

= SM U @-@ 66 =

SM U @-@ 66 was the lead ship of the Type U @-@ 66 submarines or U @-@ boats for the Imperial German Navy (German : Kaiserliche Marine) during World War I. The submarine had been laid down in Kiel in November 1913 as U @-@ 7 , the lead ship of the U @-@ 7 class for the Austro @-@ Hungarian Navy (German : Kaiserliche und Königliche Kriegsmarine or K.u.K. Kriegsmarine) . They became convinced after the outbreak of war in August 1914 that none of these submarines could be delivered to the Adriatic via Gibraltar , and sold the entire class , including U @-@ 7 , to the German Imperial Navy in November 1914 .

Under German control , the class became known as the U @-@ 66 type and the boats were renumbered ; U @-@ 7 became U @-@ 66 , and all were redesigned and reconstructed to German specifications . U @-@ 66 was launched in April 1915 and commissioned in July . As completed , she displaced 791 tonnes (779 long tons) when surfaced and 933 tonnes (918 long tons) submerged . The boat was 69 @. @ 50 metres (228 ft) long and was armed with five torpedo tubes and a deck gun .

As a part of the Baltic and 4th Flotillas , U @-@ 66 sank 24 ships with a combined gross register tonnage of 69 @, @ 967 in six war patrols . The U @-@ boat also torpedoed and damaged the British cruiser Falmouth in August 1916 . U @-@ 66 left Emden on her seventh patrol on 2 September 1917 for operations in the North Channel . The following day the U @-@ boat reported her position in the North Sea but neither she nor any of her 40 @-@ man crew were ever heard from again . A postwar German study offered no explanation for U @-@ 66 's loss , although British records suggest that she may have struck a mine in the Dogger Bank area .

= = Design and construction = =

After the Austro @-@ Hungarian Navy had competitively evaluated three foreign submarine designs , it selected the Germaniawerft 506d design , also known as the Type UD , for its new U @-@ 7 class of five submarines . The Navy ordered five boats on 1 February 1913 .

The U @-@ 7 class was seen by the Austro @-@ Hungarian Navy as an improved version of its U @-@ 3 class , which was also a Germaniawerft design . As designed for the Austro @-@ Hungarian Navy , the boats were to displace 695 long tons (706 t) on the surface and 885 long tons (899 t) while submerged . The double @-@ hulled boats were to be 228 @. @ 0 feet (69 @. @ 50 m) long overall with a beam of 20 feet 8 inches (6 @. @ 30 m) and a draft of 12 feet 5 inches (3 @. @ 79 m) . The Austrian specifications called for two shafts with twin diesel engines (2 @, @ 269 shp (1 @, @ 692 kW) total) for surface running at up to 17 knots (31 km / h ; 20 mph) , and twin electric motors (1 @, @ 223 shp (912 kW) total) for a maximum of 11 knots (20 km / h ; 13 mph) when submerged . The boats were designed with five 45 cm (17 @. @ 7 in) torpedo tubes ; four located in the bow , one in the stern . The boats ' armament was to also include a single 66 mm / 26 (2 @. @ 6 in) deck gun .

U @-@ 7 and sister boat SM U @-@ 67 were both laid down on 1 November 1913 , the first two boats of the class begun . Their construction was scheduled for completion within 29 to 33 months , but neither U @-@ 7 nor any of her sister boats were complete when World War I began in August 1914 . Because the boats were under construction at Kiel on the Baltic Sea , the Austrians became convinced that it would be impossible to take delivery : the boats would need to be transferred into the Mediterranean past Gibraltar , a British territory . As a result , U @-@ 7 and her four sisters were sold to the Imperial German Navy on 28 November 1914 .

U @-@ 7 was renumbered by the Germans as U @-@ 66 when her class was redesignated as the Type U @-@ 66 . The Imperial German Navy had the submarines redesigned and reconstructed to German standards , increasing the surface and submerged displacements by 96 and 48 tonnes (94 and 47 long tons) , respectively . The torpedo load was increased by a third , from 9 to 12 , and the deck gun size was upgraded from the 6 @. @ 6 @-@ centimeter (2 @. @ 6 in) size originally specified to 8 @. @ 8 centimeters (3 @. @ 5 in) .

= = Early career = =

U @-@ 66 was launched on 22 April 1915 . On 23 July , SM U @-@ 66 was commissioned into the Imperial German Navy under the command of Kapitänleutnant (Kptlt .) Thorwald von Bothmer , a 31 @-@ year @-@ old , thirteen @-@ year veteran of the Imperial German Navy . U @-@ 66 was assigned to the Baltic Flotilla (German : U @-@ boote der Ostseestreitkräfte V. Unterseeboots @-@ Halbflottille) on 17 October .

In late September , the British submarine flotilla in the Baltic began a submarine offensive against German ships , intending to deny free passage of cargo , especially iron ore , from neutral Sweden to Germany . In A Naval History of World War I , author Paul G. Halpern reports on part of the German response , which was an experiment involving U @-@ 66 . The U @-@ boat was towed behind an " innocent @-@ looking vessel " and connected to the host ship by a telephone line in addition to the towline . U @-@ 66 was able to cast off at a moment 's notice to attack an enemy submarine . Halpern does not report on any encounters by U @-@ 66 , nor does he provide any insight into the overall effectiveness of the plan . U @-@ 66 was not credited with the sinking of any vessels of any kind during this time . On 15 January 1916 , she was transferred from the Baltic Flotilla into the 4th Flotilla (German : IV . Unterseeboots @-@ Halbflottille) , where she joined her sister boats U @-@ 67 and U @-@ 68 .

= = Second German offensive = =

Germany began its second submarine offensive against shipping the month after U @-@ 66 joined the 4th Flotilla . As in the first submarine offensive , U @-@ boats were sent independently around Scotland to patrol the Irish Sea and the western entrance to the English Channel . The first reported activity of U @-@ 66 during this campaign reveals that she sank her first ship on 5 April 1916 . On that date she was in the vicinity of Fastnet Rock and came upon the 3 @,@ 890 @-@ ton British refrigerated cargo ship Zent headed from Garston to Santa Marta in ballast . U @-@ 66 torpedoed Zent 28 nautical miles (52 km ; 32 mi) from Fastnet and sank the ship with the loss of 49 crewmen ; the master and nine sailors were rescued and landed at Queenstown . Over the next two days , U @-@ 66 dispatched two French sailing vessels , the 151 @-@ ton Binicaise , and the 397 @-@ ton fishing smack Sainte Marie west of the Isles of Scilly . On 8 April , von Bothmer and U @-@ 66 sank the Spanish @-@ flagged Santanderino 18 nautical miles (33 km ; 21 mi) from Ushant . Santanderino , a 3 @,@ 346 @-@ ton ship built in 1890 , was sailing from Liverpool to Havana , and U @-@ 66 gave 15 minutes ' notice for all the passengers and crew to abandon ship ; four drowned during the evacuation . Santanderino 's 36 survivors were rescued by a Danish steamer and landed at a port on the Bay of Biscay .

U @-@ 66 continued her attacks on merchant shipping on 9 April with the sinking of three ships , the British steamers Eastern City and Glenalmond and the Norwegian ship Sjolyst . The 4 @,@ 341 @-@ ton Eastern City was sailing from Saint @-@ Nazaire to Barry Roads in ballast when she was shelled by U @-@ 66 and sent to the bottom 18 nautical miles (33 km ; 21 mi) from Ushant ; all of her crew survived and were landed by 11 April . U @-@ 66 's next victim was the 2 @,@ 888 @-@ ton Glenalmond sailing from Bilbao to Clyde laden with iron ore . Torpedoes from U @-@ 66 sank the ship 27 nautical miles (50 km ; 31 mi) north of Ushant , but all her crew were saved . The 20 @-@ year @-@ old Norwegian steamer Sjolyst was sailing in ballast from Nantes to Manchester when U @-@ 66 sank her about two nautical miles (four kilometers) from where Glenalmond went down . Sjolyst 's master and entire crew were picked up by the British steamer Libra and landed at Cardiff .

U @-@ 66 finished out her busy month the next day by sinking one British and one Italian ship . U @-@ 66 sank the British steamer Margam Abbey 55 nautical miles (102 km ; 63 mi) southwest of the Lizard while the ship was en route from Bordeaux to Barry Roads in ballast . Margam Abbey , at 4 @,@ 471 tons , was the largest ship sunk by U @-@ 66 to that time . The Italian freighter Unione was sailing with a load of coal from Clyde for Genoa when U @-@ 66 torpedoed her off Land 's End . The sinking of Unione , with a tonnage of 2 @,@ 367 , raised U @-@ 66 's tally for the month of

April to eight ships with a combined tonnage of 22 @, @ 848 , all sunk in a six @-@ day span . Near the end of April 1916 , Admiral Reinhard Scheer , the new commander @-@ in @-@ chief of the High Seas Fleet (under which U @-@ 66 's 4th Flotilla operated) , called off the merchant shipping offensive and ordered all boats at sea to return , and all boats in port to remain there .

= = Grand Fleet ambushes = =

In mid @-@ May 1916 , Scheer completed plans to draw out part of the British Grand Fleet . The German High Seas Fleet would sortie for a raid on Sunderland , luring the British fleet across " ' nests ' of submarines and mine @-@ fields " . U @-@ 66 was one of nine U @-@ boats that put out to sea beginning on 17 May to scout the central North Sea for signs of the British fleet . Completing five days of scouting , U @-@ 66 , along with U @-@ 63 , U @-@ 51 , U @-@ 32 , sister boat U @-@ 70 , U @-@ 24 , and U @-@ 52 , took up position off the Firth of Forth on 23 May . The other two boats , U @-@ 43 and U @-@ 44 , were stationed off Pentland Firth , in position to attack the British fleet leaving Scapa Flow . All the boats were to remain on station until 1 June and await a coded message which would report the sailing of the British fleet . Unfortunately for the Germans , the British Admiralty had intelligence reports of the departure of the submarines which , coupled with an absence of attacks on shipping , aroused British suspicions .

A delayed departure of the German fleet for its sortie (which had been redirected to the Skagerrak) and the failure of five U @-@ boats , including U @-@ 66 , to receive the coded message warning of the British advance caused Scheer 's anticipated ambush to be a " complete and disappointing failure " . Although she had not received the advance warning of the coded message , U @-@ 66 was one of the two ambush U @-@ boats that actually saw parts of the British fleet . At 09 : 00 on 31 May , U @-@ 66 sent out a wireless report of eight battleships , light cruisers , and destroyers on a northerly course 60 nautical miles (110 km ; 69 mi) east of Kinnaird Head . U @-@ 66 was unable to make any attacks on the ships she reported due to the presence of screening vessels . The failure of the submarine ambush to sink any British capital ships allowed the full Grand Fleet to engage the numerically inferior High Seas Fleet in the Battle of Jutland , which took place 31 May ? 1 June .

The next mention of U @-@ 66 in sources is on 11 August , when she sank Inverdrue , a 613 @-@ ton three @-@ masted Norwegian bark . Inverdrue was carrying a load of pit props from Sandefjord to Hartlepool when she was sunk some 160 nautical miles (300 km ; 180 mi) east of Aberdeen .

Later in August , the Germans set up another ambush for the British fleet , when they drew up plans for another High Seas Fleet raid on Sunderland (as had been the original intention in May) . The German fleet planned to depart late in the day on 18 August and shell military targets the next morning . U @-@ 66 was one of 24 U @-@ boats that formed five lines (German : Standlinie) in the expected paths of any Grand Fleet sorties . Standlinie II , consisting of U @-@ 63 , U @-@ 49 , U @-@ 45 , U @-@ 66 , and U @-@ 64 , formed a 35 @-@ nautical @-@ mile (65 km ; 40 mi) front 12 nautical miles (22 km ; 14 mi) off Flamborough Head . The other four Standlinie formed similar lines to the north and south ; all were to be in place by 08 : 00 on 19 August . Once again , British intelligence had given warning of the impending attack and ambush , causing the Grand Fleet to sortie at 16 : 00 on 18 August , five hours before the German fleet sailed .

At 04 : 45 on 19 August , U @-@ 66 fired a spread of two torpedoes at the British light cruiser Falmouth from a distance of 1 @, @ 000 yards (910 m) . Both torpedoes scored hits on Falmouth 's starboard side , flooding the warship forward and aft . The cruiser 's mechanical spaces ? located amidships ? remained intact and in working order , so she was steered to the Humber with an escort of three destroyers and an armed trawler . U @-@ 66 tried repeatedly to deal the stricken cruiser a coup de grâce , but narrowly missed with torpedoes on several further attacks . U @-@ 66 broke off her pursuit after two hours , having endured multiple attacks from Falmouth 's screening destroyers . One depth charge attack blew out all the lights on U @-@ 66 and knocked clips off two hatches that caused the boat to flood with a considerable quantity of water before the leaks could be sealed . Falmouth continued under tow at 2 knots (3 @. @ 7 km / h) until she crossed Standlinie II and was attacked and sunk by U @-@ 63 around noon the next day .

Records on U @-@ 66 next appear in late 1916 , when she is reported as one of the U @-@ boat escorts assisting the German merchant raider Wolf into the North Atlantic . Wolf , under the command of Karl August Nerger , began a 15 @-@ month raiding voyage on 30 November that took the ship into the Indian and Pacific Oceans before a safe return to Germany . U @-@ 66 's specific locations for this duty are not reported , but on 11 December she sank a Norwegian steamer and a Swedish sailing ship . U @-@ 66 shelled the 1 @,@ 090 @-@ ton Norwegian steamer Bjor 4 nautical miles (7 @.@ 4 km ; 4 @.@ 6 mi) southwest of the Norwegian island of Ryvingen . The ship and her general cargo , headed from Göteborg to Hull , were sent to the bottom without loss of life , and her crew was safely landed by 14 December . The same day , U @-@ 66 also sank the 311 @-@ ton Swedish sailing ship Palander off the island of Oxö , near the town of Tornio on the Sweden ? Finland border .

= = Unrestricted submarine warfare = =

From the early stages of the war the Royal Navy had blockaded Germany , preventing neutral shipping from reaching German ports . By the time of the so @-@ called " turnip winter " of 1916 ? 17 , the blockade had severely limited imports of food and fuel into Germany . Among the results were an increase in infant mortality and as many as 700 @,@ 000 deaths attributed to starvation or hypothermia during the war . With the blockade having such dire consequences , Kaiser Wilhelm II personally approved a resumption of unrestricted submarine warfare to begin on 1 February 1917 to help force the British to make peace . The new rules of engagement specified that no ship was to be left afloat .

U @-@ 66 's first victim under the new rules was encountered on 1 March . The Norwegian steamer Gurre , reported as 1 @,@ 733 tons , was crossing the North Sea while steaming from Narvik and Fredrikshald for Hull with a cargo of iron ore . U @-@ 66 torpedoed her at position 59 ° 30 ? N 2 ° 0 ? E , sending the doomed Norwegian ship into the murky depths with 20 of her crew . The same day , U @-@ 66 encountered another Norwegian cargo ship , the 1 @,@ 005 @-@ ton Livingstone , headed from Skien to Charente with a cargo of ammonium nitrate . Livingstone 's cargo , used in the making of explosives and munitions , was too valuable to destroy . U @-@ 66 's captain seized the ship as a prize east of Shetland . Further details of the encounter do not appear in sources , but it is known that the 11 @-@ year @-@ old Livingstone not only survived the war , but remained in service under a variety of names until she was scrapped in 1962 .

In late March , U @-@ 66 sank another two vessels . The 3 @,@ 597 @-@ ton cargo ship Stuart Prince was headed from Manchester and Belfast to Alexandria with a general cargo when U @-@ 66 came upon her 85 nautical miles (157 km ; 98 mi) off Broad Haven , County Mayo . U @-@ 66 's torpedo attack was successful , sinking the ship and killing 20 men , including the ship 's master . Five days later , U @-@ 66 encountered the five @-@ masted bark Neath 28 nautical miles (52 km ; 32 mi) south by east of Fastnet Rock . Equipped with an auxiliary triple @-@ expansion steam engine , Neath was the former German bark R. C. Rickmers which had been seized by the Admiralty at Cardiff in August 1914 . After U @-@ 66 torpedoed Neath at 08 : 45 , the bark , en route from Martinique to Le Havre with a load of sugar , sank in seven minutes . The master of Neath was taken prisoner , but had been released and landed at Queenstown two days later .

During April 1917 , German U @-@ boats sank 860 @,@ 334 tons of Allied and neutral shipping , a monthly total unsurpassed in either of the two world wars . U @-@ 66 's sole contribution to this figure came when she torpedoed the tanker Powhatan 25 nautical miles (46 km ; 29 mi) from North Rona in the Outer Hebrides . The 6 @,@ 117 @-@ ton ship , which was carrying fuel oil from Sabine , Texas to Kirkwall , bested Margam Abbey as U @-@ 66 's largest ship sunk when she went down with 36 of her crew . As was done with the master of Neath , Powhatan 's master was taken prisoner aboard U @-@ 66 .

Although the monthly total of tonnage sunk by all U @-@ boats had peaked in April , the losses were over 600 @,@ 000 tons in each of May and June . U @-@ 66 did not contribute to the May tally but , with her most successful month since April 1916 , added to the June figures . On 5 June , U @-@ 66 torpedoed the 3 @,@ 472 @-@ ton Italian steamer Amor which was on her way to

Liverpool from Galveston ; Amor sank approximately 200 nautical miles (370 km ; 230 mi) from Fastnet Rock . The same day , Manchester Miller , a 4 @, @ 234 @-@ ton steamer sailing from Philadelphia for Manchester with a load of cotton , was sunk about 10 nautical miles (19 km ; 12 mi) away from Amor when she was hit by a torpedo from U @-@ 66 . Eight crewmen died in the attack ; the survivors , who included three Americans , were landed on 9 June .

Two days after the attacks on Amor and Manchester Miller , U @-@ 66 attacked two more British steamers . The 4 @, @ 329 @-@ ton Ikalis , carrying wheat from New York to Manchester , was torpedoed and sunk 170 nautical miles (310 km ; 200 mi) from Fastnet Rock . The cargo ship Cranmore , of 3 @, @ 157 tons , was headed to Manchester from Baltimore with a general cargo when torpedoed some 150 nautical miles (280 km ; 170 mi) northwest of Fastnet . Though the ship was damaged , Cranmore 's crew was able to beach her ; the ship was later refloated and re @-@ entered service .

U @-@ 66 sank her largest ship , the 6 @, @ 583 @-@ ton British steamer Bay State on 10 June . The Warren Line cargo steamer had departed from Boston (the capital of Massachusetts nicknamed , coincidentally , the " Bay State ") with a \$ 2 @, @ 000 @, @ 000 war cargo destined for Liverpool . U @-@ 66 intercepted the ship 250 nautical miles (460 km ; 290 mi) northwest of Fastnet and sank her , but there were no casualties among her crew of 45 . Four days later , U @-@ 66 encountered the Norwegian bark Perfect , laden with grain , headed from Bahía Blanca for Copenhagen . Perfect , which had been built in 1877 , was dispatched by U @-@ 66 's deck gun at position 60 ° 58 ' N 2 ° 18 ' E , east of Shetland .

On 17 June , Kptlt. von Bothmer was replaced by Kptlt . Gerhard Muhle as commander of the U @-@ boat . U @-@ 66 was the first (and ultimately only) U @-@ boat command for the 31 @-@ year @-@ old Muhle , who had been a classmate of von Bothmer when both had joined the Kaiserliche Marine in April 1902 . On 9 July , U @-@ 66 sank her first ship under her new commander , when she sent the Spanish steamer Iparraguirre to the bottom . The 1 @, @ 161 @-@ ton steamer was headed to Santander from Piteå and Bergen with a cargo of pitwood , when U @-@ 66 attacked her west of the Orkney Islands .

U @-@ 66 scored another success when she torpedoed and sank the outbound British steamer African Prince on 21 July 60 nautical miles (110 km ; 69 mi) north @-@ northwest of Tory Island . The freighter ? a Prince Line line @-@ mate of Stuart Prince , sunk by U @-@ 66 in March ? was carrying china clay from Liverpool to Newport News . The same day , U @-@ 66 also sank the 1 @, @ 322 @-@ ton British sailing ship Harold about 5 nautical miles (9 @. @ 3 km ; 5 @. @ 8 mi) from where African Prince went down . These two ships were the last sinkings credited to U @-@ 66 . During six successful patrols , U @-@ 66 had sunk 24 ships and seized a 25th as a prize , for a combined total tonnage of 69 @, @ 967 .

U @-@ 66 began her seventh and what was to be her final patrol on the morning of 2 September when she departed from Emden destined for operations in the North Channel . Shortly after noon on 3 September , U @-@ 66 reported a position in the North Sea that placed her beyond known British minefields , in what was her last known contact . A postwar German study offered no explanation for U @-@ 66 's loss . British records suggest that U @-@ 66 may have either struck a mine in an older minefield in the Dogger Bank area , or that a combination of destroyers , submarines , and anti @-@ submarine net tenders sank U @-@ 66 sometime between 1 and 11 October . Author Dwight Messimer discounts this latter theory as not being supported by operational details .

= = Summary of raiding history = =