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Selection of the 3"/50-cal. Gun Mount Fitted Aboard HMC Ships *Protecteur* (1) & *Preserver* (2) 60 Years Ago

By Pat Barnhouse

During the summer of 1964, as a brand-new lieutenant commander, I was posted to the Directorate of Systems Engineering (DSEng), an outlier of Director General Fighting Equipment. In short order, I became directly involved in selecting gun armament for the RCN's two new *Protecteur*-class AOR oiler replenishment ships that would begin construction at Saint John, NB in 1967. Things rarely move in a straight line when specifying ship equipment, and how these ships ended up with a twin 3"/50-cal. gun mount, let alone a gun system at all, was proof of that.

At the time, much of the Navy's ship design work was done in-house. This was the case with the preliminary design for *Protecteur* (AOR-509) and *Preserver* (AOR-510) using Operational Sequence Diagrams that would define the relationship between functions, equipment and personnel to help lay out the class arrangement for the two ships. The Navy also had a "living example" of an AOR available for reference. HMCS *Provider* (AOR-508) had joined the fleet just a year earlier, and study of this ship revealed many areas that could be improved upon in the new builds.

Provider's commanding officer, **Capt(N) Kai Boggild**, was invited to Ottawa to share his thoughts from an operational viewpoint, and while much of what he offered had already been considered, there was one item that was apparently not yet in the mix: AORs were warships, he contended, and should therefore have a gun. The captain opined that a Chinese junk (a type of sailing vessel) could come alongside and blow him out of the water, and so the saga of the AOR bow gun was born. There were stories, possibly apocryphal, that fitting the new AORs with guns would qualify them for some kind of reduced "warship tariff" when transiting the Panama Canal, but whether this was indeed the case remains unsubstantiated as far as I know.



US Navy photo



Photo courtesy ReadyAyeReady.com

The AOR 3"/50-cal. gun in different eras. At top, aboard *Preserver* in the 1970s, and reinstalled aboard *Protecteur* at bottom for Op Friction in 1990.

The direction duly came down to me with instructions to choose a gun and decide where to fit it, bearing in mind that the chosen weapon would have to rely on local operation, without any associated fire-control system. To me, it seemed sensible to repurpose a couple of the 4"/45-cal. guns that were coming off our decommissioned wartime destroyers and *Prestonian*-class frigates. The mounts required a large eight-man crew to serve them, it was true, but this would be offset by their simplicity of operation in that they could be laid and trained right at the mount itself. I suggested this to the Naval Staff, but had to look elsewhere when they pointed out that although there were lots of four-inch mounts available, there was no plan to buy ammunition for them.

It was a similar story with my next suggestion to fit a couple of the RCN's Hazemeyer mounts for the 40-mm Bofors that were being taken out of service. HMCS *Ontario* (C53/32) had carried such guns, and

(Continues next page...)



Photo courtesy Naval Museum of Halifax Collection

A close-up view of a twin 3"/50-cal. gun mount. This unit from the decommissioned HMCS *St. Croix* (DDE-256) is on display at the CFB Halifax Naval Museum. The AOR guns were not fitted with the fire-control radar dish shown here, so had to be operated in local mode.

I had seen them fired to great effect—but once again, I was told that ammunition would be unavailable. (Six or seven years later, I was surprised to see these same weapons being shipped out of the Naval Armament Depot in Dartmouth, NS, destined to become interim air-defence installations at our airfields in Germany. When I asked about ammunition, I was told there was plenty available.)

I was left with one last suggestion—the twin 3"/50 mounts coming off the quarterdecks of the *St. Laurent*-class destroyers that were being converted to DDHs. The Navy agreed.

It then came down to choosing a location for the gun. Having seen several USN auxiliaries with sponsons around the aft end, I suggested the same arrangement. This was greeted with horror by the naval air community who wanted the entire stern area of the two ships kept inviolate for helicopter operations. Nothing was to interfere with this. There was no way the gun could be fitted amidships, as this area was devoted to liquid and solid replenishment stations. I then suggested an apparently vacant area just forward of the bridge house, only to be told that this was reserved for a proposed single-arm Canadian Sea Sparrow missile launcher system (which was cancelled in late 1973 or early 1974, and never fitted).

There was only one place left to put the 3"/50, and that was right up forward, clear of the anchor cables and handling gear. Over the years, this turned out to be a less than happy choice. **Capt(N) Robin Allen**, who was CO of HMCS *Preserver* from 1991 to 1993, recalls that his ship's gun had been removed in 1984 due to its exposed position so far forward leaving it vulnerable to the effects of weather and wave action over the bow. In fact, numerous gun shields were destroyed. Investigation in the late 1970s showed that large seas coming in over the bow would fill the zeriba—the corral surrounding the gun mount designed to trap spent casings—and force great quantities of water up through the open bottom of the enclosure shield, exploding it from the inside out.

In the end, the 3"/50 guns that had been so carefully specified proved to be more trouble than they were worth, and were removed from the two AORs in the mid-1980s. In an interesting footnote to this story, when HMCS *Protecteur* sailed from Halifax on August 24, 1990 with the Canadian naval task group bound for the Persian Gulf during Op Friction, the gun was back in place.



CNTHA Chairman Pat Barnhouse retired from the Navy as a Combat Systems Engineering Commander in 1989.



Photo by Brian McCullough