



# CANADIAN RIVER CLASS FRIGATES

The River Class frigates were described, shortly after the Second World War, as "the most effective naval vessels built in Canada, especially for anti-submarine warfare - not only sleek of line, but equipped with the finest anti-submarine devices then available in the country". These frigates replaced the "Flower" Class corvettes as the backbone of the maritime escort forces of the Royal Canadian Navy (RCN).

The Flower Class corvettes had been chosen very early in the war to augment the pre-war RCN's total of six destroyers with "something" that could be built speedily and in Canada. Altogether there were 107 corvettes constructed in shipyards across the country, commencing in 1940. Originally designed in England for coastal use, they were pressed into ocean service until "something better" was developed and produced in adequate numbers.

The "something better" turned out to be a British-designed ship originally called a Twin-screw corvette by its designer, William Reed of Smith's Dock Company of South Bank-on-Tees. The class name "Frigate" was proposed to "My Lords of the Admiralty" by Vice-Admiral Percy Nelles when he was Canadian Chief of the Naval Staff.

The British-built frigates were named for rivers in England, but those built in Canada were named for Canadian cities and towns, although they were still designated as "River" Class frigates. They were too long to pass through the St. Lawrence river canal system of that time, so they were built in west coast and St. Lawrence River yards, rather than on the Great Lakes, as were many smaller corvettes and minesweepers.

The first acquisition program, in 1942-43, was for 33 ships for the RCN, and a second one, in 1943-44 produced 27 more, including ten for the Royal Navy, of which two ended up in the United States Navy (USN). These two were used as prototypes for the USN 77 ship "City" Class program and, with modifications constituted the basic design for the USN's huge destroyer escort program.

In 1944 the RCN acquired twelve British-built "Castle" Class corvettes (50 feet longer than our Flower Class corvette, but smaller than the River Class frigate). Along with these the RCN manned three "Loch" Class frigates, slightly larger than the River Class, which operated only in UK waters and were returned to the RN at war's end.

River Class frigates were much better armed than were corvettes or other lesser vessels. Twin 4-inch (102-mm.)



*HMCS Capilano - a typical frigate.*

forward-mounted guns, built in Canada by Massey-Harris, were used both to engage and to illuminate surface targets. They gave at least twice the illumination and twice the firepower of lesser escorts. The aft-mounted 12-pounder gun engaged targets abeam or astern. The Hedgehog anti-submarine weapon fired 24 spigot-type 60-pound mortar bombs which fell in an elliptical pattern up to 400 yards (366 m.) ahead of the ship. The bombs were fitted with contact fuses which detonated the bomb on contact with the target. The detonation caused the other 23 bombs to detonate as well. The frigate normally carried 145 depth charges, launched from stern rails or fired from the two port- and starboard-firing throwers. For anti-aircraft defence and limited use against surface targets, the frigate mounted four pairs of 20-mm. Oerlikon guns in power-operated turrets.

In addition to its much more powerful armament, the frigate had several other advantages over the corvette. It had only three knots more speed, but twice the range, and greatly improved search, detection and tracking equipment. It was the first RCN warship to carry the 147B Sword horizontal fan echo sonar transmitter in addition to the irregular ASDIC, (an acronym from the Anti-Submarine Detection and Identification Commission, the agency which developed the instrument). This combination gave very accurate horizontal and vertical ranges and hearings on submerged targets to the Hedgehog. The Hedgehog charges, falling in an elliptical pattern ahead of the ship, permitted the ASDIC operator to remain in contact with the target unless and until one of the bombs struck a target. A second advantage was a much improved British radar set which could detect targets

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as small as a U-boat's schnorkel and sometimes even its periscope. The third advantage was the High-Frequency Direction Finder, more commonly known to operators in the navy as HFDF or Huff-Duff. Monitored by listening operators 24 hours a day, this equipment provided an accurate bearing on any U-boat transmission whose source was sufficiently near to be detected as a ground wave. Immediately transmitted to the operations room of the senior ship of the escort group and triangulated with bearings from other ships, it gave an immediate fix on the U-boat's location. Direction-Finding (D/F) stations on shore provided additional data which was plotted, and transmitted to the commanders of the naval escort force to assist them in making informed and timely tactical decisions.

The first River Class frigate commissioned in Canada was HMCS Waskesiu, launched at Yarrows Ltd. shipyard in Esquimalt, B.C. in June 1943. Most of them entered the war only after the tide of battle had turned against Germany so

few of them shared the accolades so justly accorded to the corvettes. It is significant however, that of the 29 U-boats destroyed by RCN ships, 12 were sunk by frigates and their crews. The "Champion Sub-Killer" was the frigate Swansea, which participated in the destruction of four U-boats.

After VE Day, it was planned to refit and tropicalize the frigates for service in the Pacific, but the surrender of Japan in August 1945 resulted in the cancellation of this program. Eight frigates were scrapped, eleven were stripped and sunk as breakwaters on the west coast, two were converted into "weather ships" off our two coasts and twenty-one were extensively renovated to become a new "Prestonian" Class. Ships of this class were used as training ships for many years. An exception was HMCS Stormont which after one or more resales became Aristotle Onassis' luxury yacht "Cristina".

At the time of researching this Fact Sheet, the author was unable to discover a trace of any other of these Canadian-built frigates.



## SPECIFICATIONS of the RIVER CLASS FRIGATES

### DIMENSIONS:

Length: 301 ft. 6 in. (91.9 in.)

Beam: 36 ft. 7 in. (11. 14 m.)

Displacement 1440 tons (1463 tonnes)

**RANGE:** 7200 miles (13335 km.) at an ave. speed of 12 knots (22.2 km/hr.)

**MAXIMUM SPEED:** 19 to 21 knots (35 to 39 km/hr.)

**CREW:** 10 officers and 135 ratings

### ARMAMENT:

Forward: Twin 4 in. Mk.XVI LA & HA Gun on a Mk.XIX mount.

Aft: One 12-pdr. QF Mk.V gun on a Mk IX mount.

Bridge: Two pairs 20-mm. Oerlikon Mk. IV, in Mk.V-c power operated 360-degree turrets.

Aft Platform: Two pairs 20-mm. Oerlikon Mk IV in Mk V-c turrets.

Depth Charge Throwers: Four Mk.IV (two firing to port, two to starboard).

Depth Charge Rails (Chutes): Two.

Depth Charges: 145 normally carried

Hedgehog: One (consisting of 24 spigot mortars)

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