

REFERENCE PAPERS

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THE ROYAL CANADIAN NAVY

Strength at March 31, 1945.....	more than 95,000 more than 89,000 men nearly 6,000 women
Pre-war strength of R.C.N.....	1,774
Ships at March 31, 1945.....	939
Pre-war strength in ships.....	17

LIST OF HONORS AND AWARDS (from the commencement of hostilities up to and including March 31, 1945.)

Companion of the Most Honorable Order of the Bath.....	4
Commander of the Order of the British Empire.....	10
Officer of the Order of the British Empire.....	56
Member of the Order of the British Empire.....	46
Distinguished Service Order.....	8
Distinguished Service Cross.....	109
Distinguished Service Medal.....	86
Associate of the Royal Red Cross.....	4
Royal Red Cross.....	1
George Medal.....	9
Conspicuous Gallantry Medal.....	2
Albert Medal.....	3
British Empire Medal.....	84
Royal Humane Society Medal.....	6
Mention in Despatches (Officers).....	329
Mention in Despatches (Ratings).....	415
Kings Dirk.....	1
Commendations.....	18
Naval General Service Medal with "Bar Palestine".....	6
	<u>1197</u>

Foreign Awards:

Legion of Merit (U.S.A.).....	2
Bronze Star Medal (U.S.A.).....	3
Polish Cross of Valour.....	4
Norwegian War Medal.....	2
Greek War Cross, 3rd Class.....	1
Czechoslovak Military Cross, 1939.....	3
Bronze Medal -- Order of Orange Nassau (Netherlands).....	1
Order of Patriotic War First Class, Russia.....	1
	<u>17</u>

TOTAL 1214

Functions of the service

The Royal Canadian Navy has four different parts to play in the sea warfare of the United Nations:

- 1) Protection of merchant shipping
- 2) Protection of Canadian shores

- 3) Destruction or capture of enemy merchant and fighting ships
- 4) Blockade

CONVOY

In this war, it was obvious from the outset that Canada would have to play the role of convoy protector, and when upon the declaration of war the British Admiralty asked by wireless when the Canadian convoy system could go into operation, the answer flashed back: "Immediately".

Six days after war began, the first Canadian convoy, numbering 18 ships, was escorted into the open Atlantic. It reached its destination safely. Canadian escort ships have been on constant duty since.

Convoy duty is in charge of senior officers of escorts. Naval officers in charge of various ports report directly to men in charge of three of Canada's naval commands: Rear-Admiral Leonard W. Murray, C.B. C.B.E., Commander-in-Chief, Canadian North West Atlantic; Commodore Cuthbert R. Taylor, C.B.E., Flag Officer, Newfoundland; and Rear - Admiral Victor G. Brodeur, C.B.E., Commanding Officer, Pacific Coast.

All convoy protection on the North Atlantic route is the responsibility of the Royal Navy and the Royal Canadian Navy, assisted by escort vessels of the United States Navy and the air forces of Canada, the United Kingdom and the United States.

The first job of ships on close escort duty is to see that convoys arrive safely at their destination. As the Canadian navy has been predominantly occupied in close escort work, destruction of enemy submarines has been of secondary importance. In a joint report issued by Prime Minister Churchill and President Roosevelt in August, 1944, it was revealed that more than 500 submarines had been sunk by the allies since the war began. In this destruction Canadian ships participated. But a more accurate way of estimating the success of the Canadian navy's convoy efforts is to consider the number of merchant ships that have been safely escorted across the Atlantic. In 1941 one ship was lost out of every 181 that sailed; in 1942, one out of every 233.

In 1943 the tide turned and only one out of every 344 ships was lost. Before that year the enemy was able to sink more merchant ships than could be replaced. In 1943 the United Nations' losses of merchant ships were only about one-half what they had been in 1942. In 1944 merchant shipping losses were about one-third of what they were in 1943. These figures indicate that allied warship strength was growing and that greater protection could be given to allied convoys.

From the beginning of the war to the end of March, 1945, the Canadian navy assisted in escorting nearly 222,000,000 deadweight tons of cargo from North America to Europe. In addition to the ships convoyed from American shores to Europe, the R.C.N. has also assisted in conveying ships from United Kingdom ports to ports on this continent, and in addition a great number of ships have sailed in Canadian coastal convoys from some point on the North American continent to another point in the same area. Ships of the Royal Canadian Navy have also seen service with convoys to north Russia through dangerous Norwegian waters.

Canadian ships now provide more than 80% of all close escort for trade convoys between North America and the United Kingdom. At one stage, during the summer of 1944, Canadian ships did 100% of this type of convoy work. From 1942 to the spring of 1944 Canadian trans-Atlantic convoy escort never fell below 40% and was often as high as 48%. The largest convoy ever to sail the Atlantic, a convoy of 167

merchant ships carrying more than 1,000,000 tons of cargo, sailed from North American shores in the summer of 1944 and reached its destination without the loss of a single ship. The protection for this great armada was provided by escort vessels of the Canadian navy.

Even to assemble a convoy requires work and caution undreamed of by the layman. Ships have to be routed from various ports to arrive at the assembly point at a predetermined time. The provisioning and fuelling of ships must be planned so that the ships will sail on time.

Naval Control Staffs have been set up at Halifax, Sydney, Saint-John, Montreal, Quebec, Vancouver, Esquimalt and Prince Rupert, composed principally of Naval Reserve Officers who are familiar with merchant shipping. A system was instituted whereby every merchant ship sailing in convoy would be examined as to speed, manoeuvrability, fuel capacity and adequacy and loyalty of crew and officers. Shipmasters were instructed in a brief, but adequate course of signalling, interpretation of orders, and regulations concerning sailing in convoy.

In addition to serving in the ships of the Royal Canadian Navy in convoy, R.C.N. sailors serve in the merchant ships themselves, manning the heavier guns on board. The majority of smaller weapons, such as machine-guns and anti-aircraft guns are now manned by DEMS-trained (Defensively Equipped Merchant Ships) seamen. The merchant navy has been steadily increasing the amount of defensive equipment aboard its vessels, and merchant seamen are learning gunnery in a short course at five naval gunnery schools in Canada. The schools are operated by DEMS and are an integral part of the job the R.C.N. through its Trade Division is doing to help the safe convoy of goods.

Convoy groups are arranged according to maximum speed. Escort vessels have to be assigned. Planes are supplied by the R.C.A.F. to protect the flotilla on the first leg of the trip, and aircraft of the United States or United Kingdom operating from United Kingdom or the Azores protect it for the rest of the journey. All these and other details must be looked after for each convoy.

GUARDING CANADIAN SHORES

The R.C.N. is constantly on guard in Canadian coastal waters. The monotonous but vital work of submarine patrol is carried on in the St. Lawrence River itself.

The R.C.N. works closely with coastal reconnaissance squadrons of the R.C.A.F. in this important task. Every day minesweepers steam out from Canadian ports to go about their dangerous job.

Fisherman's Reserve

The west coast of Canada with its deep indentations and myriads of small islands presents a special problem for patrol. The mainland itself stretches 1,580 miles; the islands are another 3,980 miles -- total of 5,560 miles to watch over.

In the early months of 1939, a third reserve for the navy was formed, drawn from men in the west coast fishing industry. These men know intimately this long coastline of the Pacific. Their boats, which

they brought with them into the reserve, were built to negotiate the inlets of the coast. Large and sturdy, these craft were easily converted into patrol boats.

The fishermen's reserve has done much more than patrol the coast. Boats were fitted up for minesweeping, and when the war broke out this dangerous, but most essential job was undertaken by men of the reserve. They had charge of rounding up Japanese fishing boats on the British Columbia coast and took into their charge more than 1,000 boats. The main purpose for which they were organized they have discharged very satisfactorily. The present situation is different from what it was in the early days of the war. The menace from Japanese boats has disappeared. Canada has a stronger naval force on the Pacific coast than at the beginning of the war. In all the circumstances it was felt that the fishermen's reserve might be disbanded, and this has been done.

The men who belonged to the fishermen's reserve had the choice of joining the Royal Canadian Naval Volunteer Reserve or the Royal Canadian Naval Reserve or of going back to their regular pursuit of fishing.

ROYAL CANADIAN NAVY ENCOUNTERS

From the beginning of the war to March, 1945, Canadian ships have destroyed or shared in the destruction of 23 enemy submarines, have probably destroyed eight submarines, and probably damaged seven more. In the same period Canadian ships have participated in the sinking of at least 44 enemy surface vessels, in the severe damaging of 26 enemy surface vessels, and in the capture of one. The enemy vessels sunk or damaged included destroyers, minesweepers, trawlers, E-boats and merchant ships.

Canadian ships of war, therefore, have sunk or helped to sink at least 67 enemy vessels of various types, have damaged 26 others, have captured one, have probably sunk eight and probably damaged seven more.

While the principal role of the Canadian navy has been protection of the north Atlantic convoy route, Canadian ships and personnel have been assigned various types of offensive and protective duty in many war theatre.

1939-41

H.M.C.S. Assiniboine aided a British cruiser in capturing and salvaging a big German freighter, the Hanover, in West Indies waters early in the war.

H.M.C.S. Bras d'Or, a converted minesweeper, captured S.S. Capo Noli, an Italian ship on June 9th, 1940. The foreign vessel was caught as it tried to escape from the St. Lawrence River. This was the first Canadian naval success against the Italians. The Capo Noli was placed in the empire merchant service.

The destroyers Restigouche and St. Laurent aided in the evacuation of the 51st Division of the British Army at St. Valery-en-Caux, June 11, 1940. While engaged in evacuating British troops from Bordeaux, H.M.C.S. Fraser was cut in two by another warship as a result of having to travel without lights in a danger zone. Restigouche, which was participating in this action, at the risk of attack by aircraft and submarines turned on all search-lights and performed a "miracle of navigation" to rescue 115 of the crew of the Fraser. Forty-five of the crew were lost.

The German express cargo boat Weser was captured off the west coast of Mexico in September of the same year, by the auxiliary cruiser, Prince Robert, one of three former passenger liners converted to Canadian naval use.

Early in December of 1940 the Canadian destroyer Saguenay was

torpedoed by a German submarine in the Atlantic and suffered the loss of 21 men missing and 18 wounded. The ship itself was badly damaged.

Armed merchant cruiser H.M.C.S. Prince Henry, caused the scuttling of two German vessels, the Muenchen and Hermonthis, in the Pacific during the early months of 1941.

During November, 1941, Canadians learned of the success of two corvettes, the Chambly and the Moose Jaw, against a submarine. The Chambly attacked with depth charges and blew the U-boat to the surface. The Moose Jaw closed in and rammed the submarine. The U-boat's crew opened its seacocks and abandoned ship. Forty-seven survivors were made prisoners.

1942-1943

In January of 1942 the navy told of a 66-hour battle with a submarine pack in the north Atlantic, directed by H.M.C.S. Skeena as senior escort vessel of a convoy. An exact account of submarines destroyed was not disclosed, but it is known that defence of the convoy was not without success.

During the late summer of 1942, H.M.C.S. Assiniboine rammed and sank a German submarine in the west Atlantic. With only two hundred yards between the vessels, gunfire was exchanged and both vessels scored hits. A small fire broke out in the destroyer, interfering with gun control and leaving the guns crews to independent firing. Toward the close of the engagement a depth charge from the destroyer actually landed on the deck of the submarine, then rolled into the sea and exploded beneath the submarine's hull. Several German prisoners were captured.

In November, 1942, there occurred a striking example of Canadian-United States co-operation. The Canadian corvette, H.M.C.S. Oakville, was in convoy in the Caribbean with ships of the Royal Netherlands and U.S. Navies. A United States flying boat, also protecting the convoy, sighted and bombed a submarine and signalled its position to the ships. Oakville sped to the scene, shot away the submarine's main deck gun and dropped depth charges. The German craft attempted to escape but the corvette followed it in the tropical moonlight and rammed it three times. On the third contact with the submarine, two of the Oakville's crew leaped to the U-boat deck, searched the ship, took the crew prisoner, and ordered them overboard. The Germans were picked up by a United States destroyer. The submarine was sunk.

News of an encounter of the corvette, H.M.C.S. Ville de Quebec, was announced on January 25, 1943. In the western Mediterranean, the Ville de Quebec brought a U-boat to the surface by depth charges, engaged by gunfire, repeatedly hit and rammed the submarine at right angles. The whole action, from the dropping of the depth charges to the disappearance of the U-boat beneath the water took only nine minutes.

Naval headquarters revealed on February 1, 1943, that the corvette, H.M.C.S. Port Arthur, on convoy duty in the western Mediterranean located an Italian submarine, attacked with depth charges and gunfire and destroyed it. Some survivors were found.

A Canadian corvette, H.M.C.S. Regina, sank an Italian submarine in a night action in the Mediterranean, Naval Services Headquarters announced on March 13, 1943. The submarine was forced to the surface by depth charges and finished off at close range by the corvette's oerlikon guns. More than 20 prisoners were taken.

In early June, 1943, enemy submarines mined the approaches to

Halifax harbor in an arc intended to close the port to all shipping. Minesweepers of the Royal Navy and the Royal Canadian Navy undertook the dangerous and exacting job of sweeping the mines. In one day they cleared a channel 1,200 yards wide to permit a convoy to sail. The minesweepers, having opened the harbor for the convoys, proceeded to mop up the whole minefield.

The crew of the Canadian destroyer Athabaskan demonstrated masterly seamanship after the destroyer was damaged by a Nazi aerial glider bomb in the Bay of Biscay in August, 1943. The Athabaskan was operating as senior ship of a group of Royal Navy vessels when attacked by German bombers. Three bombers aimed their bombs at the Athabaskan. The destroyer succeeded in avoiding the bombs dropped by two of the aircraft. A glider bomb from the third hit the destroyer, killing five and wounding 12 of the crew. With the boiler room and two fuel tanks flooded with sea water, the Athabaskan made home port at the remarkable speed of 12 knots.

In October, 1943, when the sinking of H.M.C.S. St. Croix was announced, it was made known that this destroyer while protecting a convoy in the Atlantic the previous year had given chase to two submarines, sinking one of them.

1944-1945.

In the early spring of 1944 the R.C.N. expanded further into a balanced fighting force with heavy offensive power. Its ships and men served in many battle theatres before and after the huge invasion concentration in June: In the Mediterranean, the Atlantic, the Caribbean, and in the north Pacific.

In January, 1944, it was announced that the corvettes, Snowberry and Calgary, assisted by the Royal Navy frigate Nene, sank a submarine while on convoy duty.

During April it was announced that the first Canadian-built frigate to engage in enemy action, the Wasquesiu, attacked and destroyed a U-boat about 500 miles north of the Azores, while defending a valuable convoy.

At the end of May came the news that the Canadian corvettes Chilliwack and Fennel, the frigate St. Catharines, and the destroyer Gatineau combined in an operation to sink a submarine.

In June it was revealed that the destroyer St. Laurent, assisted by the frigate Swansea, destroyed a German submarine in the North Atlantic. Also in this month came the announcement of the sinking of another enemy submarine by the R.C.N. frigate, the Prince Rupert, assisted by two United States vessels and a Grumman Avenger plane.

The Swansea scored again later in the sinking of another U-boat. At the same time a probable kill was credited equally to the Canadian corvette, Camrose, and a British warship while on Atlantic duty.

In August it was announced that three Royal Navy motor gunboats, manned by Canadians, sunk five ships and routed an entire convoy off the Yugoslavia coast.

Early in September the Tribal destroyers, H.M.C.S. Haida and Iroquois, took part in an action that resulted in the sinking of an entire seven-ship convoy carrying troops attempting to escape from St. Nazaire. A destroyer force led by H.M.C.S. Qu'Appelle and including the Assiniboine, Skeena and Restigouche sank four enemy armed trawlers and a supply ship. Later in the month H.M.C.S. Iroquois was engaged in two actions against enemy shipping between Brest and Lorient. The first action was an attack made on a German convoy which forced the ships within the range of coastal batteries. A few days later another group of enemy ships was met, and a total of two minesweepers, three supply ships and three escort vessels were sunk. Late in the month the Haida joined a British destroyer, the Eskimo, to sink an enemy U-boat.

In an attack off the Norwegian coast the Canadian ships Sioux and Algonquin, and the Nabob, British aircraft carrier manned by Canadians, took part.

Sinking of a U-boat by the Canadian destroyers, Ottawa and Kootenay, assisted by a Royal Navy corvette, Statice, was announced during October, 1944. The action took place in July. Announcement of an action in which the Canadian frigates, Saint John and Swansea, brought about the destruction of a submarine also came in October, 1944. This was the third time the Swansea had participated in a U-boat sinking.

In February, 1945, it was announced that the corvette, St. Thomas, assisted by the frigate, H.M.C.S. Seacliff, sank a submarine in the north Atlantic.

Two months later came the news that the Canadian frigate, Annan, sent a German U-boat to the bottom during a running night battle in the north Atlantic.

OFFENSIVE ACTION

Most of the ships and strength of the R.C.N. are designed for convoy work. During the war, however, it has gradually become a more balanced navy and the addition of heavier fighting ships has considerably increased its offensive might. Acquisition of a number of destroyers (four of them the modern, speedy Tribal class destroyers) turned the Canadian navy into a fighting force of real importance. The addition of cruisers and aircraft carriers as well as four more Tribal destroyers will give it further strength.

Sixteen R.C.N. corvettes joined in convoying the United Nations armada in the attack on Axis-held bases in North Africa.

In the invasion of Sicily, four complete landing craft flotillas manned by Canadians helped to land the British Eighth Army, which included the First Canadian Infantry Division.

In August, 1943, forces of the R.C.N. joined with the United States Navy in the expedition to occupy the island of Kiska in the Aleutians.

A large number of Canadian sailors who had patrolled the waters off Canada's eastern coast in submarine-chasing motor launches since the beginning of war, arrived late in 1943 in England to man motor gun boat flotillas. These Canadian sailors are fighting off British coasts with ships of the Royal Navy's famed "Mosquito Navy".

In September, 1943 when the invasion of the mainland of Italy began, the same four landing craft flotillas which assisted in the invasion of Sicily, were on duty in the straits of Messina.

Invasion Activities

More than 100 ships of the Royal Canadian Navy and almost 10,000 Canadian naval officers and men participated in the invasion of France on June 6, 1944. Canadian ships included: Two fleet destroyers, nine escort destroyers, two support groups of frigates, 19 corvettes, two flotillas of minesweepers, two flotillas of motor torpedo boats, two landing ships, 14 assault craft and 30 landing craft, infantry. While allied ships were loading supplies, equipment and men along the coast of England, flotillas of minesweepers were clearing paths for landing craft to follow. One flotilla was all Canadian. Canadian ships also formed a good proportion of another unit which was about half Canadian and half British, and others were in mixed flotillas of the United Nations. The two Canadian ships most prominent in the bombardment of coastal fortifications before the landings took place were new Fleet class destroyers, H.M.C.S. Sioux and Algonquin. German shore batteries were their targets. Anchoring off shore under fire in order to ensure the best possible gunnery, these ships had an important part in preventing casualties among allied troops.

First of all the big infantry landing ships to push up to the fringe of the mineswept waters in its area off the enemy coast was H.M.C.S. Prince Henry, whose captain was senior officer of a group of LSI's (landing ships infantry, large) engaged in the invasion. The Prince Henry and its sister ship, the Prince David, were originally luxury liners. They were reconstructed to serve as auxiliary cruisers, and finally LSI's. Specially equipped with subsidiary landing craft, they pushed in as close to shore as possible before disgorging their small craft, laden with Allied troops. After the initial landings, these two ships furnished troop-carrying ferry service to the front.

One of the Canadian navy's most valuable contributions to the invasion was its protection of the seaward flanks of convoy routes against attack by enemy surface craft. Two Canadian flotillas of motor boats were continually on the job helping make the channel safe for reinforcements and supplies.

At the time of the invasion and for some time before, four Tribal class destroyers, the Iroquois, Athabaskan, Huron and Haida, were engaged with four similar ships of the Royal Navy in assault work in the British channel and Bay of Biscay. These ships were all grouped as the tenth destroyer flotilla. From April to September, 1944, this flotilla compiled a most remarkable record: 36 German ships sunk and 15 others damaged.

The R.C.N. warships took part in the second French invasion, along the southern coast of the country. Once again the two big infantry landing ships, the Prince Henry and the Prince David, were used. Their third invasion activity was made in the landing of British troops on Greece and the Aegean Islands during the early part of October, 1944.

SHIPS OF THE R.C.N.

The Royal Canadian Navy at the end of March, 1945, operated 939 vessels including; cruisers, aircraft carriers, destroyers, corvettes, frigates, minesweepers, patrol vessels and small craft fitted for the many duties of modern sea warfare. Three hundred and seventy-three of the 939 are fighting ships. The remainder are auxiliary vessels such as tugs and harbor craft.

Although primarily a navy of small ships designed for convoy protection, the R.C.N. has built up a destroyer fleet which has made no small contribution to the offensive power of the United Nations.

Cruisers

On October 21, 1944, the Royal Navy medium cruiser Uganda was transferred to the Royal Canadian Navy. It is the first of two cruisers which will be given to Canada by the United Kingdom as "mutual aid in reverse". The second one is the Ontario which is expected to be in service very shortly. For a considerable time Canadian naval officers and ratings have been in training with the Royal Navy for cruiser operation. The Uganda has now joined the British Pacific Fleet, the first Canadian naval unit to enter the war against Japan.

Aircraft Carriers

Two Royal Navy escort aircraft carriers, H.M.S. Nabob and Puncher, have been manned by Canadian officers and seamen, although the aircraft and their crews are provided by the United Kingdom. It is hoped that two fleet aircraft carriers will be added to the R.C.N. for duty in the Pacific.

A flotilla of eight Tribal class destroyers being built for the Royal Canadian Navy. Four, the Iroquois, Huron, Athabaskan and Haida, built in British yards have been in action for some time. The Athabaskan was sunk in pre-D-day actions but the other three are operating with ships of the allied nations. The other four are being built in Canada. Two, H.M.C.S. Micmac and Nootka, have already been launched.

Tribal class destroyers are among the best and fastest afloat. They are heavily armed; carrying as part of their armament 4.7-inch guns. They carry a crew of 190 and have four 21-inch torpedoes.

The Royal Navy has placed six of its escort destroyers at the disposal of the R.C.N. These destroyers, which are of the River class, have been renamed Ottawa, Gatineau, Kootenay, Saskatchewan, Qu'Appelle and Chaudiere.

Early in 1944, two Fleet class destroyers, Algonquin and Sioux, were commissioned with all-Canadian crews.

During 1940 in exchange for strategic land bases, the British Commonwealth of Nations received from the U.S. 50 over-age destroyers. Canada's allotment of these was seven, a most valuable addition to Canada's naval strength.

In October 1939 the R.C.N. took over the destroyer Kempenfeldt (for which the Canadian Government had been negotiating before the war started) from the R.N. as flotilla leader for the Canadian fleet. The ship was rechristened the Assiniboine.

Frigates

The frigate, a new type of warship between the corvette and the destroyer in size, has more speed and a greater range than the corvette, and has more accommodation for the crew. It carries a crew of about 140.

Corvettes

The first corvette launched in Canada was not built to harry German submarines. It was a 500-ton ship contracted for by Neree Levasseur, a builder of ships for Louis XV of France, and launched at Quebec in 1739. A corvette was a sloop of war.

In size it ranked next below a frigate, was fast sailing and easy to handle - in these two respects it was like the corvettes of the Royal Canadian Navy.

Corvettes are small, built somewhat on the lines of the sailing ship, especially designed for escort and anti-submarine duties.

They have a "terrific roll" but are extremely seaworthy and easy to manoeuvre. They will not break under the strain of wind and weather.

Canadian shipyards have turned these vessels out in large numbers. Three corvettes can be built in the time it takes to build a destroyer, and they can be built on the Great Lakes and taken down to the sea over the Great Lakes canal and river system. Designing and building a corvette calls for great skill because of the large quantity of equipment to be fitted into the small space of the ship. There are more than 100 corvettes in the Royal Canadian Navy, and many others have been built for the Royal Navy.

Specifications of the latest and fastest of this type of ship are secret. Corvettes which were built during the earlier part of the war were 190 feet in length and included armament of a 4-inch gun, machine gun, and depth charges. The total cost was \$700,000.

In 1944 Canada's naval escort forces were strengthened by the addition of 16 British - built corvettes while Canadian shipyards built 16 Algerine class Fleet minesweepers for the Royal Navy. Twelve of the corvettes for the R.C.N. are of the Castle class, a type new to the R.C.N. and much improved over the Flower class corvette. They are larger and more powerfully armed than the standard type of corvette. The remaining four corvettes are of the revised Flower class design and have been in operation since early in 1944.

Minesweepers

Coastal patrol and protection in Canada's defence zones on both Atlantic and Pacific shores is an important part of the Canadian navy's work. Minesweeping must be carried on continually. But Canadian minesweepers have also proved efficient in escort and anti-submarine duty, and played an important role on D-day. There are almost as many minesweepers in the R.C.N. as corvettes. Minesweepers carry guns, depth charges and listening devices and often perform much the same work as corvettes in addition to their duties of sweeping and destroying mines.

Fairmiles

Fairmile motor launches are particularly suited for convoy escort in coastal waters such as the St. Lawrence River and Gulf. The Fairmiles seen off Canada's coasts and in the St. Lawrence River are all-Canadian built. Scores of them are now at sea.

Landing Ships Infantry

Landing Ships Infantry, converted auxiliary cruisers, are large craft of about 10,000 tons. The Canadians LSI's, Prince Henry and Prince David, have been used in three European invasions. The Prince Henry has now been turned over to the Royal Navy and is being reconditioned for service in the Pacific.

Auxiliary Vessels

Before the war broke out the navy made arrangements for auxiliary ships to be used in time of crisis. The Canadian government owned more than 70 boats which in peacetime were used by the Royal Canadian Mounted Police, Department of Fisheries, Transport, Public Works and Mines and Resources. They were quickly and easily converted for use as minesweepers, examination and patrol boats and anti-submarine guard.

Armed Yachts

Fifteen armed yachts were put into Canadian naval service early in the war. These vessels were named after Canadian animals: Beaver, Cougar, Caribou, Elk, Grizzly, Lynx, Moose, Raccoon, Otter, Reindeer, Renard, Vison, Wolf and Sans Peur. The last, formerly the yacht of the Duke of Sutherland, retained its own name.

R.C.N. LOSSES

Losses of the Royal Canadian Navy in ships are as follows:

Destroyers

Fraser	Bay of Biscay
Margaree	Mid-Atlantic
Ottawa	Mid-Atlantic
St. Croix	Mid-Atlantic
Athabaskan	English Channel

Frigate

Valleyfield North Atlantic

Corvettes

Windflower	Western Atlantic
Spikenard	South of Newfoundland
Charlottetown	Gulf of St. Lawrence
Levis	Western Atlantic
Louisberg	Mediterranean
Weyburn	Mediterranean
Alberni	English Channel
Shawinigan	North Atlantic
Regina	English Channel
Trentonian	United Kingdom Waters

Minesweepers

Bras d'Cr	Gulf of St. Lawrence
Chedabucto	St. Lawrence
Clayoquot	North Atlantic
Guysborough	North Atlantic
Esquimalt	Nova Scotia coast

Patrol Vessels

Otter	Coast of Nova Scotia
Raccoon	Western Atlantic

Casualties to the end of March, 1945, were: 1,544 killed on active service; 228 other deaths; 394 wounded or injured; 87 prisoners of war and 60 missing. Most of the prisoners were survivors of the Tribal class destroyer, Athabaskan, which was sunk near the French coast during pre-invasion operations.

ORGANIZATION AND TRAINING

There are 4 personnel components of the Royal Canadian Navy:

- 1) Royal Canadian Navy
- 2) Royal Canadian Naval Reserve
- 3) Royal Canadian Naval Volunteer Reserve
- 4) Women's Royal Canadian Naval Service

Canadian naval personnel at September, 30, 1939 and February 28, 1945 was as follows:

	September 30, 1939		February 28, 1945		
	<u>OFFICERS</u>	<u>RATINGS</u>	<u>TOTAL</u>		<u>TOTAL</u>
R.C.N.....	131	1,643	1,774	Almost	4,400
R.C.N.R.....	66	196	262	"	5,200
R.C.N.V.R.....	115	1,453	1,568	"	79,800
W.R.C.N.S.....	—	—	—	"	6,000
TOTAL.....	312	3,292	3,604	"	95,400

The R.C.N. is the permanent core of the organization. The R.C.N.R. is composed of persons who have followed the sea as a profession. The R.C.N.V.R. is made up of civilians who are employed in occupations not connected with the sea but who are given training for sea service in an emergency.

The Royal Canadian Naval Reserve and the Royal Canadian Naval Volunteer Reserve were re-organized in 1923 after the inactive years following World War I. For some years before this war emphasis had been placed on the work of R.C.N.V.R. Training Division. Actually, these training centres supply the greatest part of naval personnel in a war. R.C.N.V.R. training bases were set up across the country. Now (1945) R.C.N.V.R. Training Divisions are established in Calgary, Charlottetown, Edmonton, Esquimalt, Halifax, Hamilton, Kingston, London, Montreal (2), Ottawa, Port Arthur, Prince Rupert, Quebec, Regina, Saskatoon, Saint John, Toronto, Vancouver, Winnipeg, Windsor. Approximately 80% of the present Canadian navy are members of the R.C.N.V.R.

Canadians on loan to the Royal Navy have served under fire in the Mediterranean, the Pacific and in the Indian Ocean, north to the Arctic Circle, and south to the Equator. At the end of March, 1945 a total of 654 Canadians were serving with the Royal Navy. This number did not include Canadians on motor torpedo boats whose crews are changeable. At one time 2,000 Canadians were on loan to the Royal Navy.

The Royal Canadian Naval College for the training of officers, H.M.C.S. Royal Roads near Esquimalt, B.C. was re-opened on October 21, 1942, the 137th anniversary of Trafalgar Day, after being closed for 20 years. The first class of the naval college graduated and proceeded overseas during September, 1943.

All executive officers now earning commissions in the Royal Canadian Navy have come up from the lower deck. Under the system now in effect every prospective executive officer must enter the navy as an ordinary seaman.

It is the belief of the R.C.N. that the extensive schooling given these officer candidates will provide the new officers with greater knowledge and experience and give the service a better opportunity to observe and select good men for commissions. Standards are high and candidates who do not make the grade may take their discharge from the service or remain as ordinary seamen.

An R.C.N. school to teach the English language to French-speaking sailors who do not know English has been opened at H.M.C.S. Prevost, the London, Ontario, division of the R.C.N.V.R. The course accommodates between 50 and 75 French-speaking ratings.

The branch of service to which a naval officer belongs is shown by the color inserted between the gold stripes on his sleeve as follows:

Engineer.....	purple
Medical.....	scarlet
Special branch....	green
Electrical.....	dark green
Supply.....	white
Instructor.....	light blue
Ordnance.....	dark blue
Wardmaster.....	maroon
Shipwright.....	silver grey

Executive officers have no coloured cloth between gold stripes.

Every man in the navy must be entered on the books of a ship. For that reason shore establishments of the R.C.N. are given the names of ships.

Deputy Minister

W.G. Mills, C.M.G.

Chief of Naval Staff

Vice-Admiral G.C. Jones, C.B.

Chief of Naval Personnel

A/Captain A.M. Hope

Chief of Naval Equipment and Supply

A/Captain G.B. Hope

Chief of Naval Engineering & Construction

Engineer Rear-Admiral G.L. Stephens, C.B.E.

Chief Staff Officer Reserves

Captain Paul Earle

Secretary

A/Captain (S) Joseph Jeffery

Naval Staff

Responsible for day-to-day operations of the Navy is the Naval Staff, the members of which are:

Chief of Naval Staff

Vice-Admiral G.C. Jones, C.B.

Assistant Chief of Naval Staff

Captain H.G. DeWolf

Director of Operations Division

A/Captain D.K. Laidlaw

Director of Plans

A/Captain H.S. Rayner

Director of Warfare and Training

A/Captain D.L. Raymond

Director of Trade Division

Captain E.S. Brand,

Director of Naval Intelligence

Commander C.H. Little

Director of Signals Division

Captain G.A. Worth

R.C.N. AIR BRANCH

Two British aircraft carriers, H.M.S. NABOB AND PUNCHER were taken over by the Canadian navy and manned by Canadian officers and seamen, but as there is no Canadian fleet air arm the aircraft and their operational crews remained British. Scores of Canadians have, however, trained for flying duties with the British Fleet Air Arm and are serving in all parts of the world.

Number 14 Service Flying Training School at Collins Bay, Ontario, graduates naval fliers. Canadian officers have been trained with a view to service in Canadian aircraft carriers. After further advanced training in the United Kingdom the Canadian naval fliers serve with the Royal Navy, subject to recall by the R.C.N. for service in Canadian aircraft carriers or shore stations.

In the House of Commons in April, 1945, Navy Minister Macdonald reported that the Royal Canadian Navy had, at that time, 725 aircrew, air engineers and mechanics trained or in training for service in the fleet air arm.

W.R.C.N.S.

The Women's Royal Canadian Naval Service was organized in June, 1942. Shortly after the organization was launched 3,000 applications were received and a naval class of 70 completed training within a few months. To March 31, 1945, more than 6,600 women have enlisted in the "Wrens". Graduates are chiefly officers, petty officers, clerical and domestic personnel. Canadian Wrens are serving throughout Canada, in Washington and New York, in Newfoundland and in the United Kingdom.

"Wrens" must be British subjects, 18-45 years of age, without young children or other dependents, and willing to serve for the duration. Officers are commissioned from the ranks and must be 21 years of age or more, while executive officers must be 25 years of age.

ADMINISTRATION

On July 12, 1940, Hon. Angus L. Macdonald became the first Canadian Minister of National Defence for Naval Services. He resigned on April 18, 1945, and was succeeded by Hon. Douglas C. Abbott, parliamentary assistant to the Minister of National Defence.

Previously naval services had been looked after by the Minister of National Defence. One deputy minister occupied himself with both navy and air force until March, 1940. With the organization of the new Department of National Defence for Naval Services, a deputy minister was appointed to deal exclusively with naval matters. This position is held by Mr. W.G. Miller.

Naval Board

A Naval Board was set up on January 22, 1942. Until this time the Chief of Naval Staff was responsible for details of training, operation and equipment. The Board acts in an advisory capacity to the navy minister, and is responsible for general naval policy.

The structure of the Canadian Naval Board roughly corresponds to the British Board of Admiralty, and its members to the British Sea Lords. Members of the Board:

Minister

Honourable Douglas Abbott, K.C.

Hydrographer

Captain D.W. Farmer

NAVAL BASES

The expanding strength of the navy made correspondingly heavy demands on Canadian naval bases. In September, 1939, there were only two naval bases in Canada, one at Halifax on the east coast and the other at Esquimalt on the west coast. Today these two bases have been greatly expanded and improved, and in addition 12 new bases have been developed on the east and west coasts, in Newfoundland and in Bermuda. H.M.C.S. Somers' Isles, commissioned on August 1, 1944, in Bermuda is used for "working up programs" for ships which are newly constructed or have undergone a long period of refitting after service at sea. Because of the year-around warm climate, it is possible at all times to give instruction in sheltered waters in such essentials as abandoning ship, sending away boarding parties and boat pulling. Instruction in swimming, life-saving and physical training will also be carried on to a considerable degree.

At one of these bases the R.C.N. has put in operation a great floating dock capable of accommodating ships of 25,000 tons. Three marine railways have been constructed at various points capable of carrying for repairs the largest destroyer, and another similar marine railway is being built. The R.C.N. has built also three smaller marine railways that can carry corvettes and minesweepers. Other marine railways have been built for lighter craft.

COMMUNICATIONS

Modern operations lay tremendous significance on the communication of a fleet. From the time a ship is dispatched to sea, it is directed, advised and guarded by means of signals. Ships at sea must keep in touch with land bases, and with other ships. Communication must be swift.

There are three principal naval shore wireless stations in Canada. These stations are equipped with the most up-to-date apparatus and are the equal of any naval station in the world. They are in operation 24 hours a day. The signal school at H.M.C.S. St. Hyacinthe is believed to be the largest training centre of its kind in the British Empire, and, quite possibly, in the world. Currently, the school is accommodating 3,200 sailors and Wrens, and instructing this personnel in an amazing range of subjects relative to the signals branch of the Navy.

From signal flags and semaphore and the Morse code transmitted by the early wireless sets, the signals branch has progressed to Aldis lamps, radio telephone and radar. But this branch consists of much more than men who flash the signals. There are radio artificers who look after repair and maintenance, and coders, whose job it is to code and decode messages, for every message must be cyphered. Since the outbreak of the war a certain naval wireless telegraphy station has handled an average of 180,000 cypher groups each month, or 6,000 groups every 24 hours. In order to handle the work, this particular station employs over 50 specially trained civil service clerks working day and night in eight-hour shifts.

In April, 1945, seven Canadian naval officers completed the longest and most difficult naval communications course ever given in Canada. This eight-month course, given at St. Hyacinthe, was the first of its kind to be offered by British Commonwealth naval services outside the United Kingdom. It included the theoretical and practical aspects of wireless telegraphy, visual signalling, radar, coding cyphering, fleet manoeuvres and other complicated related subjects.

MEDICAL SERVICES

The medical services of the Royal Canadian Navy are largely responsible for the high standard of health throughout the service. From the beginning of the war to May 1, 1943, 678,515 hospital days (9.8 days a man each year) were lost because of sickness. This rate is no higher than that of workers in Canadian factories who do not have to contend with inclement weather, slippery decks, crowded living quarters, and handling heavy and dangerous equipment and armament.

The Research Division of the R.C.N. medical services has made a number of valuable contributions to the better health and safety of naval personnel. It is directed by Surgeon-Captain C.H. Best, R.C.N.V.R., co-discoverer of insulin, who joined the navy in June, 1941.

This division has conducted experiments in many phases of navy life and activities. Special work was done in the field of night vision. As a result, the use of low intensity red illumination was introduced to enable bridge personnel to study charts inside without seriously impairing their ability to see in the dark when they stepped outside again.

Another development is a formula which reduces seasickness. The remedy is in the form of a capsule which is taken by mouth one to two hours before sailing or in rough weather, and is effective for eight hours. It produces no harmful results, does not reduce fighting efficiency and may be repeated every eight hours if necessary.

The Research Division makes every effort to keep in touch with the special problems presented by life at sea. Observation is carried out on all types of ship. Standards of lighting and ventilation have been raised, improvement has been made in the victualling of ships, and a special vitamin preparation has been introduced to improve nutrition. Improvements have also been made to lifeboat rations.

Three R.C.N. medical officers also evolved methods of prevention and treatment for "immersion foot", an ailment usually caused by exposure in life rafts or boats for long periods. In collaboration with the R.C.A.F. research group a life jacket was produced which provides additional flotation and warmth and increases protection against under-water blast.

Royal Canadian Naval doctors have been studying tropical diseases with a view to protecting men who go to the Pacific theatre. Data and experiences of United States Navy doctors have been made available to the Canadian Navy.

CANADIAN PARTICIPATION IN THE PACIFIC WAR

Although the task of convoying merchant ships over the Atlantic remains the chief task of the Royal Canadian Navy, until there is no further threat from U-boats plans have been made for Canadian naval participation in the Pacific. Already the cruiser, H.M.C.S. Uganda is in Pacific under the command of Captain E.R. Mainguy, O.B.E., of the R.C.N. A second cruiser, Ontario, will join the Uganda.

With these two cruisers Canada hopes to send into the Pacific two fleet aircraft carriers which will be manned entirely by Canadians. The flying personnel will come from the British fleet air arm, but many will be Canadians who have enlisted in that service.

It is planned that a number of Canadian destroyers and frigates will participate in the war against Japan. With the exception of key

men, personnel for the Pacific will be enlisted on a voluntary basis.

POST-WAR PLANS

In 1941 when the decision whether certain buildings to be erected in Canada should be of permanent or temporary construction had to be made, it became important to come to some decision as to the size of the post-war navy. In that year, the government took the view that the post-war navy should be, in round figures, 9,000 officers and men. That estimate has not been changed, although Hon. Angus L. Macdonald, while Minister of National Defence for Naval Services expressed his hope that the figure might be increased to 15,000.

ROYAL CANADIAN SEA CADET CORPS

Sea Cadets of Canada were organized in 1917. Up to 1941 the organization was supported by the Navy League of Canada, but at that date the Department of National Defence for Naval Services began to foster it. There are over 750 men serving as sea cadet officers in the various corps. Sea cadet camps are sponsored during the summer months.

At the end of October, 1944, there were 91 Canadian Sea Cadet corps, with a membership of 15,298; 14,342 cadets were ratings, and 956 were cadet officers. All the forces are attracting members of the sea cadet corps, but the naval services seem to be favored by these boys. Nearly 6,000 former sea cadets have joined the Royal Canadian Navy or the Merchant Navy. Some of the navy's best officers and ratings have received training in this organization. Cadet experience has shortened the time necessary to train navy recruits. His Majesty the King has consented to become Admiral of the Sea Cadets.

HISTORY, 1907-1914

The Canadian navy came into being in 1910, with the transfer of two antiquated cruisers from the Royal Navy. During the years after Confederation, the attitude of the newly-formed country toward the whole question of naval defence had been negative. Canada was concerned with other things - with building railroads, opening up the prairies, developing infant industries.

British sea-power was supreme. The British Navy protected the trade routes of the world, for most of the trade routes led to British colonies.

At the Colonial Conference of 1907, the Canadian delegates would not consider either a navy for Canada or Canadian contributions to the British Navy, in ships or in money.

But in ensuing years, when the great German shipbuilding program seemed to threaten British supremacy afloat, the Canadian people began to think of naval defence. In March, 1909, a general resolution was moved in the Canadian House of Commons to approve an expenditure for a Canadian Naval Service, to co-operate closely with the Imperial Navy. This resolution was passed.

Naval Service Bill

The Colonial Conference of 1907 had provided for a subsidiary defence conference. At the end of July, 1909, representatives of the English, Canadian, Australian and New Zealand Governments met in London to discuss naval defence. In January of 1910 as a result of the conference a Naval Service Bill was introduced into the Canadian House of Commons under the government of Sir Wilfrid Laurier. This bill followed the lines of agreements reached at the Imperial Conference of 1909. Five cruisers and six destroyers were to be built, if possible in Canada, (otherwise in England) within six years, and divided between the two coasts. Personnel was to be partly permanent, partly reserve, but all enlistments were to be voluntary. A Naval College and a Naval Board were to be set up. The Canadian government would control its own navy, but might place it at the disposal of the British government in a

crisis, subject to approval by Parliament. An initial appropriation of \$10,000,000 was proposed.

After a great deal of debate the bill was passed. Tenders for the construction of the proposed ships were called for. To serve until the new ships were built, two old cruisers were purchased from the British government: the "Niobe" of 11,000 tons, commissioned in 1899, and the smaller "Rainbow", of 3,600 tons, commissioned in 1892. The dockyards at Halifax and Esquimalt were transferred from the British government to the Canadian government for use by the new navy. Thus the Royal Canadian Navy first came into existence.

Rear-Admiral C.E. (later Sir Charles) Kingsmill, R.N., who had been lent to Canada during preliminary negotiations with the British Government, became Director of Naval Service for Canada.

At the Imperial Conference of 1911 a three-way agreement on naval defence was reached between the United Kingdom, Canada and Australia. The Royal Navy agreed to provide the necessary personnel for administration and instruction duties, including the staffing of a training establishment for officers. The naval services and forces of each country were to be under the control of their own government, but training and discipline were to be uniform with that of the fleet of the United Kingdom, and officers and men might be interchanged. Canadian and Australian navies were to have their own naval stations, the limits of which were defined. In time of war, naval services of a Dominion which had been put at the disposal of the Imperial Government were to form an integral part of the British fleet and to remain under the control of the Admiralty for the duration of the war.

The Royal Canadian Naval College was founded at Halifax, in 1911. It was shifted temporarily to the Royal Military College at Kingston in 1917 after the great explosion in Halifax, and the following year moved again to Esquimalt on the west coast.

In 1911 the Laurier Government went out of office on the issue of reciprocity, and naval defence was allowed again to sink into the background. The Naval Service Act remained on the statute books, but nothing was done to implement it.

Although a number of tenders had been received to build the new Canadian warships, no tender was taken up, and the naval shipbuilding program never began.

Naval Aid Bill

Conservative policy on the question of naval defence differed from the Liberal. Laurier's idea had been that a distinct Royal Canadian Navy should be built. He felt that this program was consistent with his policy of Canadian nationalism. The Conservatives on the other hand felt that Canadian contributions to the Imperial Navy would be more suitable. The Conservative Prime Minister, Sir Robert Borden, in December 1912 introduced a Naval Aid Bill to provide \$35,000,000 to pay for three battleships for the British Navy. These ships were to be returned to Canada if it ever decided to build a navy of its own. After long debate, the bill was forced through the House of Commons in April, 1913, by closure, but was thrown out by the Liberal majority in the Senate.

Meanwhile the Niobe and the Rainbow were allowed to become inactive. Recruiting (with the ships in dock) ceased, and the navy was pretty well forgotten.

WORLD WAR I, 1914-1918

The month of August, 1914, found the Royal Canadian Navy with the following personnel:

	<u>Officers</u>	<u>Naval Cadets</u>	<u>Ratings</u>	<u>TOTAL</u>
R.C.N.	71	21	203	295
R.N.	<u>21</u>	<u>21</u>	<u>20</u>	<u>41</u>
	92	21	223	336

This is not a very impressive total, but immediately after the declaration of war the men of the naval service swung into action to do what they could.

The chief work of the Canadian navy in the First Great War, as in the present conflict, was in convoy duty. Every vessel that could be of use was pressed into service. The Niobe and Rainbow, which had been inactive, were made ready for the fight again. And they acquitted themselves very well.

The Niobe, in 30,000 miles of steaming during the first two years of war, captured numerous prize vessels, and the Rainbow, in 50,000 miles of patrolling took as prizes several German supply vessels.

Two submarines built for Chile were bought from a Seattle firm and spirited out of the United States past a blockade of U.S. warships, for the United States was still neutral. The submarines were inspected and paid for at sea, then put in service with the Royal Canadian Navy on the west coast.

Every type of fast motor launch, tug or yacht that could be secured was fitted up for war, and put on patrol duty. Halifax became an important naval centre for the allies.

Men in the Navy

As fast as the ships could be found and outfitted, the men were there to man them: 1,700 Canadian reservists were sent overseas for service in the Royal Navy; 580 Probationary Flight-Lieutenants were enrolled in the Royal Naval Air Services; 43 Surgeon-Lieutenants took service in the Royal Navy.

The strength of the Royal Canadian Navy soon increased to 6,000.

But when the war was over the Canadian people wanted nothing but to forget it - to get back to civilian life and to dismantle the machines of war. Immediately after the Armistice the Royal Canadian Navy was demobilized. In 1918 there were 5,978 officers and men in the R.C.N.; by 1920 there were only 1,048.

PEACETIME NAVY 1918-1939

Sir Charles Kingsmill retired in 1920, and was succeeded by Commodore (later Rear-Admiral) Walter Hose, who as commander of the Rainbow, had been with the Royal Canadian Navy from the beginning. He had retired from the Royal Navy in 1912 in order to allow him to become a Royal Canadian Navy man.

It was in 1920 also that the fleet which had been built up during the war was disposed of. The navy was in for some lean years.

In 1920 Canada received as gifts from England:

The Aurora, six-year old cruiser
The Patrician, four-year old destroyer
The Patriot, four-year old destroyer
CH. 14, submarine
CH. 15, submarine

These comprised Canada's fleet. In 1922 the Aurora and the two submarines were sold, although four minesweepers built during the war were recommissioned. They were the Festubert and the Ypres, stationed on the East Coast, and the Armentieres and Thiepval on the West. During 1922, R.C.N. personnel totalled 366 officers and men.

In that year the Royal Canadian Naval College was closed, 150 officers had graduated from the Naval College. The classes had been small, but the standards were of the highest.

As the Royal Canadian Navy had no pension system for enlisted men, there was little interest in the navy as a career. This situation was remedied in 1926.

In this year also the Patrician and the Patriot were decommissioned. The British Admiralty lent the R.C.N. two nine-year old destroyers, the Champlain and the Vancouver, pending the construction of two new destroyers.

The minesweeper Thiepval was lost in 1930 when she struck an uncharted rock in Barkley Sound, B.C. The minesweeper Ypres was placed on reserve in 1932 and her sister ship, the Festubert, three years later.

In 1931 two new destroyers, H.M.C.S Saguenay and H.M.C.S Skeena were commissioned. Contrary to the original plan to return them to England, the Vancouver and the Champlain were also retained.

The 1930's brought with them a renewal of interest in naval defence. With each year of the decade the possibility of another great war grew stronger. When the seventeen-year old destroyers Vancouver and Champlain were judged no longer capable of economical operation, and taken out of service in 1936, the Canadian Government at the urging of the naval staff approved the purchase of two new destroyers. For \$1,000,000 apiece the Cygnet and the Crescent, renamed respectively the St. Laurent and the Fraser, were purchased from the Admiralty. These ships had been commissioned in 1932 and were of a class akin to the Skeena and Saguenay. On arrival in Canadian waters the Fraser was based in the West, the St. Laurent in the East. This was 1937.

That same year saw the dominion shipyards busy with four new minesweepers the Gaspé, Fundy, Nootka and Comox, and (to be used as a training ship) the 143-foot schooner Venture.

The following year two destroyers similar to the others in the Canadian Service were purchased from England at a cost of \$817,500 each. These ships were given the names Ottawa and Restigouche. As had been seen, a policy had been adopted of calling Canadian destroyers after Canadian rivers; the minesweepers were after Canadian bays.

During the summer months, Canada's peacetime navy toured Canadian ports. They took aboard reservists for short, intensive

training courses, covering discipline, seamanship, engine-room duty, gunnery, torpedo, wireless, signals, searchlight naval routine, and tactical exercises under seagoing conditions.

During the winter, Canadian destroyers took part with ships of the Royal Navy in intensive exercises and manoeuvres in West Indian waters.

In 1934, reserve strength consisted of:

	Royal Canadian Naval Volunteer Reserve	Royal Canadian Naval Reserve
Officers	73	40
Ratings	899	149

Administrative Personnel Changes

Rear-Admiral Hose retired in 1934 and was succeeded by Commodore, now Admiral (Ret.), Percy W. Nelles. Admiral Nelles was Chief of Naval Staff in the years before the war and held that post until January, 1944. At that time he was sent to the United Kingdom to take the new position of Senior Flag Officer overseas. Vice-Admiral George C. Jones, then Vice-Chief of Naval Staff, was appointed to succeed him as Chief of Naval Staff.

In June, 1944, important changes in the organization of the Canadian navy overseas were made and the Canadian Naval Mission Overseas was set up, with Vice-Admiral Nelles at its head.

On January 10, 1945, announcement was made of the retirement of Vice-Admiral Nelles, with the rank of full admiral. He is succeeded in London by Captain Frank Houghton, formerly his deputy overseas. Although the responsibilities of the mission in Britain are of continuing importance, its activities have been reduced by the successful completion of the navy's share in invasion operations.

Canada's Marine Position

As the 1930's drew to a close, and the possibility of another world war began to emerge from a confused world scene, Canadian interest in marine power quickened. All over the world the experts debated the position of the navy in modern war. But there were reasons other than the threat of war which made it clear that Canada must have a competent naval force of her own.

Canada's economy is based upon the exchange of the commodities of which she has great surpluses for commodities of other countries which Canada lacks. To prosper, Canada has to be a great trading nation. In 1939 Canada was the fifth trading nation in the world. During the year ending March 31, 1939, 116,987 vessels of 90,161,573 tonnage entered and left Canadian ports. Of these ships 27,500 vessels of 31,353,871 tons were seagoing, and 73,586 vessels of 45,386,457 tons were coastwise. Besides this shipping, the deep sea fishing industry averaged around \$40,000,000 per year.

Canada, as a maritime power, needed a navy to protect its shipping. But it is difficult to obtain parliamentary appropriations for defence

projects in peacetime. Naval appropriations for the six years before the war were:

1933-34.....	\$2,422,000
1934-35.....	2,222,000
1935-36.....	2,395,000
1936-37.....	4,853,000
1937-38.....	4,485,000
1938-39.....	6,639,000

It will be seen from these figures that, although they increased year by year, the scope of the R.C.N. at the beginning of the war was most limited.

The entire cost of the navy in 1939, just before the outbreak of war, was less than half the cost of the Harbour Bridge, Montreal. Still, the naval staff made such preparations as it could for the battle whose coming appeared more certain every day. Once war did break out, Canada's naval strength in ships and men grew very quickly until, today, Canada is the third largest naval power among the United Nations.