due to poor visibility in the thick fog.

Nothing happened over the next several hours. Then at 8:45, sirens from two ships were heard. At 9:06, one of the two cruising vessels was spotted, without a flag, causing immediate suspicion that it was a German ship. *Orzeł* surfaced and the

commander summoned an officer with ship logs from the stopped merchant ship. It turned out to be a Danish steamer, *Tomsk* (1229 GRT), carrying food to Great Britain. The second merchant ship was not stopped; it was also a Danish freighter, *Vidar* (1353 GRT).

Bad weather prevented further searching for *Helene Russ*, and the Polish submarine returned to the patrol area in sector E1. The next day *Orzeł* set a course back to Scotland, returning to the base in Rosyth on March 17.

The fourth lone mission was planned for April 3, 1940. This time, the ship headed to the southern coast of Norway. For the next two days, she cruised on the surface, in an area not threatened by the enemy. The cruise went smoothly. On the evening of April 6, Grudziński issued an order to dive and approach their designated sector. The Admiralty's orders were for *Orzeł* to stop and search neutral ships that departed from Norwegian ports, as well as all German ships in the area. For most of the next day, nothing happened.

At dawn on April 8, *Orzeł* was near Lillesand. At 9:45 near the entrance to Oslofjord, a suspicious single-smokestack freighter without a flag was spotted, heading perpendicular to *Orzeł*'s course. At first, it was thought to be a neutral ship, because these waters had shipping routes to Kristiansand, one of the major ports of southern Norway, as well as into Oslofjord, to Oslo. *Orzeł* maneuvered around to read the name and nationality of the ship. It turned out to be the German ship *Rio de Janeiro* with a barely readable name of her home

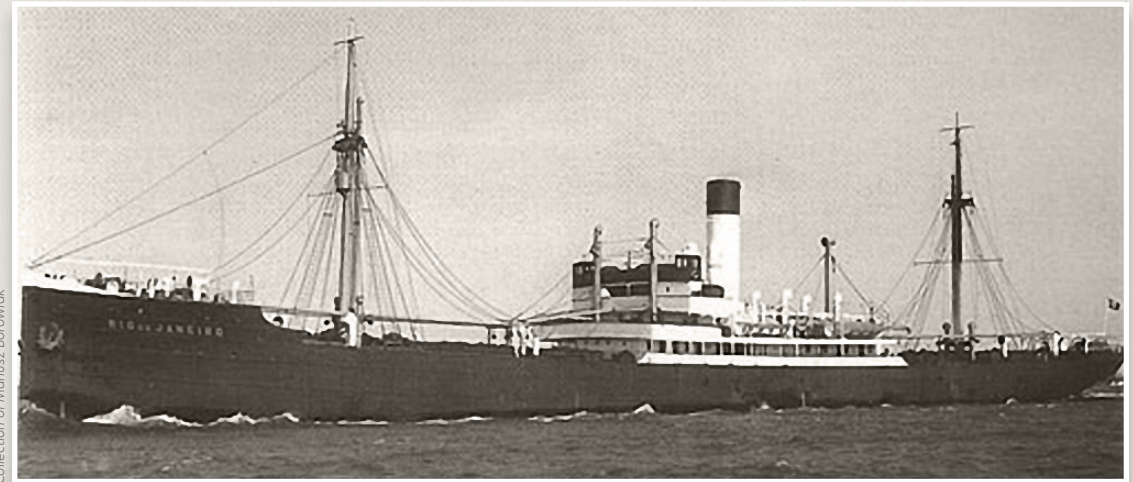


Collection of Mariusz Borowick

A view of Orzeł's conning tower. A censor covered the ship's number 85A in this photo from January 11, 1940.

port covered by a sloppy layer of paint: Hamburg. The distance to the German ship was 1200 m.

In this situation, just before 11:00, the commander ordered the crew to battle stations. *Orzeł* surfaced and began the procedure provided for by maritime law: *Orzeł* demanded that the German ship's crew stop their engines and send their captain with documentation aboard *Orzeł*. *Rio de Janeiro* stopped their engines and raised a flag on the stern mast, indicating that the submarine's signal was understood. Meanwhile, a boarding party, led by Lt Piasecki, was assembled and ready to board the German ship. On the merchant ship's deck, there was some activity, and after a moment a boat with two people was launched. Several minutes passed. Suddenly *Orzeł*'s radio operator began to pick up some messages: two fast attack boats were heading to their sector from the shores of Norway, a radio signal was transmitted from very nearby in an incomprehensible code, and a high-speed motorboat was mentioned. Then he heard a German radio operator calling for help from the Luftwaffe. Observers noticed the ship beginning to accelerate away from *Orzeł*, trying to escape into the territorial waters of Norway. The Germans clearly did not intend to obey *Orzeł*'s order. After increasing speed, at 11:12 *Orzeł*'s machine guns fired two volleys of warning shots. Grudziński issued an order to surrender the ship within 15 minutes. The freighter crew was playing for time, so *Orzeł*'s commander sent a third signal: "Surrender your ship immediately. In five minutes, I will shoot a torpedo." There was still no move-



Collection of Mariusz Borowick

The German transport ship *Rio de Janeiro*.

ment aboard the freighter. The Germans were ignoring Grudziński's message.

At 11:45 the first torpedo was launched, which unfortunately missed its target. A few more minutes of waiting minutes passed, and the commander gave the order to fire a second torpedo, which hit the target. The ship began to list, but did not sink. The deck of the German ship suddenly swarmed with soldiers, throwing rafts overboard and jumping into the water.

Further operations were interrupted by a report about an approaching plane from the land (it was a single-engine Norwegian seaplane Höver MF-11 of the 21 Reconnaissance Division), a high-speed motorboat, and three small fishing boats *Lindbö*, *Adger 2* and *Stjernen*, which began res-

cue operations. The torpedo boat *Odin* from the Royal Norwegian Navy soon joined to help.

Lt Cdr Grudziński gave a signal to submerge to periscope depth. The torpedoed ship was listing to the side, but was still afloat. The commander gave an order to circle around the ship to the other side. At 12:45 (or 13:15, according to some sources) a third torpedo was launched. Like the previous hit, this one struck the ship in the middle near the smokestack, on the other side. There followed an explosion in either the boiler room or the ammunition hold, and three minutes later the freighter broke and began to sink. *Rio de Janeiro* sank at 58° 08' N and 08° 29' E. As soon became clear, the sunken ship was a harbinger of the German invasion of Norway. The ship was



Collection of "Nasze Sygnaty" in London

Orzeł returning to Rosyth from a military patrol.

carrying 313 soldiers from the 1st Battalion of the 159th Infantry Regiment and the 169th Pioneer Battalion (both units were part of the 169th Infantry Division under the command of Major General Hermann Tittel) and from the 13th and 33rd Anti-Aircraft Artillery Regiment, as well as weapons, ammunition and supplies. Although *Orzeł's* commander immediately forwarded a message to the British Admiralty, they failed to realize the significance, and they downplayed the forthcoming operation called "Weserübung", which was to take place on April 9, 1940.

After the ship was sunk, Grudziński received an order to go to a new area of operations near Larvik, Norway. Around noon, three auxiliary patrol boats were spotted in the Polish ship's sector. They were units adapted to search and attack submarines, armed with cannons and depth charges. *Orzeł's* commander considered launching an underwater torpedo attack, but after some deliberation, he abandoned the plan and left the dangerous sector. Planes flew overhead until evening, and the ship could not resurface until midnight.

Before noon on April 10, *Orzeł* continued patrolling along the Norwegian coast. The armed units spotted the previous day were still circulating in this sector. This time, the commander was determined to attack one, or even two simultaneously. They waited several hours for an opportune moment to attack. At 18:22 from a distance of about 230 m, two torpedoes were fired at the boat *Fritz Reiser* - V 705. However, the attack was ineffective. When *Orzeł* carried out this failed tor-

pedo attack, an unspotted enemy plane bombed her. Fortunately, the ship dove to a depth of 50 m, and the bomb explosions did no damage.

On April 12, *Orzeł* was to go to 58° 40' N and 11° 00' E to check the situation in the area. Just before 4:45, an explosion of an unidentified ship was noticed. For several hours, *Orzeł* continued to perform standard operations in this sector. Around 10:00, *Orzeł* happened upon an enemy convoy with two transport ships—the freighter *Itauri* (6838 GRT) and an armed anti-submarine decoy ship, which was either *Oldenburg-Schiff 35* or *Schürbeck-Schiff 40*. They were accompanied by two patrol ships from the 7th Patrol Boat Flotilla (7 Vorpostenflotille). Before *Orzeł's* commander could torpedo *Itauri* (after two hours of preparation; during the operation, the forward launcher valves got stuck), the target unexpectedly changed course by 100°, thus preventing an attack. A moment later, the submarine was attacked from air and water.

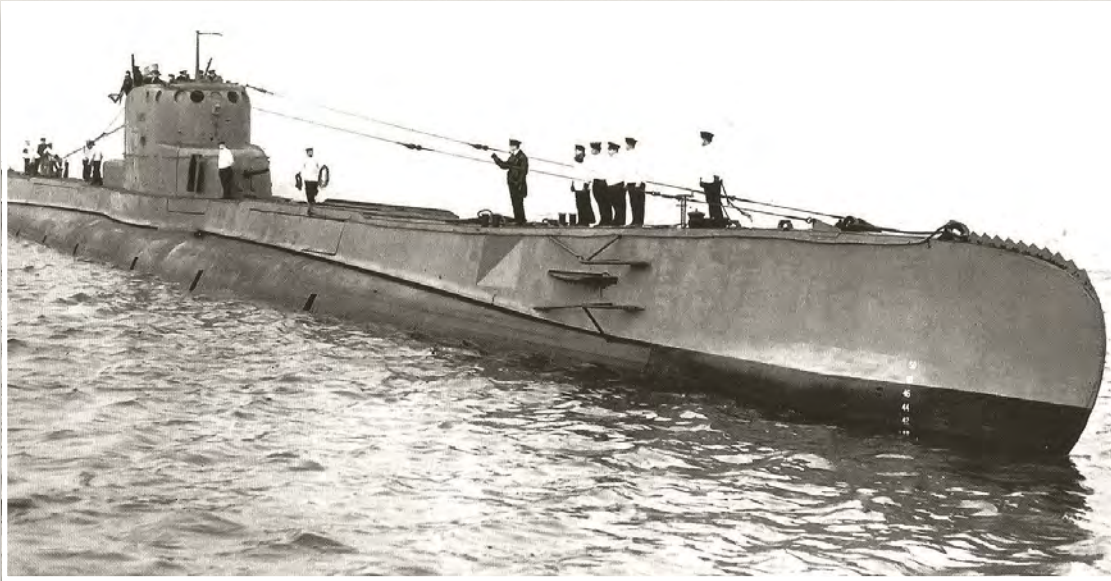
A German plane had probably spotted the submerged submarine's periscope on the surface. Soon 20 explosions rocked the ship. Grudziński escaped to a depth of 50 m, and then to 70 m. From 12:45 to 13:45, patrol aircraft dropped 21 depth charges set to explode at various depths. Only shortly before 20:00, the commander decided to rise to periscope depth and slip away as quietly as possible.

On April 13, an armed minesweeper and sub chaser again tracked down *Orzeł* and launched depth charges. During almost eight hours of hunting, four unsuccessful attacks were launched,



Collection of Mariusz Borowick

On April 28, 1940, ORP *Orzeł* left for its fifth independent patrol to the North Sea, toward the Stavanger area of the Norwegian coast. Original map made by Lieutenant D'Ombraïn, Royal Navy Liaison Officer, from the collection of The National Archives in Kew, Greater London.



*Orzeł returning from a patrol. A two-color identification mark is visible behind the bow diving planes.*

dropping a total of 20 depth charges against the submarine. Lt Grudziński had to save *Orzeł* by diving down to a depth of 85 m. Explosions damaged the muffler valves of the diesel engine. The crew spent 19 hours exhausted.

Then at 2:00 in the morning, April 14, *Orzeł* received a message from the Admiralty to change to a new patrolling area—it was now to be between Skagerrak and Kattegat. While moving to the new patrolling area, the ship was detected by a Kriegsmarine torpedo boat. Three Schnellboots entered the action. They dropped over 20 depth charges,

some of which exploded near the target. The hunt lasted almost all night, ending when *Orzeł* managed to leave the dangerous area without loss.

On April 15, *Orzeł* was ordered to go to sector C9 in the north, near Skagerrak. Just before 10:00 the ship rose to periscope depth and unexpectedly could not dive. But then, suddenly, she abruptly dove with her bow down, until the manometer indicated 105 m! The hull was dangerously close to being crushed by the increasing external water pressure. A vent was stuck in the quick dive tank, but finally the situation was

under control again. But before the crew could relax, depth charges began dropping again.

The next day after midnight Grudziński was ordered to return to base. From April 9 to April 15, up to 111 depth charges were dropped against *Orzeł*, including 20 by plane. In addition, enemy patrols were randomly hitting the entire area with depth charges. On April 18, *Orzeł* arrived at Rosyth. Captain Stephens did not hide his satisfaction with the Polish sailors' spirit; he greeted them with a loud shout: "Very good, Orzeł! Very good!"

On April 28, *Orzeł* went out on her next patrol to the North Sea, towards the Stavanger region of the Norwegian coast. Two days later, after arriving at the indicated patrol location, *Orzeł* received another assignment—to the southwest Norwegian coast near Jæderen. The patrol proceeded calmly—*Orzeł* met no Kriegsmarine surface ships, because the German fleet during this period was not very active, as it prepared for an upcoming offensive of German troops on the Western Front. En route to the new area, three times *Orzeł* encountered a large number of drifting and anchored sea mines. Also, anti-aircraft fire and illuminating rockets were observed at the latitude of Stavanger.

On May 3, *Orzeł* carried out reconnaissance north of 59° latitude. The reconnaissance of the ship in this area lasted until 03.00 the next day. Around midday, a group of German minesweepers was detected heading north; they were probably responsible for minesweeping previously

observed floating mines. Over the following days, the submarine remained submerged or at periscope depth.

On the May 6 watch, they observed an abandoned wreck of an unidentified commercial ship on the shore, but the following hours were uneventful. On May 8, *Orzeł* moved to a new reconnaissance area, at 57° 50' N and 06° 10' E. There was still no enemy contact. The only variety during this "lazy" patrol were some observed floating mines and the sounds of unidentified underwater explosions. The presence of a German Schnellboot was noted. In the evening, an order arrived to return to Scotland.

On May 10, the day before ending the fifth independent patrol, the ship was unexpectedly attacked by a Dornier Do 17 aircraft, which emerged from a dense fog. Poor observation during the watch was to blame. *Orzeł*'s commander ordered fire at the German reconnaissance bomber, recognizable by its machine guns, and then, making use of the distance from the air intruder, *Orzeł* submerged in alarm. After a moment, the Luftwaffe aircraft returned and attacked again, dropping two depth charges onto the diving ship, but they did not cause much damage. For over an hour, the Dornier circled around the position of the submerged *Orzeł*. On May 11, *Orzeł* returned to Rosyth.

Before the next patrol, *Orzeł* finally had a working 105 mm caliber gun (a new gun lock was delivered from Sweden to replace the one taken by Estonians in Tallinn). At 23:00 on May 23, according



Collection of Mariusz Borawicki

Lieutenant (posthumously promoted to the rank of Captain) Andrzej Piasecki, Orzeł's second-in-command from September 15, 1939 to June 8, 1940.

to her orders, *Orzeł* was to pass through the area around coordinates 56° 11' N and 00° 00' E (a position coded as DKZS 1100), and then to proceed to the sector marked with the symbol A3.

To date, no historian has managed to recreate beyond doubt the course of events of this patrol of *Orzeł*. Heading to the Firth of Forth, *Orzeł* was supposed to send a last short farewell message by radio, probably to the crew of ORP *Wilk*—the second of the Polish submarines in Great Britain.

The day after leaving Rosyth, the submarine was to reach her patrolling area, which was in the northern part of the area marked A3, bounded by latitudes 55° 10' to 54° 30' N and longitudes 03° 30' to 04° 25' E. *Orzeł* was to stay in this assigned area until June 1. Seven days after the start of the cruise, June 1, at 15:06, an order was sent from Rosyth that after sunset, the ship should proceed to a neighboring sector, designated A1 (from 56° 30' to 55° 45' N and 03° 30' to 04° 25' E). Entrance to this area was scheduled for the next day.

At 10:02 on June 2, command in Rosyth radioed another order, designating a new patrol sector—the next day, *Orzeł* was to leave A1 and move to coordinates 57° 00' N and 06° 00' E (a position coded as MBRU). At 9:00 on June 3, *Orzeł* was to reach coordinates 57° 00' N and 04° 10' E, and remain on patrol just at the exit from Skagerrak to the North Sea. Next *Orzeł* was to pass through coordinates 57° 00' N and 05° 00' E. We don't know whether these two messages reached *Orzeł*. One thing is certain—these orders were not confirmed by radio.

On June 4, *Orzeł* was to take a position 120 nautical miles south of the Norwegian port of Egersund and 70 nautical miles west of the Danish coast, at the latitude of Aalborg. Arriving in the new sector, *Orzeł* was to relieve the British submarine Trident, which was to end her patrol service on June 2 after dark and head to Rosyth.

Lt Cdr Grudziński was instructed that on the day when his sub would be east of the 05° E meridian, the ship should be submerged. That was the border of a protective zone. The British assumed that the Polish ship had reached her new patrol position on June 3 in the evening. Unfortunately, *Orzeł* had not responded to the Rosyth radio signals since the patrol began. At first, this did not cause concern; it was believed that the ship was observing radio silence during the voyage.

At 16:05 on June 5, the British command sent another order: at 22:00 on June 6 *Orzeł* was to leave her current patrol position and return to base, cruising on the surface, passing through the position at coordinates 57° 00' N and 03° 00' E (coded as MBTS). The deadline for arrival at Rosyth was the morning of June 8. When the ship did not return to base at the planned time, without informing about reasons for the delay, that same day at 12:12 a request was sent to *Orzeł* to report her current position. All orders sent from command in Rosyth remained unanswered. On June 11, the Polish naval command in London declared: "Due to the lack of any messages and a failure to return from patrol within the specified period,

the submarine of the Republic of Poland *Orzeł* is considered lost."

Rear Admiral Jerzy Świrski, the Chief of Polish Naval Command, in Daily Order No. 32 of June 13, 1940, announced the loss of the submarine *Orzeł*:

*ORP Orzeł has been lost!*

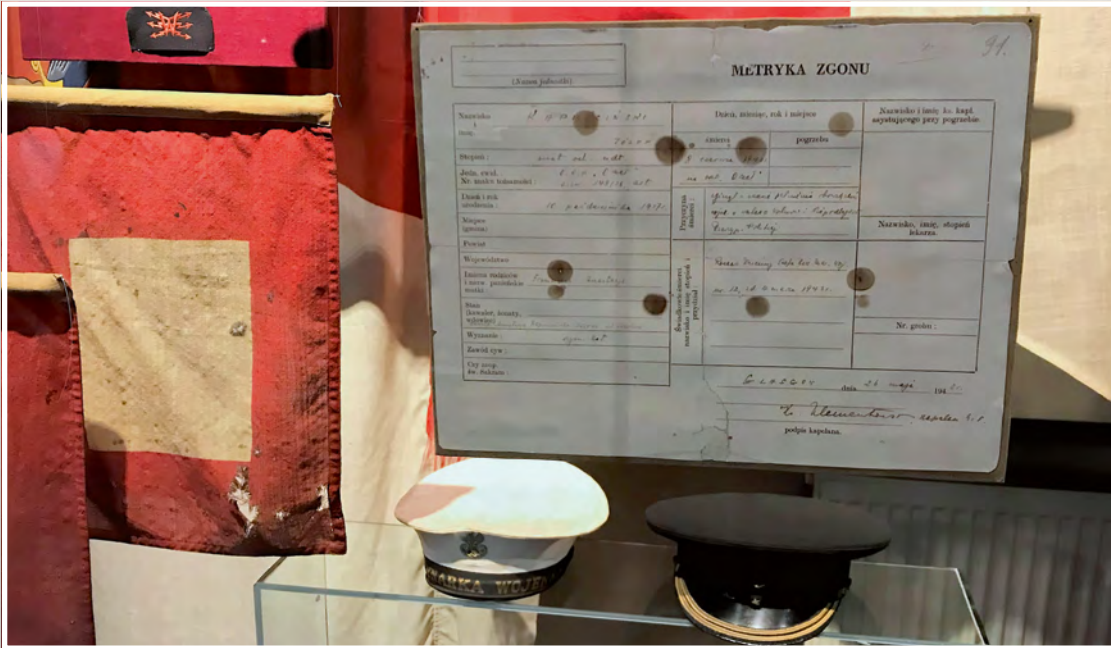
*Sailors, we have suffered a loss—ORP Orzeł with the entire crew was lost in the fight against the enemy.*

*The commander and crew wrote one of the most glorious pages in the history of Poland, and the legends of their deeds survive for centuries. Future generations of Poland will be taught this legend. It will seal the inseparable bonds of the Nation with the sea.*

*Today, ORP Orzeł is a symbol of the greatness of the Polish Nation, which, having such sons as her crew, cannot die. Honor to the memory of heroes.*

The Admiralty announced the tragic loss of the Polish ship, followed by the press. Rear Admiral Max Horton, commander of the British submarine fleet, expressed his great regret after the loss of *Orzeł*. In a special note, he highlighted the high merits and great combat value of the Polish crew. Admiral Charles Forbes agreed, emphasizing the merits of *Orzeł* during her service under the wings of the Royal Navy.

The Admiralty supposed that *Orzeł* hit a mine on May 25 at position 57° 00' N and 03° 40' E (this position is now generally accepted as probable). In the documents of the Polish naval command,



Mariusz Barowick

Original death certificate of seaman Józef Kapuściński (born October 10, 1917 in Góra Leszczyńska), an Orzeł crew member. Death in the depths of the North Sea struck a dozen sailors from Wielkopolska. It was unusual that so many sailors from one region all served on the same ship (which had 60 Polish sailors). Document from the collection of the Military Museum of Wielkopolska in Poznań.

the officially noted date of the sinking was June 8, 1940, i.e. the day designated for the ship's return from patrol. 63 officers, NCOs and sailors were killed on the ship. The ship's commander and other officers and crew members were posthumously promoted. After the war, Jan Grudziński was posthumously awarded the Golden Cross of the Virtuti Militari. He had the distinction of

being the only member of the Polish Navy to be awarded the same order twice. Some of the fallen were also awarded Crosses of Valor and Navy Medals with three bars for participation in combat operations. In addition, the Polish authorities in Great Britain posthumously awarded Crosses of Valor to the three British members of Orzeł's crew. ◆

## List of crew members of the ship Orzeł, lost on patrol in May 1940

(Military ranks before posthumous promotions)

- Lieutenant Commander Jan Grudziński;
- Lieutenants Andrzej Piasecki, Florian Roszak;
- Sub-Lieutenants Marian Mokrski, Jerzy Sosnowski, Henryk Kamiński;
- Petty Officer Cadet Edmund Brocki;
- Petty Officers First Class Wacław Foterek, Józef Stelmaszczyk;
- Petty Officers Second Class Henryk Kotecki, Władysław Narkiewicz;
- Petty Officers Third Class Julian Kozowy, Stanisław Mucha, Jerzy Pięga, Stanisław Samotus, Wiktor Dąbrowski, Jan Brzęczka, Aleksander Kamecki, Józef Adamowicz;
- Seamen Paweł Giełdoń, Wojciech Hetman, Jak Kasprzak, Edmund Leśniak, Jan Olejnik, Teofil Piechota, Teodor Pokrywka, Bronisław Produkowicz, Tomasz Prządka, Julian Skarbek, Zygmunt Sosnowski, Ignacy Świebocki, Jan Torbus, Wacław Szubert;
- Seamen Second Class Paweł Czopp, Paweł Górny, Wacław Hałaczek, Stefan Janaszek, Józef Kapuściński, Emil Krystek, Henryk Rebizant;
- Seamen Third Class Zdzisław Wilwer, Franciszek Chojecki, Alojzy Gettka, Henryk Grabowski, Roman Hagno, Wiesław Jakubowski, Stefan Jarmuż, Roman Jasiński, Zbigniew Kawa, Józef Kłosowicz, Maksymilian Kühn, Kazimierz Mazurkiewicz, Mariusz Mączarski, Zdzisław Mońko, Zygmunt Nowak, Leonard Palowicz, Józef Prociuk, Jan Szal, Stanisław Uliczny, Piotr Zydroń.

British liaison crew:

- Lieutenant Keith D'Ombraim Nott;
- Petty Officers Leslie William Jones and Walter Fordyce Green.



## Postscript

In spring 2006 the first search for *Orzeł* with the use of modern equipment was undertaken, by the hydrographic ship ORP *Heweliusz*. The search was very limited because other tasks were also being performed at that time. Two years later, at the end of July 2008, the expedition "Orzeł Balexmetal" set out on *Imor*, a research ship of the Maritime Institute in Gdańsk, with a group of enthusiasts from a maritime search team. During 10 days of seabed exploration, the team searched very carefully with the help of sonar, a probe and a remote-control underwater robot, covering an area of 866 km<sup>2</sup> (in what had been a German minefield, in sectors 16a and 16b and adjacent areas), somewhat over a hundred miles south of the coast of Norway. They traveled a total of almost 2500 NM (4630 km). This expedition did not locate *Orzeł*. In August 2010, *Heweliusz* searched again for seven days in the North Sea. A 270 km<sup>2</sup> area was combed—without success. Then in June 2013, the rescue ship ORP *Lech* made an expedition to

explore another lead. At a depth of about 70 m in the Excluded Economic Zone of Great Britain at the bottom of the North Sea, sonar detected a submarine similar to ORP *Orzeł*. Unfortunately, after careful analysis of the material obtained, it turned out to be the wreck of the British submarine HMS *J6*, sunk in the last weeks of World War I.

In the years 2014–2018, a group of divers, historians and wreck hunters—part of a project "SANTI Find Orzeł"—made five expeditions, based on the analysis of documents and the selected area of the North Sea floor, but none of them located *Orzeł*. Although several decades have passed since the end of the war, the location of *Orzeł*'s wreck remains unknown.

*Orzeł*'s legend still lives, and it is not surprising that it arouses great interest and excitement, especially among historians and wreck hunters. This is undoubtedly one of the greatest unsolved mysteries of 20<sup>th</sup>-century Polish history.

*Cielimowo, January 29, 2020*



Collection of Maciej Dąbrowski

*Probably one of the last photos of ORP Orzeł, taken in late May 1940 in Rosyth. In the background is the British destroyer HMS Highlander.*

## Bibliography

- Bagnasco E., *Uboote im 2. Weltkrieg*, Stuttgart 1997.
- Borowiak M., *Okręt podwodny ORP "Orzeł"*, Oświęcim 2017.
- Borowiak M., *Stalowe drapieżniki. Polskie okręty podwodne 1926-1947*, Warszawa 2019.
- Gross P., *The Naval War in The Baltic 1939-1945*, Barnsley 2017.
- Haarr Geirr H., *No Room for Mistakes. British and Allied Submarine Warfare 1939-1940*, Barnsley 2015.
- Haarr Geirr H., *The Gathering Storm. The Naval War in Northern Europe, September 1939-April 1940*, Barnsley 2013.
- Haarr Geirr H., *The Battle for Norway. April-June 1940*, Barnsley 2012.
- Jando H., *ORP „Orzeł”. Historia i hipotezy jego zatonięcia*, Gdynia 2015.
- Jones G., *Submarines versus Uboats*, London 1986.
- Kondracki T., *Okręty podwodne "Orzeł" i "Sęp"*, Warszawa 2013.
- Kosiarz E., *Flota Białego Orła*, Gdańsk 1984.
- Longstaff R., *Submarine Command*, London 1984.
- Miller D., *Submarines of the World*, London 2002.
- Padfield P., *War Beneath the Sea. Submarine Conflict 1939-1945*, London 1995.
- Pertek J., *Dzieje ORP "Orzeł"*, Gdańsk 1988.
- Pertek J., *Wielkie dni małej floty*, Poznań 2015.
- Peszke MA, *Poland's Navy 1918-1945*, New York 1999.
- Petrov PW, *Krasnoznamennyj Baltijskij flot nakanune Velikoj Otechestvennoj vojny. 1935-vesna 1941*, Moscow 2016.
- Roskill SW, *The War at Sea, vol. 1: The Defensive*, London 1954.
- Rudzki Cz., *Polskie okręty podwodne 1926-1969*, Warszawa 1985.
- Scott P., *The Battle of the Narrow Seas. The History of Light Coastal Forces in the Channel and North Sea 1939-1945*, Barnsley 2009.
- Sopoćko E., *Patrole "Orła"*, Gdańsk 2010.
- Śledziński K., *Odwaga straceńców. Polscy bohaterowie wojny podwodnej*, Kraków 2013.



Mariusz Borowiak

The cover of a book published in 1942 in London by Lt Eryk Sopoćko, who participated as a naval cadet on a patrol aboard *Orzeł* in April 1940. Lt Eryk Sopoćko died on October 8, 1943, aboard ORP Orkan.

The game was designed and the instructions were written by **Łukasz M. Pogoda**  
Historical study: **Mariusz Borowiak**  
Review: **dr Władysław Bułhak, Maciej Rędziniak**  
Copyediting: **Dorota Białas-Kosińska**  
Polish proofreading: **Magdalena Baj**  
English translation: **Russ Williams**  
English proofreading: **Anna Skudlarska**  
Cartography: **Tomasz Ginter**  
Cartographic consultation: **dr inż. kpt. ż. w. Andrzej Bąk, Maritime University of Szczecin**  
Graphic design and illustrations: **Bartłomiej Kordowski**  
Action icons: **Łukasz M. Pogoda**  
Icon with armed arm from the naval jack: **Paulina Żak**  
Typesetting: **Paulina Żak, Łukasz M. Pogoda** and the **MOTOKO agency**  
Project coordination: **Łukasz M. Pogoda**

The map was created using parts of a general nautical chart of the Baltic Sea by the Hydrographic Office of the Polish Navy.

The seabed image comes from the Baltic Sea Bathymetry Database by the Baltic Sea Hydrographic Commission, licensed under a Creative Commons Attribution 3.0 Unported License (CC BY 3.0). Downloaded from <http://data.bshc.pro/>, on February 7, 2020. © Baltic Sea Hydrographic Commission, 2013, Baltic Sea Bathymetry Database version 0.9.3.

The game was tested by members of the invaluable Monsoon Group: **Michał Gołębiowski, Antoni Kowalski, Karol Madaj, Jan Madejski, Dominik Sidorek, Krzysztof Wierzbicki** and **Jerzy Zambrowski**, as well as by our guest, **Tomasz Napierała**.

Additional testing was done by **Wojciech "WRS" Sieroń, Krzysztof Dytczak**, and employees of the Institute of National Remembrance, as well as guests visiting the prototype room at Plaszówki na PGE Narodowym 2019, whom the author thanks for various valuable comments.

The author especially thanks **Michał Gołębiowski** and **Krzysztof Wierzbicki** for helping to improve the game.

Thanks to **Wojciech "WRS" Sieroń** and **Maciej Sorokin** for all the remarks improving the clarity and quality of the rules.

The author also thanks **Michael Rieneck** for the game *The Lord of the Rings: Journey to Mordor*. That game's system of setting aside dice and re-rolling became a valuable part of *Orzeł's* game mechanics.

Printed by **Trefl S.A.**

The *Orzeł* miniature was designed and manufactured by **Barbarians Forge s.c.**

**BARBARIANS FORGE**

Questions? Comments? Ideas? Missing pieces?  
Write to us: [lukasz.pogoda@ipn.gov.pl](mailto:lukasz.pogoda@ipn.gov.pl)

© Institute of National Remembrance—Commission for the Prosecution of Crimes against the Polish Nation, 2020

National Education Office  
ul. Postępu 18, 02-676 Warszawa, Poland

ISBN 978-83-8229-008-0 (Print version)  
ISBN 978-83-8229-009-7 (PDF version)