

= Gazelle @-@ class cruiser =

The Gazelle class was a group of ten light cruisers built for the Imperial German Navy at the turn of the 20th century . They were the first modern light cruiser design of the Imperial Navy , and set the basic pattern for all future light cruisers in Imperial service . The design of the Gazelle class attempted to merge the fleet scout with the colonial cruiser . They were armed with a main battery of ten 10 @. @ 5 cm (4 @. @ 1 in) guns and a pair of torpedo tubes , and were capable of a speed of 21 @. @ 5 knots (39 @. @ 8 km / h ; 24 @. @ 7 mph) .

All ten ships served with the fleet when they were first commissioned , and several served on foreign stations in the decade before the outbreak of World War I. Most were used as coastal defense ships early in the war . Ariadne was sunk at the Battle of Heligoland Bight in August 1914 , Undine was torpedoed in the Baltic by a British submarine in November 1915 , and Frauenlob was sunk at the Battle of Jutland in May 1916 . The rest survived the war to see service with the Reichsmarine , with the exception of Gazelle , which was broken up in 1920 .

Niobe was sold to Yugoslavia in 1925 and renamed Dalmacija , and the rest of the cruisers were withdrawn from service by the end of the 1920s and used for secondary duties or broken up for scrap . Medusa and Arcona were converted into anti @-@ aircraft ships in 1940 and were scuttled at the end of World War II . Dalmacija was captured twice during the war , first by the Italians , who renamed her Cattaro , and then by the Germans , who restored the original name of Niobe . She ran aground in December 1943 and was subsequently destroyed by British Motor Torpedo Boats . Amazone was the only member to survive the war intact , as a barracks ship , and she remained in service until 1954 , when she was broken up for scrap .

= = Design = =

The Gazelle class was the first modern light cruiser design of the Imperial Navy . The design for the Gazelle class followed several intermediate types , including the Bussard class of unprotected cruisers and the unique vessels Gefion and Hela . They were intended to fulfill the requirements for a fleet scout and an overseas cruiser . The design was somewhat smaller than contemporary light cruisers , but the ships were nevertheless sturdy and powerfully armed for the period . These characteristics evenly balanced the requirements for the two roles envisioned for the class . According to the historian Eric Osborne , " [t] he light cruisers of the Gazelle @-@ class established a trend for future ships of this general design ... [they] carried little or no armor , the chief asset being speed . " Indeed , all future light cruisers built by the Imperial Navy generally followed the same pattern , with few fundamental changes .

= = = General characteristics = = =

The ships of the Gazelle class were 104 @. @ 10 to 104 @. @ 40 m (341 ft 6 in to 342 ft 6 in) long at the waterline and 105 meters (344 ft 6 in) long overall . The first seven ships had a beam of 12 @. @ 20 m (40 ft 0 in) and the last three were slightly wider , at 12 @. @ 40 m (40 ft 8 in) . They had a draft of 4 @. @ 11 to 5 @. @ 38 m (13 ft 6 in to 17 ft 8 in) forward and 5 @. @ 31 to 5 @. @ 69 m (17 ft 5 in to 18 ft 8 in) aft . They were designed to displace 2 @, @ 643 to 2 @, @ 706 metric tons (2 @, @ 601 to 2 @, @ 663 long tons) at a normal loading , and at full combat load their displacement rose to 2 @, @ 963 to 3 @, @ 180 t (2 @, @ 916 to 3 @, @ 130 long tons ; 3 @, @ 266 to 3 @, @ 505 short tons) . The ships ' hulls were constructed with transverse and longitudinal steel frames ; the outer hull wall consisted of wooden planks covered with a layer of Muntz metal to prevent fouling . The Muntz metal extended up to a meter above the waterline . The hull was divided into twelve watertight compartments and it had a double bottom that extended for 40 percent of the length of the keel . For the last three ships , their double bottom was lengthened to 46 percent of the hull .

All ten ships were crank and rolled severely . They were also wet in a head sea . After their modernizations , they tended to suffer from lee helm . Nevertheless , the ships turned tightly and

were very maneuverable . In a hard turn , their speed fell up to 65 percent . They had a transverse metacentric height of .5 to .63 m (1 ft 8 in to 2 ft 1 in) . The Gazelle class required a crew of 14 officers and 243 enlisted men , though for the last three ships , the number of enlisted men rose to 256 . They carried a number of boats , including one picket boat , one pinnace , two cutters , two yawls , and one dinghy .

== Machinery ==

Their propulsion system consisted of two triple @-@ expansion engines manufactured by the dockyards that built the ships . Gazelle 's engines were designed to give 6 @,@ 000 indicated horsepower (4 @,@ 500 kW) , for a top speed of 19 @.@ 5 knots (36 @.@ 1 km / h ; 22 @.@ 4 mph) , while the rest of the ships ' engines were rated at 8 @,@ 000 ihp (6 @,@ 000 kW) for 21 @.@ 5 knots (39 @.@ 8 km / h ; 24 @.@ 7 mph) . The engines were powered by eight coal @-@ fired water @-@ tube boilers of various manufacture , divided into two boiler rooms . The first three ships carried 500 tonnes (490 long tons) of coal , which gave them a range of 3 @,@ 570 nautical miles (6 @,@ 610 km ; 4 @,@ 110 mi) at 10 knots (19 km / h ; 12 mph) . The next four vessels carried slightly more , at 560 t (550 long tons) , which allowed them to cruise to the approximately same range , 3 @,@ 560 nmi (6 @,@ 590 km ; 4 @,@ 100 mi) , at the higher speed of 12 knots (22 km / h ; 14 mph) . The last three ships carried 700 t (690 long tons) of coal , which substantially increased their cruising radius , to 4 @,@ 400 nmi (8 @,@ 100 km ; 5 @,@ 100 mi) at 12 knots . The ships were equipped with three electricity generators that provided a total of 110 kilowatts at 110 volts .

== Armament and armor ==

The ships were armed with ten 10 @.@ 5 cm SK L / 40 guns in single mounts . Two were placed side by side forward on the forecastle , six were located amidships , three on either side , and two were placed side by side aft . The guns could engage targets out to 12 @,@ 200 m (40 @,@ 000 ft) . They were supplied with 1 @,@ 000 rounds of ammunition , for 100 shells per gun , though the allotment for the last three ships increased to 1 @,@ 500 rounds , or 150 per gun . They were also equipped with torpedo tubes . Gazelle had three 45 cm (17 @.@ 7 in) tubes with eight torpedoes ; one was submerged in the hull in the bow and two were mounted in deck launchers on the broadside . The rest of the class only had two 45 cm tubes with five torpedoes , and these were submerged in the ships ' hulls , on the broadside .

The ships were protected by an armored deck that was 20 to 25 mm (0 @.@ 79 to 0 @.@ 98 in) thick , with 50 mm (2 @.@ 0 in) thick sloping armor on the side . The armor consisted of two layers of steel with a single layer of Krupp steel . The Gazelle @-@ class cruisers were also equipped with cork cofferdams to increase buoyancy . The conning tower had 80 mm (3 @.@ 1 in) thick sides , with a 20 mm thick roof . The guns were protected by 50 mm (2 @.@ 0 in) thick shields .

== Construction ==

The ten ships of the Gazelle class were built between 1897 and 1904 , at various German dockyards , including private firms and government shipyards .

== Service history ==

The Gazelle @-@ class cruisers served in various capacities after their commissioning . Most of them served with the fleet reconnaissance force , though several served on foreign stations as well . Gazelle served abroad in 1902 ? 1904 , Thetis in 1902 ? 1906 , Niobe in 1906 ? 1909 , and Arcona in 1907 ? 1910 . Nymphe was also used as a training ship for naval cadets in addition to her fleet scout role , and Undine served as a gunnery training ship .

Due to their age , the Gazelles had been placed in reserve by 1914 , but after the outbreak of World

War I in August 1914 , they were mobilized for active service . Most were initially used as coastal defense vessels in the Baltic , but Frauenlob and Ariadne remained in service with the fleet . They both saw action at the Battle of Heligoland Bight on 28 August 1914 ; Frauenlob engaged and badly damaged the British cruiser HMS Arethusa , while Ariadne was sunk by several battlecruisers . Frauenlob soldiered on in the fleet reconnaissance forces until the Battle of Jutland on 31 May 1916 , when she was torpedoed and sunk by HMS Southampton in a ferocious night battle , with the loss of almost her entire crew . In the Baltic , Undine was torpedoed and sunk by the British submarine HMS E19 on 7 November 1915 .

The seven surviving ships were withdrawn from front @-@ line service in 1916 and disarmed , with the exception of Medusa , which retained six of her guns , and Thetis , which was rearmed with nine 10 @. @ 5 cm U @-@ boat guns for use as a gunnery training ship . The remaining seven cruisers survived the war and went on to serve in the new Reichsmarine , except for Gazelle , which was broken up for scrap in 1920 . The ships remained in service throughout the 1920s , but were all withdrawn by the early 1930s . Niobe was sold to Yugoslavia in 1925 and renamed Dalmacija , while Nympe and Thetis were scrapped in the early 1930s . Arcona , Medusa , and Amazone were used as barracks hulks for the rest of the 1930s .

After the outbreak of World War II , Medusa and Arcona were converted into floating anti @-@ aircraft batteries and defended German ports from 1940 to the end of the war , when they were scuttled by their crews on 3 May 1945 . Amazone meanwhile remained in service as a barracks ship through the end of the war . Dalmacija was captured by the Italians after the Invasion of Yugoslavia in April 1941 , renamed Cattaro , and pressed into service with the Italian Navy . She was then captured by the Germans after the Italian surrender in September 1943 , and returned to her original name , Niobe . The ship ran aground in the Adriatic in December 1943 and was destroyed by a pair of British Motor Torpedo Boats . Niobe , Medusa , and Arcona were broken up for scrap in the late 1940s , but Amazone lingered on as a barracks ship until 1954 , when she too was sold for scrapping .