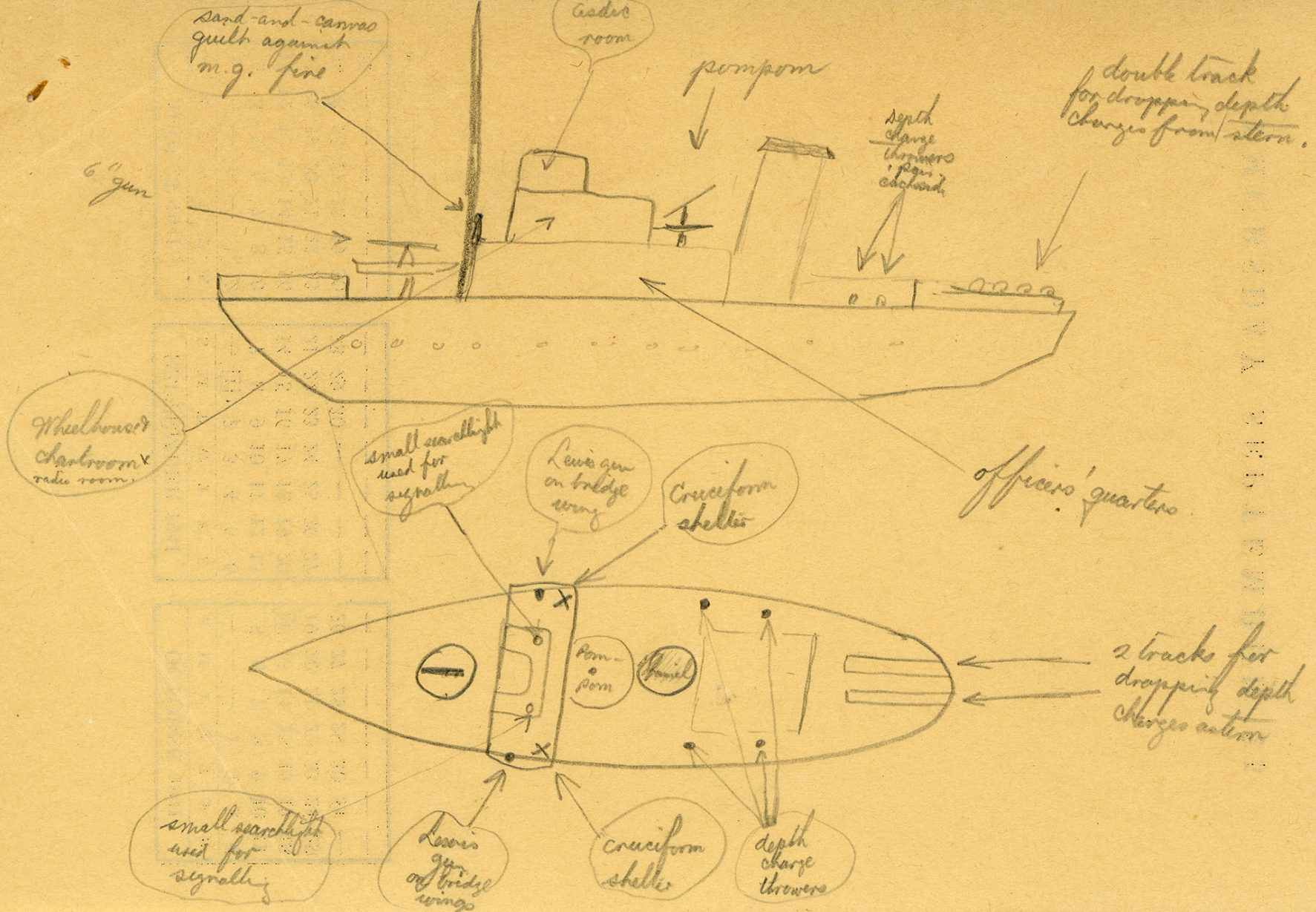

sand-and-canvas guilt against m.g. fire
Asdic room
pompom
double track for dropping depth charges from stern.
depth charge throwers
6" gun
Wheelhouse
Chartroom
radio room
small searchlight used for signalling
Lewis gun on bridge wing
Cruciform shelter
officers' quarters
Pom-pom
Funnel
2 tracks for dropping depth charges astern
small searchlight used for signalling
Lewis gun on bridge wings
Cruciform shelter
depth charge throwers

AUGUST 1941						
S	M	T	W	T	F	S
—	—	—	—	—	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	—	—	—	—	—	—

SEPTEMBER 1941						
S	M	T	W	T	F	S
—	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	—	—	—	—
—	—	—	—	—	—	—

OCTOBER 1941						
S	M	T	W	T	F	S
—	—	—	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	—
—	—	—	—	—	—	—

THURSDAY SEPTEMBER 25

$$$$$$ CORVETTE

She is a trim grey craft that looks all bridge and funnel. The bridge screens are composed of sand-and-canvas quilts against machine gun fire. The wheel house is spacious, with a little steel kennel behind the wheel for the helmsman to duck under when the ship is attacked by diving aircraft. Here also is a folding table for the charts; a hydrophonic sounding outfit for navigation soundings; electric controls for the identification lights (which are installedon the mast, the bridge and sides) voice tubes and a telephone to all parts of the ship; engine room telegraph; a device to indicate if the de-Gaussing coils areworking properly. Main voice tubes are large, so that the mouth-piece can be swung aside and a written message passed up or down. On the wheel-house wall inside, and on the outside, port and starboard, are electric "action stations" buttons. Also on the rear wall of the wheelhouse, inside, on the starboard side is a rheostat controlling a radio telephone, together with a box containing a one-piece mouthpiece and receiver on a cord. The place is heated with brass steam pipes along the forward side. Small racks overhead on the starboard side (fastened to the celing over the chart-table) hold sextants of the commander and his Number One. *The radio cabin opens off the rear of the wheelhouse.*

Above the wheel-house is the sacred " Asdic" room, which controls the ship when a submarine is being hunted. The Asdic operator sits in a swivel seat facing a wheel and compass like that in the wheel-house below, together with the complicated hydrophonic apparatus. The hydrophone is purely a listening device, worthless unless the submarine's engines are going. The Asdic works on the principle of the well-known echo sounding apparatus; an electric device on the ships bottom (one each side) throws a vibration through the sea. Any considerable submerged object reflects this vibration, which is picked up by the Asdic listening apparatus as an echo. Time lag between transmission and echo indicates distance between the two. The bearing of the submerged object is shown by a siphon recorder on a moving roll of paper. There a small metal object which slides on a scale and is adjusted to match the ship's speed when Asdic work is being done. And a hinged transparent arm, marked in degrees, and with a line of black dots along its length, is $$$$$$ shifted by the Asdic officer (who standsbeside the operator) to match the line of dots being made on the moving roll by the siphon. By this means $$$$$$$$$$$$$$$$$$$$ it is possible to determine (a) the submarine's distance away, ###(a) its horizontal bearing (c) its $$$$$ rate of movement; and the corvette can be brought on its track and kept there until the corvette has actually passed over it. At the moment of immediate approach, the Asdic officer presses buttons which warn the depth-charge men what depth to set their charges for, and give them the command to fire.

There are two depth-charge projectors on the starboard quarter, and two on the port quarter. Behind each pair is an indicator board showing depth at which charges are to be set -- 150 fms, 300 fms, etc., and " Fire". The projector is really a small mortar, fired by a lanyard in the hands of a man standing between the two projectors. There are two kinds of depth-charge, one more heavily weighted in order to sink faster than the light type, and usually one projector in each pair is loaded with a"heavy" and the other with a "light". The depth charge itself is a cylinder of iron about the size of a nail-keg, containing amatol, with a hollow shaft through its #### axis for the detonating device. For firing from a projector, each depth charge is fitted in a T-shaped iron holder, whose shaft fits down into the mortar. On the stern are mounted two parallel gravity tracks, from which depth charges are simply rolled into the ship's wake. Usually the charges on one track are "Heavies" and the other tracks hold " lights". At the moment of attack, the Asdic officer, having previously warned the depth at which charges are to be set, presses his "Fire" button. At once a "light" and a "heavy" are rolled off astern, a "light" and a"heavy"are $$$$$$ shot out to starboard, a " light" and a "heavy" are shot out to port. Those shot from the projectors are carried forward some distance by the ship's momentum before striking water, and this has to be allowed for. Finally another pair,"light" and "heavy", are dropped off the stern. And again a pair off the stern. This makes the well-known "diamond" pattern, with five charges exploding

at a fairly shallow depth simultaneously with the five "heavies" on a deeper level.

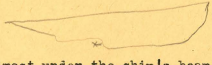
If other pursuit craft are engaged, it is possible to continue this pattern over a wide area of sea, simultaneously, and a submarine thus caught is due for a bad shaking-up if not destruction. Most submarines ~~caught~~ thus are sunk, practically without trace. All that is known is the uncanny Asdic recordings, showing the wreck going down, down, down, into depths where no submarine can stay intact, or alternatively to bottom in comparatively shallow water, where the pursuit craft can gather overhead and make sure with a shower of charges. No credit is given for a submarine sunk unless prisoners or bodies are recovered. The old " patch of oil coming to the surface" whimsy means nothing. Asdics have recorded submerged whales before this, and depth charges dropped, with a resultant flood of whale oil pouring up to the surface. Asdics also record schools of fish, when the schools are dense; so do the hydrophones, but the sound of a submarines engines is unmistakeable. For that reason, when the Asdic operator reports a submerged object, the commander's first question is, " Do you get a hydrophone indication ?"

Depth-charging is the true function of the corvette in fighting submarines. In the rare event that a submarine is caught on the surface, the forward 4 inch gun is used. It is mounted on a wide circular platform between the forecastle and the bridge. For anti-aircraft defence, there is a Lewis gun on a swivel mounting upon each wing of the bridge (these are being replaced with heavy-calibre machine guns) and a pom-pom on a high circular platform between the bridge and funnel.

On top of the Asdic room, in the open air, is mounted a " loud-hailer" for talking to convoyed ships etc at short distance, also a pedestal for the pelorus -- a bearing card.

On the wings of the bridge are mounted small searchlights, used mostly for signalling, and between these and the machine-guns are small steel sheets standing on end, chin-high, known as "cruciform protectors" -- a simple and quickly accessible shelter for the machine-gunners or signallers when an aircraft dives at them, firing.

The engines are simple and rugged, and can push the corvette along at 16 knots without difficulty, 18 or 20 if pushed hard. The hull is an odd shape, rather like that of a racing yacht:



with the single-screw propeller almost under the ship's beam. Thus she can turn very quickly. This corvette has been turned at full speed 180 degrees in less than a minute. From "full astern" she can be going full ahead in 45 seconds.

Identification lights are red, white and green, arranged in differing groups on mast bridge and sides every day, by cutting lights in or out from the switchboard in the wheelhouse. The press of a button flashes the "challenge" or the "identification". A blue light can ~~####~~ be switched on astern, and its intensity varied, for convoy work in thick weather.

The ship carries one service boat and a number of Carley rafts.

The officers had a roomy wardroom, with small leather-padded chairs, a sideboard with paraphernalia for drinks, and a radio on a table. In convoy, the use of a radio is usually forbidden, as the carrier wave might be detected by a listening Submarine. On patrol the wardroom radio is used, also the radio in the Commander's cabin when he wants.

Corvettes cont'd.

Asdic room is above wheelhouse, is known as "the rabbit hutch". Contains, besides, Asdic, the loud-speaker (or Loud-hailer, official term), standard compass, chart table, all voice control pipes, indicator-signals .

Wheel house contains wheel, stering compass, chart-room and W/T room.

Beginning at bow there is:-- chain locker, fore peak (for stores) 3 mess decks forward, then the spirit room, four-inch magazine, boiler room, engine room, fuel tanks, A/A magazine. Aft is steering compartment, petty officers' quarters, petty officers' mess. Officers ' accommodation is all amidships.

Crew

Commanding officer of a Canadian corvette may be :--

Lieutenant,R.C.N.R. or R.C.N.
Liet-Commander R.C.N.V.R., R.C.N.R., or R.C.N.

1st Lieutenant:-- May be a lieutenant,R.C.N.R or R.C.N.V.R.

Navigator:-- usually a Mate, R.C.N.R.

Gunnery officer:-- Sub-Lieutenant R.C.N.V.R.

Extra watch-keeping officer -- Sub-Lieutenant,R.C.N.V.R.

1 Chief Petty Officer
3 Leading Seamen
15 Able Seamen or Ordinary Seamen
1 Leading Telegraphist
3 Telegraphists
6 specialized ratings
1 Sick Berth Attendant
2 Stewards
1 Victualling Assistant
2 Cooks
1 Ordinary Torpedoman (does all electrical work aboard)

Chief Engineer -- Chief E.R.A. or Warrant Engineer. (Warrant Engineers are scarce)
2 E.R.A's
3 Stoker Petty Officers
4 Leading Stokers
9 Stokers

Favourite song of the R.C.N.V.R ("the wavies" -- wavy sleeve braid)
Sung to the tune of "Roll along, covered wagon, roll along."

"Roll along, wavy navy, roll along; roll along, wavy navy, roll along,
If they want to know who you are
You're the R.C.N.V.R.
Roll along, wavy navy, roll along."

A verse added to " What Shall We Do With A Drunken Sailor " by Canadian corvette wardrooms:

" What shall we do with a drunken sailor,
What shall we do with a drunken sailor,
What shall we do with a drunken sailor,
Ear-lie in the morning ?

Put him in a corvette and roll him over
Put him in a corvette and roll him over
Put him in a corvette and roll him over
Ear-lie in the morning. "

Canada's First Corvettes

First ten corvettes built in Canada were for the British Admiralty, to be delivered by Canadian Navy to England. First 3 to sail were "Trillium", Lieutenant (later Lieut-Commander) Roland Harris, built by Vickers, Montreal; "Windflower", Lieutenant (later Lieutenant-Commander)J.Hubert MacDonald, built by Davies at Lauzon, Quebec; and "Hepatica" , Lieutenant (later Lieut-Commander) Charles W. Copelin, built by Davies at Lauzon, Quebec. The three commanders were old friends, stuck together whenever ashore, and were known in the patrol service as the Three Musketeers. ("Hepatica" was of course known everywhere as " Sally")

These corvettes were to receive their armament in England. They sailed across armed each with 1 Lewis gun and 100 rounds .303 ammunition, and 5 depth charges; nothing else.

"Trillium" and "Windflower" sailed in convoy from Halifax Nov.23,1940. The convoy was scattered by a terrific gale somewhere in 30 West. "Trillium" found herself alone, so Harris decided to rig dummy guns on the empty gun-platforms; this was done, in spite of heavy seas which frequently flooded even the bridge; and "Trillium" then ran before the gale to Iceland, and made her way to England in convoy from there. " Windflower" in the meantime had turned to the south, hoping to get out of the gale area. Her Asdic was out of commission, so she was of no use to the convoy. MacDonald also rigged dummy guns, and when the weather permitted made straight for his destination. About 50 miles off the Irish coast, in the most dangerous submarine area, "Windflower's" engines broke down, and it was necessary to change her H.P. bottom end. To keep the corvette under way, MacDonald (who had served his apprenticeship in sailing vessels) lashed dodgers and other canvas together and hoisted this crude sail to his fore-stay. Got in to the Clyde and was joined there by "Trillium", escorting 4 ships from Iceland.

" Hepatica" sailed from Halifax in convoy early in December 1940, and had an exactly similar experience. The convoy was scattered by gales." Hepatica" found herself alone. Copelin rigged a dummy gun on his forward platform, using an ammunition derrick for the "barrel" and the Asdic box for a "trunnion". The weather continued rough and the sky overcast; in the latitude of her passage there was about 6 hours' daylight out of the 24; for 9 days there was no horizon, the sun just a blur at noon, no stars at night -- 9 days without sights ! She closed with the Scottish coast, still in thick weather, somewhere off the Rockalls, and the weather fined at last. As it cleared, the track of a submarine on the surface was seen, a long slick of diesel oil. " Hepatica" boldly turned and followed for a look-see; but the submarine was evidently going faster than the corvette; "Hepatica" could not come up with it. Copelin ordered the corvette back on her course for the Clyde. His No.1 (first lieutenant) begged, " Can't we hunt him some more, sir ? " Copelin answered, " What do you propose to throw at him -- hot potatoes ? He's on the surface." So "Hepatica" carried on towards the Clyde and two hours later came up with 2 ships of his convoy and a British destroyer. The Destroyer signalled, " Are you happy to take these ships in ? ", by blinker.

"Hepatica" answered, " Provided you understand I have a dummy 4-inch gun, 1 Lewis and 5 depth charges."
The destroyer replied, " Think I'd better stand by with you."
With these ships "Hepatica" went down North Channel (between Ireland and the Scottish Isles) and then the destroyer ordered her to take 2 of the ships in to the Clyde. "Hepatica" took them in, past Ailsa Craig. In the Clyde outer approaches, " Hepatica" signalled her number, but nobody ashore seemed to know anything about her. However, they passed her in. At the Clyde entrance she got orders to enter the boom and tie up alongside an oiler (an ordinary tanker anchored for the purpose of fueling ships). After taking on oil fuel, "Hepatica " remained alongside the oiler all night, as the weather had shut down thick. Next morning the weather cleared a bit, and the shore signalled Hepatica to anchor in " D.4. off the Tail of the Bank." Hepatica knew where the Tail of the Bank was, but " D.4 " was a mystery; however she pushed on to the Tail of the Bank, where the weather again shut down very thick. Moving cautiously, she discovered a pair of corvettes anchored side by side, and moved in and anchored near them. Immediately both corvettes signalled with their blinkers " Welcome home." They were the Trillium and Windflower. Before Hepatica was finished anchoring, Hubert MacDonald was wagging his fine new beard over the gunwale.

The three corvettes lay there 10 days. It transpired that the Admiralty could not spare crews to take over from the Canadians. The three skippers called their crews together, told them the situation, and pointed out that it gave them all a chance for action in the famous Western Approaches. The crews answered with three cheers.
The three corvettes went up the Clyde for completion. Hepatica completed at Paisley with Trillium. She then came down to Greenock for ammunition and stores, then to gunnery trials off Ardrossan, then went round to Tobermory and worked up on fleet exercises.

Hepatica then went out on convoy patrol for 31 straight days. During this long stretch she had contact with a submarine submerged near the convoy; Hepatica promptly signalled " Preparing to attack ", and the convoy sheered aside to give her room . She put down 25 depth charges set for fairly shallow explosion. Windflower came rushing up, having picked up the same contact, and began dropping depth charges also. Contact was then lost, and the corvettes were obliged to rejoin their convoy. (The chance of sitting over a submarine lying doggo, and eventually getting him, had to be passed up again and again by escort craft, who were obliged to give up the hunt and fulfil their true function with the convoy.) But that night one of the escort destroyers picked up wireless signals from a submarine in the vicinity, making her "homing signal" to Germany. The destroyer signalled Hepatica " You must have stung his tail."
The explosion of the depth charges close under their sterns had upset some of their own internal arrangements. Hepatica signalled Windflower " Am stymied at both ends -- galley stove upset and sanitary pump broken." Windflower also had suffered a damaged sanitary pump.

Hepatica fueled in Iceland, and returned with an in-bound convoy to Liverpool, England, where the crew were given 1 days liberty at the end of their long patrol. Next morning every man returned promptly to the ship, ready for another patrol. This 1 night was spent in Gladstone Dock, Liverpool. Hepatica then went out with another convoy and in the North Channel was joined by Trillium and Windflower .
In this area it was recognised that the greatest danger was from aircraft, and the senior escort officer (in a destroyer) put the corvettes between the lines of the convoy. (Many merchant ships carry anti-aircraft guns, but these are not automatic, and fire slowly. The corvette's pom-pom can throw up something like 90 shells a minute.) The corvettes did not mind this position (screened more or less from torpedo attack) but did not like being "squeezed like pips" as the merchant ships closed in from time to time, compelling the corvettes to shoot ahead or drop astern to avoid being crushed. Usually, however, the merchant ships are apt to get out of formation the other way, straggling and spreading; then the corvettes have to range up and down from ship to ship, cussing and cajoling to get the ships to close up. This was not usually the fault of the men on the merchant's bridge, rather the fault of their enginerooms, and doubtless the age-old squabble between mates and second-engineers had something to do with it. But it was marvellous the way the merchants produced steam and closed up when

the escort dropped a depth charge. The thud and woomp of the explosion sounds very loud in every engineroom of the convoy, and everybody knows what it means -- that the convoy is under attack from submarines. Corvette commanders were often tempted to let go a depth charge sometimes, just to keep the convoy on its toes.

One bright morning, a merchant ship dropped astern of her station, and Hepatica, inside, dropped astern also to shield the ship from possible aircraft attack. The SEO (senior escort officer) promptly ordered Hepatica to steam up inside convoy again. Hepatica had just regained her position when her lookout spotted a Heinkel 111 coming out of the sun, and bombs falling, one of which struck the merhantman amidships. Again Hepatica dropped astern, and the SEO in his destroyer came back at 30 knots and circled. The Heinkel went off. The merchant's crew had the wind up and were lowering boats. The ship was burning and making a great smoke.
SEO signalled Hepatica, " Screen this ship while she gets her boats out," and later, " Stand by to board and save ship." Hepatica's boarding party promptly got a boat lowered; but now the SEO signalled " Screen me while I put boarding party aboard." Hepatica obeyed -- taking station between the destroyer and the sun, the most likely point of attack. In the meantime, the special rescue ship of the convoy (an ordinary steamer with a picked volunteer crew and $$$$$ accommodation for about 100 passengers) had dropped astern to pick up the crew from their boats.
SEO now signalled " My boarding party aboard. Escort rescue ship back to convoy." Hepatica did so, keeping on the ship's port quarter (down-sun). The convoy was about 10 miles ahead, and Hepatica, tying her own speed to that of the rescue ship, slowly crept up on them. By this time it was lunch time, and Hepatica's officers were down in the wardroom shaking dice for gins before lunch; but before the last fall of the dice, the alarm bells rattled all through the corvette and everyone sprang to action stations, cheering. (Don't know what they do in R.N. corvettes, but Canadian corvette crews always cheer like hell when running to action stations.)
When Copelin reached the bridge, the navigator, who was on watch, pointed and said, "There she comes ! " The Heinkel was coming back. Copelin sang out, " All A.A. stations stand by, open fire within range ! " He increased speed, in order to keep between plane and the rescue ship, and the Heinkel promptly dived straight at the corvette. When the plane came in range the pom-pom opened fire, but the port Hotchkiss automatic jammed after a few rounds. Hepatica spun around (corvettes can turn completely in a very short space of time) to let the starboard Hotchkiss fire. The pom-pom tracers were goin all round the Heinkel, while the Hotchiss tracers could be seen going right through the wings. The Heinkel didn't like it and banked -- putting himself ina position from which he couldn't release bombs. Hepatica promptly turned again, to continue screening the rescue vessel, and the Heinkel, having had enough, withdrew at a low level with the damage to its wings plainly visible. He flew off so low that Hepatica was able to throw a couple of shells from the forward 4-inch gun -- more for a parting salute than anything else. The Heinkel was not seen again, but later it was learned that it had managed to finish off the ship she had damaged with her first stick of bombs.
After this encounter, the SEO, not understanding the reason why Hepatica had turned during attack, signalled " You should keep closer to your escorted vessel."
Hepatica replied, " Have repulsed aerial attack here without casualties."
SEO replied handsomely, " Well done, sir."

Hepatica saw this convoy out and came back to Greeock. Went out again, and off the north of Ireland a distress call was received from a ship being bombed, about 200 miles northward . SEO detached Hepatica, alone, to investigate. Corvettes are intended to work in convoys together with ships of larger armament. A lone corvette would be no match for the larger German submarines. When Hepatica had proceeded about 170 miles, a plane appeared, diving towards her. Hepatica manned her guns and showed recognition signals. On the radio phone a cheerful R.A.F. voice demanded, " What do you silly bastards think you're doing ? "
Hepatica replied " The same to you."
The plane circled. " I'm looking for a bombed ship," it declared.
Said Hepatica " So am I. I figure her about 30 miles ahead."

" Okay," said the plane. " I'll scout ahead and let you know."
The plane didn't come back for two hours. Then he said, " Ships ahead, will direct you."
Hepatica followed on, and presently on starboard bow saw the plane circling over three ships. As Hepatica approached, the plane returned towards its base.
The ships made a queer little procession; a merchant ship, down by the stern, being towed by an armed trawler and escorted by another. This merchant ship had been torpedoed days ago and was being towed to Britain , and she and her accompanying vessels had come upon the survivors of the bombed ship and picked them up.
Hepatica steamed up alongside the trawler escort and spoke her by megaphone.
The Trawler asked, " Will you take off the survivors ? "
The towed ship now signalled, " I have some survivors on board."
Hepatica lowered a boat in the heavy sea and took off 50 men.
The trawler said casually, " I have towed this ship from 30 West "
With the survivors of the bombed ship aboard, Hepatica managed to save her own boat, and then made a good 24 hours' run into Derry (Londonderry). Landed the survivors there (having shared out the corvette's last 5 bottles of whiskey amongst them. The corvette's officers gave up their berths to injured men.)
SNO (senior naval officer) Derry said Hepatica must sail within 1 hour to rejoin convoy. Hepatica could not comply, having some engine trouble. But she sailed down the Foyle at daylight and two days later, in the thickest of thick weather, rejoined the convoy to which she had been allotted. The SEO of the convoy signalled " Well done, Hepatica ."

Out of 16 convoys escorted by the Three Musketeers in the Western Approaches, only one ship was lost, though they had brushes with submarines and aircraft. Trillium had 3 men killed and 7 or 8 wounded when she was machine-gunned by a Fokke-Wulff. The others had no casualties. $#$@$$$$$
As the weight of U-boat attack shifted further and further west, the Three Musketeers found themselves stationed at S. John's, Newfoundland in the summer of 1941; and in October 1941 they returned together to Halifax for a much-needed refit.

The above information given to me by Capelin & Macdonald in late autumn 1941. Macdonald's "Windflower" refitted at Liverpool, N.S.