

Canada's First Submarines

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Background

The Canadian Navy was established 04 May 1910. By the start of World War 1 the navy possessed two older cruisers provided by the RN. These were the Niobe (stationed in Halifax) and Rainbow (stationed in Esquimalt). By that time the RN had withdrawn their naval contingent which had been protecting Canada's west coast and were concentrating their forces in the UK and Mediterranean, in anticipation of fighting a large and capable German home fleet.

The Threat

Meanwhile, the German Navy had a squadron of 5 heavy and light cruisers stationed in Tsingtao, China under the command of Vice Admiral Maximilian, Reichsgraf von Spee.

These included the following major units:

SMS Scharnhorst

SMS Gneisenau

SMS Emden

SMS Leipzig

SMS Nürnberg



The German East Asia Squadron, led by the Scharnhorst. The Gneisenau was identical

The German squadron was stationed in Tsingtao, a concession from the Chinese government. The Germans also held a number of Islands in the western Pacific, principally part of New Guinea, the Solomon Islands, the Marshall Islands, the Bismarck Archipelago, the Northern Marianas and German Samoa.

Submarine Acquisition

Given the lack of any Royal Navy support to protect Canada's west coast and the potential threat offered by the German East Asia Squadron, the Provincial Government sought ways to bolster the naval defences. A solution came in late July 1914, in the form of an offer by the Seattle Construction and Drydock Company, which offered to sell two submarines that had been built for the Chilean Navy. Ordered by the Chilean government from the Electric Boat Company, the submarines were constructed on the east coast, broken down into component parts and shipped across the country to Seattle to be reassembled for delivery to Chile.

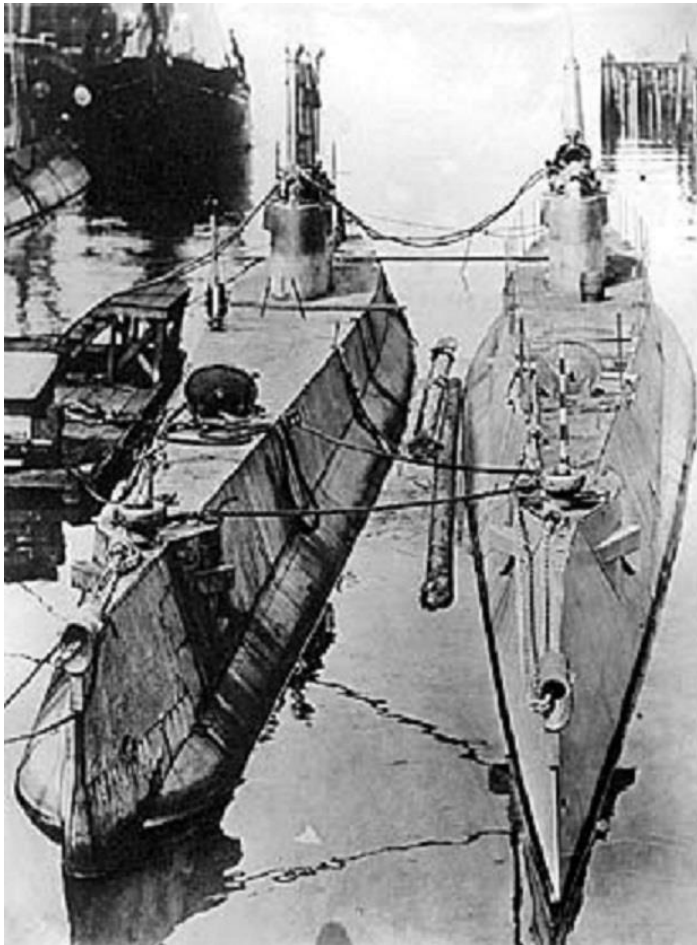
However, the deal with Chile had fallen through after the Chilean government grew unhappy with the submarine's capabilities. After a meeting between BC Provincial officials and the Seattle Company, a plan was hatched to sell the submarines to Canada. Sir Richard McBride, the Premier of British Columbia, did not wait for approval of the deal from the federal government in Ottawa and authorized the purchase of the two submarines using provincial resources.

On 3 August 1914, C-1 (*Iquique*) and sister boat C-2 (*Antofagasta*) left Seattle in secrecy and sailed for Canada. Meeting British Columbia officials outside Canadian waters, the transfer was made at night with British Columbia paying \$1.15 million for the two submarines (approximately \$332,000 more than Chile would have paid). The two boats were taken to Esquimalt British Columbia to await federal approval of the purchase. On 7 August, the Government of Canada passed an Order in Council assuming responsibility for and purchasing the two warships from British Columbia

In keeping with an earlier Australian practice when two British E-class submarines had been renamed AE 1 and AE 2 by adding the "A" in front of the class to denote Australia, the two submarines purchased by Canada, resembling British C-class submarines, had an additional "C" placed in front of

their names to denote Canada and their apparent class

The two submarines were not identical, with the Electric Boat Company employing two separate designs with the same internal machinery for the submarines. *CC-1* was built to the design 19E and *CC-2* was built to design 19B. The layout of the torpedo tubes within the boats led to different hull forms. *CC-1* was armed with five 18 in (460 mm) torpedo tubes, four forward and one astern. This gave the submarine a bluff **bow** shape. *CC-2* was armed with three torpedo tubes of the same size, two forward and one astern, giving *CC-2* a more narrow, tapered, bow. Both submarines used Whitehead Mk IV 18-inch (460 mm) torpedoes that had a range of 1,000 yards (910 m) at 25 **knots** (46 km/h; 29 mph). However, https://en.wikipedia.org/wiki/HMCS_CC-2_-_cite_note-if30-3 the only source for these torpedoes in Canada was from HMCS *Niobe*'s stock and it took some time before they were shipped to the submarines



The two submarines docked in Esquimalt. *CC-1* is inboard and *CC-2* is outboard.

The two submarines were designed to make 13 knots (24 km/h; 15 mph) surfaced and 10 knots (19 km/h; 12 mph) submerged. They had a **length** of 144.5 ft (44.0 m), a **beam** of 15 ft (4.6 m) and a **draught** of 11 ft (3.4 m). The boats could dive to a depth of 200 ft (61 m).

The submarines had a complement of 2 officers and 16 enlisted each.

The acquisition of the submarines faced serious scrutiny, undergoing a Royal Commission and investigation. The submarines faced criticism from Royal Navy experts and even the Electric Boat Company. However, the Royal Commission later found in favour of the decision to acquire the submarines. The defence of the decision lay in the timing of the deal, the eventual US neutrality, and the Admiralty recommendation to purchase the boats when they had been informed. These three points swayed the Royal Commission in finding in favour of McBride's decision.

Commissioned on 6 August the submarines were assigned to the west coast in the home port of Esquimalt, British Columbia, and conducted training operations and patrols for three years. After discussions between the Royal Canadian Navy and the Admiralty HMS Shearwater was recommissioned on 8 September 1914 as a submarine tender for the Canadian CC class submarines at Esquimalt. She was transferred permanently in 1915 to the Royal Canadian Navy, becoming HMCS Shearwater. Together with the cruiser HMCS Rainbow, CC-1 and CC-2 were the only Canadian or British warships defending the west coast of Canada between 1914 and 1917.



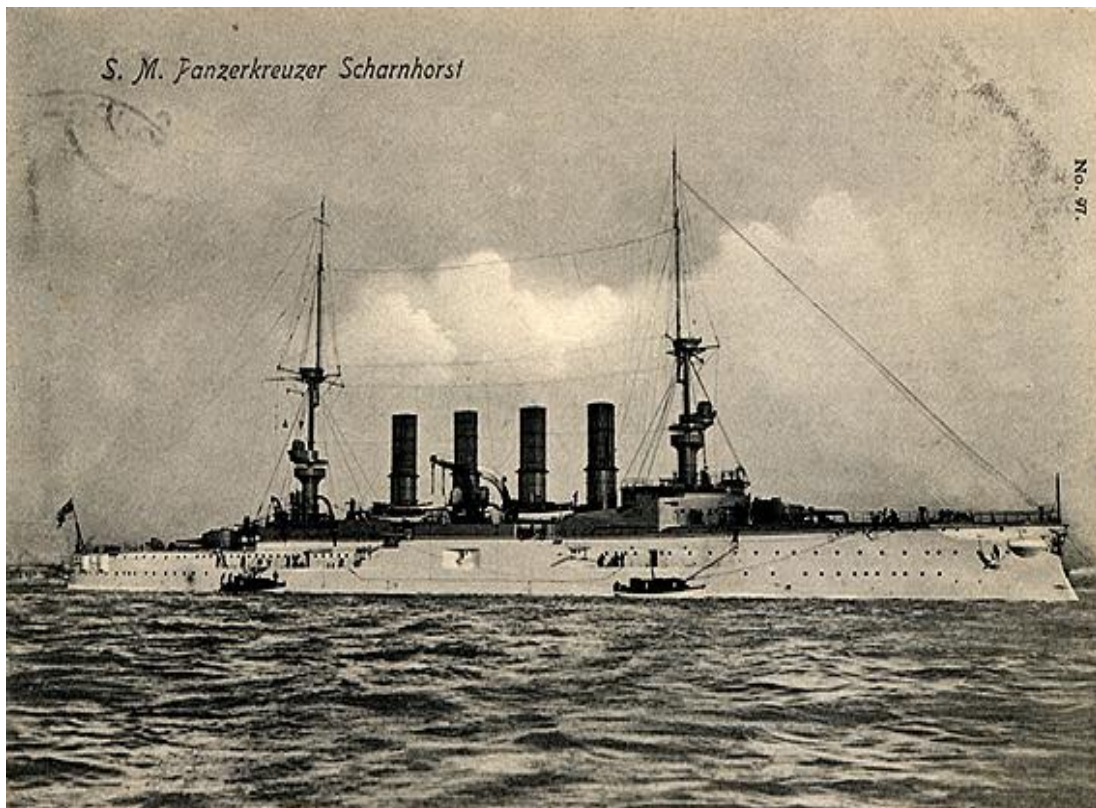
HMCS *Shearwater* circa 1918

In 1917 the submarines were transferred to the east coast with the submarine tender HMCS Shearwater. On 21 June 1917 the three vessels left Esquimalt. Off Cape Blanco, the fleet ran into a gale and CC-2 rolled heavily in the seas, seawater contaminating the sub's batteries. The high seas also caused the propellers on both the submarines to be tossed out of the water, in turn causing the engines to over-rev. The stabilisation of this problem later caused the battery cells to start to break down and eventually short-circuit and start electrical fires. The electrical fires led the crews to only operate one diesel engine at a time, as the other was usually under repair. CC-2 worked until San Francisco and then both submarines were towed to San Diego. Confined to port-hopping down the coast and passing through the Canal Zone, the fleet had to stop at Kingston, Jamaica to make repairs.

Moving on from Kingston, the three ships spent five days at Charleston, South Carolina making more repairs. The fleet attempted to set out but were forced to return to Charleston for further repairs. They left again and hit a storm, the fleet limping into Norfolk, Virginia, where the submarines spent two weeks in the US Navy dockyard. The group ultimately arrived at Halifax, Nova Scotia on 17 October 1917.

Following their arrival at Halifax, it was found that the two submarines both need an engine overhaul and that neither would be available until mid-August 1918. Only after the Admiralty was informed of their dire condition did they rescind the order for deployment to Europe and then ordered them for use as coastal defence on the east coast. CC-2 was held in Halifax as a Training Assistance Boat, training surface vessels in anti-submarine warfare. The two submarines were put up for sale in 1920 and were packaged with *Niobe* for disposal.

German East Asia Squadron (The Reckoning)



SMS Panzerkreuzer Scharnhorst the flagship of the Squadron.

As part of the run up to the war, the UK and France were working with Japan to join in or support the Triple Entente (UK, France and Russia). This would have been a real threat to the German holdings in China and the Pacific as the Japanese navy far outnumbered and out weighted the German Squadron. When war broke out the crews of minor German warships were disembarked to form the garrison for the defence of Tsingtao. The Siege of Tsingtao by the Japanese concluded with the surrender to Japan of German colonial forces on 7 November 1914.

At the same time, the German cruiser squadron left China for the South Eastern Pacific, although Emden was detached as a commerce raider to operate in and around the Indian Ocean. In her 4 months of operations she destroyed or captured approximately 24 commercial ships. She was then sunk by the Australian Cruiser HMAS Sydney.

The remainder of the squadron conducted operations in the Eastern Pacific, but as allied naval activities increased in that area Spee decided to move to the Atlantic and try to force passage back to Germany. This was interrupted when Spee met the British West Indies Squadron on 1 November 1914 at the Battle of Coronel (off the coast of Chile) sinking two British cruisers, HMS Good Hope and HMS Monmouth. This included the loss of 4 Canadian Midshipmen who were serving with the RN.

Spee then proceeded around Cape Horn and into the Atlantic but, unwisely, chose to attack Port Stanley in the Falkland Islands. British naval forces had already been sent to the Falklands and included the battlecruisers HMS Invincible and Inflexible along with cruiser support. Spee was detected as he approached the islands and in the ensuing battle all but one of the German cruisers were sunk. This effectively ended German naval operations in the Pacific.



HMS Inflexible recovering survivors from the *Gneisenau*