

= Bussard @-@ class cruiser =

The Bussard class of unprotected cruisers were built for the German Kaiserliche Marine ( Imperial Navy ) in the late 1880s and early 1890s . The class comprised six ships : Bussard , the lead ship , Falke , Seeadler , Cormoran , Condor , and Geier . Designed for service in Germany 's colonial empire , the class emphasized a long @-@ range cruising radius and relatively heavy armament ; they were also the last cruisers in the Kaiserliche Marine to be equipped with an auxiliary sailing rig . The ships were equipped with eight 10 @.@ 5 @-@ centimeter ( 4 @.@ 1 in ) guns .

All six ships served abroad for the majority of their careers , primarily in Africa and the south Pacific , where they assisted in the suppression of uprisings such as the Boxer Rebellion in China and the Sokehs Rebellion in the Caroline Islands . Cormoran participated in the seizure of the Kiautschou Bay concession in China in 1897 , and Falke was involved in the Venezuela Crisis of 1902 ? 03 . Bussard and Falke were broken up for scrap in 1912 , but the remaining four ships were still in service following the outbreak of World War I in August 1914 .

Cormoran was based in Tsingtao with unusable engines ; she was scuttled in the harbor since she was no longer operational . Geier briefly operated against British shipping in the Pacific before having to put into Hawaii for internment by the then @-@ neutral United States . After the United States entered the war in April 1917 , she was seized and commissioned into the US Navy as USS Schurz ; she served as an escort until she was accidentally sunk following a collision with a freighter in June 1918 . Seeadler and Condor , meanwhile , had been converted into mine storage hulks after the start of the war . Seeadler was destroyed by an accidental explosion in 1917 . Condor was the only member of the class to survive the war , and she was scrapped in 1921 .

= = Design = =

The Bussard class was designed for service abroad in Germany 's colonial possessions , and were an improvement over the preceding Schwalbe class of unprotected cruisers . The design for the Bussard class was prepared in 1888 . The ships were significantly larger and faster than the Schwalbe class , but mounted the same battery of guns ? though only Bussard carried the same type of guns ? the rest carried a newer , quick @-@ firing model . They were also the last cruiser class in the German Kaiserliche Marine ( Imperial Navy ) to be equipped with a sailing rig ; the subsequent unprotected cruiser Gefion was entirely steam @-@ powered .

= = = General characteristics = = =

The ships of the Bussard class all differed slightly in their characteristics . The first two ships , Bussard and Falke , were 79 @.@ 62 meters ( 261 @.@ 2 ft ) long at the waterline and 82 @.@ 60 m ( 271 @.@ 0 ft ) long overall . They had a beam of 12 @.@ 50 m ( 41 @.@ 0 ft ) and a draft of 4 @.@ 45 m ( 14 @.@ 6 ft ) forward and 5 @.@ 63 m ( 18 @.@ 5 ft ) aft . They displaced 1 @,@ 559 metric tons ( 1 @,@ 534 long tons ) as designed and up to 1 @,@ 868 t ( 1 @,@ 838 long tons ) at full combat load . The next three ships , Seeadler , Condor , and Cormoran , were 79 @.@ 62 m ( 261 @.@ 2 ft ) long at the waterline and had the same overall length as their earlier sister ships . They had a beam of 12 @.@ 70 m ( 41 @.@ 7 ft ) and a draft of 4 @.@ 42 m ( 14 @.@ 5 ft ) forward and 5 @.@ 35 m ( 17 @.@ 6 ft ) aft . They displaced 1 @,@ 612 t ( 1 @,@ 587 long tons ) as designed and 1 @,@ 864 t ( 1 @,@ 835 long tons ) at full load . The last ship , Geier , was 79 @.@ 62 m long at the waterline and 83 @.@ 90 m ( 275 @.@ 3 ft ) long overall . She had a beam of 10 @.@ 60 m ( 34 @.@ 8 ft ) and a draft of 4 @.@ 74 m ( 15 @.@ 6 ft ) forward and 5 @.@ 22 m ( 17 @.@ 1 ft ) aft .

The cruisers ' hulls were constructed with transverse steel frames with yellow pine planking up to the upper deck . A layer of Muntz metal sheathing covered the hull to protect the wood from shipworm . The stem and sternposts were constructed with steel and timber . A bronze naval ram was fitted at the bow . The hull was divided into ten watertight compartments , and a double bottom was installed below the boiler rooms . The ships were good sea boats , but they rolled badly and the

sponsons for the main guns caused severe vibration . Since Geier was laid down after the other five ships entered service , she was redesigned slightly to discard the sponsons , and so she did not suffer from bad vibration . They were very maneuverable , except for turns into the wind when steaming at low speed . The ships had a crew of 9 officers and 152 enlisted men . They carried a number of smaller boats , including one picket boat , one cutter , two yawls , and two dinghies .

#### == Propulsion ==

Their propulsion system consisted of two horizontal 3 @-@ cylinder triple @-@ expansion steam engines powered by four coal @-@ fired cylindrical boilers ; the engines were rated at 2 @, @ 800 indicated horsepower ( 2 @, @ 100 kW ) and were placed in their own engine rooms . The engines drove a pair of 3 @-@ bladed screws that were 3 m ( 9 @. @ 8 ft ) wide in diameter . The boilers were divided into two boiler rooms and were trunked into a single funnel . The ships were fitted with an auxiliary schooner barque rig with a total surface area of 856 to 877 m2 ( 9 @, @ 210 to 9 @, @ 440 sq ft ) . Steering was controlled by a single rudder . Each ship was equipped with a pair of electricity generators with a combined output of 24 kilowatts ( 32 hp ) at 67 volts .

The propulsion system provided a top speed of 15 @. @ 5 kn ( 28 @. @ 7 km / h ; 17 @. @ 8 mph ) , though all six ships exceeded their design speeds while on sea trials , reaching between 15 @. @ 7 to 16 @. @ 9 knots ( 29 @. @ 1 to 31 @. @ 3 km / h ; 18 @. @ 1 to 19 @. @ 4 mph ) . The ships carried between 170 to 205 t ( 167 to 202 long tons ; 187 to 226 short tons ) of coal as designed , and they could accommodate up to 305 to 320 t ( 300 to 315 long tons ; 336 to 353 short tons ) of coal using additional storage spaces . This provided a range of between 2 @, @ 990 to 3 @, @ 610 nautical miles ( 5 @, @ 540 to 6 @, @ 690 km ; 3 @, @ 440 to 4 @, @ 150 mi ) at 9 knots ( 17 km / h ; 10 mph ) .

#### == Armament ==

The first ship was armed with eight 10 @. @ 5 cm K L / 35 guns in single pedestal mounts , supplied with 800 rounds of ammunition in total . They had a range of 8 @, @ 200 m ( 26 @, @ 900 ft ) . The five subsequent ships were equipped with newer quick @-@ firing SK L / 35 versions of the 10 @. @ 5 cm guns . These newer guns also had a longer range , of 10 @, @ 800 m ( 35 @, @ 400 ft ) . Two guns were placed side by side on the forecastle , two on each broadside ? one in a sponson and the other in a gun port ? and two side by side on the quarterdeck . Geier did not use sponsons for the second pair of guns , instead simply mounting them on the upper deck . The gun armament was rounded out by five revolver cannon . The first five ships were also equipped with two 35 cm ( 14 in ) torpedo tubes , both of which were mounted on the deck . Geier instead had larger 45 cm ( 18 in ) torpedo tubes . Each ship carried five torpedoes .

#### == Ships ==

#### == Service history ==

All six ships of the class spent the majority of their careers abroad , primarily in Germany 's colonial possessions in Africa and the Pacific . Seeadler visited the United States in March 1893 , along with the protected cruiser Kaiserin Augusta , for the belated celebrations for the 400th anniversary of Columbus 's crossing of the Atlantic . In July of that year , while assigned to the East Asia Division , Bussard and Falke assisted in the suppression of Mata 'afa Iosefo 's revolt in Samoa , along with a British corvette . Throughout the 1890s , Seeadler was assigned to Germany 's colonies in East Africa and Southwest Africa , where she suppressed local uprisings .

In November 1897 , Cormoran took part in the seizure of the Kiautschou Bay concession in the Shandong Peninsula in Qing China . Geier was present in the Caribbean during the Spanish ? American War in 1898 , though she took no active role in the conflict . Between 1898 and 1900 ,

Bussard and Seeadler were modernized in Germany . In 1900 , Seeadler participated in the suppression of the Boxer Rebellion in China , including a blockade of the Chinese coast . In December 1902 , Falke and the protected cruiser Vineta joined British forces in the Venezuela Crisis of 1902 ? 03 after Venezuelan forces seized a British merchant ship . The two cruisers helped British warships bombard Venezuelan coastal fortifications and blockade the coast .

Cormoran and Geier were modernized between 1907 and 1909 ; only Falke and Condor never returned for major dockyard work . Condor and Cormoran suppressed the Sokehs Rebellion in the Caroline Islands in January 1911 , along with the light cruiser Leipzig . In 1912 , when the Second Balkan War broke out , Geier was stationed in the eastern Mediterranean Sea to observe the hostilities . Both Bussard and Falke were stricken from the naval register on 25 October 1912 and broken up the following year , at Hamburg and the Kaiserliche Werft in Danzig , respectively .

After the outbreak of World War I in August 1914 , Seeadler was converted into a mine storage hulk in Wilhelmshaven . An accidental explosion in April 1917 destroyed the ship , and her wreck was never raised . Condor was used for the same purpose in Kiel ; she survived the war and was broken up for scrap in 1921 in Hamburg . Cormoran , still stationed in Tsingtao , was scuttled in the harbor because her engines were in poor condition . Geier meanwhile operated against British merchant shipping in the Pacific following the onset of hostilities . By October , she was running low on coal and had been isolated from any sources of support ; she therefore steamed to Hawaii , where she was interned by the US Navy . After the United States declared war on Germany on 6 April 1917 , she was seized and commissioned as USS Schurz for use as an escort vessel . She was sunk after colliding with a merchant ship in June 1918 .