THE WAY OF A SHIP

INDEX

HMCS SACKVILLE

CANADA'S NAVAL MEMORIAL | MÉMORIAL NAVAL CANADIEN

THE WAY OF A SHIP

"Way" …. The forward progress of a ship

123 Canadian Corvettes
fought
The Battle of the Atlantic

This is a short story of one of them

HMCS SACKVILLE

K181

PROLOGUE

This is not a history of the Royal Canadian Navy or the Battle of the Atlantic

It is a brief, illustrated tour guide of the HMCS Sackville and a few stories about the other 122 Corvettes of the Royal Canadian Navy, whose ships companies were for the most part, ***Royal Canadian Navy Volunteer Reserve*****.** The RCNVR or,
The Wavy Navy.

There have been many books, papers, and ships records published about this epic period in the Second World War of 1939 to 1945. They are stories of how when the war began in 1939 Canada had only 6 destroyers. But by the war's end, Canadian shipyards had constructed hundreds of ships, and manned them with thousands of sailors, who had come from every part of Canada, and every walk of life.

However, the Corvette stood out as a vessel whose original concept was that of a ship for catching whales and coastal and escort work, was now, crossing the Atlantic Ocean. At the war's end, it had safely escorted 25,000 merchant ships through the North Atlantic, in all kinds of weather.

Weather however, was not the greatest danger. German submarines sank 3500 ships. Sackville and other corvettes escorting their convoys would attack the submarines and at the very least, force the submarine to submerge, and hopefully the submarine would lose contact with the convoy.

But attacking was not the primary responsibility of a corvette. Unlike more powerful well equipped warships, they were called, the ***Sheep-Dog Navy*****.** Their main purpose was that of being tied to their convoy for defence, and in doing so, many times they also placed themselves in harm's way. However, their primary objective was always:
The Safe and Timely Arrival of the Convoy

These little ships were manned by men stepping out of civilian occupations. They undertook basic shore training and then had to learn what the regular navy took years to learn - ***they had to learn it on-the-job***, and at sea under the harshest of conditions.

As you carefully walk her decks, visualize the waves crashing over them in a violent winter storm. See the bridge where they "s*tood watch"* in all weather, and feel the discomfort of the cramped quarters where sailors ate, slept and relaxed when they could.

Consider that over 70 years ago, these little ships sailed across a hostile ocean with the most basic of navigational equipment. Many depended on only a magnetic compass and a sextent for celestial navigation. There were no sophisticated electronic aids. In the rush to build the ships, many of them had to do without such things as Gyro compasses and Radar. Much of this up to date equipment was made in England and supplied from the Royal Navy. In many instances, preference was given to the Royal Canadian Navy, which was the Regular Navy, or what was at times referred to as – "*The Big Navy"*.

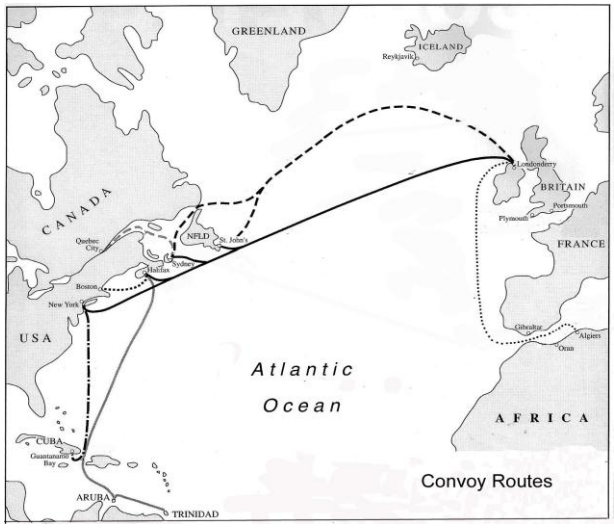
Bert Walker
Trustee
HMCS Sackville – Canada's Naval Memorial

An Introduction to the Battle of the Atlantic

When WWII began in 1939, Canada had a peacetime navy of only 3500 personnel and 6 Destroyers. By the end of the war in 1945, Canada would be the third largest Allied navy in the world, with about 100,000 personnel and 400 warships

123 of those warships were the Canadian Corvettes, the little ships that were the backbone in winning the Battle of the Atlantic. At the beginning of the war, the destroyers escorted convoys of merchant ships from Halifax and St. Johns to England. However, these destroyers were fast ships, though *"short legged"*, (short range) they were built before the war in a program that called for heavily armed surface warships. What we needed now, were many smaller ships, more suitable for ASW (anti-submarine warfare), seaworthy warships with proven dependable engines, and maneuverability. They were ships that could be quickly constructed in Canadian shipyards that previously had never built such naval vessels. And so, 122 Corvettes were built in New Brunswick, Quebec, Ontario and in West Coast yards. And now after 70 years, the HMCS Sackville is the only remaining one of them, and is today,

Canada's Naval Memorial



There were many crucial battles during WWII, but the Battle of the Atlantic was the longest, as it started on the first day of the war, and only ended on the last day of it. It was a battle against the violence of Atlantic storms and the menace of German submarines that sunk hundreds of ships and killed many Canadian Navy Sailors and Seamen of the Merchant Navy.

England needed supplies and the Allies needed a build-up of war materials for the eventual liberation of Europe. Winston Churchill said ***"the only thing that ever frightened me during the war, was the German submarine peril"*** - which was to say devastating, until the tide of battle turned in our favour in 1943.

Convoys of merchant ships were escorted by the corvettes across the 2000 miles of the Atlantic Ocean. About every 3 days 30 or so ships, left Halifax and other East Coast Ports for Britain.

There were many fast convoys of 8 to 10 knots, but as the speed of a convoy was based on the speed of the slowest ships in it, the hazardous voyage sometimes took over 2 weeks, at speeds of about only 5 knots. The corvette was originally designed for coastal escort duties, but it crossed and re-crossed the ocean. They shepherded their charges into defensive positions, sought out enemy submarines, and like a Bulldog they attacked them, and in doing so, also placed themselves in harm's way. However, for this responsibility, the corvette by warship standards, was not very large, or very sophisticated.

The design was based on the lines of a 1930's Whale Catcher which was very maneuverable. While there were many improvements to the ships in later years, the first Corvettes were rushed into service, basically equipped. While they had an Asdic device for underwater submarine detection, some did not have radar. Without it, they depended on visual sighting of the convoy, or an enemy submarine on the surface.

Note the ***"crow's-nest"*** on the main mast of this early version where a lookout sailor was stationed. In the following pages, we'll tell you more about the ship, its company, and stories of what was called - ***The Wavy Navy.***

HMCS Sackville is a Canadian Corvette, the last of 122 that were built in Canada during World War II.

In 1939, the basic design of it was developed from that of a commercial ***Whale Chaser*** and it was more suitable as a Naval Coastal Patrol Vessel, rather than a small warship.

At the start of the war, there was a desperate need for warships to escort the convoys and in many Canadian shipyards these little warships, were hastily built before there were sufficient men to make up the ships company.

In 1939, the full time or permanent Royal Canadian Navy, the RCN consisted of about 3500 personnel and did not have any men to sail these ships

The corvettes ship's company then consisted of volunteers from all walks of life across Canada. Some of who had never seen the sea.

While the Permanent Navy had years to train men, these volunteers had to in effect learn ***On-The-Job*** in a shortened shore based training and working up as a team ***At-Sea.***

There were shortages of the most up to date weapons and aids to navigation, some of which had to come from England.

In the rush to build and commission these ships, many sailed with the most basic equipment, some did not have Radar and most did not have Gyro compasses.

In the beginning, their captains for the most part, were masters or deck officers from the civilian Merchant Service they were the Royal Canadian Navy Reserve, the RCNR

The new volunteer officers instead of having straight rings on their sleeves like the RCN had wavy rings. While this designated them Royal Canadian Navy Volunteer Reserve, the RCNVR became known as the ***Wavy Navy.***

They were also known as the ***Sheep-Dog Navy*** and ***The Corvette Navy*** Regardless of what they were called, from 1939 to 1945, this ***Band of Brothers*** developed as a ***Team.***

They crossed and re-crossed the North Atlantic Ocean in gales and winter storms and also faced the dangers of the Submarine Menace.

For 6 years, they fought the Battle of the Atlantic

And

They Safely Escorted 25,000 ships to England

HMCS SACKVILLE was the second of the Flower-Class Corvettes ordered by the Royal Canadian Navy. She was laid down May 28 1940 at the St. John Shipbuilding and Drydock Company in St. John NB and was launched on May 15, 1941.

She was not a large warship, only 205 ft. long with a 33 ft beam, and a top speed of only 16 knots. While the speed may not have great, it was faster than a submerged submarine. Based on the design of a Whale Catcher, she could turn inside anything else afloat - and chase submarines.

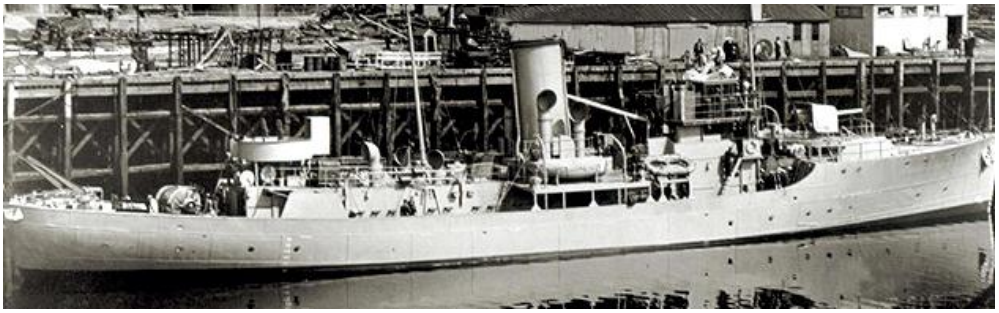
"Flowers" had what you could call a lively motion to them, somewhat akin to a cork. They were a wet boat from the ocean seas crashing over their decks, but they proved to be excellent sea- boats. It was sometimes said, that the first corvettes looked very much like quaint little merchantmen masquerading as warships with their short forecastle, merchant ship type bridge and large ventilators. Nevertheless, those early corvettes would carry the burden of Canada's war at sea through its darkest days. No one in the RCN could ever imagine what lay ahead for these little ships.

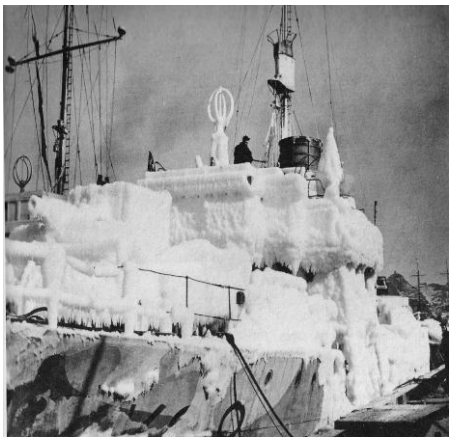
What Was a "FLOWER CLASS"

The ship that launched the Royal Canadian Navy onto the world stage was designed by Smith's Dock in the UK. When Winston Churchill was First Sea Lord of the Admiralty, he wanted to give the ships the names of flowers, as it would be good public relations to report that one of Hitler's sea wolves (U Boats) had been destroyed by a vessel named for a flower, like his Majesty's Ship Buttercup. So the Royal Navy dubbed them ***Flower Class.***
However, instead of naming Canadian Corvettes after flowers as was the British practice, the RCN named them after Canadian Communities. ***"After all",*** said Percy Nelles Chief of Naval Staff, ***"Flowers don't knit mittens"***
To which he alluded the community spirit of a ship being named after their community. As 50 US Destroyers transferred by United States Lend-Lease program to the UK and Canada were designated as *"Town Class",* the Canadian Built Corvettes remained as ***Flower Class.***

Rushed Into Service

Like other early Corvettes, Sackville had a lot of shortcomings. In the photo below of a ship being outfitted after launching, you will see the short forecastle which is the forward part of the ship called the ***foc'sle.*** The open area from the bows, to "abaft" the funnel, allowed the seas to crash into the side passageways and made the sailors access and accommodation very wet and also very dangerous. Along with other inadequacies, it was corrected later in a well-deserved re-fit, but not until January 1943.





The design of the corvette was such, that it could be quickly, easily and inexpensively built. They were equipped with the barest of available equipment. While it had a basic type of Asdic for submarine search, many of them lacked Radar and more sophisticate electronics that were available for larger warships. Without a Gyro Compass, navigation was not as easy, or as accurate as it could be. As a result, station keeping and accurate navigation was difficult. Despite these inadequacies, and that the Corvettes ***ship's company*** were former merchantmen and raw recruits, with only basic naval training, they launched into the harrowing North Atlantic.
The corvette was a small ship designed for coastal waters, but it faced the stormiest ocean waters in the world, as seen in the photo on the left of a corvette coated in ice, returning to Canada across the Grand Banks.-

The Navy Wants You!

At the start of WWII, there were Regular Navy Personnel and Reservists.
In total, the Canadian Navy, had a naval force of only 3500 personnel

These 3500 sailors were Canada's first line of naval defence. They were the Royal Canadian Navy the RCN, who were the full time permanent naval force, and the Royal Canadian Navy Volunteer Reserves, the RCNVR. The Reserves were civilian personnel who had regular employment outside of the navy. In the years before the war, they received uniforms, and were trained about once a week at an inland base. Some of them travelled to shore bases on the East or West coast, and received sea training on a ship during their summer vacation. Also available were masters and deck officers of Merchant Ships, who were very experienced civilians, prepared to accept navy postings in the event of National Hostilities. They were designated as the Royal Canadian Navy Reserve, the RCNR.

DEPARTMENT OF NATIONAL DEFENCE

MEN WANTED

FOR THE

ROYAL CANADIAN NAVAL VOLUNTEER RESERVE

Volunteers are required for enrolment as seamen, signalmen, telegraphists, buglers, engineers, electricians, ordnance artificers, motor mechanics, accountants and cooks in the Royal Canadian Naval Volunteer Reserve.

PERIOD OF ENROLMENT—Three years.

QUALIFICATIONS—Candidates must be British subjects over 18 years of age resident in Canada, of good character, physically fit and willing to serve at sea or wherever required in time of emergency, or when undergoing annual training. Candidates must not belong to any other Reserve Force.

NAVAL TRAINING—From two to three weeks' Naval training in H.M.C. Ships or Establishments at Halifax or Esquimalt each year. In addition to annual training, at least 30 drills each year, at Company Headquarters near their homes, will be required of Reservists.

PAY AND ALLOWANCES—Canadian Naval rates of pay will be paid to men of the Reserve Force whilst undergoing annual training at the Naval bases. A bounty to cover expenses of men attending drills at Company Headquarters will be paid at the rate of 25c. per drill up to a maximum of 30 drills a year. An extra $5.00 will be paid each year to Reservists on completing 40 or more drills during the year.

WHERE TO APPLY—For further information application should be made as follows:—

Residents of Halifax, The Senior Naval Officer, R.C.N. Barracks, Halifax, N.S. or the Officer Commanding the Halifax Half Company, R.C.N.V.R.

Residents of Vancouver, The Senior Naval Officer, R.C.N. Barracks, Esquimalt, B.C., or the Officer Commanding the Vancouver Half Company, R.C.N.V.R. Bowman Building, 837 Hastings St. East.

Residents of any other town of Canada, The Naval Secretary, Department of National Defence, Ottawa.

FOR MORE DETAILED INFORMATION APPLICATION SHOULD BE MADE TO:

When WWII began, the RCNR & RCNVR were called up for active service. After that, the navy went out to get volunteers to join the navy. At first they were cautious and looked only for men with experience, but as the demand for sailors increased, they looked for inexperienced men and designated them also as RCNVR, ***for the duration of hostilities.*** These were men with no navy experience, most of them from inland regions of Canada.

At the start of the war, small warships were for the most part commanded by RCNR captains but later in the war, many RCNVR reserve officers would be given command of newly commissioned vessels, including our new corvettes for Convoy Duties in Atlantic Ocean and the Mediterranean Sea.

The photo on the left taken in early 1941 shows ten new corvettes, waiting for their Ship's Company. The 1939-1940 corvette building program was a most remarkable feat of Canadian ship construction.

In little less than 2 years, seventy ships went from the planning stages into service.

With so many inexperienced men recruited for these ships, the training, or ***working up*** of a ship's company in such a short time was an incredible task.

The corvette's original design was a very simple ship, intended for tasks of short duration. The original ship's company was intended to be only 4 officers and 48 ratings. During 1939-1940 this became 5 officers and 70 ratings. As electronic surveillance equipment, weapons and convoy distances increased, so did the ship's company, and they again increased to 80 and more as required.

The men on a corvette varied depending on the month and year of the war, location of operation and the equipment and weapons it carried. As the war progressed, and new electronic devices were developed, more men were needed to operate them. But, the fact remains, that any increases in a ship's company, had to be accommodated in the same space of the ship. With such crowding there was discomfort, but in the end it was camaraderie that counted, and that a seaman's life depending on his mate.

A Typical Ship's Company Consisted of about 85 Personnel

1 Lieutenant Commander RCN or RCNR
1 Lieutenant RCNR Exec. Officer
4 Sub Lieutenants RCNVR
2 Chief Petty Officers
8 Petty Officers
2 Cooks
2 Signalmen
3 Telegraphists
1 Supply Assistant
1 Sick Bay attendant
60 Leading, Able & Ordinary seamen and Engine room stokers

As ships were refitted with more sophisticated weapons and equipment,
the number in a ship's company increased up to 100 men

THE WAVY NAVY

The Royal Canadian Navy Volunteer Reserve

While Canada had a naval force of 3500 personnel, only a half of them were called the regular navy or a permanent force of professional career officers and seamen. They were the RCN, a well-trained disciplined force which to some people was also called the ***Pusser*** navy which is slang for doing it correctly in a regulation way. An RCN officer's rank was shown as straight gold rings such as shown on the right.

The RCNVR goes back to before and after The Great War of 1914-1918. It was a group of civilians who, some with wartime experience at sea, found their own quarters for training, dipped into their own pockets, and scrounged anything they could for training purposes. They were designated the Royal Canadian Naval Volunteer Reserve, the RCNVR. In those early days Ratings got such uniforms as could be found, while officers usually provided their Kit out of their own pocket.

By 1939 there was a force of about 1800 men in the RCNVR. When the war started, new recruits enlisted for a period that was called ***for hostilities only*** were also designated as the RCNVR. An officer's rank was indicated as wavy gold rings as shown above and on the right.

Ports on the East & West coasts and also inland, had registries of professional ***Merchant Service*** officers and ratings, (Civilian Merchant Navy) personnel who had agreed to serve in an emergency, and they were called the Royal Canadian Navy Reserve or the RCNR. Their insignia of interlaced gold rings on their sleeves, was a carry-over from the Merchant Service they came from, as shown on the right.

It was said by many, in different ways:

The distinction between RCN, RCNR & RCNVR was something that Canada's navy could well have done without, as it served no useful purpose. An officer must stand or fall on capability not cosmetics. When WWII came, the navy had so many ***Wavy officers,*** that the few straight-ring RCN officers, were the minority and appeared to be somewhat of a snobbish elite. ***The Wavy Navy however, had an esprit of its own.***

As James Lamb in his book the Corvette Navy stated:

Canada had two navies in the Second World War. The first was the so called "Real Navy", the "Permanent Navy". Canada's second navy was a much different force. They were a bunch of amateur sailors recruited from all walks of life, managing ships that were deemed too small for command by professional naval officers, this was the RCNVR ***The Corvette Navy,***

The Big Navy, the RCN, lay ashore. It was a tremendous force embodying the best brains in the country that flew their flags from office buildings and had their ward rooms and mess decks in shore establishments. From their desks, or the bridge of a Destroyer or capital ship, they directed the thousands of reservists in their active duty.

There is no question however, that the RCN with all of its "spit and polish" were experienced and skilful sailors. They were a credit to Canada's WWII naval contributions, but the division between the two navies was surprisingly complete and clear cut. Few regular career Canadian naval officers ever kept watch aboard a corvette, and only a handful of corvette crewmen were RCN ratings. As a result,

Canada's professional naval officers of the RCN were to play an ever-diminishing role in the Battle of the Atlantic, which was fought mostly by Corvettes, and the RCNVR.

Manning The Ship

Where did a Ship's Company come from?

Canada's six destroyers in 1939 (more were added during the war) were fully manned, as were other existing smaller warships with RCN personnel. The rest of the RCN, were shore bound in administrative duties. In a short time there were going to be hundreds of ships, Corvettes, Mine Sweepers and Coastal Patrol vessels needing a ship's company. This will amount to an additional naval force of about 10,000 men, and that was just for corvettes.

There were very few RCN officers available for sea duty. The small Canadian merchant Navy provided about 1000 first-rate people – masters, deck officers, engineers, seamen and technicians who were used to living in ships and getting them about the oceans. The existing RCNVR personnel were called up, and the new navy recruits, also designated as RCNVR, completed a ship's company.

However, the great majority of the new volunteer officers and seamen had never been on, or even seen the sea. They had to fit into a disciplined organization, learn nautical terms and skills and fit into close discomfort, in a small ship battered by a hostile sea and an enemy bent on destroying them. Incidentally, on merchant ships, the personnel are called the ***crew*** but on a navy ship, they are called the ***ship's company***

From the beginning, the men of the ***Corvette Navy*** were left largely on their own. An RCNR Lieutenant, a month or two away from his second mate's berth in some merchant ship is given command of a corvette. His officers and about 70 young men are fresh from the prairies or city streets, some have never seen the sea. If the new captain was lucky, one of his officers might have some practical knowledge of piloting or navigation. If his chief engineer worked on a steam locomotive engine, the captain may feel fortunate indeed. However, after a brief, but good shore training, and a ***working up*** at sea, they would soon become a close-knit working team.

The ship was commanded or ***conned*** from a bridge, which was open to the elements in all kinds of weather, winter and summer on 4 hour shifts that were called ***watches.*** While the captain had a cabin below decks, when he was at sea he spent most of his time on the bridge and caught snatches of sleep on a cot in the wheelhouse, as seen in the photo below.

Note the ***voice pipes,*** which were used for communication from the open bridge to the ***quartermaster*** on the wheel and the ***telegraph*** that signalled instructions to the engine room.

They had Asdic (underwater submarine detection) and some of the Corvettes at the start of their commissioning were equipped with a very unreliable type of early Radar, while those ships without it, had to rely on visual sightings of the enemy.

The Ship's Company

Ratings, seamen below the rank of officers, had their accommodation in the forward part of the ship called the forecastle or ***foc'sle*** They slept in hammocks spaced 18 inches apart, the same as it was in the 1800's of Admiral Nelson's day. They also stowed their gear, ate their meals and relaxed off duty in the same place, as seen in the photo on the right. A ship's company of 80 and up to 100 sailors were ***bunked-in*** a space, originally intended for only 50.

Working up the Ship's Company

Firing the 4 inch Gun on the Foc'sle

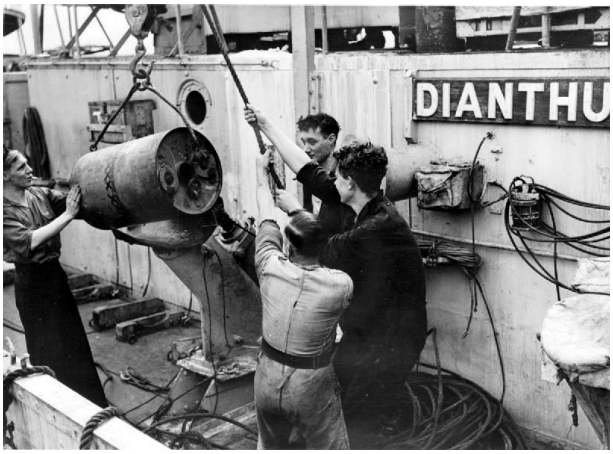
These young men were from all walks of life. Some had never been to sea before. At a shore base, they did a little marching and saluting officers. In addition, they received a reasonable amount of basic instruction and practical training. However, some of the equipment was unfortunately from WWI. Obsolete equipment and procedures they may never use again. As soon as a ship was ready, they were mustered aboard, and now a rigorous ***working up*** or training on-the-job began. The gunnery officer may have been a similar person with little experience, but under the direction of an experienced Gunner's Mate or similar rating, they learned their part in the battle that was to follow. There was no time for parades with spit and polish, but there was camaraderie.

Developing Asdic Skills (Anti-Submarine Detection Investigation Committee) and Radar

RCN Asdic (or Sonar) in the early years of the war was a 1920 vintage old style type 123A. While most of the ships had Radar like Sackville did, it was the newly designed SW1C A Scan, which was very unreliable. However, they had to learn to interpret what they were hearing and seeing. They spent many hours watching and listening, and when they had a contact, they had to guide the captain in his attack. They developed skills and teamwork in all kinds of weather during their sea training.

Their efforts at times were severely strained as some corvettes being rushed into immediate service, did not have such things as searchlights, radio telephones, Gyro compasses and even a shortage of binoculars. Without the better Gyro compass the accuracy in plotting an attack with a magnetic compass, on a rolling ship was unreliable. Many of the newer and better electronic devises were not made in Canada, and the RCN was at the back of the queue as everything had to come across a hazardous sea after the RN ships were supplied. ***In Fact,*** a call went out to the public to contribute binoculars and any other such navigating tools.

It Was a Race Against Time



Working up involved every operation of the ship from the bridge to the engine room. Their classroom was an overcrowded uncomfortable space, and regardless of how hard they tried, there was never enough time to develop the greatest efficiency…… *But try they did*.

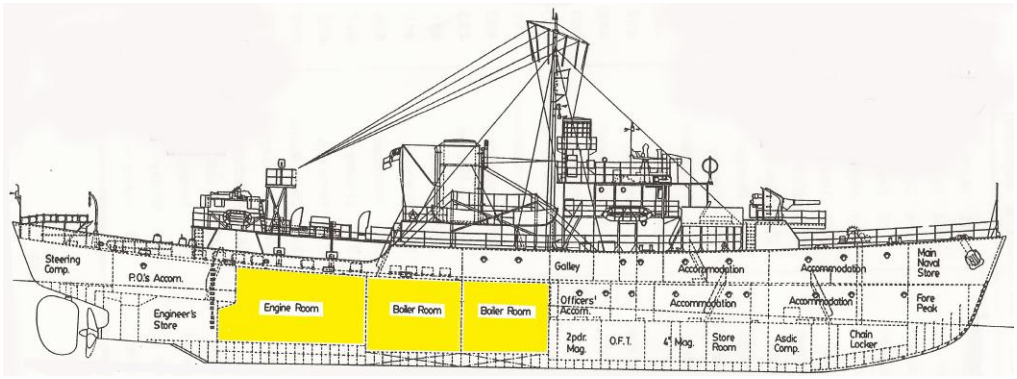
Even a small warship was very complex. They learned to operate engines and make sense out of bells, buzzers and lamps, a tangle of pipes, valves, and shafts.

Just learning how to get out of harbour safely was a challenge. When they got to sea the learning would begin again, because now at sea, there was the submarine menace that was sinking ships, their own safety to consider, as well as their mates.

The Corvette Engine

2700 horsepower that could drive the ship 16 knots (18 mph or 30 kmph)

As you will see in the picture on the right, the engine machinery space occupied about one third the space in the hull.



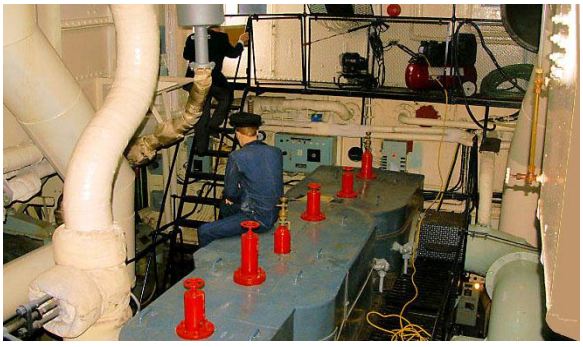
In that space, were the fresh water tanks for the boilers, storage tanks for the oil to fire the boilers, two steam boilers, the steam engine and a steam to water condenser. In technical terms, the engine was a 4 cylinder, triple expansion, reciprocating steam engine, that drove a single crankshaft and the ***screw*** (the propeller).

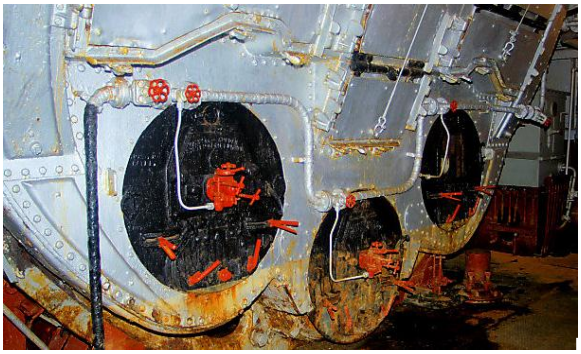
The Fire Tube Scotch Marine boilers produced steam at 200 psi to drive the 4 reciprocating pistons, and after that, the exhausted steam was condensed back into water for re-boiling again to produce more steam.

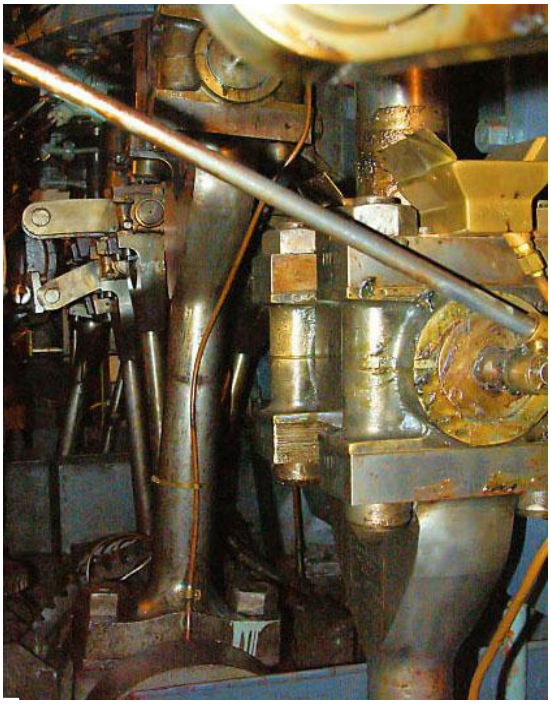
The engine design as a reciprocating type was old technology by 1939 standards, but it was very reliable. They were the most common marine engines in what was previously called the golden age of steam and there was no question that they could get the job done. As the components were economical and easy to manufacture by Canadian factories, it could be built in the shortest time possible and be within the same production scheduling as the building of the ships. It was also relatively easy for personnel to learn to operate and repair, and often at sea. The boilers were similar to those in steam locomotives, so a railway engineer could easily make the transition to a corvette or frigate boiler room.

The principal of 4 cylinder triple expansion is that steam is first fed into a high pressure cylinder, and after being reduced in pressure and exhausted from it, the lower steam pressure is then fed to the second cylinder. It is then fed to two very low pressure cylinders. After that, it is returned to the condenser for processing it back to water.

Below on the left, is the top of the engine and below is a part of one of the two boilers. On the left, are the massive piston and connecting rods, that turned the crankshaft and the ships single propeller.







A Corvettes Action Stations

The 4 inch Gun on the Foc'sle

Like most of the equipment on the new early built corvettes, the Forward Gun was also of WWI Vintage. It was a 4 inch MK IX that had a range of 12,000 yards or about 6 miles (10 km) At that range, and by only visual sighting of the gun, (no radar control) it would be next to impossible to hit a small moving target from the deck of rolling yawing ship. What it did however, was to force the submarine to submerge.

As the sub now operated on battery power, its speed was reduced and with the periscope low in the water, its view of the convoy was also reduced. Now the escort(s) could converge on its projected position to attack it with depth charges. In the meantime, the convoy may also change its direction, and the sub would hopefully lose contact with it.

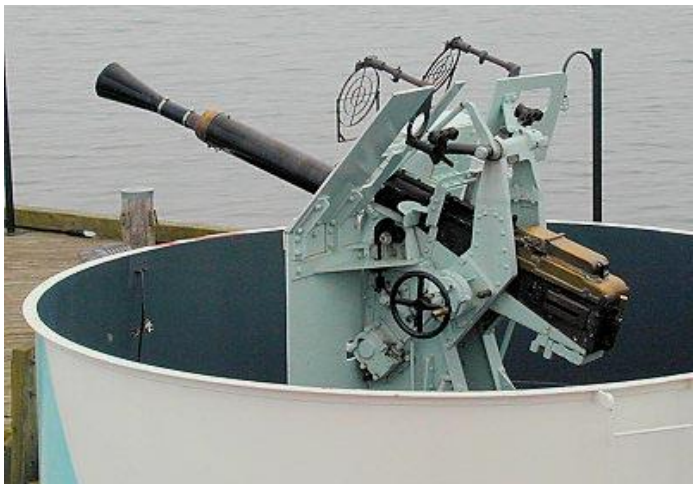
Two 20mm Oerlikon Guns on the Bridge

The earliest built Canadian Corvettes were fitted with WWI Vintage Lewis .303 machine guns, the same calibre as a hunting rifle. They were all that was available at the time, and were ineffective on targets even at close range and definitely not effective against he heavy steel hulls of a submarine.

As they became available, they were later replaced by the more powerful 20mm Oerlikon machine gun. This gun was more than twice the caliber, and had greater muzzle velocity, accuracy and impact for defence against aircraft and for attacking submarines at close range on the surface.

A 2-Pounder Pom-Pom

This weapon, a MK VIII QF (quick firing) 2 pounder weapon was called a ***Pom Pom,*** as the name came from the sound that the original models made when they were fired. Its placement was on the afterdeck of the ship in a circular Gun Turret or a Tub that was called by some sailors, the Band Box.



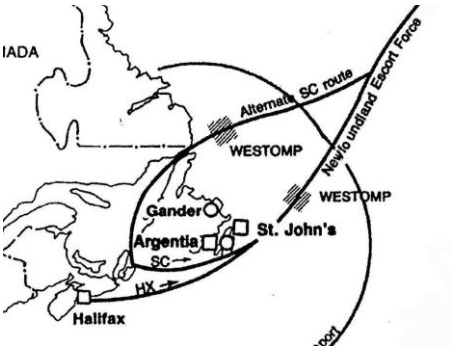
It was a manually operated rapid fire gun and its primary purpose was an anti-aircraft gun, as it had a high angle of firing and could rotate 360 degrees.

It could also cause considerable damage to submarines on the surface due to it larger 40mm calibre ammunition and its fire power that could fire a 2 pound projectile over a mile.

The Convoy

At shore based training, the ship's company learned their responsibilities and all the practical aspects of their equipment, until they knew it blindfolded and upside down. Then they went through ***rigorous at-sea training,*** under the watchful eyes and guidance of senior retired RCN officers. They fired at targets day and night, pinging and tracking an RN submarine. They worked in rough weather, practiced fighting fires and damage control. They manoeuvred with other ships in battle problems thrown at everyone from the captain down. They hashed over mistakes, and did it over, and over again, until they got it right.

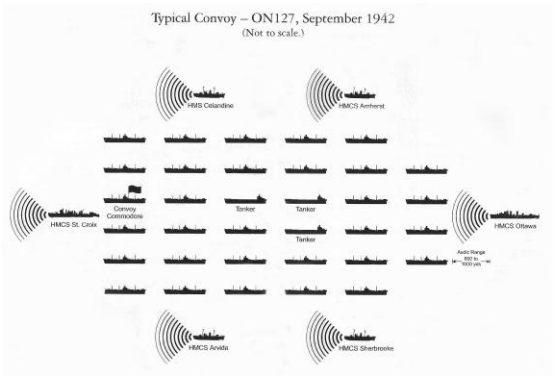
HMCS Sackville was now ready. The amateur sailors were now a team of trained, but untried sailors.



Merchant ships destined for the UK, would leave Canadian as well as United States ports, and be escorted to the Western Ocean Meeting Points WESTOMP. Here they met the Newfoundland Escort Force, and proceeded as a Mid-Ocean Group through the ***Black Pit,*** an area beyond air cover where Wolf Packs of submarines concentrated, to somewhere south of Iceland, where they would be relieved by a United Kingdom Escort Group.

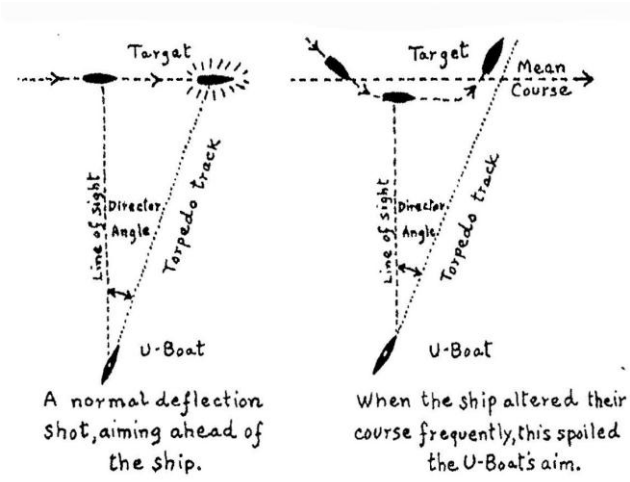
HMCS Sackville was one of the Newfoundland Escort Force which was stationed in St. John's Newfoundland, or ***Newfyjohn*** as sailors called it.

A convoy consisted of about 30 merchant ships led by a Convoy Commodore. He was usually a retired former Naval Flag Officer, who was then under the direction of the Naval Escort Force Commander, usually in a destroyer that was supported by about four corvettes. It is interesting to note that the retired commodore called back into service was usually outranked by an escort commander, such as a Lieutenant Commander. But then, each had his responsibilities. Prior to sailing, there was a meeting of the ships masters. They received their sailing orders which included their position in the convoy, speed, direction as well as locations and times for ***Zig Zags*****.**



What was, and Why a Zig Zag?

A Zig Zag was a maneuver, such that the entire convoy all together upon a signal from the Convoy Commodore, would change the direction they were sailing. Failure to execute it properly could result in collisions or at the very least, confusion and misalignment of the convoy. One of a corvette's responsibilities was to get the convoy back into its original sailing positions and like a sheep dog, ***round up the strays***



In the diagram at the left you will see a submarine sighting a merchant ship. It determines its distance, direction and speed. Then the submarine commander determines in what direction he should fire his torpedo ahead of his target, in order to hit the moving ship. After launching the torpedo, if the convoy should turn or Zig Zag, the torpedo will miss its target. A submerged tracking submarine may also lose sight of the convoy, as it sails away on a new course.

Defensive Systems

Contact & Magnetic Mines

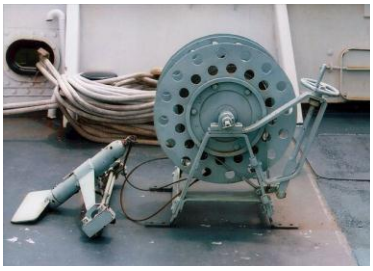
As a carryover from the First World War, there was the floating contact mine that exploded when a ship came in contact with one of its spikes, as seen on the right. There were warships such as the Bangor Class Mine Sweepers, and in the early part of the war, some corvettes carried mine sweeping gear to deal with them.

But then the Germans developed the Magnetic Mine. It laid in wait on the bottom of the sea. The magnetic force of a ship, even tens of metres above it, had a magnetic force field that could ***trigger*** the mine.

Gauss is a unit of magnetism. Cmdr. Charles Goodeve RCNVR, first used the term ***Degaussing a Ship*** when with other Admiralty scientists they developed a number of systems to change the magnetic force field of a ship, and render the magnetic mine ineffective. Suffice to say in this brief outline, it involved installing electromagnetic coils of cables ***Coiling*** around the ship or ***Wiping*** which was dragging a large electrical cable along the side of a ship .

Acoustic Torpedos

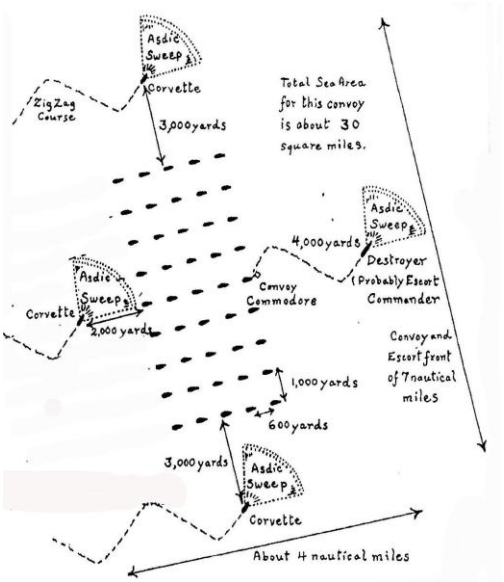
Germany then developed an Acoustic Torpedo that homed into a target from the sounds generated by a ship's engines. This weapon required less skill or accuracy of a submarine commander to strike a ship, which increased their sinking's for a while. However, we then developed the Canadian Anti-Acoustic Torpedo gear called ***CAAT*** This simple mechanism as seen on the right was towed about 200 yard, (180 m) astern of the ship. It generated a sound louder than the ship's engines to attract the torpedo away from the ship.



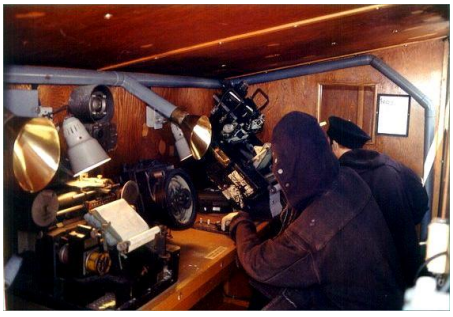
Smoke Screens

In a daylight attack by submarines, sometimes it was necessary to hide the convoy with a smoke screen, while the convoy changed direction in a ***Zig Zag.*** A corvette could generate a thick black smoke by injecting oil directly into the ship's funnel, or restrict the air supply to the boilers causing incomplete fuel combustion. Alternatively, without affecting the ships performance, there were six smoke floats they could discharge over the stern of the ship that chemically generated a thick white smoke as they steamed away.

Asdic, Radar & Huff Duff



While these were devices that improved the submarine hunting skill of a corvette, they were also means of defending their ship, and the ships of the convoy. With Radar, the escorts could see the convoy in all weather conditions, and at night. Its Radar could seek out a submarine on the surface, and even just the periscope without relying on a visual contact. Huff Duff, was High Frequency Radio Directional Finding that zeroed onto the bearing, or direction of an enemy by its radio transmission.



Attacking a Submarine with Depth Charges

The photographs of huge fountains of water erupting the surface of the ocean look great, but they are to some extent, shallow explosions, where most of the force of the weapon is lost in the atmosphere. The most destructive force of a depth charge is a deep one that lifts the surface like a boil, but develops powerful shock waves beneath the surface.

Due to sound interference, Sonar (Asdic) contact is lost immediately prior to the attack on the submarine and immediately following it, thus leaving the Corvette blind at a crucial moment of attack. If a ship only dropped depth charges over the stern, a submarine could easily turn away and avoid them. A skilful submarine commander therefore had an opportunity to take evasive action.

It was for this reason, a wider area of depth charging is necessary and achieved by firing side mounted depth charges, in addition to rolling them off the stern to create a broader area of submarine bombardment.

The Side Mounted Depth Charge Throwers

Four Side Depth Charge Throwers were mounted on the upper ***Iron Deck*** in pairs on both sides at the "waist" of the Corvette. The depth charges were propelled by an explosive Cordite charge a distance of some 150 ft (45 m) in a wider pattern involving some 6 to 10 charges in the area of the submarine's suspected position.

There was a larger attack coverage by the four side mounted throwers. However a single ship attack, and the loss of Asdic contact that occurred after the explosions of the depth charges, was still a liability to the success of the action.

When two ships were used to attack a submarine, one could stand off and maintain contact with the submarine, while the other attacked. However, in the early days of the war, there were very few ships available to escort convoys and usually only one ship could be detached from the convoy to investigate a possible contact or attack a submarine.

In those early days, the effective use of depth charges required the combined resources and skills of many individuals during an attack. Asdic, Helm, Depth Charge Crews and of course, the resourcefulness of the captain to anticipate ***…..what will the submarine commander do – where and how will he turn?***

A decisive weapon to effectively deal with the asdic loss during attack was resolved by the use of the Hedgehog

The Hedgehog

The Hedgehog came into service in 1943 and was a major contribution to winning the Battle of the Atlantic. It was 24 mortar type bombs fired in an arc about 750 ft (230 m) ahead of the attacking corvette. Without losing Asdic contact, the bombs were fired in a circular area of about 100 ft in diameter (30 m). The depth of the submarine did not need to be known, as the bomb only explodes on contact, and could be effective down to 1300 ft (400 m) The reloading only took 3 minutes and any explosion was a ***hit*** and 1 or 2 hits were sufficient for a ***Kill.***

Just a few of
HMCS Sackville's Achievements

As Canada geared up for war by enlisting men and building ships in the 12 months of 1940, German U-boats sank 400 ships with a loss of two million tons of supplies. Canada's initial six RCN destroyers, supported by British RN destroyers, sank 22 U-boats. There were hundreds of U-boats and more being built. Escorts were hard pressed, and at that time, the RCN & RN were being beaten.

When HMCS Sackville was ***laid down*** in a New Brunswick ship yard in 1941, there were already plans being made for improved versions of the Canadian built Corvettes, which in part would make them more ***sea kindly.*** However, to modify the ship's construction which was well underway, would have delayed the immediate need to get her to sea. While other corvettes were modified during their construction and others retro-fitted within a short period of time, Sackville went through 3 years of active service before she was taken in for a complete modernization program of structural improvements that included the installation of the most current electronic and navigational systems.

She was commissioned in December 1941 and after being worked up with her new Captain, Lieutenant-Commander Alan Easton RCNR, she entered The Newfoundland Escort Force in Feb 13, 1942. She served until July 1944 during which time ***she escorted 30 convoys of over 1200 ships*** across the mid ocean and through the Black Pit, with a losses of only 13 ships being torpedoed, of which 9 sank.

Action as Quoted from Wikipedia:

In August 1942, HMCS Sackville fought a series of fierce actions escorting Convoy ON-115. Deprived of air cover by heavy fog, the convoy was attacked by two successive U-boat "Wolf Packs" off the coast of Newfoundland. On August 3, *Sackville* caught the submarine U-43 on the surface and, as the submarine dived, made a series of depth charge attacks that blew U-43 out of the water. The submarine managed to survive, but had to flee to Europe for repairs.

The next day Sackville attacked U-704 as it dived, causing the submarine to break off its attack, leaving *Sackville* to rescue survivors from an abandoned, but still floating merchant ship.

Only a few hours later, Sackville detected U-552 on the surface with its radar, and landed a four inch shell on the submarines conning tower and followed up with depth charges. U-552 nearly sank, but managed to regain control and creep back to Germany heavily damaged.

Sackville's attacks played a key role in allowing the 41 ship convoy to escape, with the loss of two merchant ships. And this was with a crew of so called amateurs, who had been worked into a fighting team.

The foregoing was but one convoy of the many she escorted. It has been recorded by the Canadian War Museum that the RCN sank 31 enemy submarines in the North Atlantic and for its part, lost 14 ships to U-boat attacks. Most of the 2000 members of the Royal Canadian Navy who lost their lives died in combat in the Atlantic.

Although the German submarines sank over 3500 merchant ships, HMCS Sackville was a part of the ***Newfoundland Escort Force, which safely escorted 25,000 merchant ships*** that delivered about 165 million tons of supplies to England and Europe.

Senior officers of the RCN frequently warned, that, "men and ships (the Corvettes) were being tested beyond their limits, with too little, and inadequate training. There was also too little time to recover from the horrors they frequently witnessed, as ships were blown apart, and survivors froze to death before being rescued".

However, the exhausted RCNVR in their little warships, got no respite – only increased pressure, but they carried on, and the tide of battle started to turn in their favour in the middle of 1943. .

The mid Ocean Group of the Newfoundland Escort Force (NEF) worked a continuous 33 day cycle.
After leaving ***Newfyjohn,*** they spent about 9 ½ days in an Eastbound convoy crossing through the Mid Ocean Black Pit and conducted a maintenance and training period in Londonderry for 8 days. Then they escorted a Westbound convoy for about 9 ½ days, returning to St. John for 6 days. It wasn't all violence and horror, as many hours would be spent in monotonous duties or sometimes battling violent ocean storms, but always with the fear, that without any warning, a torpedo may crash into their hull, and end their lives.

In 1942, the Newfoundland Escort Group C-3 comprising the, destroyers Saguenay and Skeena along with the corvettes Sackville, Agassiz Wetaskiwin, and Galt, of their own initiative, painted on the funnel of their ships a red and white barber pole to distinguish them as Canadian ships. They became known as the Barber Pole Group. This was later done by all Canadian ships of the Mid-Ocean Escort Service. Today in a different format, this tradition is still carried on, in that all RCN ships have red Maple Leafs on their superstructure.

Early in 1943, several Canadian Corvettes of the NEF, were withdrawn from the Mid Ocean Convoys.
They were sent to British waters, to free up British destroyers, to in affect, "smash the wolf packs". In fact, the Canadian groups had little time for a rest in British waters, as they became heavily engaged in the UK- Gibraltar convoy run. Here they were not only attacked by submarines, but also by continuous air attacks from German air bases in France.

By mid-1943 the tide of battle was changing. More, and better equipped escorts became available. Ship's companies were more experienced with greater efficiency and confidence. Long range aircraft as spotters to direct escorts to lurking submarines, or as depth charge bombers, were available to shadow a convoy all the way across. The Black Pit lost its advantage to the submarines. The Germans withdrew submarines from the central Atlantic, as their losses increased. By mid-1944 the life expectance of a German submariner at sea was only a couple of weeks. Up to now, escorting was primarily a defensive function that kept the warships of the convoy tied by a short leash to their convoy.

Up to about 1943, if an escort broke away from its convoy screening position to force down and possibly attack a submarine, they had to do it by themselves, as the convoy commander could not spare any more ships from the screen to help out. But with more corvettes becoming available with new battle tactics, the hunt for submarines was on. Not only could the convoy escorts break off in pairs, but there were also special hunting groups, who's only purpose was to search and destroy.

The following story is but one of the many actions against submarines:
An escort came upon a Submarine about a mile away which was diving. She closed and picked it up on Asdic. Her skipper, was by now an experienced, careful systematic man. He held the U-boat by Asdic, circled around it and held his attack, As a single ship could lose a submarine, he radioed for help. Soon another escort arrived. She moved in and gained contact also, and followed behind the U-boat slowly. Now began a co-ordinated attack. As one ship came in on the beam of the U-boat to drop depth charges, the other held the contact. The deadly dance continued again and again for 3 hours: 8 patterns of 80 charges. At last diesel oil spread on the surface, and the contact faded. The debris confirmed a kill!

Canadian Corvettes also operated in the Mid Atlantic, the Mediterranean Sea, the English Channel and the approaches for the Normandy Landings:

But over the same period it was the infusion of 100 fully manned, reasonably equipped and adequately supported Canadian escort vessels that made the Trans-Atlantic convoy system possible.

By 1944, the major convoy routes across the North Atlantic were under Canadian (Corvette) Escort

In a history of the RCN, Gilbert Tucker said the corvettes were by no means ideal anti submarine vessels, yet they successfully filled a most dangerous breach, in circumstances where superior vessels might well have failed, because there were so few of them. The work of the escorts was dangerous because if these small ships were torpedoed, it was touch and go, as to whether those below decks could escape in time.

In October 1940, Winston Churchill said,

"The Battle of Britain is over but the Battle of the Atlantic is beginning"

He also said after the war ….

"the only thing that ever frightened me during the war, was the German U-boat peril"

In saying this, he alluded to the threat of the German submarines to the Atlantic lifeline, as this lifeline was Briton's survival – the loss of which would probably have led to wholesale defeat in the war.

Rear Admiral L. W. Murray RCN, as Commander of the Newfoundland Escort Force, commented

"the reputation of the RCN in this war, depends on the success or failure of the NEF and the RCNVR "

To which he referred to: **The Sheepdog Navy.** "The infusion of nearly 100 fully manned, reasonably equipped Canadian Escort Corvettes, made the trans-Atlantic convoy system possible, and by 1943 when the tide turned, in our favour, the major convoy routes across the treacherous North Atlantic, were under Canadian escort".

Vice Admiral P.W.Nelles RCN As Chief of Naval Staff was being hounded by Canada's Minister of Defence over the shortfalls in modern equipment in the escort fleet, and its failure to sink U-boats, while the British and Americans, sank them by the score - He relied:

" Admittedly, the Sheep Dog Navy was not the best trained and equipped, but he pointed out, that while they were doing the basic work of escorting, the larger navies had the time and opportunity to train and fit new equipment, and most important to be free to hunt U-boats."

The Canadian War Museum (Roger Sarty) Recorded: At the end of 1941, senior officers of the RCN warned that men (RCNVR) and ships (Corvettes) were being tested beyond their limits, with too little and inadequate equipment, insufficient training, and too little time to recover from the horrors they frequently witnessed as ships were blown apart and survivors froze to death within minutes in the frigid North Atlantic. Yet, the exhausted naval seamen and their little ships got no respite – only increased pressure.

Cdr. Harry DeWolf Staff Officer Operations Halifax, Captain of Haida and later Vice Adm. RCN said

"We never caught up. We were always under pressure to man more ships"

James B Lamb Captain of Corvettes HMCS Minas & Camrose, wrote in his book - The Corvette Navy
Ex-Merchant Service Officers provided the solid core of experienced seamen on which the Canadian seagoing navy was built – The strain of command, particularly in the early years, was almost more than men could bear. Each convoy trip was a test of endurance; two to three weeks of gales and sinking's and collisions, of escorts trying to take in tow huge disabled merchantmen ten times their size, of excruciating discomfort and agonizing decisions. After weeks of a nightmare, a corvette would limp into Iceland, or later on Londonderry, for a layover of three to four days, during which the crew had to refuel, load food and ammunition for the return voyage and attempt to repair and maintain their battered ship and armament.

And of Captain(D) Edmund Rollo Mainguy base commander of "Newfyjohn" James B Lamb wrote He **i**mparted the spirit that fashioned Canada's escort navy into an effective and efficient team, and its officers and men into a ***true band of brothers***, a race of men apart. In St. John's, Mainguy insisted that the ships came first. When a corvette berthed there, battered and breathless from the fury of the Atlantic, staff men would be waiting on the jetty to help make good her defects, replenish her stores, and generally aid and comfort her crew. Mainguy instilled a sense of team spirit, of pride in one's ship and in one's escort group.

In no small way, the RCN & RCNVR had found a niche as a ***Flotilla Navy.*** As was said by others, those dumpy, little war built Corvettes which Admiral Nelles ordered in 1940, but only as a stepping stone to a proper fleet of modern destroyers, became the cornerstone of the modern Canadian Navy.

CREDITS

There is nothing new in history, as it is only a collection of experiences that are gathered together and retold my many people, in many different ways.

This then, is my small contribution. It's my collection of notes about a ship and the experiences of people who were the *Ship's Company*, or people who have written about them. My brief collection of comments is matched wherever possible with a descriptive photo or illustration, for a visual appreciation of what happened, and what it was like aboard HMCS Sackville.

Its purpose is to assist tour guides and visitors to HMCS Sackville and very important are younger visitors to whom WWII is just a mention in history.

This would not have been possible without the work of members the Canadian Naval Memorial Trust, their volumes of notes generated by former Ship's Company, it's past and present trustees, Wikipedia, Canadian War Museum and books such as HMCS Sackville by Marc Milner, 50 North by Alan Easton, and many others, fact or fiction, and unfortunately too numerous to mention.

In my research I found many written events and photos borrowed from other sources, published in different books without credits or restrictions or copyrights. However, some of the photos of Sackville I used in my guide were taken by Ian MacCorquodale & John Webber aboard the Sackville.

My knowledge of what happened and when, was best told by James Lamb in his book *The Corvette Navy*. Like many other seamen he was there. He knew the political scene, the building of the Corvette, and experienced the discomforts, pain and tragedies of war. It's a book I recommend for the best all round awareness of the Battle of the Atlantic.

There was also Nicholas Monsarrat's book, The Cruel Sea. While it is a fictional story of a WWII Corvette, and a drama, it accurately described the events and personal challenges of that time.

There were numerous US & UK "*war effort movies"*, movies made. In 1943 there was *Corvette K225* with Randolph Scott. It was a US made movie about the RCNVR and a fictional Canadian ship called the Corvette HMCS Donnacona. Incidentally, in the making of the movie, they used the Canadian Corvette Kitchener K 225.

I hope that in some way, my efforts and of course, the many efforts of others will help to give a continuing place in history to the memories of those who served and died in the Battle of the Atlantic,

Bert Walker
Trustee
Canadian Naval Memorial Trust