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Cultural Organization

UNDERWATER CULTURAL HERITAGE FROM WORLD WAR I



PROCEEDINGS OF THE SCIENTIFIC CONFERENCE ON THE OCCASION OF THE CENTENARY OF
WORLD WAR I
BRUGES, BELGIUM, 26 & 27 JUNE 2014

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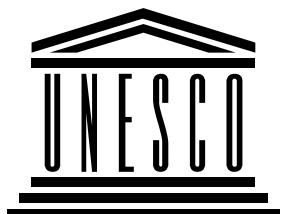
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The Protection of the
Underwater Cultural Heritage

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Foreword

The international community will commemorate the centenary of the First World War from 2014 to 2018. These four long years of war and hardship left an indelible mark on many societies and peoples around the world. They also left a significant underwater heritage that can today serve as a tool for dialogue between the nations concerned in the conflict. Until recent years, the potential of this shared heritage for achieving reconciliation, mutual understanding and friendship was not sufficiently acknowledged and understood. The remembrance of the past through



Alfredo Pérez de Armiñán,
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for Culture ©UNESCO

historic sites and artefacts can significantly contribute to peace and reconciliation in the twenty-first century.

The present publication highlights a special legacy of World War I: the many warships, submarines and merchant vessels that sank during that conflict and that constitute the last remaining original traces of war. Each sunken ship has a story to tell. This invaluable underwater cultural heritage stands as a moving memorial of the painful events of the conflict, as well as the lives lost. As such, they deserve our respect and protection.

Unfortunately, the underwater cultural heritage of WWI has been extensively damaged through salvage, looting and industrial activity over the past hundred years, and legal protection has been insufficient. Beginning in 2014 the underwater heritage of WWI will begin to be covered under the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage for those UNESCO Member States that have ratified this international instrument. The Convention protects all shipwrecks lying more than 100 years under the oceans, and will prove very useful in the fight to preserve them.

The papers featured in this publication are the results of the UNESCO Scientific Conference held in Bruges on 26 and 27 June 2014. They highlight the extent and importance of WWI underwater cultural heritage, new information resulting from recent research and ongoing projects aimed at protecting, preserving and researching it. The years 2014 – 2018 will provide an excellent opportunity to emphasize the significance of WWI underwater cultural heritage. The papers published herein, reflecting the opinions of numerous experts in the fields of underwater archaeology and cultural heritage management, represent a good starting point in this campaign.



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Section I.

The Underwater Cultural Heritage of World War I

The naval battles of the First World War took place over a very wide area. They gave rise to large, uninterrupted battles, such as Jutland, which pitted the British Navy against its German rival on 31 May and 1 June 1916 in the North Sea near the Danish peninsula of Jutland. Another clash of similar scale occurred at the battle of Gallipoli (from 25 April 1915 to 9 January 1916).

The conflict was characterized primarily, however, by small-scale battles, submarine attacks and naval blockades. Thus, the naval blockade of Germany, led by the British Royal Navy from 1914 onwards to halt attempts to supply Germany and its allies by sea, is considered a key element in the ultimate victory of the Allies. Germany, which in fact largely depended on imports to feed its population and fuel its industry, was hit hard by this embargo.



Figure 1. The War Balloon, a steamer sunk during WWI. © Nicolas Job

During the conflict, British naval forces mobilized some 11,000 war vessels. In total, approximately 250 of those vessels and some 850 auxiliary vessels sunk. More than 74,000 sailors and 15,300 men of the Merchant Navy lost their lives. On the German side, almost 200 submarines and hundreds of warships were lost. The total casualties amounted to 34,836 men.

Such battles were not limited to the North Sea, and many lives were also lost in the Mediterranean, the Indian Ocean, and in the waters off China, Japan and Australia.

These vessels that sank with their crews a century ago remain at the bottom of the ocean. This underwater cultural heritage is a major witness to history. It is, however, little protected, scarcely researched, and insufficiently known.

This section presents a number of papers discussing specific examples of WWI underwater cultural heritage that have been researched recently. These papers demonstrate the great variety of this heritage and the important lessons that can be learned, as well as the connections that can be made between the past and the present.



The History and Underwater Archaeology of World War I: The Case of the Operations of U-35 off the Coast of Algarve, Portugal

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The First World War was tragically unprecedented in many aspects: the scale of destruction, the number of dead and the technology of war. Its cruelty still surprises us to this day.

Submarine warfare was one of the unprecedented aspects of the conflict that brought the war to the sea, especially in the North Sea, the Mediterranean and the North Atlantic. This new kind of naval warfare affected not only the Central and Entente powers, but all those countries that traded with them. As such, scores of people from various nations and cultural backgrounds were dragged into the conflict, many of whom subsequently lost their lives.

Nations tried to regulate naval warfare at the end of the nineteenth century, through the Declaration of Paris (1856)¹ and the Hague Conventions (1899 and 1907), which stated that passenger ships could not be sunk, and that merchant ships' crews should be taken to safety before any military action. It is relevant to know that, according to the Prize Rules, life boats were not considered as safe in such cases, unless in close proximity to land. The contraband of war goods was prohibited, and merchant ships were required to stop to present papers and undergo cargo inspection.

Merchant ships would be sunk on any suspicion of involvement with the enemy, regardless of their flag. The ship's captain was to be taken as a prisoner.

Nevertheless, Germany intermittently implemented unrestricted submarine warfare against the merchant ships of Britain and its allies between 1915 and 1918. In fact, it was this submarine warfare that ultimately brought the United States into the war, with the sinking of the *Lusitania* serving as a major catalyst.

At the beginning of the First World War, neither German nor British naval officers believed in the possibility of using submarines on long unescorted oceanic missions. The first U-Boats operated, with escorts, close to home bases

¹ The Declaration of Paris was intended to establish maritime law for times of peace, which would also be applicable during times of war.

such as the Heligoland Islands (Helgoland), to which they returned after a day on patrol. Their primary mission was to detect and warn the German admiralty of the arrival of the English Grand Fleet, which was expected to descend through the North Sea for an invasion of the German coast.

The first sign of change came on 6 August 1914, when an unescorted scouting formation of U-boats was sent into the North Sea up to the latitude of the Norwegian Orkneys. This unprecedented mission was planned and executed by the submarines *U-5*, *U7*, *U-8*, *U-9*, *U-13*, *U-14*, *U-15*, *U-16*, *U-17* and *U-18*.

Not surprisingly, the first encounter between German submarines and British warships happened just some days later, off Fair Island, on 8 August, when *U-15* fired a torpedo at HMS *Monarch*, with no success. The next morning, *U-15* was cut in two by the bow of the light cruiser HMS *Birmingham* in the British counterattack.

The lack of faith in submarine warfare increased with the result of this first encounter.

But on 5 September, *U-21* sank the first ship ever to be sunk by self-propelled torpedo fired from a submarine, the scout vessel HMS *Pathfinder*.

The first attack without warning on an unarmed merchantman occurred on 26 October 1914, when SS *Amiral Ganteaume*, was attacked off Cape Gris Nez, by *U-24*. The ship did not sink, but 40 of the 2,500 Belgium refugees aboard the ship were killed.

The tremendous success of *U-9*, commanded by Otto Weddigen, on 22 September, with the sinking of no less than three large, but obsolete, *Birmingham*-class cruisers, HMS *Aboukir*, HMS *Cressy* and HMS *Hogue*, was therefore a complete surprise for both sides. This event opened a new era in naval warfare that forcibly introduced a new way of conducting war at sea. England and France had no other choice then but to deploy large numbers of anti-submarine destroyers to accompany their naval and merchant vessels. Such measures, on the British side, were only taken in 1915 in the case of the Grand Fleet, and in 1916 for screening cruisers. However, it was not the Fleet casualties that triggered British concern, it was the alarming rate of goods sinking with the merchant fleet, especially during the 1915 German campaign against trade and the German unrestricted submarine warfare against merchant shipping, which began in 1917.

This first phase was now complete. The Germans believed in the capabilities of their submarine flotillas, and the British feared them. To stem the tide of German success, the convoy system was implemented for the first time in

1917, with merchant convoys being escorted by warships and armed merchant vessels in convoy formation, with the added advantage of depth charges. These measures, among others, would prove quite efficient against submarines.

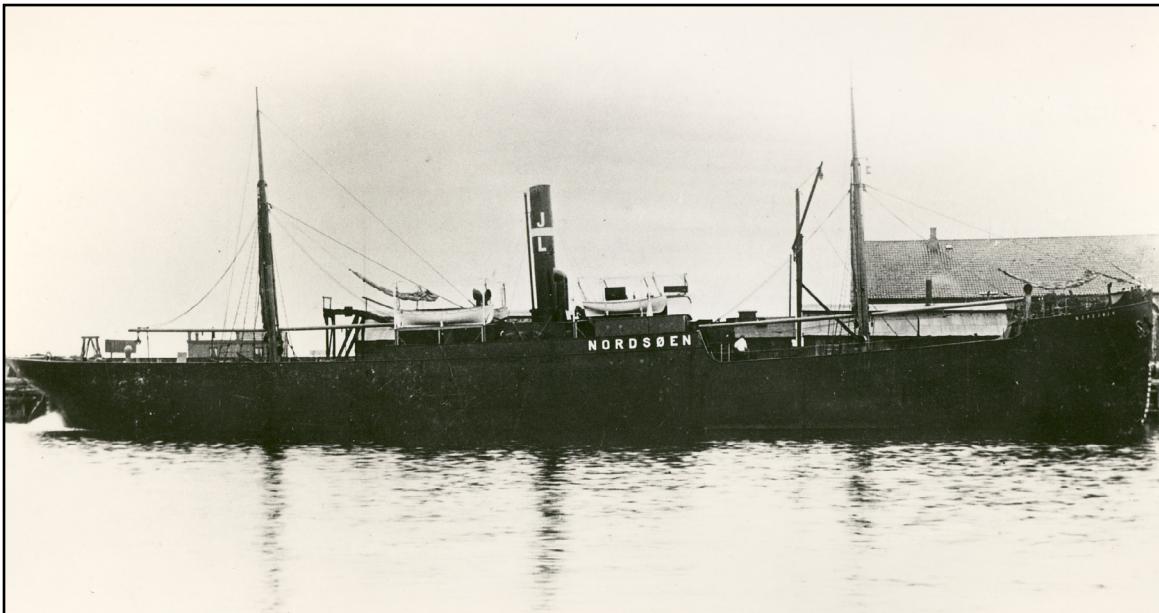


Figure 1. SS Norsøen © M/S Museet for Søfart (257:55)

The March-May 1917 U-35 Mission and Cape St. Vincent, Sagres Attacks on 24 April²

The trade route between the Mediterranean and the British Isles, with Gibraltar as a key point, was a very busy and important sea route for the Allied Powers, linking the Eastern front with England. Because of its importance, the German Imperial Navy reinforced the Austro-Hungarian Navy's submarine force by establishing U-Boat forces at the Adriatic ports and the naval bases of Pola and Kotor (Cattaro).

It was in this context that on 31 March 1917, SM *U-35* set out from Kotor (Cattaro). It was part of the Austro-Hungarian Empire at the time, commanded by '*the ace of aces*', Lothar Von Arnauld de La Perière (1886-1941).

Even though *U-35* had left its homeport with several battery problems, it managed to conduct a long-distance mission that lasted until 6 May, during which it sank 23 ships and avoided a torpedo attack by an enemy submarine.³ During this mission, La Perière passed through the Straits of Gibraltar on the

² The account presented here is based the Imperial War Museum monograph on the *U-35* footage, Lloyd's War Losses, the Kriegstagebuch of *U-35* and the Diário Náutico of the *Galgo*.

³ This is not the attack by the French submarine *Farady*, which fired three torpedoes at *U-35* on 6 November of 1917. That time one of the torpedoes was fired at low depth and hit the bridge of *U-35* without exploding after jumping over the waves.

evening of 12 April, and made for Cape St. Vicent, Sagres, Portugal, sinking several ships during the transit.

In the early light of 24 April, *U-35* was just South of Sagres Cape, where it halted two steamers under British charter. At 08.50 the 1,055 ton Danish *SS Nordsöen* (Figure 1), bound from Bergen for Genoa with a cargo of herrings, and at 09.15 the 1,667 ton Norwegian *SS Torvore*, on route from Swansea for Naples with a cargo of coal. As usual, La Perière used *U-35*'s deck gun and demolition charges to send his prey to the bottom.⁴ With the use of demolition charges placed by the *U-35*'s crew, *SS Torvore* sank immediately, but *SS Nordsöen* remained afloat.

As *U-35* engaged these merchant ships, it was attacked by what La Perière thought to be an armed Portuguese fishing boat. It was, however, the armed Portuguese steam tugboat *Galgo*,⁵ commanded by First Lieutenant Alberto Carlos dos Santos. *U-35* exchanged gunfire with the vessel, with no consequences for either, as La Perière was able to keep outside the range of the *Galgo*'s light gun.⁶

Not being able to engage the submarine, on 24 and 25 April, the Portuguese tugboat rescued the crews of the sunken steamers, delivering them to Lagos.

Apparently that day, the *Galgo* was the only armed vessel operating in the area, although during the night before, an English naval force of one auxiliary cruiser and four torpedo boats passed nearby, sailing SE.⁷

After avoiding the *Galgo*, *U-35* then pursued three Spanish steamers, unintentionally hitting one of them, *SS Triana*, with a warning shell. All three ships - *SS La Castreja*, *SS Cataluña* and the damaged *SS Triana*, with one wounded and one dead from its crew, were released after inspection.

At 10.40, another British charter ship was halted and sunk. This time it was the 3,715 ton Norwegian *SS Vilhelm Krag*, sailing on ballast from Genoa to Barry.

4 *U-35* had two 105 mm guns mounted on the deck, with about 550 rounds.

5 The *Galgo* was built in Glasgow in 1857, and belonged to João António Júdice Fialho. It was commissioned on 27 September 1916 by the Portuguese Navy the south coast, from Lagos to Cap St. Vincent, a huge area for the 25.59 m 82.99 ton tugboat armed with a single 37 mm gun powered by a 200 psi tubular boiler and a 45 nominal horsepower double cylinder compound steam engine.

6 The day before, while passing the same area on transit to the West coast of Portugal, a watchman had heard the sound of a propeller in the water, without having seen any vessel; the sound had surrounded the ship and then disappeared. With the engagement with *U-35* the next day, the conclusion was that it would have been that same submarine.

7 Usually, either a British or French naval force patrolled the area, being anchored at Baleira, near Cape St. Vincent.

This was in spite of the intervention of the French armed ship *SS Caravellas*, which exchanged fire with *U-35*. Although being low on shells, La Perière decided to sink the Norwegian steamer by gunfire (Figure 2), before proceeding after the French vessel, which managed to escape its hunter.



Figure 2. *U-35* sinking a steamer by gunfire. © IWM (Q 24072)

Another steamer was halted, inspected, but this time released, as it was the neutral Spanish *SS Elvira*.

Meanwhile, *SS Nordsöen* remained afloat, as mentioned before, but adrift and abandoned by its crew after the morning attack, it went aground on the Portuguese coast, and needed an extra charge to be destroyed.

Another Spanish steamer, *SS Italica*, was halted, inspected and released.

That afternoon, at 16.10, the 265 ton Italian sailing ship the *Bieneimé Prof. Luigi*, which was sailing from Genoa to Fowey with a cargo of China clay, was halted, inspected and sunk.

By then, *U-35* had only 24 shells and no torpedoes, and La Perière decided to return to home base. The U-Boat passed back through the Straits of Gibraltar that same evening, sinking no more ships on the way back to Kotor (Cattaro), where it arrived 6 May, after 36 days at sea.

As usual for La Perière, all four ships sunk at Cape St. Vincent's were sunk, without firing a single torpedo, by gunfire or demolition charges set by his crew. All the ships were properly recorded in the *Lloyd's War Losses records*.

On this 36-day mission *U-35* sailed 5,551 nautical miles, fired all 9 torpedoes,

fired 541 10.5 mm shells and used 29 demolition charges. The allies lost 23 ships, for a total of 67,989 tons. 16 ships were from enemy countries (12 British and four Italian) and seven from neutral countries (three Greek, two Norwegian, one American and one Danish), with 44 lives lost.

This single U-Boat mission demonstrates the multinational and multicultural nature of the submarine warfare of the First World War, which is especially relevant from the perspective of culture and heritage.

In this mission, *U-35* had at least one cameraman on board, his name is unknown.⁸ A lot of still shots were taken and a film was made, both survived, being captured by British intelligence. The first edited Allied counterpropaganda commercial cinema version, based on the original movie, was released by the British at the end of October 1919.⁹

U-35

Between 1911 and 1915, 29 *U-23* class U-boats were built (*U-23* to *U-41*), *U-35* being one of the latest. This class was very similar to the Second World War Type VII, the backbone of the German submarine warfare, and was considered a very good ocean-going boat.

U-35 was launched on 18 April 1914 at Krupp's Germania dockyard in Kiel and commissioned on 3 November. With an overall length of 64.7 m and a breadth of 6.32 m, it was powered by a 6 cylinder diesel engine with 1,850 EHP on the surface, and 2 battery-powered electric motors with 1,200 EHP submerged, with maximum speeds of 16.4 knots and 9.7 knots respectively. It could dive in less than a minute, after improvements to the original design, with a maximum operating depth of 50 m.

It had four 50 cm torpedo tubes, two at the bow and two at the stern, and carried 9 torpedoes. Initially it was armed with a 7.5 cm gun, first upgraded to an 8.8 cm, and later, in 1916, with a 10.5 cm gun, carrying more than 500 shells.¹⁰

For the March/May 1917 mission, La Perière brought with him a very skilled gunlayer from the High Seas Fleet, which may explain *U-35*'s exceptional success.

8 La Perière mentions only one, but some sources also mention a photographer.

9 The Exploits of a German Submarine (*U-35*) Operating in the Mediterranean (1919)

10 In the Imperial War Museum photo Q_24049 of *U-35* off Cattaro (1917), it is fitted with only one gun at the bow, but at some time it was fitted with two guns, one at the bow and another at the stern, as is the case in the photo from Richard Berger's photo album, that shows *U-35* in Brioni (No date).

Until early 1917, when the unrestricted warfare order was issued, it was common for submarines to save their torpedoes and sink their prey with gunfire or demolition charges, after unloading water, supplies and fuel from the ship. La Perière, however, continued using the ‘old ways’, which allowed him to considerably extend his missions.

With these rules, the crew was put to ‘safety’ and sometimes ship’s captains were taken prisoner on the submarine (Figure 3). They were very well treated, as we can understand from the testimony of William McLellan Hunter, Master of SIS *Patagonier*, who appreciated the way he was treated by *U-35*’s crew during his 23 days of captivity.



Figure 3. Crew of a sunken steamer being interrogated from the deck of the German submarine *U-35*. May 1917. © IWM (Q 20378)

He and another four captains, not from those vessels sunk at Cape St. Vincent, were taken prisoner on board *U-35*.

All of them were not only captains of British ships, but also of armed ships, thus combatants. Their imprisonment was a way of depriving Britain of its experienced fighting merchant captains.

U-35’s total crew was, theoretically, 4 officers and 31 men, although this could be significantly different during the war. With the extra prisoners on board, it would have been a very crowded submarine (Figure 4).

U-35’s first commander was Kapitänleutnant Waldemar Kophamel, until his promotion to Flotillenchef (Chief of the Flotilla), with Lothar Von Arnauld de

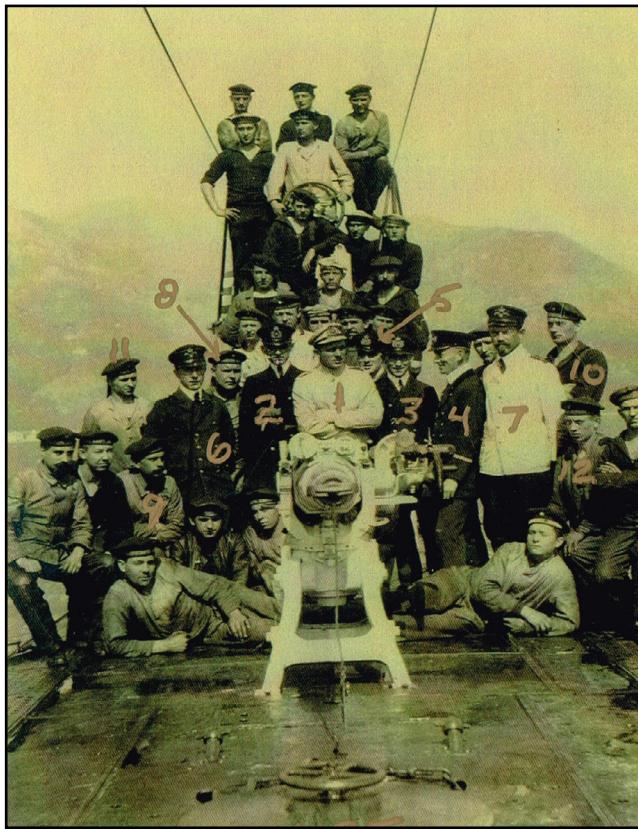


Figure 4. 1916 U-35's crew
© Courtesy of Allan Hunt

1-Kapt LT Lothar Von Arnould de La Perière;
2-OBLTN ZS Otto Launburg;
3-OBLTN ZS Horst Obermüller;
4-OBERINGENIER Hans Fechter;
5-OBERLYN ZS Wolfgang Stein Bauer;
6-OB MADSCH MT. Hoch*;
7-OB STM Albert Neumann*;
8-OB MASCH Rochner;
9-OB BTS MT. Richard Berger;
10-Ratjens*;
11-Lehnert*;
12-Karl Kettelhut*.

*Austro-Hungarian Navy

La Perière assuming *U-35*'s command after him. On 17 March 1918, La Perière handed over command and was given a new command, the newly constructed *U-139*.

In addition to its brilliant role in the war on trade, *U-35* undertook some important diplomatic missions, such as one to Cartagena, 21 June 1916, to deliver a personal letter from the Kaiser to the King of Spain.

U-35 survived the war, sinking 224 ships, nearly 536,000 tons, and was broken up at Blyth in 1919-20.

The *U-35* Sagres Project

Almost 10 years ago, a diver named Paulo Costa suggested the relation between three wrecks and the *U-35* mission at Cape St. Vincent, Sagres. From that moment forward, the wreck locally called '*Vapor das 19*' or '*Bolo da Noiva*' ('19 fathoms steamer' or 'Bride's Cake', because the wreck lies 19 fathoms deep (35 m) or because of the fishing nets caught in the wreck's structure) and the wreck that lies 34 m deep known as '*Vapor da Luz*' ('Light Steamer', because of its location near Baía da Luz, Light's Bay), became known as SS *Torvore* and SS *Vilhelm Krag*. Additionally, the unknown shallow wreck near the shore became known as the SS *Nordsöen*. Looking at the *U-35* War Diary (*Kriegstagebuch*) and comparing the wrecks and log entries for these ships, the geographic

coordinates matched, so we now believe there is a very strong possibility of a correlation between these wrecks and those vessels sunk by *U-35*. Nevertheless, archaeological research must be conducted in order to scientifically determine the identities of these vessels, especially because several other ships were sunk in the area, particularly during WWII.

The fourth sunk ship, the 110 ft long Italian brigantine *Bieneimé Prof. Luigi*, according to the War Diary entry, should be approximately 10 nautical miles south of Cape St. Vicente, 650 m deep, in a very busy Sea Lane.

In this context, a historical-archaeological project was designed and is being conducted by the Portuguese Navy Research Centre (CINAV), with support from Vila do Bispo Municipality and the diving centre SUBNAUTA.

The main objectives are: research into the history of the events - both from a military perspective considering the U-Boats campaign, and from a human perspective considering those aboard the sunken ships and those ashore, archaeological survey and research into the four wrecks and the consideration of the possibility of their identification as those vessels sunk by *U-35*, mainly through the analysis of their propulsion machinery and the notable features of their structures.

The project started with the search for the sailing ship *Bieneimé Prof. Luigi* in a fortunate opportunity to test multibeam sonar and the ROV *LUSO* during an *EMEPC Estrutura de Missão para a Extensão da Plataforma Continental* (Task Group for the Extension of the Continental Shelf) mission on board the Portuguese Navy Hydrographic Ship NRP *Gago Coutinho*. The War Diary entry for the ship puts it on a muddy bottom, 650 m deep, which represents a set of problems. Apart from the depth at which the vessel lays, the other major problem is due to the nature of the ship's cargo, China clay, which could have completely covered the wreck. If the cargo of China clay, mixed with the sediment, is covering the ship's structure or the ballast mound, the wreck could be easily mistaken for a natural feature unless some part of the ship's structure remains uncovered.

Apparently this is the case, because on the first search that was conducted, no clear evidence of the wreck was discovered, apart from an unidentified two metre long wooden structure found on the presumed sinking location. However, the first visual analysis of this structure did not allow us to positively connect it to the ship in question.

Due to the multicultural and multinational context mentioned earlier, we intend to research the fates of the sunken ships' crews from the moment they reached shore, and the impact the sinkings might have had in their countries,

in Portugal and in the relationships between nations.

In this line of research, we located, in the United States of America, a great nephew of a crewmember of *U-35*, *Oberbootsmatt* Richard Berger (Figure 5), who immigrated to that country after the end of the war. For this reason, we are presently working, with the kind collaboration of Allan Hunt, on a biography of Richard Berger and a testimony of his service on *U-35*. As Berger was a German High Seas Flotilla gunner, it might have been him that sank SS *Vilhelm Krag* by gun fire that day.

The project will additionally contribute to external projects and will integrate multidisciplinary resources and scientific areas: the *Stroke Project*, which is intended to determine the possible relationship between the stroke and height of compound steam engines; to test methodologies for applying electro-corrosion protection *in situ* in accordance with preservation methodologies for large metallic underwater cultural heritage; the application of remote sensing methodologies and ROV operation at great depths around underwater archaeological heritage, and several additional projects and approaches.

Finally, we would like to underline that all aspects of the project are oriented primarily towards the general public and to the fruition of the wrecks and the local history. We also hope to be able to return the cultural heritage to the local, national and international community as cultural and identity values, in accordance with the UNESCO Underwater Cultural Heritage principles, as stated and comprehended in the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage, which Portugal ratified, and which on 24 April 2017 will receive these four wrecks under its protection.

This project is also intended to build an extensive number of initiatives with outside partners for public, academic and scientific publishing, a permanent exhibition enriched with periodic additions and cultural initiatives, to adopt these wrecks in the spirit of the *Adopt a Wreck* scheme of the Nautical Archaeology Society, and to publish, in 2017, a full dedicated monograph



Figure 5. OLive footage from the ROV Luso, of the wooden structure, found on the location of the Italian Brigantine sinking. © Augusto Salgado

commemorating the 100th anniversary of the sinking of these four vessels.

The project is very well aware and will be focusing at all times on '*the importance of underwater cultural heritage as part of the cultural heritage of mankind and particularly important element in the history of peoples, nations and their mutual relations.*'

Conclusion

The *U-35* mission at Cape St. Vicent, Sagres, Portugal, is an exceptionally rich episode of the First World War submarine warfare, highlighting the Portuguese Navy's lack of defensive ships to defend the coast, but it also much more than that.

It is a multi-national episode of war that occurred with ships from several European nations engaging in Portuguese territorial waters, so close to shore that the national newspapers mentioned that inhabitants watched from the cliffs as *U-35* halted, inspected and sank these ships on 24 April 1917. Additionally, German and Portuguese warships clashed with gunfire, albeit timidly, on the Portuguese coast.



Figure 6. Oberbootsmann Richard Berger ©
Courtesy of Allan Hunt

Far away from the front lines in Belgium, or the Portuguese African colonies, where Portugal was engaging Germany much earlier than this event, war came to Portugal's continental doorstep.

It is then much more than a First World War episode, it is an episode of Human identity, culture and intangible heritage, more than just the tangible heritage in the form of the silent wrecks at the bottom of the ocean, it is multicultural and multinational.

The story behind a member of *U-35*'s crew, Richard Berger (Figure 5), through his great nephew Allan Hunt, and his great uncle's photo album, is a good example of this approach, that can be 'measured', if that is even

possible, through the enthusiastic and valuable contributions to our project of *U-35*'s history that Allan is given us, and we thank him a lot.

We are very committed to work this layer into the project, and to return the research information to the local community, and give them back the episode, in order to allow them to understand why and how those wrecks are at the bottom of their ocean, where they used to fish and lose their fishing nets. This is the only way to motivate public awareness to the need for the preservation of underwater cultural heritage.

Divers, hundreds of divers, visit these wrecks every year, especially in the summer, with no clue on their significance. It is critical that they receive proper cultural briefings and that the wrecks be prepared to receive them. There is no better 'army' to defend underwater cultural heritage than aware divers.

So, the project and the episode return a profit to local tourism and to the diving industry, not only locally, but if worked properly, internationally.

The Vila do Bispo Municipality is very well aware of the importance that a rich cultural history can have to the local development, and has supported the project since the first day. The same happens to the diving industry. SUBNAUTA, the leading diving center at Algarve, is also supporting the Project.

Of course we intend to work the wreck's archaeology, and the episode's history, to work the scientific and academic layer of the project, as the base of support. In this layer we intend to extend the Project to other scientific areas, like the electro-corrosion field of chemistry and *in situ* conservation of underwater archaeological artifacts, or the contribution of data to *The Stroke Project*, which is gathering data from steam engines all over the world, in order to test the possible relation between the engine stroke and engine height, as a correlation wreck identification methodology.

The project already received support from the Portuguese MoD, through the "100 anos Grande Guerra 1914-1918" Commission, the Municipality of Vila do Bispo and SUBNAUTA, although the general trend within the academic community, which has shown little interest in the archaeology of contemporary iron/steel steam ships. Even the Centenary of the First World War has seemingly been unable to motivate further academic research into this field.

As a State Party to the 2001 Convention, Portugal will soon be charged with the protection of numerous WWI era shipwrecks. Increased academic and governmental interest in these wrecks will be necessary to ensure that they are properly protected and managed to the standards of the Convention.

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