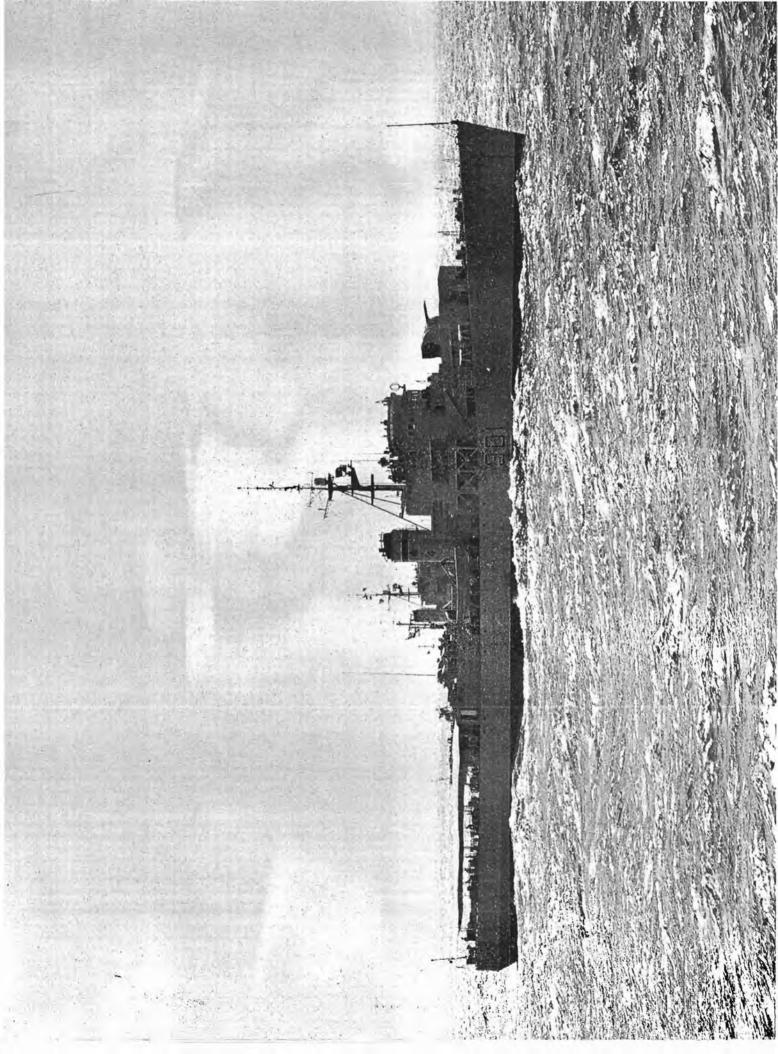
FCROWSNEST

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*CROWSNEST

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THE ROYAL CANADIAN NAVY'S MAGAZINE

DECEMBER, 1960

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The Cover—Perhaps not the best example to hold up to the young sailor but certainly a sight to stir the blood is the picture of the new "HMS Bounty" under sail off the coast of Nova Scotia. The photograph is reproduced by the kind permission of W. R. Carty, 370 Spring Garden Road, Halifax.

LADY OF THE MONTH

Proud of their ship, a number of men serving in HMCS Antigonish, Pacific Command frigate, forwarded a request that she be presented as "Lady of the Month". Although it was pointed out to them that it would take this department more than five years to make the rounds of the fleet, it so happens a fine portrait of the Antigonish was taken recently—and their wish is granted.

A member of the Fourth Escort Squadron, the Antigonish is scheduled to go into refit early in the New Year and thus will miss out on the cruise to the South Seas to be undertaken by three other ships of the squadron, the Sussexvale, New Glasgow, and Beacon Hill. (E-54712)

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EDITOR.

The Crowsnest, Naval Headquarters, Ottawa, Ont.



March past of the Stadacona band at the wreath-laying ceremony on Trafalgar Day during the international Navy League convention in Montreal. (ML-9258)

Frigates to Make South Seas Cruise

Three frigates of the Fourth Canadian Escort Squadron will sail from Esquimalt on January 9 for a three-month training cruise to Hawaii, Fiji, New Zealand, Australia and Samoa.

Embarked in the Sussexvale, New Glasgow and Beacon Hill will be naval cadets from HMCS Venture.

In the course of the cruise the ships will take part in a ceremony at Waitangi, N.Z., commemorating the 121st anniversary of the signing of the treaty of February 6, 1840, between Queen Victoria and the Maori chiefs which brought New Zealand under protection of the British Crown. Later the ships will participate in the Festival of Wellington at Wellington, N.Z., February 24 to March 4.

For the Venture cadets the cruise will provide sea training with practical experience in navigation, torpedo antisubmarine, gunnery, seamanship, communications and bridge and engine-room watchkeeping duties. At the same time, the ships will carry out evolutions and tactical exercises as part of the squadron's training program.

Queen Launches HMS Dreadnought

Britain's first nuclear-powered submarine was launched at Barrow-in-Furness on Trafalgar Day, October 21, by Her Majesty the Queen and christened HMS *Dreadnought*, thus marking the entry of the Royal Navy into the nuclear age.

The new submarine was named after the first of the Royal Navy's great battle-ships, launched at Portsmouth on February 10, 1906, by King Edward VII. The last of this mighty line of warships, the 44,000-ton HMS Vanguard, went to the breaker's yard earlier this year.

Assembled with Her Majesty on the launching platform were the Duke of Edinburgh; Lord Carrington, First Lord of the Admiralty; Admiral of the Fleet Earl Mountbatten, Chief of the Defence Staff; Admiral Sir Caspar John, First Sea Lord, and other members of the Board of Admiralty; Admiral H. G. Rickover, USN, the "father" of the nuclear submarine, and Cdr. B. F. P. Samborne, RN, first commanding officer of the *Dreadnought*.

The submarine has a surface displacement of 3,500 tons, a length of 266 feet and a beam of 32 feet. She is being fitted out at a specially built dock at Portsmouth and will join the fleet in about two years.

At a luncheon following the launching, the Queen said:

"I believe submariners called her a boat. I must say 3,500 tons seems a bit large for that description."

The nuclear power unit of the *Dread-nought* was designed and built in the United States, and Her Majesty spoke of the wholehearted co-operation given by that country:

"The United States Navy has allowed us to draw unreservedly on their resources and on the experience they have already gained with their own nuclear submarines. These are the actions of a true and trusted ally."

The United States was the first to enter the nuclear submarine field with the completion of the *Nautilus* in April 1955. Since then the USN has steadily added to its undersea nuclear fleet and this fall the most deadly instrument of war ever known, the missile submarine George Washington, put to sea, armed with 16 Polaris missiles with nuclear warheads. The destructive potentiality

of these missiles was said to be more than that of all the bombs dropped in the Second World War.

The day before the *Dreadnought* was launched, the press quoted Premier Khrushchev as saying Russia already possesses nuclear submarines armed with missiles.

\$1,500 Awarded For Suggestion

Lt. Harry Hargreaves, serving at Naval Headquarters, has been awarded \$1,500 by the Suggestion Award Board of the Public Service of Canada. This is the largest cash award to have been made to a member of the Royal Canadian Navy.

The award is in recognition of a suggestion by Lt. Hargreaves for processing naval messages that has resulted in increased efficiency and a considerable financial saving. Put on trial in 1956 and subsequently adopted by the Navy, the suggestion is estimated to have saved the Department of National Defence \$190,000 over a three-year period. At the same time, it has enabled more rapid and efficient handling of naval messages.

Lt. Hargreaves was presented with his award by Vice-Admiral H. S. Rayner, Chief of the Naval Staff, on November 8 at a ceremony in the Naval Board room.

Lt. Hargreaves was born in Bradford, England, on June 22, 1918, and served with the Royal Navy from November, 1933, to August 1948. In August 1951 he entered the RCN (Reserve) and, while serving at HMCS Carleton, Ottawa naval division, was promoted to the rank of acting commissioned officer.

He transferred to the regular force in June 1952 and has served at Naval Headquarters since November 1953. He is now on the staff of the Director of Naval Communications. Lt. Hargreaves is married and has four daughters.

Lt. Hargreaves' award is the second largest made to date by the Suggestion Award Board.

Fraser Stands By Crippled Yacht

HMCS Fraser became one of the principals in a sea drama in mid-November when she went to the aid of a storm-crippled 40-foot yacht, the Red Witch.

The Fraser, en route to San Diego from exercises in Honolulu, detached from the Second Escort Squadron to relieve the freighter Hawaiian Packer which had been standing by the drifting craft.



A cheque for \$1.500 and a framed certificate were presented to Lt. Harry Hargreaves, of Naval Headquarters, by Vice-Admiral H. S. Rayner, Chief of the Naval Staff, on November 8. It was the largest cash award yet made to a member of the RCN by the Suggestion Award Board of the Public Service of Canada (O-13230)

The Fraser sent a repair party on board the Red Witch to determine the damage and discovered the sails and rigging unserviceable, the rudder gone and the auxiliary engine seized. The Red Witch had been heading for Tahiti and New Zealand when she became storm damaged. The owner, his wife and two children, and two crewmen were aboard.

The Fraser radioed the position as 600 miles east of Honolulu. After transferring the woman and children on board she took the Red Witch in tow and awaited the arrival of the United States Coast Guard Cutter Basswood.

The tow was turned over to the Coast Guard a day later, whereupon the Fraser continued on to San Diego and further anti-submarine exercises with the Assiniboine and Skeena.

Joint Sweeping Exercise Held

Ten United States Navy units and eight Canadian warships participated in NATO minesweeping exercise Sweep Clear V off Shelburne, Nova Scotia, starting October 3. The exercise lasted for 18 days.

The eight American minesweepers, both ocean and coastal, were the Agile, Aggressive, Bold, Bulwark, Kingbird, Bluebird, Limpkin and Hummingbird.

They were accompanied by the mine counter-measures support ship USS Orleans Parish and the netlayer USS Yazoo. American forces also included an explosive ordnance and disposal team.

Canadian naval forces included the Bay class coastal minesweepers Resolute, Fundy, Thunder, Chignecto, Quinte, and Chaleur, the repair ship Cape Scott and the loop-layer Bluethroat. Diving tender YMT6 and frogmen were also in the force.

The mine warfare exercise got under way on Canada's Thanksgiving Day under the direction of Rear-Admiral K. L. Dyer, acting in his NATO role of Commander Canadian Atlantic Sub-Area.

The exercise consisted of mine preparation, mine laying, mine hunting, mine counter-measures, mine location and mine recovery.

In the first phase of Sweep Clear V, the Cape Scott, closely followed by the Orleans Parish, threaded a careful course through a narrow, eight-mile winding channel to reach Shelburne Harbour.

A dummy minefield had been laid earlier by five ships at the entrance to Shelburne and the two ships reached safety only after negotiating the doglegged passage which had been cleared by a dozen busy Canadian and American minesweepers.

Providing this safe route through the minefield was a long and difficult task, particularly in seas too rough for ideal working conditions. But they completed the job and the Cape Scott and Orleans Parish made their way into the harbour in safety.

Six units of the First Canadian Minesweeping Squadron and eight United States Navy 'sweepers from U.S. Navy Mine Division 41 and 83, Charleston, South Carolina, worked round the clock for four days to remove the influence mines placed on the bottom or moored beneath the surface.

In the final phase the Yazoo, the Bluethroat and the RCN diving tender started mine recovery operations. Later a successful sortie by the Orleans Parish indicated that the 14 Canadian and American minesweepers had cleared the drill mine fields sufficiently for the safe passage of shipping.

Cdr. A. H. Rankin, commander of the Cape Scott, was in direct command of the exercise.

A "hot wash up" was held after the exercise for the benefit of the participating forces and a detailed analysis was to be carried out.

Most of the ships later paid a visit to Saint John, N.B., after which Canadian forces returned to Halifax. The Cape Scott and CNAV Bluethroat returned directly to Halifax.

First Sea Lord Visits Canada

Admiral Sir Caspar John, First Sea Lord at the British Admiralty, visited Canada and the United States in November.

This was Admiral John's first visit to North America since his appointment as First Sea Lord earlier this year.

He was greeted in Ottawa by Vice-Admiral H. S. Rayner, Chief of the Naval Staff, and Captain O. H. M. Steiner, RN, Senior Naval Liaison Officer (United Kingdom) in Ottawa.

On November 10 Admiral John called on the Minister of National Defence, Hon. Douglas S. Harkness; the Chairman, Chiefs of Staff Committee; the chief of the Naval Staff and members of the Naval Board to exchange views on naval matters of mutual interest.

While in Ottawa, he visited the National Gallery, one of whose treasures is a self-portrait of Sir Caspar's father, the distinguished artist, Augustus John,

NATO Officers Visit Canada, U.S.

Admiral Sir Wilfrid J. W. Woods, RN, Commander-in-Chief of the Home Fleet, who holds the NATO appointment of Commander-in-Chief Eastern Atlantic (Afloat), and Air Marshal Sir Edward Chilton, RAF, Air Officer Commanding-in-Chief, Coastal Command, RAF, who holds the NATO appointments of Air Commander-in-Chief Eastern Atlantic Area and Allied Commander Atlantic and Allied Air Commander-in-Chief, Channel Command, were visitors to Canada and the United States in late October and early November.

The two distinguished visitors toured Canadian and U.S. military installations. Their tour began in Montreal on October 27 and ended on November 10 at Halifax.

Officers from 14 Countries on Tour

Eighteen senior naval officers from 14 nations toured Canadian naval and commercial installations from November 3 to 9.

They were taking a United States Navy Senior Allied Officers Supply Management Course in Washington, D.C., designed to acquaint officers from other nations with USN supply methods. This was the second year a visit to naval and industrial establishments in Canada was arranged as part of the course.

Countries represented were Belgium, Brazil, Canada, China, Germany, Greece, Iran, Italy, Japan, Korea, Philippines, Sweden, Turkey and Vietnam.

Cdr. James W. Thomson was the Canadian naval officer participating in the course.

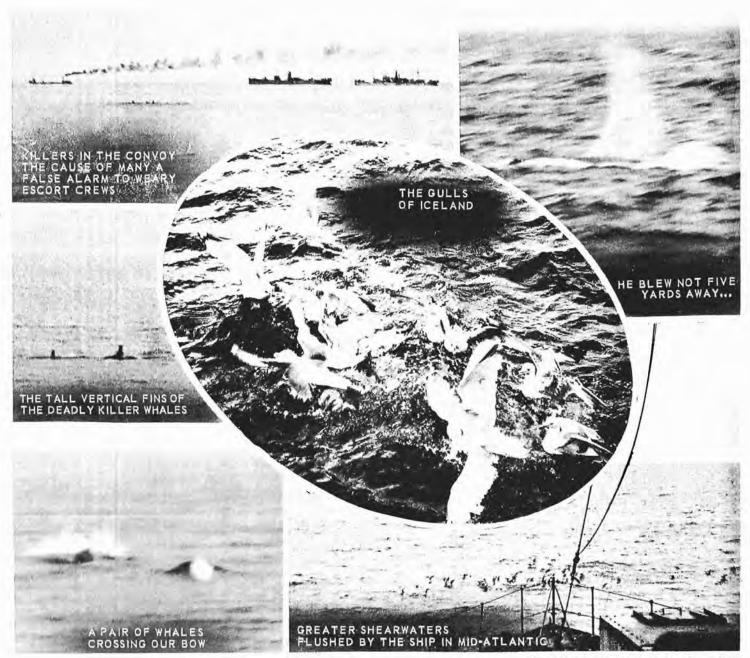
On November 3 the officers visited the Naval Supply Depot, the RCN Supply School and Canadair Limited, all in Montreal.

On November 6 the group visited Ottawa, and the same day flew to Halifax where they toured the Bonaventure, visited other ships, Stadacona, Shearwater, and the Dockyard and harbour facilities.

They returned to Washington from Shearwater on November 9.



Admiral Sir Caspar John, First Sea Lord, visited Canada and the United States in November. He is shown (left) at Naval Headquarters, Ottawa, with Hon. Douglas S. Harkness, Minister of National Defence, Sir Saville Garner, United Kingdom High Commissioner to Canada, and Vice-Admiral H. S. Rayner, Chief of the Naval Staff. (O-13236)



-From wartime snapshots by the author

NORTH ATLANTIC WILDLIFE

"SCAVENGERS, sir. Half-bird, half-fish. That's what they are," said the signalman as we leaned over the dodger together watching a dovekie flounder along the surface until just clear of the bow-wave and then dive with wings working as hard underwater as on the surface.

"Half-bird, half-fish they are, sir. Can't fly, but just flap along the surface like that."

I pointed out to him a gang of them crossing our bow about 20 feet in the air.

By

Bruce S. Wright

"If they can't fly what would you say those are doing?" I inquired.

"Them's birds, sir. Not scavengers. Scavengers is half-fish like I told you, sir."

I gave up. I had been trying for the past few days to make a tally of the pelagic birds seen from the ship during my four-hour watch. As a naturalist playing sailor for the Duration, it had

occurred to me that our frequent trips across the Grand Banks as convoy escorts were an ideal opportunity to gather data on the abundance of pelagic open-sea birds at this season of the year. I attempted a sort of strip-cruise system using twice the flushing distance from the ship as the width of strip and relying on the ship's log to give an accurate measure of the length of strip. On paper this looked fine, but on the first watch I was snowed under with dovekies alone, and had to give up keeping actual count.

Our signalman, a Bluenose Nova Scotian and excellent signalman, was quite seriously assuring me that the birds we saw flying around us in hundreds, and sitting on the sea in large gangs, were two entirely different species, one a bird and the other a "scavenger," half-bird, half-fish. When I tried to argue with him, he acquiesced respectfully, but obviously did not believe me.

Dovekies, murres (shot and eaten by the Newfoundlanders under the name of turres), herring gulls, great blackbacked gulls and kittiwakes were the most common sea birds and old squaws, eiders, and scoters represented the ducks. A surprise to me was to see common loons when out of sight of land, their unmistakable cry making identification certain. I first saw them between Pictou, N.S., and Prince Edward Island in Northumberland Strait, a likely migration route in October, but when four showed up a good 150 miles out in the Atlantic off St. Johns, Newfoundland, in December, I had to hear them laugh before I would believe my eves.

The birds thin out as you get out to sea. All the Grand Banks area is well populated in winter, but 200 miles or so off Newfoundland you usually see the last dovekies. Gulls follow almost all the way over. Coming in to Newfoundland we first saw dovekies, then the occasional murre and, as you approach the coast, old squaws and eider ducks are sighted. Over the Banks there are large concentrations of murres. We sailed for two days with gangs of 50 to 100 or more, dotting the sea as far as the eye could reach on either side of the ship. During the night they could be heard and seen getting out of the way of the ship. This was on the Grand Banks east of Sable Island in March. There must have been several hundred thousand murres in this area as well as dovekies and the odd puffin.

The first puffin I saw caused a mild sensation. I was on watch and standing at the front of a destroyer's bridge. The bird came up directly ahead of us and as I was surprised and pleased at seeing this my first puffin in its natural state, I remarked rather sharply, "Puffin dead ahead!"

The captain and the gunnery officer were beside me in one jump, both with binoculars to their eyes scanning the horizon. When I pointed out my find there was a disgusted "My Lord! A bird!" We were in the role of shepherd to a fair-sized convoy with a particularly crusty Senior Officer of Escort (not my captain), and enemy submarines were reported in the vicinity. A ship had been torpedoed 30 miles ahead the

previous night, so their obvious lack of ornithological interest might well be excused. However my stock went up again a few minutes later when the captain turned to me and said, "I've been going to sea for 20 years and you're the first man I've met who could tell me the name of that bird."

The great black-backed gulls in Iceland are the largest I have ever seen. Several specimens which floated on stiffly out-stretched wings around our bridge while we lay at anchor in an Iceland fjord came within 20 feet of me, I estimated their wing-spread to be at least five feet from tip to tip. I watched one of these great gulls chasing a female eider one day. He chased her for over half a mile, the rather slow heavy flight of the duck causing him no difficulty whatsoever in keeping up. Finally the duck despaired of shaking her tormentor and folded her wings and dove into the sea from a good 20 feet in the air. She disappeared beneath the surface with a remarkably small splash and came up again on the other side of the ship. We drew 14 feet of water, so she really did some work getting under us.

One of the queerest sights I saw in Iceland was a large raft of ducks and geese in a bay. While watching them with glasses I noticed that they would suddenly scatter leaving an area of open water in the middle of the raft. A few seconds later a small whale blew directly in the middle of this open space without in any way disturbing the birds. These whales were light in colour and I watched carefully but was unable to distinguish any dorsal fin. I tentatively identified them as narwhals although I did not see the horn. There were several of them and they seemed to be feeding directly under the raft of wildfowl. They were probably all feeding on the same shoal of the small sea-creatures known as "krill" to the whalers. The queer part of it was how the wildfowl knew when and where the whales were coming up to blow in order to leave those patches of open water, as they invariably did several seconds before there was any sign of the whale.

There were great numbers of eiders to be seen in Iceland, with old squaws the next most plentiful species. The eiders are protected, as the eiderdown industry is important, and they have become very tame. I did not get close enough to the geese to even hazard a guess at their species. Several large ravens were seen and heard flying back and forth to their homes in the barren crags surrounding the fjord. I several times noticed two or more great blackbacked gulls harrying a raven, who always came off second best and retired croaking dismally.

On the way back from Iceland we ran into quite a herd of whitesided dolphins. There were about 20 in the herd and they came within ten yards of the ship. It was quite a rough day and they frequently jumped clear of the water across the trough of a wave. I longed for a movie camera, but had to content myself with watching the splendid exhibition of grace and power these animals put on. The water was clear and the conspicuous white sidemarkings made it possible to follow them in their gambols below as well as above the surface. They swam along with us for probably ten minutes and then, tiring of our mere 12 knots, pulled on ahead and disappeared.

On a bright sunny day in late February, with a slight swell running and just sufficient sea to make "Away seaboat's crew" an unpopular evolution, we had an unusual experience. Visibility was at least ten miles and the convoy, away on our port quarter, was keeping station nicely. All in all it was a day to make an escort captain relax and forget about the grim business after sundown. We, a destroyer, were slipping along smoothly at 15 knots zigzagging as usual. As junior watchkeeper, it was my job to run the zigzag, making the necessary alterations of course at the proper time. I had just finished an alteration and had joined the captain at the front of the bridge when I saw a dark object on the surface within a hundred yards of our starboard bow.

"What's that, sir!"—and almost at once I recognized it: "Whales!"

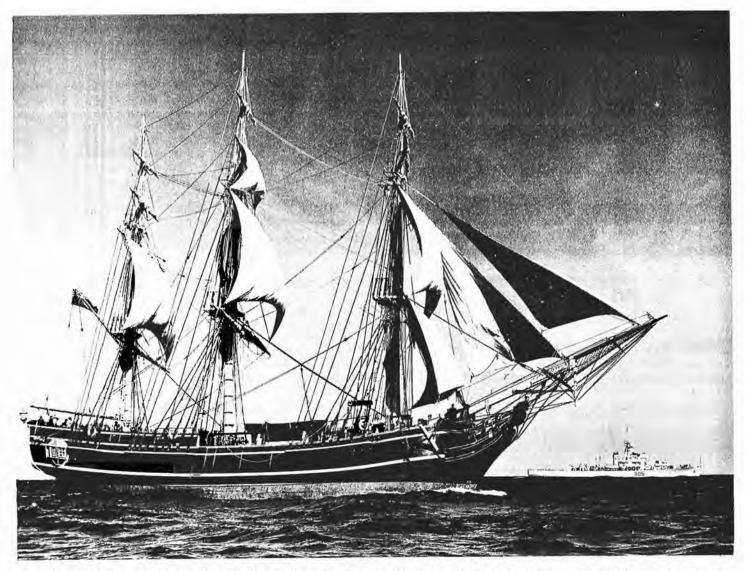
There were four of them. They were swimming in two couples, side by side and almost touching each other, and crossing our bow. Suddenly there was a great hullabaloo from the crowsnest. "Look, sir! Just ahead! He's coming up!" True enough, there was another pair just rising to blow dead ahead, and not five yards away.

"Stop her!" the Captain said mechanically, knowing full-well that it was too

The nearest whale blew just before the slim knife-edged bow of the destroyer chopped down on it out of a wave with all the terrible force of 1,500 tons of steel going 15 knots. There was a jar that rattled the masts, and then another and lesser one as the second of the pair rose under the bottom of the ship.

Jim, a brother sub, was standing on the quarterdeck and he said afterwards: "Half a whale came down our port side. Very messy. Blood and things."

She had the right of way, but we had a destroyer!



A span of two centuries in warship design is represented, not altogether by accident, in this picture of the movie version of HMS Bounty and the modernized frigate, HMCS Swansea sailing and steaming respectively off the coast of Nova Scotia. Rear-Admiral H. F. Pullen, who retired last summer as Flag Officer Atlantic Coast, was a guest on board the Bounty during her sailing trials and suggested to Canadian warships exercising in the vicinity that they steam past to display the contrast between the 18th and the 20th century vessels. (Photo courtesy W. R. Carty, Halifax)

BOUNTY OUT OF LUNENBURG

A NEW HMS Bounty has taken to the sea-lanes and, as sure as her wooden guns, there will be another mutiny against Captain Bligh, after which Mr. Christian and his cohorts will again settle on Pitcairn Island.

The new Bounty was built in Nova Scotia and in command is a Canadian, Lt.-Cdr. Ellsworth Trask Coggins, RCN (Ret), of Weymouth and Dartmouth, N.S. Sailed from Lunenburg following her trials, the Bounty will eventually reach Tahiti, where MGM is to film a new version of "Mutiny on the Bounty'.

Built in Lunenburg at the yard of Smith and Rhuland, she is a product of the wooden shipbuilders' skill. Even her planking, imported from Vancouver and California, has been secured in the time-honoured fashion with wooden pegs split and wedged.

The new Bounty is a larger version of the original, except for certain additions in the interior—such as an auxiliary diesel engine which will give her a speed of about nine knots, regardless of wind, refrigerator, deep freeze, comfortable bunks and other amenities in the crews quarters, which will be hidden from sight in the picture.

It is almost a certainty that if Captain Bligh and Mr. Christian had had the comforts that have been incorporated into the present *Bounty* the mutiny might never have taken place.

But the new HMS Bounty looks old enough. In fact it probably looks older than the old Bounty looked in her day. During the building special processes were used to give the illusion of age. Green - tinted copper - coloured paint simulates green-mottled copper sheathing on the bottom, her many coats of thick paint were imitated by mixing ground plastic with paint and layering it on by brush, the rigging is steel wire wrapped with rope tarred in the old manner, the new decking has been deliberately worked over to make it appear that many hob-nailed boots had passed over it.

Ferocious - looking wooden cannon peek through the gunports. With masts

and rigging towering 105 feet over all, she is a full-rigged ship, 118 feet long —23 feet longer than Bligh's Bounty. The extra length was needed to make room for cameras and her crew numbers only 25 as against Bligh's 60. One in five are former members of the RCN.

There are a few other slight differences, too, that can't be seen until halfway down the main hatch before the great wheel. On the left, below, is a modern galley the like of which the Bounty's men never dreamed and, indeed, would make a modern housewife envious. Nor could they ever have en-

visioned such things as bunks with spring-filled mattresses, air-conditioning, 10,000-gallon water tanks, six 25-cubic-foot deep-freezes, modern bathrooms and navigational aids and, lastly the two 225 horsepower auxiliary engines.

Why did Lt.-Cdr. Coggins, one of the few remaining officers with master's papers in sail, take the job as captain? The same reason that drew 300 others to seek berths in the Bounty. "I can always say I was on the last square rigger built in Nova Scotia." It was a last chance to recapture the romance of the days of sail.

Lt.-Cdr. Coggins came from Digby County and in 1938 entered the Navy from the Merchant Service where he had been a chief officer. He served for 17 years in the Navy, spending most of the Second World War at sea. Having served for much of his youth in sailing ships he was appointed to sail HMCS Venture's training yacht, the Oriole, from Halifax to Esquimalt when she was transferred to the West Coast in 1954. He retired in 1958.

Marlon Brando will play the role of Mr. Christian in the new "Mutiny on the Bounty", which is said to have a new approach and not be simply a remake of the old movie.

NEW SHIP FOR INSHORE SURVEY

A NEW VARIETY of hydrographic vessel, an inshore survey unit, will make her appearance in the fleet of the Canadian Hydrographic Service next spring in time for the service's 1961 operations in Canada's coastal waters.

Mines and Technical Surveys Minister, Paul Comtois, describes her as a new type ship which is especially designed for inshore survey work, and will in fact be an intermediate unit in size between a launch as used by a land-based shore party and a fully staffed ship. She will be especially valuable for work along the more rugged and isolated parts of Canada's eastern seaboard.

The new craft will have a range of over 2,000 miles and a speed in excess of 12 knots. She will be capable of carrying and of providing living accommodation for a crew of 20 persons. She will have the latest in navigational aids, and many of the amenities of modern living. Moreover, she will be equipped with two 26-foot launches, each with inflatable life rafts. Initially she will work off the south coast of the Islands of Newfoundland and later off the coast of Labrador.

The vessel will cost an estimated \$450,000; a contract for its construction has been let to Halifax Shipyards Limited at Halifax. An inshore vessel, of steel, she will be an attractive looking craft of the raised forecastle type, with raised wheelhouse and deckhouse amidships. She will be 115 feet overall in length, with a beam of 26 feet.

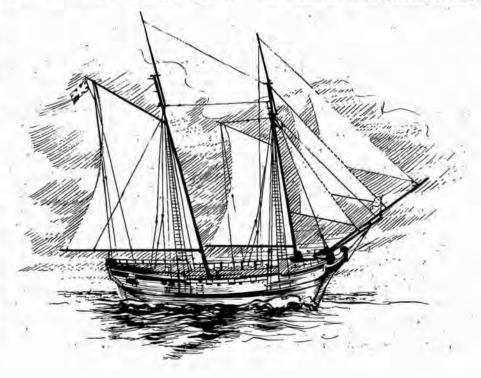
Her two screws and twin rudders will result in good manœuvrability. The two engines will be about 350 h.p. each. Navigational aids will include a gyro compass, radar, and radio telephone ship to shore, and it will have automatic steering. The vessel's launches will give the surveyors aboard three working craft in one package. The deck machinery, including the boat hoists, will be hydraulically operated to facilitate work in icy weather.

The new ship will permit some oceanography research to be carried out on board in a small laboratory. The normal duties of the vessel, however, will be hydrographic.

The new vessel will be named the C. H. S. Maxwell in honour of the late Staff Commander W. F. Maxwell of the Royal Navy. Before the establishment of the Canadian Hydrographic Service, the Royal Navy was responsible for the charting of Canada's coastal waters. Staff Commander Maxwell was in

charge of the first detailed survey of the coasts along which the new vessel will be working. It was under him that Staff Commander Boulton, also of the Royal Navy, worked for nine years in this area, and it was Maxwell who made the final report to arrangements with the Admiralty for the long-term loan of Staff Commander Boulton to Canada for the establishment of the Georgian Bay survey. The Canadian Hydrographic Service has already honoured Boulton by naming a small vessel after him.

The term Staff Commander was used in the 19th Century to designate a navigation specialist. He was the successor of the "master" of the previous century.



Page eight

OFFICERS AND MEN

New Structure For Two Branches

A new structure for clearance diver and meteorological trades was approved by Naval Board and appropriate triservice authorities and promulgated in November.

New trades consisting of the following, formed from former trades as indicated, were effective November 1.

Clearance Diver (CD) from Clearance Diver and Clearance Diving Instructor;

Meteorologist's Mate (MM) from Meteorologist's Mate Trade Group I and II;

Meteorological Technician (MO) from Meteorologist's Mate Trade Group III and IV.

All men serving in the former clearance diving and meteorology trades are being transferred to new trades, Recruits will be allocated to the new meteorology trade in *Cornwallis*. All future clearance divers will be selected from men of other trades holding Trade Group I, preferably with Clearance Diver Ships qualification.

All men retain rank, trade group and seniority held at time of transfer to their new trades and all promotion and advancement qualifications attained in the former trade will be counted as equivalent qualifications in new trades where applicable,

Men who were in the zone for promotion to next higher rank at time of transfer to their new trades will continue to be considered in zone for

WEDDINGS

Leading Seaman J. H. Alleyne, Kootenay, to Veronica Elaine Tynes, of Halifax.

Lieutenant John M. Arnold, Shearwater, to Elizabeth Theresa Begley, of Peterborough.

Able Seaman William Coxon, Cornwallis, to Mary Louise Amirault, of Digby, N.S.

Ordinary Seaman Herbert Gibson, Cornwallis, to Pauline Dostal, of Brantford, Ont. Sub.-Lieutenant Michael Hodgson, Lanark,

to Sara Jane Peters, of Halifax.

Chief Petty Officer John S. (Jay) Lawrence, Naden, to Sheila Whitely, of Edmonton.

Able Seaman L. D. MacDonald, Kootenay, to Mary Ann Morton, of Halifax.

Lieutenant James D. MacIntosh, Shearwater, to Valerie Anne Higgins, of Halifax,

Able Seaman Ronald B. Wellwood, Antigonish, to Josie A. Ripka, of Nanaimo.

Sioux Adopts Greek Child



"CAP TALLY"

HMCS Sioux has an adopted daughter and to the ship's company she is "Cap Tally".

This unlikely name came about when the Sioux applied to the Foster Parents Plan in Montreal to adopt a child and, after meeting the requirements laid down by the FPP, the ship was assigned a little Greek girl called Efthymia Kapoteli.

Finding the Christian name hard to pronounce, the men soon settled on a play on the surname and "Cap Tally" came about.

So enthusiastic are members of the ship's company over "Cap Tally" that even the 17-year-olds are heard to mention "our daughter". To meet the \$180 a year, or \$15 a month costs, the men pay ten cents a month.

Since their little girl can't yet write correspondence is carried on with the girl's mother, with translations made by the New York office of the FPP.

Another naval adoption under the Foster Parents Plan was by 50 Anti-Submarine Helicopter Squadron. The child is Smaragda Brokov, a ten-yearold Greek girl.

The squadron busied itself in November making up a Christmas parcel to forward to her. promotion in their new trade. All these men can be promoted, if selected and a vacancy is available. Further promotion for such men will be conditional upon successful attainment of those qualifications prescribed for higher rank in their new trade.

Men who are not in the zone for promotion to next higher rank at time of transfer to new trades will be required to obtain qualifications prescribed for next higher rank in their new trade.

The details of amendments to advancement and promotion regulations will be promulgated,

The new trades do not apply to RCN(R) personnel.

Five Rewarded For Suggestions

A chief petty officer and four petty officers earned cash awards in November for suggestions forwarded to the Suggestion Award Board of the Public Service of Canada and adopted for use in the Royal Canadian Navy.

CPO William Rennick, Shearwater, and PO Frederick H. Kuhn now on the staff of the RCN Recruiting Officer, Ottawa, together submitted a design for an emergency front towing bar for Tracker aircraft.

BIRTHS

To Leading Seaman H. E. Collins, Chaudiere, and Mrs. Collins, a daughter.

To Petty Officer H. C. Crocket, Chaudiere, and Mrs. Crocket, a son.

To Able Seaman D. D. Enders, Chaudiere, and Mrs. Enders, a daughter.

To Petty Officer Hjalmar Hansen, Naval Radio Station Aklavik, and Mrs. Hansen, a son.

To Able Seaman George Haworth, Naden, and Mrs. Haworth, a son.

To Leading Seaman William Koch, Naval Radio Station Aklavik, and Mrs. Koch, a son.

To Leading Seaman Thomas Lane, Naval Radio Station Aklavik, and Mrs. Lane, a son. To Able Seaman G. J. Marcoux, Chaudiere, and Mrs. Marcoux, a daughter.

To Leading Seaman C. W. Patterson, Naden, and Mrs. Patterson, a daughter.

To Able Seaman Alan Penney, Naval Radio Station Aklavik, and Mrs. Penney, a son.

To Sub-Lieutenant M. H. D. Taylor, Chaudiere, and Mrs. Taylor, a daughter.

To Able Seaman L. Walling, Kootenay, and Mrs. Walling, a daughter.

To Petty Officer Raymond White, Naval Radio Station Aklavik, and Mrs. White a daughter. PO Gordon J. Coldham, Shearwater, suggested a modification to the electrical equipment of the Banshee jet fighter.

PO Harold R. Howard, Star, suggested three modifications of procedure dealing with pay records of RCN (Reserve) personnel.

PO Joseph D. Leclair, Shearwater, devised a crane to simplify the installation of Banshee jet engines.

Promotions and Appointments

Recent promotions and appointments include the following.

Lt.-Cdr. George L. Hopkins, formerly electrical officer of HMCS St. Laurent, has been promoted to commander and appointed to Naval Headquarters, Ottawa.

Lt.-Cdr. Charles Henri Larose, at Naval Headquarters, was promoted to the rank of commander. Cdr. Larose is taking a course at the RCAF Staff College, Toronto.

Lt.-Cdr. John B. C. Carling, who commanded HMCS Ste. Therese from January 1959 until August 1960, has been promoted to the rank of commander and appointed Director of Supplementary Radio Activities at Naval Headquarters.

New President Veteran of USN

One thing was sure when citizens of the United States went to the polls on November 8 and that was that a naval officer would become president for the first time in the history of the Union.

Both the candidates served in the U.S. Navy during the Second World War.

The new president, Senator John F. Kennedy, joined the navy as an ensign in 1941 and retired as a Naval Reserve lieutenant in 1945. The new vice-president Lyndon B. Johnson is also a veteran of naval service. He was a lieutenant-commander by the time the

Conference Site Ill-Chosen

The first change to the various operations orders governing the NATO minesweeping exercise "Sweep Clear V", in October at Shelburne, N.S., was disclosed in Halifax at the pre-sailing conference.

"Change One" moved the site of the conference from Room 209, Command Headquarters, to Room 211, where it should have been held anyway. Room 209 holds the wrens' powder room.

Second World War ended and, as a commander in the Naval Reserve, outranks President-elect Kennedy. However, he will be unable to "pull rank" on the new president, since Senator Kennedy also becomes commander-inchief of the U.S. Armed Forces on taking office.

Vice-President Richard M. Nixon, who so narrowly lost the presidential race, was a naval officer during the Second World War, maintained his status in the Naval Reserve and was promoted to commander in 1953.

Vice-President Nixon's running mate, Henry Cabot Lodge, outranked the others by being a brigadier-general in



Petty Officers Donald Raven, Robert McGahan and Charles Jessop on October 1 successfully completed the Branch Officers' Professional Qualifying Course (Writers) at HMCS Hochelaga, Montreal. On the same date they were promoted acting commissioned officers and have since been appointed to Cornwallis for the officers' divisional course, (ML-9126)

the U.S. Army Reserve. Ten generals, including President Eisenhower, have become president of the United States and eight others had served in lesser army ranks.

The Army Navy Air Force Journal, source of the foregoing information, says that 15 former presidents had no military experience.

Sixteen Qualify For University

Sixteen men of the Royal Canadian Navy have qualified under terms of the navy's College Training Plan and entered various Canadian universities this fall. Each of the men has been promoted to the rank of cadet.

No Longer Two Grilses

When the Royal Canadian Navy chose the name of Grilse for the ex-USS Burrfish, the submarine it is acquiring from the United States, there was another craft of the same name in the Navy. This was the yacht Grilse, and, although she was not a commissioned ship, it was deemed advisable to rename her.

The new name chosen for the yacht is Goldcrest.

The College Training Plan applies specifically to navy men who have been selected as officer candidates. These candidates must qualify for entry to the Services Colleges or to university before they reach the age of 25. Those selected are entitled to full pay and allowances of the last rank held, up to petty officers second class. Tuition and other essential fees are paid by the Navy.

To qualify, the 16 men selected successfully completed a nine-month senior matriculation course given at Naden. This full-time academic course prepares the candidates to write the British Columbia grade 13 examinations. On successful completion of the examinations, the candidates are selected by a final board of review to go on to university or to one of the three Canadian Services Colleges.

Selected for university training are: Ldg. Sea. Joseph C. Braconnier, University of Alberta; Ldg. Sea. Gilbert J. Borsa, University of Toronto; Ord. Sea. Peter C. Connelly, University of Alberta; AB Robert B. Cunningham, University of Western Ontario; AB Kenneth E. Fisher, University of Alberta; Ord. Sea. David A. Gasser, University of Toronto;

Ldg. Sea. Russell E. Goodwin, University of Western Ontario; PO Roger K. Howe, Queen's University; Ldg. Sea. Donald H. Knight, University of Western Ontario; PO Terrance C. Lyons, McGill University; PO Ronald W. Quick, McGill University;

PO John N. Ray, McGill University; PO George D. Roberts, University of Manitoba; PO Adam J. Smith, Queen's University; Ldg. Sea. Brent R. T. Steele, McGill University, and Ldg. Sea. Gerald S. Tarum, McGill University.

Trees Perpetuate Names of Ships

Names of HMC Ships serving in the Atlantic Command in 1960 have been perpetuated in 38 Norway maple trees planted in HMC Dockyard, Halifax. The trees have been financed from the non-public funds of the vessels participating. The plan is part of the Navy's 50th Anniversary celebrations.

The final tree, located near the Maritime Command (Atlantic) Headquarters building, was planted with due ceremony by Rear-Admiral K. L. Dyer, Flag Officer Atlantic Coast, on October 27.

Others present at the ceremony included the Senior Canadian Officer Afloat (Atlantic), Commodore James Plomer, and the participating ships' commanding officers or their representatives.

School Cruise Held at Haiifax

A special cruise for school authorities within a 100-mile radius of Halifax was carried out October 1 in two destroyer escorts

Seventy school principals, vocational guidance teachers and 40 selected senior

high school students were embarked in the *Micmac* and *Cayuga* for the familiarization cruise. They came from such widely separated points as Liverpool, Middleton and New Glasgow.

The cruise ended at 2 p.m. to allow the guests to see the presentation of memorial drums to the RCN by the Province on the Garrison Grounds that afternoon,

Officer Completes U.S. Sub Training

Lt. Roy Allan MacKay has completed submarine qualification training with the United States Navy in preparation for his appointment to HMCS Grilse, the present USS Burrfish, now being refitted before commissioning into the RCN next year.

At present serving in the submarine USS Irex, Lt. MacKay is the first RCN officer to qualify in American submarines. The Irex of Submarine Squad-



Having successfully completed the Branch Officers' Professional Qualifying course (Stores) at HMCS Hochelaga, Petty Officers G. S. Waddell and J. C. Plummer now are undergoing the Branch Officer Candidates Educational Course in Naden. (ML-9127)

OFFICERS RETIRE

LT.-CDR. FREDERICK C. BINGHAM, CD, of Saint John, N.B., joined RCNVR February 10, 1932, RCN May 8, 1933 as an ordinary seaman, promoted to warrant rank January 6, 1943. Lt.-Cdr. Bingham served in Stadacona, Saguenay, St. Laurent, Skeena, Gaspē, Venture, Protector, Naden, Givenchy, Prince David, Cornwallis, Scotian, Stadacona, Bytown, Cape Breton, Brunswicker; awarded British Empire Medal in 1943; last appointment was Supply Officer and Staff Officer Administration, HMCS Brunswicker; commenced leave October 22, 1960, retires June 4, 1961.

CDR. ARTHUR ROBERT HEWITT, CD, of Reveistoke, B.C., and Ottawa, joined RCN September 1, 1928, as an ordinary telegraphist, promoted to warrant telegraphist October 18, 1941. Cdr. Hewitt served in Naden, Stadacona, HMS Victory, HMS Nelson, Vancouver, Skeena, Armentieres, Ottawa, W/T Station Ottawa, St. Hyacinthe, Bytown, Stadacona, HMS Puncher, Givenchy, Naden, Niobe; last appointment Director of Supplementary Radio Activities at Bytown; commenced leave August 18, 1960, retires April 28, 1961.

LT.-CDR. JOHN WILLIAM ISHERWOOD, CD, of Victoria, and Ottawa, joined RCNVR as Stoker 2/C October 26, 1927 to March 21, 1930, and rejoined January 8, 1938, to RCN May 2, 1943, as a regulating petty officer, promoted warrant master-at-arms July 15, 1944. Lt.-Cdr. Isherwood served in Meander, Dundas, Stadacona, Fort Ramsay, Protector, Avalon, Peregrine, Naden, Stadacona, Shearwoater, Magnificent, Cornwallis, Bytown; last appointment Staff Officer Administration HMCS Griffon; commenced leave August 18, 1960, retires March 14, 1961.

LT. GEORGE KIRKENDALE, CD, of Victoria and Sidney, B.C., joined RCN January 5, 1937, as an electrical artificer, promoted to warrant electrician January 15, 1945. Lt. Kirkendale served in Naden, Skeena, HMS Vernon, HMS Nelson, Ottawa, Stadacona, Niobe, Athabaskan, HMS Berwick, Warrior, Ontario, Scotian, Magnificent, Cornwallis, Cape Breton; last appointment was on the

staff of the Manager Electrical Engineering, HMC Dockyard, Esquimalt; commenced leave October 19, 1960, retires April 14, 1961.

CDR. JOHN MeW. LEEMING, CD, of Victoria, joined RCNVR January 1, 1941, as a sub-Lieutenant, transferred RCN March 2, 1946. Cdr. Leeming served in Kenora, Wallaceburg, Strathadam, New Waterford, Naden, York, Bytown, Stadacona, Ontario, Donnacona, Niagara, Labrador, Bytown; mentioned-in-despatches in 1945; last appointment officer-in-charge operations and weapons division at Naden; commenced leave October 20, 1960, retires April 16, 1961.

CDR. WILLIAM A. MANFIELD, CD, of Vancouver and Ottawa, joined RCN September 19, 1928, as an ordinary seaman, promoted to gunner January 23, 1940. Cdr. Manfield served in Naden, Vancouver, HMS Victory, HMS Warspite, HMS Excellent, Skeena, HMS Hood, Fraser, Stadacona, Assiniboine, Cornwallis, Bytown, Huron, Warrior, Athabaskan; last appointment was to Bytown as Assistant Director of Naval Organization; commenced leave August 29, 1960, retires May 9, 1961.

COMMISSIONED OFFICER ARTHUR ED-WARD SAXBY, of Halifax, joined RCN August 31, 1934, as an officer's steward, promoted to commissioned rank on March 15, 1952. Cd. Off. Saxby served in Stadacona, Saguenay, St. Laurent, Skeena, Columbia, RCNVR Montreal, Avalon, St. Hyacinthe, Uganda, Warrior, Magnificent, Cornwallis, Naden, Niobe II, Bonaventure; last appointment was to Stadacona; commenced leave October 15, 1960, retires April 19, 1961.

LT.-CDR. GEORGE E. W. WOODFORD, CD, of Calgary and Victoria, joined RCN May 2, 1929, as writer, promoted to warrant writer August, 1941. Lt.-Cdr. Woodford served in Naden, HMS Victory, HMS Vivid, HMS Nelson, Skeena, Fraser, St. Laurent, HMS Pembroke, Ottawa, Givenchy, Niobe, Bytown, Burrard; last appointment was to Naden on staff of RCN Depot, Esquimalt, as Staff Officer Supply Personnel; commenced leave August 19, 1960, retires April 30, 1961.

ron Eight, at New London, Connecticut, has been conducting training for students of the submarine school.

Born in Winnipeg, Lt. MacKay served briefly in the RCN(R) before entering the regular force as a midshipman in August, 1948. Following early training with the Royal Navy, Lt. MacKay served in ships and establishments on the Pacific Coast.

He commenced submarine training at New London in January 1959 and on graduation from the school in June of that year was appointed to the USS Irex for duty. He has since served as assistant engineering officer, first lieutenant and gunnery officer.

Officer Cadets Tour Services

Nearly 175 officer cadets of the Canadian Services College, Royal Roads, participated in the college's annual "Military Day" program.

First-year cadets visited establishments of their own service while secondyear cadets visited services other than their own.

RCAF cadets went by bus to the air force station at Comox, RCN cadets joined the frigates Jonquiere and Stettler for a cruise to Comox and returned by bus, and Army cadets visited the Princess Patricia's Canadian Light Infantry at Work Point Barracks, Esquimalt.

SWIMMER WITH A PURPOSE

"Bind your legs, weight your drms, and see how you react when placed in a deep pool."

A CCORDING to swimming instructor PO Alfred "Alf" Aylward, of Naden, this gives a slight idea of how physically handicapped persons feel when first introduced to swimming as a recreation and a therapy.

Tuesday mornings and Friday evenings have been set aside at Naden's pool for handicapped swimmers. The water is heated to a temperature of 84 degrees and for two hours PO Aylward, his instructors, their assistants, and 68 learners are hard at work trying to make leg and arm muscles respond.

Persons who have suffered from such cripplers as polio, arthritis, or are victims of cerebral palsy, have a deeply-rooted fear of water. Their confidence must be won by the instructor before progress can be made.

Two little girls, Wendy, aged ten, who had lost the use of her legs, and Leslie, aged seven, who had no muscular control, began swimming classes in July of this year.

Wendy at first was so afraid of the water she refused even to purse her lips and blow into it. After much hard work and determination she can now swim half the breadth of the pool. Leslie has learned how to float by herself.



In addition to teaching thousands of other youngsters the art of swimming and water safety, PO "Alf" Aylward has devoted many hours to helping hundreds of physically handicapped children to float and swim. Here in the Naden pool he provides water therapy for a child with a muscular ailment. (E-58940)

Saturday is kiddies' day at the pool. Classes commence at 8 a.m., and by 4 p.m. 300 children have taken the lessons. Some have gone ahead to attain higher swimming awards such as Bronze Medallions and Awards of Merit.

PO Aylward, originally from Biggar, Saskatchewan, could not swim a stroke until he joined the Navy in 1942. Now he holds the coveted "Award of Distinction". To this petty officer there are not enough hours in the week to get everything completed.

In addition to his naval instructional duties with the physical training department most of his duty time is freely devoted teaching swimming or life saving.

After a hurried noon hour sandwich he teaches naval personnel who wish to improve their swimming style. From 12:30 to 1 p.m. he instructs in life saving.

Four nights a week he assists in the instruction of YMCA swimmers. Friday nights he is with the handicapped at Naden. Sunday afternoon is taken up with water polo. Between times PO Aylward referees basketball games for the Victoria Basketball Association.

During the summer PO Aylward claims he gets "pretty busy". He works with the Red Cross Water Safety Society, when anywhere from 10 to 15 hours a day is spent instructing and examining aspiring life guards.

About the only night of the week this navy petty officer can call his own and spend with his wife and family is Tuesday evenings. Sometimes even this one is lost if there happens to be a trapeze display scheduled in Victoria's Crystal Gardens, because Alf is also a member of the trapeze team.

A busman's holiday is taken once a year when Alf, his wife Joyce, and their two children Patrick, 13, and Brenda, 10, take off to a lakeside resort for some relaxation and, of course, swimming!

—J.A.B.

AKLAVIK—CANADA'S WINTER WONDERLAND

NAVAL RADIO Station Aklavik has unique recreational facilities. In summer a sun-baked flood plain is used as a softball and volleyball playing surface. During the winter the broomball rink is frozen by temperatures of minus 30 to 60 degrees.

Virtually unlimited hunting grounds for rabbit, ptarmigan and ducks are nearby. Fishing anyone? Whitefish, jackfish and herring abound in the waters of the Mackenzie river delta area.

Ten miles northwest of Aklavik, the Richardson mountain range rises 2,500 feet from the nearly sea-level delta. The almost perpendicular sides offer a challenge to the most enthusiastic mountaineer.

Canoeists will find a maze of channels to explore throughout "the delta". Aklavik has an indoor curling rink and a club which has the longest season of any in Canada.

During the summer, Naval Radio Station Aklavik is buzzing with the scores of the softball games between the various watches and between the daymen and watchkeepers. Because of the 24-hour day, games are sometimes continued until midnight. This summer, Naval Radio Station Aklavik played a team representing the newly-created town of Inuvik. There was no active volleyball league but many enjoyable hours were spent on the outdoor court.

The Navy provides two freighter canoes, with a ten-horsepower outboard for the largest. During their time off, various watches made several hikes this summer, with the Navy cabin in the mountains as their goal. This trip is partly by canoe.

The blast of a shot gun is a familiar

sound during September and the aroma of roast duck in the galley is ever present.

Freeze-up occurs during October and the household broom is put to a use other than its designed purpose. This is the start of the broomball season. There is no shortage of ice or avid players and the league usually has a successful year.

"The roaring game" makes its appearance about the same time as broomball. The rink was ready in November and the curling club was being organized. The outlook is for another good year.

Canada has been referred to in the past as nothing but a few acres of snow. Up in the Northland, which can rightly be called Canada's frontier, there is plenty of snow, but one also finds a hunting and fishing paradise, a winter wonderland, and a proud Navy base enjoying it all immensely.—G.R.G.

OPERATION EARTHQUAKE

N FRIDAY afternoon, May 27, 1960, the Departments of External Affairs and National Defence decided to send immediate aid from Canada to the earthquake devastated area of Chile. The Canadian government's decision followed an urgent request from the Minister of External Affairs, who was visiting Chile during his Latin American tour when the earthquake struck.

The Surgeon General, Canadian Forces Medical Service, ordered emergency medical supplies adequate for equipping a 40-bed hospital to be made ready for immediate air shipment.

By 7 pm No. 1 Central Medical Equipment Depot, at Plouffe Park, Ottawa, had begun the arduous task of selecting and packaging all the equipment necessary to set up the emergency hospital. Depot personnel worked on into the night and by 1:30 am, Saturday, I was advised, as escort officer, that the entire shipment was en route to Uplands Airport, to await the arrival of an RCAF North Star in the morning.

No. 1 Central Medical Equipment Depot, in a race against time, had undertaken and completed its tremendous assignment in six and one-half hours.

The aircraft arrived from Trenton before 9 am and the plane was ready for take-off at approximately 11:30 am. At Trenton we were joined by the second aircraft, which carried as cargo emergency Red Cross supplies, such as blankets and clothing.

En route to Santiago, Chile, refuelling and crew rest stops were made at Charleston, South Carolina, Panama City and Lima, Peru.

The flight over the Caribbean was most uncomfortable, in that electrical storms were encountered from Miami to Panama.

We arrived at Santiago at 7 am, Wednesday, May 31, and were met by His Excellency the Canadian Ambassador, Paul Tremblay, and the Canadian Trade Commissioner, H. M. Maddick, as well as by Chilean government officials and service representatives. Here perishable supplies, such as vaccines and toxins, were delivered.

On the day of our arrival I had the pleasure of meeting the Minister of National Defence for Chile, who expressed his thanks to the people of Canada for the medical supplies so desperately needed. He said that from his observations and from reports at

hand it was apparent that aid was most needed in the south of Chile, particularly in the town of Castro on the island of Chiloe. As it was impossible to land large aircraft at Castro, it now became necessary to first deliver the supplies to Puerto Montt, a large town 1,200 miles south of Santiago.

Before our departure from Santiago I was joined by Lt. Col. Frederico Cave, a medical officer of the Chilean Air Force Reserve. His assignment was to act as adviser, interpreter and liaison officer.

Accompanied by Mr. Tremblay and Mr. Maddick, we proceeded to Puerto

By

Lt. (MAD) Edward Y. Porter

RCN

Montt on Thursday, June 9. This trip was most interesting in that we flew along the coast by way of Concepcion and Valdivia, two of the cities badly damaged by the earthquake. Most of the damage was visible from the air. One could also see damage along the coast which had been caused by the tidal waves. In some instances coastal villages were entirely wiped out.

The airport at Puerto Montt, which consisted of one 6,000-foot runway, was handling traffic beyond its limitations, with aircraft from North and South America arriving in increasing numbers. As landings were only permitted during daylight hours and as unloading facilities were inadequate, there was lengthy delay on the ground and aircraft had to be parked on both sides and ends of the runway. This meant that planes were forced to land and take off over parked aircraft. Much to our relief, this situation was remedied prior to our arrival.

The day following arrival in Puerto Montt I visited, in company with Lt.-Col. Cave, the disaster headquarters at the Municipaldo (town hall).

After surveying the damage sustained in Puerto Montt, both Lt.-Col. Cave and I felt that medical supplies had been received in abundance and that the urgent need now was for food, clothing and emergency housing units such as tents. A message to this effect was for-

warded to the Canadian Ambassador in Santiago. The message took two days to reach its destination.

The loss of life and injuries in Puerto Montt apparently were slight. This was due to the fact that, as the major tremors occurred on a holiday afternoon, several minor tremors prompted most of the residents to vacate their homes and go into the streets.

The supply of water to most sections of Puerto Montt was seriously disrupted and all residents were warned to boil all drinking water; efforts were made to deliver a supply of water to homes twice a week. This tremendous task was the responsibility of the fire department, or as they are locally called the "Bomberos".

The American Army 13th Field Hospital Unit had been established in Puerto Montt prior to our arrival and this 400bed unit was more than adequate to meet any demands that may have been required at that particular time. In addition, the Engineers attached to the 13th Field Hospital Unit had established a field hospital unit near the waterfront and, by condensing sea water, sufficient fresh water was obtained to provide for the daily laundering of all hospital linen. I discussed, with the Commanding Officer 13th Field Hospital Unit, the situation as we saw it and we both were of the opinion that the 13th Field Unit was adequate for the Puerto Montt area and that, if at all possible, the Canadian supplies should be forwarded to the town of Castro.

I arrived at the small airport in Castro in the early evening of June 5 where I found that all arrivals to Castro were being informed by the local health authorities that typhoid fever was prevelant and typhus fever was endemic. It was recommended that the available innoculations be taken for one's protection.

Having accepted the innoculations, I was taken to the town's temporary hospital and was reunited with my genial guide, Lt.-Col. Cave. Following lengthy discussions with the hospital superintendent, Dr. Ortega (which discussions were made possible by Dr. Cave acting as interpreter) we began the job of unpacking and centralizing all the Canadian supplies.

The building that was now a temporary hospital was previously a boys' industrial or trades school. A hospital

under canvas and would have been most impracticable as it was then the winter season in Chile and the rainfall is excessive at this time of year and some snow could be expected. While in Puerto Montt it was noted that the American Field Hospital Unit endeavoured to keep dry by using bales of straw spread on the ground inside each tent.

Sunday morning a survey of the temporary hospital was made and a hospital as such was most difficult to realize. One 20-bed ward had been set up in one side of the only remaining good wing of the school and here all patients, regardless of sex or age, were accommodated. The segregation of cases was also impossible. Surgical and medical cases as well as infectious cases were kept in this one ward. The majority of patients were suffering from upper respiratory infections, several were emergency surgical cases and one teenage lad was a confirmed typhoid fever case.

The maternity ward was set up to accommodate eight patients and was located in the old part of the school. The room was without heat and light, several of the window panes had been shattered and were replaced by wood or cardboard. All beds were occupied and, as there was no nursery, the newborn infants were left with the mothers. As the temperature was around 40 degrees Fahrenheit, it was necessary to use six to eight blankets per bed. The roof leaked and water was seen to be dripping in several places.

Toilet facilities were practically nonexistent. Fortunately some running water was still available. The linen problem was acute, with all laundering being done by hand. Some electrical power was available, sufficient only to supply emergency lighting.

An emergency operating theatre was established in a room next to the maternity ward. This was divided by a sheet hanging on a piece of wire; one side of the room was set up as a scrub room and the other side as the operating room. Surgical instruments, sterile linen, and anæsthetic equipment were in short supply.

The out-patient facilities were established in a long room which ran parallel to the main ward; here DDT sprayers were noted in abundance, and a good dusting became part of every treatment, regardless of the complaint. All food was handled in a small kitchen located next to the main ward and an attempt was made to prepare hot meals. Fuel for the wood-burning stoves came from destroyed buildings in the area.

Monday morning an attempt was made to renovate an adjoining building, previously used as a machine shop, in hopes that additional space could be provided for an isolation ward. The previous day, one case of measles and one of mumps had been seen at the outpatient clinic and it was felt that this could well mean the beginning of an epidemic.

The living conditions for many residents of Castro were such that unless one saw for himself, he would not believe that such conditions could be tolerated. This particular area had been subjected to heavy tremors, and many homes and business sites were completely destroyed. In addition, the entire business area of Castro had been ravaged by fire immediately following the earthquake. Large well-built homes were seen that were completely removed from their foundations, while other homes and apartment dwellings were without entire walls. Many of the residents took refuge in the country while others attempted to relocate themselves on any available plot of land with only a piece of tin for a roof and a makeshift stove set up to keep warm. Barefoot children were seen wandering aimlessly around in near-freezing weather; here it was hoped that the canvas tents from Canada could be used to best advantage.

As I had to return to Santiago by Tuesday evening at the latest, it was necessary that I leave Castro on the first available flight—a Chilean DC3.

This short flight of 50 miles turned out to be the most harrowing of the entire trip in that while taxiing for take-off the plane became firmly lodged in the mud, then after breaking free barely managed to obtain altitude suf-

ficient to clear a hill at the opposite end of the airstrip. Shortly after becoming airborne we encountered severe turbulence. This, coupled with the fact the cargo door opened, caused several of the passengers to become airsick.

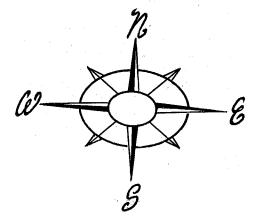
On arrival in Puerto Montt I proceeded via helicopter to the American 13th Field Hospital Unit Headquarters where I met Colonel Tyrell, the commanding officer. I described conditions as I had seen them and requested that if at all possible some means should be found to supply portable stoves that could be used in heating the temporary hospital in Castro. Colonel Tyrell said he felt certain that at least six stoves could be forwarded the next day via helicopter.

On my return to Santiago I reported to the Canadian Embassy, where at the request of the ambassador I submitted a report of conditions as I had seen them. The next day Wednesday, June 8, began the return journey to Canada via Lima, Panama, and Washington, D.C.

I should like to mention the outstanding part that was played in the complete operation by the RCAF 426 Transport Squadron. Their co-operation, teamwork, and untiring efforts enabled the operation to be carried out in an efficient and commendable manner. It has indeed been valuable experience for me to have been a participant in this operation and my association with 426 Squadron will never be forgotten.

Appreciation is also extended to Colonel Tyrell and Major Ruther of the American 13th Field Hospital Unit; their direction and co-operation proved to be most valuable.

The supplies that were forwarded from Canada, although small in quantity in comparison to the shipment forwarded by the United States, were received by the government and the people of Chile with much appreciation. The decision of the Department of National Health and Welfare and the Department of National Defence to forward Canadian aid at this particular time was one that did much toward the establishment of good relations between Canada and the countries of Latin America.





COLUMBIA IN NIGERIA



CPO Bud Kirk shares his cigarettes with villagers during a visit to the interior of Nigeria.
(HS-62980)

THE PRIVILEGE of seeing a new free nation within the Commonwealth come into being awaited HMCS Columbia when she sailed on September 9 from Halifax, bound for Africa to assist in representing Canada at the Nigerian independence celebrations.

On the morning of September 28, the Columbia, after a two-day stop in Sierra Leone, met HMS Bermuda, wearing the flag of the Commander-in-Chief, South Atlantic and South America, at the fairway buoy off the mouth of the Niger River.

Both warships then sailed into the harbour of Lagos, the federal capital of Nigeria, and secured fore and aft to buoys in the stream. Ships of the Ghana Navy, one wearing the broad pendant of the Commodore Commanding Ghana Navy, were present. Also present was the Commodore Commanding Royal Nigerian Navy, flying his broad pendant in HMNS Nigeria.

The Columbia was a flurry of activity—out booms and ladders, lower the boats, spread the awnings, and the commanding officer was off on a round of official calls. Calls were exchanged with the Canadian High Commissioner, the

Governor General, the Minister of State, the Oba of Lagos, the Chief Justices, the General Officer Commanding, the Commander-in-Chief, South Atlantic and South America, and the Commodores of the Royal Ghana and Nigerian navies. The Oba of Lagos is a paramount tribal chief. He and his retinue and the Chief Justices presented a picturesque and colourful sight in their tribal robes, which they wore to all functions.

Sweltering Lagos, teeming with Africans from other nations who were there to celebrate the Independence, is a city of contrasts. With more than 300,000 inhabitants, it presents a modern face to the visitors arriving by sea. The Marina, or main street, facing the harbour, is as modern as any comparable street in the world. However, it is not uncommon to see herds of cattle within two blocks of the Marina, driven by colourful Northernmen riding horses and camels. Millions were spent for the celebrations. The colourful street decorations and modern lighting created a sharp contrast with the age-old way of living persisting within the city.

Lagos is growing and being modernized at a rapid rate. She appears certain to be a leading city in the Africa of tomorrow.

A guard from the Columbia was landed on September 30 to participate in the Searchlight Tattoo and raising of the National Flag. This stirring event was attended by HRH the Princess Alexandra of Kent.

How Do You Get This Out of Second?

Everyone must be aware by now that Canadian sailors call their fine new destroyer escorts "Cadillacs". Also not unfamiliar is the novelty song "The Little Nash Rambler and the Cadillac", which gave a certain compact car a lot of free publicity.

The stage was set for a re-enactment of the ditty when the little mine-sweeper Chignecto was leaving harbour at Sydney, N.S., last summer for full-power trials after refit. Ahead of her was the Gatineau, proceeding out of the harbour entrance at sedate and economical speed.

A little devil whispered in the ear of Lt.-Cdr. J. I. Manore, commanding officer of the Chignecto, who thereupon roared: "Full ahead both!"

A great welter of foam appeared astern of the *Chignecto* and her powerful diesels bellowed defiance as the little ship overtook and swept past the destroyer escort.

At that moment, a message notable for its brevity, was passed:

> FROM: CHIGNECTO TO: GATINEAU X BEEP BEEP X



Cdr. W. P. Hayes, commanding officer of HMCS Columbia, welcomes aboard Hon. John Arthur, Regional Commissioner for Takoradi. Next to Cdr. Hayes is Nana Kwamina Anaisie IV, the Omanhene of Dutch Sekondi. (HS-62988)



Center, wearing glasses, is the Canadian High Commissioner to Ghana, Bruce Williams, with Hon. Charles De Graft Dickson, Minister of Defence, on his left with other Ghana officials and members of the ship's company. (HS-62987)

On the stroke of midnight the Union Jack was hauled down as the massed guards of honour presented arms and the bands played the National Anthem. This was followed by the raising of the green-white-green flag of Nigeria and, as 40,000 voices rose in the new official anthem, Africa's most populous nation became independent. A gigantic fireworks display then covered the sky,

accompanied by blowing of sirens and playing of searchlights from the many ships in the harbour.

The following day Hon. Donald M. Fleming, who was the official representative of the Canadian Government at the independence celebrations, and Nigerian dignitaries were guests onboard the *Columbia*.

The ship's company made a host of friends among the people, both European and Nigerian. Several clubs extended memberships for golf, tennis, swimming and other sports. There were sight-seeing trips and special events such as the national pageant, the Nigerian Exhibition, the West African games, national native dancing, and a water regatta, witnessed by HRH the Princess Alexandra.

The official celebrations came to an end on October 3. The next morning the Columbia, having assisted in repre-

senting Canada at this historic event, sailed for Ghana.

The ship arrived in Takoradi, Ghana, on October 5. After the activities in Nigeria all personnel looked forward to a pleasant, quiet, three days of relaxing and seeing the country. There were visits to beaches, old castles and forts, as well as inland to a gold mine. The highlight of the cruise for five officers and 25 men was an overnight visit to the capital city of Accra, more than 100 miles from Takoradi.

During this visit they attended a reception given by the Minister of Defence for Ghana and were entertained at a buffet and reception given by the staff of the Canadian High Commissioner.

Accra, in the same manner as Lagos, is a city of contrasts, showing both the old and the new Africa. The university, for example, is fully modern and would be a credit to any country. However.

there is the age-old problem of overcrowding and lack of housing in the native quarters.

Back in Takoradi, the ship's company was welcomed at several private clubs and, as in Nigeria, made friends with the inhabitants. Takoradi is noted for its excellent wood and ivory carvings and many a sailor spent hours bartering for souvenirs.

On October 8, the Columbia put to sea again and sailed for Freetown, Sierra Leone. She arrived on October 11, for a quiet two-day stay. Nearly everyone relaxed on the magnificent beaches and enjoyed the hospitality of the members of the Sierra Leone Regiment.

On October 13 it was time to say goodbye to West Africa and the Columbia sailed for Canada. She arrived in Halifax on the 25th, having steamed 10,500 miles during her visit to the newest member of the Commonwealth.



Village street scene in West Africa. (HS-62982)

Monthly Rate of Pay for Men

					ALLOWANCES					
Rating	Basic	3 Yrs.	6 Yrs.	9 Yrs.	Subsi	Subsistence		Kit		
					Single	Married	Marriage	Upkeep		
CPO 1	\$304 272 235 211 187 134 115 108 56	309 277 240 216 190 154 —	314 282 245 221 193 176 —	319 287 250 226 196 — —	95 85 85 75 65 65 65	110 105 105 105 100 100 100	30 30 30 30 30 30 30 30	9 9 9 7 7 7 7 7		

Additional pay is given for trade qualifications. Two new classifications—3A and 4A—have been added to the trade groups to compensate for the more complex trades. The trades pay monthly rates are: Trade Group 1, \$12; Trade Group 2, \$30; Trade Group 3, \$54; Trade Group 3A, \$63; Trade Group 4, \$72, and Trade Group 4A, \$90.

Qualified aircrew men engaged in flying duties receive flying pay at the rate of \$75 a month.

Trained submarine personnel serving in submarines in commission receive submarine pay at the rate of from \$65 a month for leading seaman and below to \$75 a month for chief petty officers. Men undergoing basic submarine training courses are paid at half this rate, as are trained submarine personnel serving in "annotated positions", e.g., spare crew or crews of submarines in refit. An allowance of \$30 a month, all ranks, is paid to non-qualified personnel on casual duty in a submarine in commission.

A foreign service allowance is paid for service in ships outside Canadian waters, provided the ship is away for a continuous period of not less than 30 days, at the following monthly rates: CPO1, \$16.50; CPO2 and PO1, \$15; PO2, \$12:

Ldg. Sea., AB and Ord. Sea., \$9.

Marriage allowance is not payable under 21 years of age. However a special rate of separated family allowance is payable for men under age for marriage allowance. See QRCN 205.24 para 1(b).

Monthly Rate of Pay for Officers

			,		ALI	OWANCES	3
Rank	Basic	3 Yrs.	6 Yrs.	9 Yrs.	Subsi	STENCE	
	<u></u>				Single	Married	Marriage
Captain. Commander LtCdr. Lt. Cd. Officer Sub-Lt. Act. Sub-Lt. Midshipman Cadet.	639 510 393 393 321 225	844 674 540 423 413 356 —	879 709 570 453 433 371 —	744 600 483 453 — —	139 126 113 96 95 90 75 75 65	165 150 135 125 125 125 110 110	40 40 40 40 40 40 40 40 40

Qualified aircrew officers engaged in flying duties and officers under training for aircrew qualification, receive aircrew allowance at the rate of \$75 to \$150 according to their rank, in addition to regular pay and allowances.

Qualified submarine officers, serving in a submarine in commission, receive a monthly allowance of \$75 to \$115, and half those rates when undergoing training or serving in "annotated positions". Non-qualified officers are paid \$30 a month while on casual duty in a submarine.

A special allowance of \$30 per month is paid to naval officers in certain specific appointments.

Subsistence allowance is payable only when rations are not provided and quarters are not available, and is thus not normally applicable to junior officers.

Marriage allowance is not paid to married officers under 23 years of age.

AFLOAT AND ASHORE

ATLANTIC COMMAND

HMCS Cornwallis

The new system in new entry training is now functioning, with the former divisional officer replaced by a chief petty officer.

Thus each division is now guided through the 15 weeks of new entry training by a chief petty officer and a petty officer first class, with one officer to supervise five divisions. The Divisional Chief Petty Officers are: S. F. Mein, D. H. Thomas, J. A. Stoddart, A. H. Maynard, Gordon Dark, Nicholas Lazaruk and C. J. Holmes, from Esquimalt Port Division, and H. W. Foreman, T. J. Starkey and F. E. Addy, from Halifax Port Division.

The month of September saw the new entries engaged in the extra-curricular activities of forest fire fighting, which entailed hard work, but for a worthy cause.

To get to the hot spots the crews were airlifted in by the RCN and RCAF helicopters and a Department of Lands and Forests Beaver. At the same time it was

Can't Always Be in Orbit

Naval firefighters stress safety measures for the Chemox breathing apparatus, especially in regard to disposal of the oxygen-producing canisters. So the fire fighting staff of the NBCD Section of Stadacona set out to prove convincingly to a score or more students how careless handling of the canisters and untidy habits in a ship can lead to serious trouble.

The students were marshalled a safe distance away to watch the demonstration. The staff readied a canister in an empty oil drum along with shipboard products of slack habits, namely gash waste and drippings of dirty oil.

The stage was therefore set for the instructor's promise of a brilliant explosion of flame as the Chemox fumes and the other substances united. The blast would take place in 30 to 45 seconds.

An expectant hush fell on the crowd. The seconds dragged on . . . still no explosion. Seconds became minutes.

Finally, a bleacher-type voice issued from the student body;

"Never mind, sir! We have the same trouble at Cape Canaveral."



Lt. Eric Haywood, the photographic officer at the RCN Air Station, Shearwater, and editor of the weekly the Navalaire, attests his son David as a naval cadet in the Regular Officer Training Plan. Cadet Haywood, a Dartmouth High School graduate, will take science courses at Dalhousie University. Lt.-Cdr. A. T. Loye, area recruiting officer, looks on. (DNS-26316)

often necessary for a fast airlift out when the fires got out of control and life became endangered.

On October 1, Cornwallis sent a company from Saguenay and Ottawa Divisions, plus the band, to Halifax for the presentation by the Premier of Nova Scotia of the Memorial Drums. These drums were given to the RCN by the Province of Nova Scotia to commemorate the 50th anniversary of the RCN.

Saguenay and Ottawa Divisions also formed the Sunset Guard and guns' crews and put on displays at Lunenburg and Lawrencetown. Cd. Off. G. N. Beveridge and Sub-Lt. P. O. McWade were the first and second officers of the guard respectively. Petty Officers E. W. Ginley and R. B. Faulkner trained the guard and the gun's crews were trained by Petty Officers L. W. Stagg and W. L. Jenkinson.

HMCS Micmac

After spending four weeks alongside in leave period and two weeks in self-maintenance, the *Micmac* came off the Dartmouth slips on September 5. During the next few days the ship was ammunitioned and stored. She proceeded to sea on the 8th to spend the remainder of September on anti-submarine and squadron exercises.

The Micmac spent the first two weeks of October on an advanced operational training cruise, followed by a one-week sea phase which took place off Bermuda. She then proceeded to New York for a five-day operational visit.

New York proved to be an extremely enjoyable leave port for the ship's company. Movies, plays, tours, dances and sports activities were all made available by the USN and the USO. New York's night life speaks for itself.

In sports, Micmacs have been active: soccer and softball teams had a good season and the hockey team shows promise. The Micmac is well represented on this year's edition of the Sailors' football team by Ldg. Sea. Edward Bayliss and AB Robert Osmack.

From March 1959 (recommissioning) to the end of September 1960 the *Micmac* spent 180 days at sea, and steamed more than 44,300 miles.

HMCS Terra Nova

On the afternoon of October 15, HMCS Terra Nova sailed for Montreal to participate, along with the USS Barry, in the joint United States and Canadian Navy League meetings.

The Terra Novas' contribution to the convention consisted of guiding delegates from both nations around the ship, providing a tour and lunch for a large

A-Power Triples Avgas Capacity

One of the by-products of the application of nuclear power to aircraft carriers is a substantial increase in the amount of aircraft fuel they can carry.

This is demonstrated in the world's first nuclear-powered aircraft carrier, the USS Enterprise, which was launched at Newport News, Virginia, last September 24. Because she does not need bunkers for her own fuel, the Enterprise can carry nearly three times the aviation gas which would normally be carried in a ship of her size.

Built at an estimated cost of \$450,-000,000 the Enterprise displaces 85,350 tons (twice as much as a good-sized battleship), has an over-all length of 1,102 feet six inches, which makes her the longest ship ever built, and is powered by eight nuclear reactors. Including the air group, her crew will number 4,600 officers and men.

She has a designed top speed of 33 knots, but is expected to be able to do 35 knots for short periods.

number of members of the RCSC and taking part in a parade and memorial service on Trafalgar Day.

The Chief of the Naval Staff, Vice-Admiral H. S. Rayner, visited the ship on Trafalgar Day and congratulated the guard on its fine showing.

One of the outstanding incidents of the journey involved the inability of the pilot boat to take the pilot off at Quebec City, due to the roughness of the weather. The pilot was quite undisturbed about this development in view of the fact he was being paid for nothing.

This particular information somehow made a Halifax radio news broadcast and, when the *Terra Nova* entered harbour on October 27, her navigating officer, Lt.-Cdr. G. G. Armstrong, was asked by flag hoist from a certain minesweeper whether or not he required a pilot.

HMCS Chaudiere

On November 1, the officers and men of HMCS Chaudiere celebrated the first anniversary of the ship's commissioning.

The gala event, which was held in the Commonwealth Room of the Nova Scotian Hotel, included a buffet supper and dancing to the music of Pete Powers' orchestra.

Cdr. V. J. Wilgress, commanding officer of the *Chaudiere*, expressed his pride in the ship and the ship's company. He also presented the Interdepartmental Sport Shield to the cocaptains of the victorious operations team.—J.S.A.

NAVAL DIVISIONS

The twelfth annual conference of commanding officers of the 21 naval divisions of the Royal Canadian Navy (Reserve) was held November 21-23 at the Hamilton headquarters of Commodore P. D. Taylor, Commanding Officer Naval Divisions.

Naval divisions in major Canadian cities from Vancouver Island to Newfoundland were represented.

In addition, senior officers from Naval Headquarters, Ottawa, attended the conference. They included: Rear-Admiral B. R. Spencer, Chief of Naval Technical Services; Captain A. B. Fraser-Harris, Director of Naval Ship Requirements; Captain R. J. Pickford, Director of Naval Plans, and Captain F. D. Elcock, Coordinator, Personnel Structure Committee.

A meeting of the Naval Reserve Consulting Group was held in Hamilton during the week of the conference.

PACIFIC COMMAND

Moresby House

The Wrens' Mess at Moresby House in Esquimalt, has elected a new executive, installing as president Ord. Wren Gloria J. Saunders. The secretary-treasurer is Ord. Wren Nance M. Kievill and the representative to the Ships' Fund and Welfare Committee, Ord. Wren Jo Anne Field.

A representative was named for the first time to the *Naden* Fleet Club. She is Ord. Wren Shirley M. Masding.

Changes among wren officers at Naden include: Lt. (W) D. J. Kiely, from Naval Headquarters, is commander's assistant and wren divisional officer; Lt. (W) A. L. Lawrence, from Stadacona, non-public funds officer, and Lt. (W) C. M. Mallabone is on the staff of the personnel selection officer.



It is worth recalling at this time of year that, once upon a time, children romped in the warm sunlight. This picture was taken during a doll carriage parade held in conjunction with the Shannon Park recreational program last summer. Shannon Park's Roman Catholc chapel is in the background. (Photo courtesy Mrs. James Oakes)

SCIENCE AND THE NAVY

New Standard of Length Chosen

A resolution introduced by the Canadian delegation recommending a new international standard for measuring length was adopted by the Eleventh General Conference of the International Bureau of Weights and Measures in Paris, Delegates from 30 countries unanimously agreed that the international standard for the metre should no longer be a metal bar kept in Europe, but should be defined as a specific number of wave-lengths of orange light emitted by the gas krypton.

Dr. L. E. Howlett, of the National Research Council, introduced the resolution on behalf of the International Committee on Weights and Measures in his capacity as Chairman of the Advisory Committee for the Definition of the Metre.

Since 1952 all Canadian units of length have been defined in terms of the metre. The inch, for example, is defined by law as exactly 254 ten-thousandths of a metre.

Canadian scientists, notably Dr. K. M. Baird, of the National Research Council, have made important contributions towards compiling evidence for adoption of the new standard. The world's only working apparatus using the new standard for directly measuring linear scales was designed and built at NRC by Dr. Baird.

One of the advantages of the new standard is that it can be readily and accurately reproduced anywhere in the world by any well-equipped physics laboratory. Unlike the metal bar it cannot be destroyed, lost, or affected by changes in temperature or pressure. The new standard is available in all countries and there will be no further need for prolonged comparisons of "standard" bars of metal. The new definition will facilitate accurate linear measurements in many industries.

New Way to Keep Track of Storms

It has been known for years that storms cause minute vibrations (microseisms) on the earth's crust. Now an instrument has been devised which can detect vibrations of the ocean floor, thus promising (The Scientific American

suggests) a new method of detecting and tracking storms at sea.

A pilot model of the new bottom seismometer, as it is called, was developed by the Lamont Geological Observatory of Columbia University and was dropped in the Atlantic Ocean near Bermuda last year.

"The bottom was found quiet enough to permit the use of instruments 100 times more sensitive than can be employed on land," says The Scientific American.

It quotes Maurice Ewing, director of the Lamont Observatory, as saying that bottom seismometers may also offer a highly effective means of detecting nuclear explosions and may open up striking possibilities in undersea research.

Sun's Rays Push Satellites Around

The Echo balloon satellite, says Hugh Lucas in the *Navy Times*, has proved that it would be possible to sail through space propelled by the suns' rays.

The Echo, he went on to say, is pressed some one and a half miles nearer to the earth every day by the push of light from the sun. Meanwhile, the U.S. Navy's Vanguard 1, the "grape fruit" satellite, is being pushed a mile closer to the earth every year by the same villains.

The villains, he says, are photons, the units of light which combine the properties of both waves and particles.

Atom-Powered Light for Beacons

One aid to navigation which is being eyed with interest, according to the Navy Times, is an atom-powered light for light houses and buoys.

The designers claimed the light could be installed in a buoy and the power supply would last ten years.

The light is operated by a battery which is trickle-charged by strontium-90—a safe-to-handle isotrope—fissioning slowly and producing heat which is turned into electricity by two metal slabs.

Another flasher for the same purpose, also shown at the International Light-house Conference at Curtis Bay, Maryland, by the U.S. Coast Guard, was a propane device which heats metal slabs and produces electricity to charge the battery. It was claimed the unit would run for three years on \$19 worth of propane.



G. K. Lloyd, instructor in the Machine Shop of the Academic Division of the Fleet School at Stadacona, produced this 1-10 scale micrometer to enable trainees to grasp more readily the fundamentals of the device. It can be readily seen from the rear of a classroom and has proved an invaluable training aid. (HS-61893)

Maritime Research Directorate Formed

Increased interest in maritime activities by Canada's defence forces, together with expanding technology in the fields concerned, have necessitated the establishment of a Directorate of Maritime Research (DMR) at Defence Research Board Headquarters.

The small new directorate will concern itself with co-ordinating maritime research generally and in particular, with sicentific aspects associated with ocean surface and sub-surface environments; underwater acoustics, submarine detection, tracking and killing, and countermeasures against the submarine threat.

Scientific advances relative to maritime warfare involving the Royal Canadian Navy, along with great participation by the Royal Canadian Air Force in similar activities, were factors in dictating establishment of the new directorate. Its objective will be to effect closer co-ordination of scientific research related to maritime defence activities.

Patrick W. Nasmyth, formerly of Vancouver, who has been named Director of Maritime Research will continue his duties as Director of Scientific Services at Naval Headquarters.

'Massey Sound' New Name on Map

An unnamed sound in Canada's Arctic archipelago is to be named after the Right Hon. Vincent Massey, former Governor General of Canada.

Massey Sound, as it is to be known, lies between Axel Heiberg and Amund Ringnes islands in the Queen Elizabeth Islands. It is approximately 70 miles long and 30 miles wide.

Choice of the name following recommendation by the Canadian Board on Geographical Names was approved by Cabinet.

Mr. Massey has always been interested in Canada's northland, and its northern citizens, the Eskimos. In November, 1956, he visited various Eskimo settlements in the Far North and ffew over the northern fringe of the archipelago to become the first Governor General to fly across the North Pole. It was on this trip that he flew over the sound which is being given his name.

Ex-RN Hydrographer Comes to Canada

The former hydrographer of the Royal Navy, Rear-Admiral Kenneth St. Barbe Collins, CB, OBE, DSC, RN (Ret), has



been appointed consultant to the Surveys and Mapping Branch of the Department of Mines and Technical Surveys, at Ottawa.

The appointment is for a two-year period.

Admiral Collins, a 1918 cadet entry at College Osborne, had been with the Royal Navy's surveying service since 1925. His hydrographic, oceanographic and meteorological work has taken him around the world, including surveying operations in the Far East, Atlantic Ocean, West Indies, Mediterranean, Indian Ocean, China Sea and Denmark Strait.

During the war he served in a number of ships and commanded HMS Scott, fleet minesweeper. He was appointed Hydrographer of the Royal Navy in 1955.

Hay Solves Oil Problem

The Navy Times, published in Washington, reports an unusual method of solving an unusual problem at Newport, R.I.

The problem was to remove the layer of 336,000 gallons of heavy black fuel oil dumped into the water off nearby Jamestown from a tanker that had gone aground. The oil was playing havoc with Newport beaches. Oil slicks as far away as Connecticut and Massachusets were reported. Hundreds of clams were killed and washed ashore, other marine life suffered and birds were effected.

Because of the fire hazard, the governor of Rhode Island declared a state of emergency and assigned fire-fighting units to stand a constant watch.

A helicopter survey led to the decision to pump the oil into tank trucks and haul it away but Hurricane Donna struck, piling up more oil on the beaches.

It was then that a citizen of Newport suggested grinding up hay, spreading it over the area and scooping it up with clamshell shovels. The method proved so successful that the fuel officer at Newport feels that it is a practical method for use wherever the Navy's activities create such problems, or wherever such problems exist.

LETTERS

Dear Sir:

I should like to point out that Mr. J. M. Thornton, in his "Naval Lore Corner" of the August 1960 issue, overlooked the loss of HMS Kent in Suda Bay, Crete, sunk by Italian explosive motor boat.

Yours faithfully, A. J. R. SMEDLEY.

HMCS Stadacona Halifax, N.S.

Dear Sir:

As a constant reader of your fine magazine, I wish to appeal for help.

The United Services Club, Montreal, is forming a collection of ships' badges, for the most part donated by the ships themselves or by members who have served in them.

We are very anxious to find old officers or men who may have served on board HMCS Lasalle during the last war.

We are anxious to borrow a badge of the ship, or a photograph of one, so that we may have one made or even, failing that, perhaps someone may be able to describe the badge (and colours) for us.

The badges of many of the old wartime ships are becoming very hard to find and any information would be gratefully received.

Anything sent to me will be promptly returned after I have photographed it.

Sincerely yours, IAN MORGAN, Major.

22 Holton Avenue, Westmount 6, Que.

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THE NAVY PLAYS

Badminton Club Off to Good Start

The Pacific Command Badminton Club, enjoying another successful season, has been joined by naval personnel and Dockyard employees and membership is now 50.

Though the majority of the players are new, the calibre of badminton is generally good. Several of the experienced players are giving instructions to the newcomers and club officials are pleased with the progress.

The club is affiliated with the Canadian Badminton Association and participates in the Lower Vancouver Island Badminton League.

Chaudiere Puts Stress on Sports

To promote maximum, active participation in sports within the ship, HMCS Chaudiere held an inter-departmental sports competition during September and October.

Five departments entered one or more teams: operations, weapons, electrical, engineering, and supply and bos'n combined.

Stadacona's P&RT staff assisted with facilities, officials and equipment.

The final game of basketball, a playoff won by operations over supply and bos'n, was played at the submarine base in New London, Conn.



Captain F. C. Frewer, commanding officer of Cornwallis, is shown presenting the Tri-Service soccer trophy to PO D. J. Russell, Stadacona's team captain. (DB-14492)

At the ship's company dance, at the Nova Scotian Hotel in early November, the co-captains of the operations department team, PO W. R. Squires, and Ldg. Sea. S. J. Sheals, were presented with the shield by Cdr. V. J. Wilgress, captain of the *Chaudiere*.—J.S.A.

Stadacona Tops Swimming Meet

Stadacona stroked its way to a 31-point lead to take first place in an Atlantic Command swimming meet held at Stadacona's pool, in early November. Cornwallis collected 28 points and Shearwater trailed with 26.

First place winners were:

120-yard free style—Sissons (Stadacona), time 1:27; 120-yard back stroke—Cooke (Stadacona), 1:37; 120-yard breast stroke—Chandler (Shearwater), 1:49; 90 yard butterfly—Seward (Stadacona), 2:09; 480-yard free style—Ewins (Shearwater), 7:17; 210-yard back stroke—Cooke (Stadacona), 3:20; 210-yard breast stroke—Donaldson (Stadacona), 3:34; 210-yard free style—Ridgway (Stadacona), 2:43; 240-yard medley—Seward (Stadacona), 4.25; 480-yard medley relay—Stadacona, 6:19; 480-yard free style relay—Cornwallis, 6:15.

Water Polo Team Improving

Naden's ever-improving Navy water polo team swept to an overwhelming 11 to 2 victory over Royal Roads in November.

The Navy, led by Ldg. Sea. Jerry Vowles, AB Gordie Mee and Fred Cox, showed the scoring punch which as of late has made it the team to reckon with in the League.

The two points for the victory moved the sailors within six points of first place.

'Stad' Victor in

Indoor Shoot

The Atlantic Command's first smallbore, indoor rifle competition was held at Stadacona November 4 and 5. It will be an annual event.



Happy Beacon Hill personnel with the Cock of the Fleet trophy they won in boat pulling during fleet exercises in Mayne Bay, Barclay Sound, B.C., in late September. Left to right are: Lt. D. C. Gurr, PO Leslie Stevens, Sub-Lt. G. D. Paltridge, PO John McAndrews, PO Terrance Whitley, Ord. Sea, Kenneth Rodzinski, and PO Lloyd Ferguson. (E-58024)

Eight teams participated and Stadacona, with 1,152 points, was the winner. Shearwater, with 1,136 points (just 16 behind Stadacona) was second. In third place, with 1,104 points was the Seventh Escort Squadron.

The First Escort Squadron held fourth place with 1,081 points, while the Third Escort Squadron, with 1,067, was fifth. Sixth spot was taken by Fifth Escort Squadron with 1,059. Cornwallis amassed 1,014 for seventh place and the Sixth Submarine Squadron, with 980 points, was in last place.

The high individual aggregate was won by CPO Reg Winter, of Stadacona, with 296 points. The runners-up were PO S. H. Bell, also of Stadacona, with 292, and PO F. G. Ball, of the First Escort Squadron, with 290.

High single target was taken by PO H. M. Greenwood, of *Shearwater*, with a possible 100.

Eight Teams in Volleyball League

Eight teams have been organized into the Victoria City Volleyball League and play began at *Naden's* P&RT Centre on November 1.

In early games Naden defeated Victoria College two games out of three, and Victoria High School two out of three.

Playing in the league are: Naden, Naden Wardroom, Victoria College, Victoria High School, East Indian Athletic Club, Venture, and the Princess Patricia's Canadian Light Infantry.

Shearwater Opens Curling Season

The 1960-61 curling season for sailors in the Dartmouth area began on November 7 when Captain T. C. Pullen, commanding officer of *Shearwater*, threw the first stone at a 'spiel at the Dartmouth Curling rink.

The program opened with a general muster of the curlers followed by a grand march and other formal procedures.

Shearwater Keeps Volleyball Title

Shearwater volleyballers toppled host Stadacona to retain the Atlantic Command volleyball championships 16-14, 16-14 and 15-8 in a best-of-five finals, in November.

Stad had beaten Bonaventure two games to one to gain a place in the finals. Eight Atlantic Command teams started in the two-day tourney.

Chief and POs Win Soccer Final

Brawn and beef paid off in the Corn-wallis interpart soccer league when the Chief and POs, in overtime play, downed Communications Division 4-3 in the finals.

Hockey Shows Return to Style

Out west the Navy's puck-chasers regained some of their punch to defeat Pattersons 10-6 and look again like the team that captured the Victoria Commercial Hockey League championship two years in a row.

In their previous three games they had slumped badly, scoring only nine goals and taking one win.

League standings on November 15 were: IAA, 6; Navy, 4; Pattersons, 4, and Army, 2.

Royal Roads Wins Rugby Trophy

Royal Roads won the Admiral Hibbard Trophy and the city services rugby title for the second straight year in November with a 21-6 victory over *Venture* in their annual match at Royal Roads.

The win put Royal Roads in second place in the Victoria Rugby Union standings.

VRU standings	on	740	vem	per	13
were:					
	P	w	L	T	Pts.
Oak Bay Reds	7	6	0	1	13
Royal Roads	8	6	2	0	12
Venture	8	5	2	1	11
Oak Bay Whites	7	3	4	0	6
University "A"	7	3	4	0	6
Apprentices	6	2	3	1	5
James Bay	6	0	5	1	1
University "B"	7	0	7	0	0



The Navy of yesterday, as it is today, was prominent in sports, both in the community, inter-service, inter-ship, inter-part and in foreign ports. This 1938-1939 rugby team on the West Coast made Itself known in Victoria rugby circles in the senior division. Left to right back row, are: Lt.-Cdr. C. E. M. Donaldson, RCNVR, Lt. (now Commodore) M. G. Stirling, Ldg. Sea. (retired CPO) Bill Smith, Stoker First Class Jim Crozier, Ldg. Victualling Assistant (now Lt.-Cdr.) "Ginger" Fisher, Stoker First Class Bill Geddes, AB "Toar" Young (lost in Margaree), the late Lt.-Cdr. Charles MacDonald, and Lt.-Cdr. (retired Commodore) J. C. I. Edwards. Front row: PO (now Commander) W. A. "Chili" Manfield, Ldg. Sea. Harry Nelson, Ldg. Sea. (retired CPO) Lance "Sticks" Rutherford, AB (now Lt.-Cdr.) Reg Mylrea, AB Earl Sealey, Ldg. Sea. Charles Street, Ldg. Sea. (now Lt.) George Grivel, AB Henry Sciban (lost in HMCS Fraser), Ldg. Tel. (retired CPO) George Bonfield and AB (now Commander) J. D. "Darky" Lowe. (E-38292)

ANOTHER LOOK AT THE ARMADA

I T IS NEARLY four centuries since King Philip II of Spain sent his proud Armada of 130 ships and 30,000 men northward to conquer England. The image of the resulting encounter in the minds of 20th century man is confined largely to Sir Francis Drake bowling at Plymouth as the mighty Armada approaches and, later, the little English ships knifing through the Spanish formations, sinking galleons by the dozen.

Michael Lewis, in his book entitled "The Spanish Armada", does nothing to destroy our picture of Sir Francis on the bowling green but, alas, we learn that English ships sank only three of the 51 Spanish units lost in the campaign. This is not to detract from the role of the English sailors, however, for in the final analysis, Drake's tactics foiled the Spaniards' attempt to make a landing.

The two fleets first met off Plymouth on July 21, 1588, and during the next

BOOKS for the SAILOR

nine days engagements were fought off Portland, the Isle of Wight, Calais and Gravelines. The English forces, under the command of Charles, Lord Howard of Effingham, numbered 62 front-line ships and 43 smaller vessels. During the nine-day engagement the Spaniards, under Don Alonso Perez Gusman, Duke of Medina Sidonia, lost 11 ships, three of them to English gunfire.

The subsequent loss of 17 Spanish ships on the barren coast of Ireland is nothing short of tragic. After the final engagement at Gravelines with the English, the Armada, still intact, steered northward through the North Sea with

the intention of sailing around Scotland into the Atlantic. Poor weather and bad luck drove 17 ashore and the Irish killed those who survived the sea.

Mr. Lewis obviously has been meticulous in his research and has put together in his book a comprehensive account of the Armada's misadventures against the background of political, philosophical and religious considerations which led to the inevitable clash between Spain and Elizabethan England. All the characters are here too, including Elizabeth, Philip II, Drake, Hawkins and Frobisher as well as the leaders of the Spanish fleet. All in all, it is a carefully-written and highly fascinating account of one of the most crucial naval engagements in history.—R.S.M.

THE SPANISH ARMADA, by Michael Lewis, British Book Service (Canada) Ltd., Kingswood House, 1068 Broadview Avenue, Toronto 6. 216 pages, illustrated; \$5.

RETIREMENTS

CPO WILLIAM PATRICK BELLEFON-TAINE, C2FC4, of Halifax, N.S., joined January 1, 1940; served in Naden, Stadacona, Acadia, St. Croix, Saguenay, Cornwallis, Burrard, HMS Nabob, Peregrine, Algonquin, Uganda, Scotian, Haida, Huron, Nootka, Niobe, Excellent, Donnacona, St. Laurent; awarded CD; retired November 21, 1960.

PO GEORGE ALBERT EDWARDS, PICK3, of Dartmouth, N.S., joined RCNVR October 17, 1939; transferred RCN July 9, 1940; served in Stadacona, Acadia, French, Alachasse, Mahone, Mont Joli, Scotian, Laurier, Iroquois, Haida, Albro Lake Radio Station, Magnificent, Shearwater, Naden, Hochelaga, New Liskeard; awarded CD; retired November 18, 1960.

CPO ANDREW RICHARD GRAINGER, C2LA4, of Kingston and Ottawa, Ont., served in Canadian Army July 23, 1940, to November 15, 1940; RCAF November 16, 1940, to October 22, 1945; joined RCN November 30, 1945; served in Carleton, Naden, Charlottetown, Stadacona, Micmac, Cornwallis, Haida, Huron, Niagara, Labrador, Bytown, Quadra, Hochelaga, Margaree, Aldergrove, Discovery; awarded CD; retired November 29, 1960.

CPO ARTHUR EWART HILL, C1ER4, of Aurora, Ont.; joined November 18, 1940; served in Naden, Malpeque, Stadacona, Cornwallis, Woodstock, Chaleur, Toronto, Peregrine, Sioux, Givenchy, Scotian, Warrior, Niobe, Magnificent, La Hulloise, Haida, Wallaceburg, Bonaventure; awarded CD; retired November 17, 1960.

CPO GEORGE FREDERICK KINCH, C2PR3, of Esquimalt, B.C., joined November 18, 1940; served in Naden, Stadacona, Prince David, Givenchy, Outarde, Haligonian, Hochelaga, Whitby, Avalon, Fennel, Niobe, Peregrine, Cornwallis, Scotian, Kootenay,

Crescent, Royal Roads, Beaconhill, Ontario, Venture; awarded CD; retired November 17, 1960.

PO DAVID ROSE MARTIN, P1WS3, of Montreal, Que., joined RCNVR October 30, 1935; transferred RCN September 15, 1945; served in Montreal division, Stadacona, Prince David, Algoma, Hochelaga, Shediac, Saguenay, Charny, Niobe, Stamshaw Camp, Portsmouth, Sioux, Ste. Marie, Peregrine; Givenchy, Charlottetown, Donnacona, Magnificent, Shearwater, Nootka, Hunter, Huron, Cornwallis, Star; awarded CD; retired November 5, 1960.

PO LEONARD WILLIAM PALMER, PIER4, of Wishart Point, N.B.; joined November 20, 1940; served in Naden, Royal Roads, Malpeque, Stadacona, Hochelaga, Brantford, Captor II, Longueille, Avalon, Parry Sound, Cornwallis, New Glasgow, Peregrine, New Waterford, Givenchy, Qu'Appelle, Scotian, Newport Corners Radio Station, Cayuga, Athabaskan, Magnificent, Micmac, New Liskeard, Huron, Lauzon, Cape Breton, Cape Scott; awarded CD; retired November 19, 1960.

PO EDWARD WILLIAM GEORGE PAR-HAM, P1WU4, of Bedchester, Dorset England; joined November 24, 1943; served in Niobe, Stadacona, ML 054, Peregrine, Shelburne, Fort Erie, Warrior, Naden, Crescent, Antigonish, Cayuga, Cornwallis, Sault Ste. Marie,

CREDIT TO WHOM DUE

The initials at the end of the article "Cruising up the River" in the November issue of *The Crowsnest* should have read "G.A.B.". The initials which appeared were those of the commanding officer, who signed the covering letter.

Athabaskan, Ontario, Fraser; awarded Long Service and Good Conduct Medal; retired November 23, 1960.

PO MALCOLM DOUGLAS PAYNE, P1BN3, of Saint John, N.B.; joined RCNVR February 2, 1939,-September 17; transferred RCN October 23, 1945, served in Saint John division, Stadacona, Prince Henry, Fleur de Lis, DEMS Horda, DEMS Cyda, St. Laurent, HMS Ferret, Kamsack, Niobe, Iroquois, Chaudiere, Avalon, Cornwallis, St. Pierre, St. Hyacinthe, Brunswicker, Peregrine, Warrior, Scotian, Haida, Magnificent, Swansea, Shearwater, Micmac, Acadia, Cayuga; awarded CD; retired November 11, 1960.

CPO MELVIN IRVIN PORTER, C2ER4, of Jarvis, Ont.; joined November 18, 1940; served in Naden, Stadacona, HMS Ramillies, HMS Victory, HMS Berwick, Niobe, HMS Pembroke, HMS Ferret, Restigouche, Avalon, Brantford, Wentworth, Gananoque, Peregrine, Antigonish, Orkney, Micmac, Scotian, Iroquois, Athabaskan, Swansea, Montcalm, Magnificent, Nootka, Fort Erie, Buckingham; awarded CD; retired November 17, 1960.

CPO EDWARD HANNAFORD RANDALL, P1BN3, of Halifax, N.S.; joined January 27, 1941; served in Naden, Stadacona, St. Croix, Niobe, HMS Quebec, RNB Chatham, Brandon, Avalon, Chicoutimi, Arrowhead, Peregrine, Petrolia, Scotian, Sans Peur, RCNAS Dartmouth, Swansea, Nootka, Quebec, Magnificent; awarded CD; retired November 23, 1960.

CPO JAMES ALFRED WILSON, C1SN4, of Nelson and New Westminster, B.C., joined November 18, 1940; served in Naden, Givenchy, MacDonald, Wolf, Woodstock, Uganda, Discovery, Stadacona, Crescent, Rockcliffe, Diving Tender No. 2, Athabaskan, Wallaceburg, Brunswicker, Iroquois, St. Croix; awarded CD; retired November 17, 1980.

LOWER DECK PROMOTIONS

Following are further lists of lower deck personnel selected for promotion. Separate lists are given for Atlantic Command and Pacific Command, with names grouped according to trade. The effective date of promotion is September 1, 1960. An alphabetical list of RCN(R) promotions made over the past several months also appears below.

Pacific Command

	For promotion to Petty Officer Second Class
LSBN2 LSBN3	R. G. Parisien
LSWS2	C. R. Peppar24225-E
LSFC2 LSFC2	D. D. Jackson
LSWU2 LSWU3 LSWU3 LSWU2 LSWU2	R. D. Vilness 27985-E V. C. Flett .7935-E D. J. Crowe 16797-E D. H. Lyle .9357-E H. J. Ferguson .24481-E
LSSN2 LSSN3 LSSN2 LSSN3	F. C. White 26595-E W. A. Mackie 24221-E K. H. Wardell 24242-E D. K. Riley 7427-E
LSRP3 LSRP2	R. R. Reding
LSSG2	W. E. Semple16200-E
LSRM2 LSRM2 LSRM2 LSRM2 LSRM2 LSRM2 LSRM2	R. K. Storie 24216-E J. S. Oros 11030-E T. N. Acheson 27402-E D. J. Girvin 24761-E G. L. Blackhall 16482-E A. E. Gadsby 18409-E A. E. Burton 7939-E
LSEM2 LSEM2 LSEM2	M. P. Kelly 17367-E G. D. Morgan 17347-E R. Hendy 15145-E
LSET3 LSET3 LSET3	W. M. Neil 28011-E R. D. Siemens 28654-E M. Hayes 8067-E
LSLT3	D. Norgaard7457-E
LSAW2 LSAW2	F. C. Stundon 19019-E K. D. Sinclair 23797-E
LSVS2 LSVS2	D. W. Earley
LSNS2	R. A. Walker
LSCK2	B. J. Brooks17425-E
LSSW2	R. M. Turner24064-E
LSMA2 LSTM3	R. H. Massey
LSPR2 LSPR2	F. H. Eggleton
F	or promotion to Leading Seaman
ABBN1 ABBN1 ABBN1	J. E. England 28059-E W. N. Aller 9338-E D. R. Reevos 27457-E
ABWS1 ABWS2 ABWS1 ABWS2	H. A. Simpson 28743-E T. J. Ringrose 14037-E D. J. Turgeon 32880-E A. J. Gilbert 28070-E
ABFC1 ABFC1 ABFC1	D. M. Mylie 15203-E B. A. Harpham 17304-E L. R. Smith 38300-E
ABWU2 ABWU1 ABWU1 ABWU2 ABWU2	F. G. Mitchell 24724-E A. S. Grass 33364-E C. E. Maguire 32882-E R. B. Parker 35194-E L. R. Jenkins 34722-E

ABSN1 ABSN2	K. E. Strandberg
ABSN2	G. C. Roth34645-E
ABSN2	J. W. Clark
ABSN2	N. W. Atkin24003-E
ABSN2	R. A. Edwards
ABSN1	D. V. Kleisinger28161-E
ABRP1	C. W. Ball33413-E
ABRPI	M. A. MacKay
ABRPI	D. A. Sutter
ABRP1	H. A. Stohl
ABRP1	G. A. Farrell
ABRP1	D. F. Timms
ABRP1	R. C. Heal32849-E
ABRP1	C. J. Turcotte39352-E
ABRP2	H. R. Roberts24644-E
ABRP1	A. L. Bourelle28660-E
ABRPI	J. W. Mason32996-E
ABRP1	J. A. Croft34677-E
ABRP2	R. P. Fournier33002-E
ABRP1	R. T. Alexander
ABRP1	G. R. McLeod
ABRP1	K. A. Phillip28197-E
ABSG2	K. V. Franks24209-E
ABSG1	W. D. Moffatt 34615-E
ABSG1	G. R. Plant38351-E
ABRM2	T. E. Rutledge
ABRM2	A. J. Crawford32828-E
ABRM2 ABRM1	N. O. Deen
ABRM1	J. N. Hornung
ABRM1	P. R. Burr
ABRM1	R. B. Rosenfeld
ADIMIL	n. D. Rosemeid



ABEM1	G. F. Bott33274-E
ABEMI	J. T. Verheul 34583-E
ABEMI	J. T. Verheul 34583-E R. K. Grainger 28101-E
ABEMI	D. K. Eriksen24041-E
ABEM1	G. M. Alexander 34565-E
ABEM1	S. H. Scott
ABEM1	R. L. Haynes
ABEM1	L. G. Alcock
ABEM1	J. D. Stanway
ABEM1	D. E. Hutson
ABET2	M. A. Dunn
ABET2	B. P. Weber
ABET2	B. I. Brower-Berkhoven32868-E
ABET2	G. H. McCann39378-E
ABET2	K. Toule39402-E
ABLM2	D. F. Johnston32916-E
ABLT2	R. W. Adamson
ABLT2	G. A. Burmeister33255-E
ABLT2	J. D. Corbett34729-E
ABLT2	R. V. Stalker
ABLT2	N. J. Ostiguy34699-E
ABAW2	T. W. Seal24834-E
ABAW2	G. N. Sorken
ABAW1	C. O. Oliver
ABAW2	H. W. Pinckard
ABAW1	C. E. Ferguson
ABPW1	W. Hoogerdijk
ABPW2	R. B. Barron27101-E
ABVS2	D. J. Shaughnessy34540-E
ABVS2	P. W. Donaldson 7103-E
ABVS2	P. W. Donaldson
ABVS2	C. R. Hunt27829-E
ABNS1	D. Taylor
ABNS2	R. M. Descoteau 24739-E
ABNS2	W. J. Wright 18467-E
ABNS1	W. J. Wright 18467-E G. F. Vauthrin 32792-E K. J. Dyer 27879-E
ABNS2	K. J. Dver
ABNS1	R. J. Waterman33235-E
ABCK2	L. G. Bagley33140-E
ABCK2	K. B. Potts33021-E
ABCK2	V. F. Gallop18196-E
ABCK2	G. I'. Sehmeutz
	4.5
ABSW2	R. N. Russell25655-E
ABSW1	D. N. Martin
ABSWî	C. M. Duncan
ABSW2	D. R. York
ABSW1	H. D. McLean

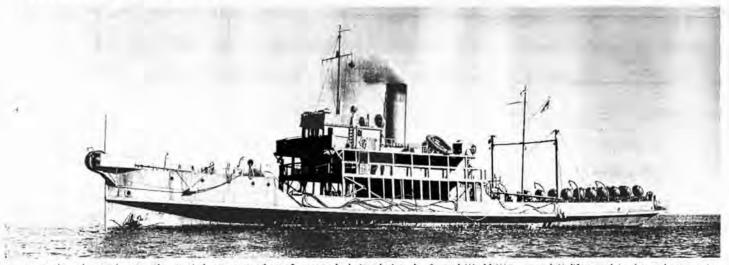
ABMA2 ABMA2	V. A. Propp B. G. Slots C. W. Johnson G. A. MacDonald	23917-E 35081-E
ABPR2	R. S. Bootland	28811-E

Atlantic Command

LSWU2 E. Richard 14768-H
LSSN3 D. Clelland. 10929-H LSSN2 R. G. Ferguson. 15367-H LSSN2 J. E. Paquette. 13421-H LSSN2 R. G. Erguson. 15367-H LSSN3 R. B. Clark. 14551-H LSSN4 G. E. Morgan. 26049-H LSRP2 R. E. Bentley. 16664-H LSRP2 R. E. Bentley. 16664-H LSRP2 W. G. Rose. 12760-H LSRP2 J. H. Merriam. 25324-H LSRP2 R. A. Tofflemire. 18007-H LSRP2 J. H. Merriam. 25324-H LSRP2 J. W. Milligan. 26047-H LSRP2 E. A. Brinn. 26047-H LSRP2 E. A. Brinn. 26041-H LSRP2 LSG2 W. J. Rigby. 28301-H LSSG2 W. J. Rigby. 28301-H LSSG2 W. J. Rigby. 28301-H LSSG2 E. M. McMillan. 26409-H LSSG2 E. M. McMillan. 26409-H LSSG2 E. M. McMillan. 26409-H LSSG2 E. M. Roberts. 34236-H LSRM2 S. Morris. 25919-H LSRM2 R. J. Gilleapie. 31822-H LSRM2 R. J. Gilleapie. 31822-H LSRM2 R. J. Gilleapie. 31822-H LSRM2 R. J. Connelly. 26039-H LSRM2 R. J. Connelly. 26039-H LSRM2 R. I. Pelletier. 13483-H LSRM2 D. J. Couvrette. 17867-H LSRM2 D. J. Couvrette. 17867-H LSRM2 J. B. Trowsse. 31234-H LSRM2 J. R. Rogerson. 16565-H LSRM2 J. R. Rogerson. 16365-H LSRM2 J. R. Towsse. 31234-H LSRM2 J. R. Rogerson. 16365-H LSRM2 J. R. Rogerson. 16365-H LSRM2 J. R. Rogerson. 16365-H LSRM2 D. M. MacIsaac. 16181-H LSRM2 D. M. M
LSRP2
LSSG2 K. A. Roberts 32288-H LSRM2 S. S. Morris 25919-H LSRM2 K. R. Kraft 19736-H LSRM2 S. R. Elliott 11673-H LSRM2 R. J. Gillespie 31822-H LSRM2 R. J. Gillespie 31822-H LSRM2 T. E. Chapman 16485-H LSRM2 T. E. Chapman 16485-H LSRM2 R. D. Yerrell 34257-H LSRM2 R. D. Yerrell 34257-H LSRM2 R. J. Couvrette 17867-H LSRM2 D. J. Couvrette 17867-H LSRM2 J. R. Rogerson 16565-H LSRM2 J. R. Rogerson 16565-H LSRM2 J. R. Trowsse 31234-H LSRM2 J. J. Benson 27088-H WLCO2 N. L. Coleman W-36414 LSRS3 D. N. Martin 24171-E LSRS3 D. N. Martin 24171-E LSRS3 D. N. Martin 24171-E LSRS3 G. G. Jennings 34234-H LSEM2 J. G. Jennings 34234-H LSEM2 W. C. Campbell 33929-H LSEM2 V. C. Campbell 33929-H LSEM2 L. Deschenes 18960-H LSEM2 D. H. Woodside 15381-H LSEM2 D. E. MacNeill 15389-H LSEM2 D. H. O'Sullivan 18631-H LSEM2 D. H. O'Sullivan 18631-H LSEM2 G. G. H. Woods 19907-H LSEM3 C. M. Wells 12850-H LSET3 L. H. Smith 25079-H LSET3 L. H. Smith 31287-H LSUT3 C. M. Wells 12850-H LSUT3 L. W. E. Bradbury 26647-H LSLT3 L. W. Stanbrook 26215-H LSWA2 G. O. Dinsdale 51270-H LSWA2 G. O. Dinsdale 51270-H LSWA2 B. W. Chambers 13002-H
WICO2 N. L. Coleman. W-36414
WICO2 N. L. Coleman. W-36414
LSRS3 N. A. Paine. 27005-H LSRS3 G. G. Jennings. 34234-H LSEM2 R. S. Thompson. 31179-H LSEM2 D. S. MacWilliam. 11890-H LSEM2 W. C. Campbell. 33929-H LSEM2 J. L. Deschenes. 18960-H LSEM2 E. A. Heppel. 26033-H LSEM2 A. L. Blinkhorn. 15777-H LSEM2 D. H. Woodside. 15381-H LSEM2 D. H. Woodside. 15381-H LSEM2 U. J. Adams. 13761-H LSEM2 U. J. Pople. 12882-H LSEM2 W. J. Pople. 12882-H LSEM2 W. J. Pople. 12882-H LSEM2 G. K. Snow. 25215-H LSEM2 G. H. Woods. 19907-H LSEM2 D. H. O'Sullivan. 18631-H LSEM2 D. H. O'Sullivan. 18631-H LSEM2 D. H. O'Sullivan. 14491-H LSLT3 L. H. Smith. 25079-H LSET3 L. H. Smith. 25079-H LSET3 L. H. Smith. 25079-H LSLT3 W. E. Bradbury. 26647-H LSLT3 W. E. Bradbury. 26647-H LSLT3 N. B. Clark. 31287-H LSLT3 L. W. Stanbrook. 26215-H LSWA2 G. O. Dinsdale. 51270-H LSWA2 G. O. Dinsdale. 51270-H LSWA2 L. E. Willits. 24452-H LSWA2 B. W. Chambers. 13002-H
LSET3 L. H. Smith. 25079-H LSET3 A. H. Chamberlain. 14491-H LSLT3 W. E. Bradbury. 26647-H LSLT3 C. M. Wells. 12850-H LSLT3 N. B. Clark. 31287-H LSLT3 L. W. Stanbrook. 26215-H LSWA2 G. O. Dinsdale. 51270-H LSWA2 L. E. Willits. 24452-H LSWA2 B. W. Chambers. 13092-H
LSET3 L. H. Smith. 25079-H LSET3 A. H. Chamberlain. 14491-H LSLT3 W. E. Bradbury. 26647-H LSLT3 C. M. Wells. 12850-H LSLT3 N. B. Clark. 31287-H LSLT3 L. W. Stanbrook. 26215-H LSWA2 G. O. Dinsdale. 51270-H LSWA2 L. E. Willits. 24452-H LSWA2 B. W. Chambers. 13092-H
LSUT3 L. W. Stanbrook. 26215-H LSWA2 G. O. Dinsdale. 51270-H LSWA2 L. E. Willits. 24452-H LSWA2 B. W. Chambers. 13002-H
LSAT2 A. W. Gillespie

LSAT2	E. M. Flight	ABFCI	D. A. Curnock,	ABRS2	C. R. McDonald24613-H
LSAT2	R. G. MacMillan	ABFC2	J. J. Dejong37700-H	ABRS2 ABRS2	D. W. Stoker33426-E
LSAT2	H. A. Ireland17310-E	4 7077774	D W G -1 10017 II	ABRS2	G. A. McKay
TODIO	TO TO TO 1-11 7007 II	ABWU1	E. W. Gourley	ABRS2	T. A. Shergold
LSEA3	F. T. Dowdall	ABWIII	W. R. Walkden32157-H	ABRS2	R. H. Brill
****	D W DI 1	ARWIII	E. H. Simpson	ABRS2	H. G. Clarke31045-H
LSRA3	R. W. Blake	ARWIII	A. M. Muir34864-H	ABRS2	V. M. Bitz
LSRA3	D. R. Galbraith	ABWU2	R. Hurst	ABRS2	D. G. Tytler
LSRA3	D. A. Carriere	ABWU1	G. H. Brown19091-H	ABRS2	J. M. Zaste35022-E
LSAW2	E. Mercer	ABWU2	R. P. Macey35691-H	ABRS2	C. H. Andrews
LSAW2	J. Moore	ABWU1	D. H. Butler	ABRS2	G. F. Pratt
LSAW2	J. G. Cloutier			ABRS2 ABRS2	A. Westwell
LSAW2	H. S. Nielsen	ABWUI	L. Reynolds29830-H	ABRS2	E. H. Lafontaine
LSAW2	A. B. Nolan	ABWUI	E. Tuck	Amina	D. D. Pones
LSAW2	B. B. MacCormac	ABWUI	H. W. Metelmek	ABEM1	R. E. Sweline
LSAW2	M. Young16751-H	ABSN2	B. W. Taylor8867-H	ABEM1	W. W. Burgess
LSAW2	J. E. Lawrenson26731-H	ABSN1	C. D. Carpenter23550-H	ABEM1	E. J. Mellor
	2 4 2 1	ABSN1	R. G. Fulcher31443-H	ABEM1	M. J. Williamson
LSV82	J. E. Ingham	ABSNI	D. J. Brun	ABEM1	J. D. Morrell
LSVS2	P. J. McClure	ABSN1	J. Sidev31552-H	ABEM1	L. F. Keane23590-H
LSV82	J. L. Bourget18838-H	ABSN1	R. A. Dube	ABEM1	L. P. Duchesneau
LSV82 LSV82	J. W. Greatwich	ABSN2	P. J. Robinson34255-H	ABEM1	
LOVOZ	C. M. Conard	ABSN2	R. D. Lawrence	ABEM1	
LSNS2	J. G. Gareau14036-H	****	# 15 Pl	ABEM1	
LSN82	J. F. McRobb	WASD2	G. M. Pippenger	ABEM1	
LSN82	P. A. Gillis 7066-H	innna	L. C. Hughes43370-H	ABEM1	
LSN82	M. A. Yelland17760-H	ABRP2 ABRP2	P. J. Pettett	ABEM1	
LSN82	V. J. Marr	ABRP1	D. F. Nieholson	ABEM1	G. F. Larose32016-H
5136100		ABRPI	R. J. Betti	ABEM1	M. L. Gelinas
LSCK2	A. B. Perry	ABRP1	B. L. Matthews	ABEM1	K. R. Mellor
LSCK2	R. J. Brun	ABRP1	G. H. Knott	ABEM1	R. C. Montgomery23706-H
W. Walance		ABRP1	T. M. Danyluk	ABEM1	C. V. Paterson
LSSW2	J. J. Simoneau18565-H	ABRP1	L. J. Roy23690-H	ABEM1	
LSSW2	R. Bouchard14199-H	ABRP2	J. F. Grant25353-H	ABEM1	
LSSW2	G. A. Blacklock	ABRPI	J. A. Crocker29520-H	ABEM1	
LSMA3	A. Caulier	ABRP1	H. Shears37481-H	ABEM1	C. H. McBride
LSMA3	R. A. Burns	ABRP2 ABRP1	D. Y. Jesso	ABEM1	J. T. Proulx
***************************************	All III Dullis III III III III III III III III III I	ABRP1	C. J. Heaslip	ABEM1	E. B. Klein 28166-H
WLME2	S. M. Houghton	ABRP1	K. J. Reibe29859-H	ABEM1	R. G. Batchelor
WLME2	R. A. Larson	ABRP1	D. E. Parkinson	ABEM1	J. R. Robichaud
e augu		ABRP1	J. D. McKinnon34087-H	ABEM1	
LSCD3	A. J. Haywood34228-H	ABRP1	R. L. Jones31065-H	ABEM1	
Tanna	W C D-4-1-1 10000 W	ABRP1	J. A. Gorma31968-H	ABEM1	
LSPR2	K. C. Batchelor	ABRP1	E. A. Spillett	ABEM1	
LSPH3	R. W. Foster	ABRP1	G. J. Cormier23669-H	ABEM1	
1801 140	II. W. P. Katol	ABSG2	W. C. Schenk39018-H	ABEM1	R. L. Overton
		ABSG1	E. R. Cameron	ABEM1	
F	or promotion to Leading Seaman	About	La le Cameron	ABEM1	M. A. Gristy
		ABRM1	J. W. Seager35558-H	ABEM1	
ABHN1	P. A. Whiffon13817-H	ABRM1	D. A. Lickman 35641-H	ABEM1	D. M. Boutilier
			E. J. Bonneau	ABEM1	
ABWS1	R. A. Donovan,	ABRM1		ABEM1	L. L. Murch
ABWS2	R. L. McLeod	ABRM1	F. E. Walton38123-H	ABEM1 ABEM1	
ABW81	K. T. Hughes	ABRM1		ABEM1	
ABWS1	M. W. Tye12952-H	ABRM1	D. W. Boicey	ABEM1	
ABFC2	R. A. Iorio30095-H	ABRMI	G. S. Fraser	ABEMI	
ABFC1	R. V. Duffy33989-H	- Indicate	a. a. a month in the control of the		D. P. Thomas38955-H
ABFCI	D. P. Keigan	ABRS2	N. J. Buist30043-H		
ABFC2	W. W. Koch	ABRS2	D. W. Neale	ABET2	W. M. Thom30482-H
ABFC2	R. G. Edgecomb	ABRS2	R. G. Kaiser34169-H	ABET2	G. H. Allin31010-H
ABFC2	D. A. O'Neill	ABRS2	G. D. Iddenden	ABET2	J. U. Gaudet
ABFC1	C. M. Ebel	ABRS2	E. Mirka	ABET2	R. L. Alexander
ABFC1	N. A. Wilson	ABRS2	J. G. Flynn	ABET2	G. J. Lashamber
ABFC2	K. W. Murray35486-H	ABRS2 ABRS2	N. R. Milne	ABET2	P. J. Lemay
ABFC2	M. J. Labonte19141-H	ABROZ	G. T. Alleth	ADELZ	ы и оппрвои

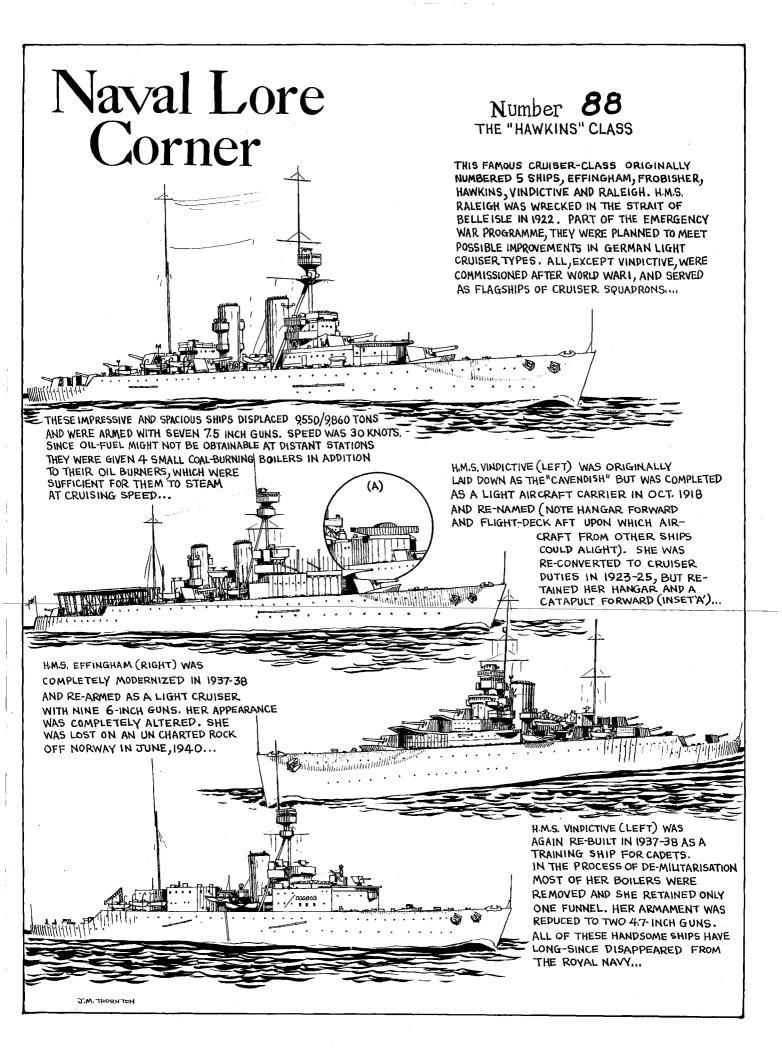
Yesterday's Navy



Remember the Sankaty? She carried out a number of assorted duties during the Second World War around Halifax and is shown here putting out for the harbour approaches with a deckload of controlled mines — the kind that are fired from a shore control point when the presence of an enemy ship or submarine is known or suspected. (H-142)

ABLT2 G. M. Pollock. ABLT2 H. L. Leigh. ABLT2 J. E. Wallace. ABLT3 D. C. Thomas.	42279-H ABEA2 38908-H ABEA2	D. R. Kittmer	33373-E 30939-H 33836-H	ABNS1 ABNS2 ABNS1	J. C. Dufour 32396-H P. N. Mallette 32336-H R. A. Rogers 35563-H
ABLT2 I. A. Webber ABLT2 A. Omerod ABLT2 A. L. Reamsbottom ABLT2 J. D. Westbrook	29858-H ABAW2 42403-H ABAW2 31998-H ABAW2	R. C. Wilson G. J. Thibault	33232-H 25978-H 28897-H	ABCK2 ABCK2 ABCK1 ABCK2	T. A. Ogilvie 30106-H O. G. Caines 33892-H C. W. Aitken 28047-H R. G. Barrett 16924-H
ABLT2 G. W. Hurst	38950-H ABAW1	J. A. Nadeau		ABCK2 ABCK2	G. A. Gaudette
ABWA1 R. E. Glass ABWA1 C. W. McShane ABWA1 L. C. Blue ABWA1 J. A. Sayoie	32264-H ABAW2	J. E. Battcock C. J. Glenn		ABCK1 ABCK1 ABCK2 ABCK2	R. J. Pratte 29117-H G. R. Charron 35886-H M. A. Powell 30864-H F. B. Zinck 33964-H
ABWA1 R. F. Beazley	34040-H ABPW1	R. C. Anger D. R. Shaver R. A. Rowlands		ABCK2 ABCK2	R. J. Lapierre. 24985-H G. F. Hall 25733-H R. M. Mercer. 30102-H
ABNA2 A. J. McClusky ABNA2 F. T. Illingworth ABNA2 R. W. Higgins	14578-H ABPW1	N. J. Trudeau		ABCK2	R. M. Godfrey
ABNA2 J. J. Vincent ABNA2 D. W. Robinson	19116-H 3115-H ABVS2 ABVS2	J. A. Leedham	33819-Н	ABSW1 ABSW1 ABSW1	W. J. King
ABAM2 R. G. QuirmbachABAM2 J. E. HunterABAM2 W. J. Crowe	26239-H ABVS1 27227-H ABVS1	H. J. Cave G. C. Neil		ABSW1	R. O. Normand. 28964-H G. J. Tougas 31932-H B. N. O'Leary 36309-H K. P. Charter 36550-H
ABAM2 E. D. Olliffe	12843-H ABVS2	G. A. Dorion G. F. Walsh		ABSW1	R. J. Levasseur29126-H
ABAM1 W. T. Coldwell	18013-H ABVS1	B. W. Power J. W. MacDonald	29041-H 37420-H	ABMA2	G. J. Chiasson
ABAT1 K. R. Wells ABAR1 D. W. Wynn ABAF1 D. M. MacKay	33994-H ABNS2 34085-H ABNS2	L. J. Michaud		WAME2 ABCD1	M. R. Lister W-43234 D. J. Schwartz
ABAT2 W. A. Osborne ABAF1 H. Clelland ABAR1 E. Czajkowski	35428-H ABNS2 31977-H ABNS1 36807-H ABNS2	R. K. Graves W. C. Warrell W. C. Gosse	18027-H 26023-H 13776-H	ABCD1	G. B. Carnahan
ABAR1 W. G. Wong. ABAF1 R. K. Ireland. ABAF1 G. M. McGrath.	34112-H ABNS1	R. Boudreault D. E. Scully	31908-H 35990-H 6187-H	ABPH2	J. C. Switzer
ABAT2 F. L. Dominey	38063-H ABNS1 ABNS1	O. P. Keeney J. G. Simmons		ABPH2 ABPH2 ABPH2	R. J. Maheux
ABEA2 H. F. MacLellan	25117-H ABNS1	C. R. Cummings	31024-Н	ABPH2	J. C. McClinton11850-H
ROY	AL CAN	ADIAN	NAVY (R	ESE	RVE)
ALDERSON, Arthur WAST, Harley J	ABTD(X)1 ABCV(X)1	Discovery Queen	LECLERC, Gaetan LEGGE, Barbara A	• • • • • • • •	P2BD(X)5. Montcalm WP2SS(X)4. Hunter ABAW(X)1. Tecumseh ABBD(X)1. Griffon
BELL, Thomas RBELLEPERCHE, Laurette H	ABCR(X)1 WLCO(T)2	Chippawa Hunter			
BELL, Thomas R BELLEPERCHE, Laurette H BLAQUIRE, Roland D BLISS, Coleen E BROWN, Long F.	ABTD(X)1 WP1SS(X)6	Chippawa Discovery	MARLOW, Donald W. MATTICE, Ronald F. McCOLDRICK, Robot	 	ABRP(X)1QueenABTD(X)1Star

ROYAL	CANADIAN	NAVY	(RESERY	VE)
ALDERSON, Arthur WABTD AST, Harley JABCV	(X)1Discovery (X)1Queen	LEGGE, Barbara	a A	.P2BD(X)5. Montcalm .WP2SS(X)4 Hunter .ABAW(X)1 Tecumseh
BELL, Thomas RABCR BELLEPERCHE, Laurette HWLCO	(T)2Hunter	LYSY, Eugene, V	W	ABBD(X)1Griffon
BLAQUIRE, Roland D. ABTD BLISS, Coleen E. WP1SS BROWN, James E. C2AW	S(X)1	MATTICE Ron	ald F	$ \begin{array}{cccc} ABRP(X)1 & Queen \\ ABTD(X)1 & Star \\ ABTD(X)1 & Star \end{array} $
CHAMBERS, Robert HABMA	(X)1Scotian	McKENDRICK	. Valelta	.WANP(X)1Discovery .P2PW(X)4Unicorn
CLAYPOOL, Robert WmABTD COADE, Peter Colin ABRP	$(\mathbf{X})1Discovery \ (\mathbf{X})1Scotian$.P1VS(X)6Discovery
COWDREY, Donald G. ABEM CUNDALL, Norma G. WACC CUNNINGHAM, Ernest V. LSVS((T)1Nonsuch	OJALA, Clifford	м	.ABBD(X)1Griffon
DAVIS. Garry AABCR	(X)1Chippawa	PARKER, Rober	rt H	. WLCO(T)2
DESGAGNE, Clement	$(X)4Star \ O(T)6Carleton$	PEDERSON, De	ennis W	. WACO(T)1
DOWNIE, Robert J. ABRP DUNLAP, George D	$(X)1,\ldots,T$ ecumseh	RICHARD, Alex	: F	.P1NS(X)6
FERGUSON, Sheila G	$(\mathbf{X})1Donnacona$	ROGERS, Irene	M	.ABTD(X)1Discovery .WLSV(X)2York .LSCR(X)3Cataraqui
FIOR, Lena N. WACC FRASCA, Francine WLCC	(T)1Unicorn	SCOTT. Dewitt.	J	.ABRP(X)1Tecumseh
GARRETT-JONES, SusanWANI GERBRANT, Jobie AABCR	P(X)1 Discovery	SIMPSON, Fran	k G	$\begin{array}{cccc} \operatorname{P2BD}(X)5. & Griffon \\ \operatorname{C2RN}(X)7. & Brunswicker \\ \operatorname{C2CR}(X)6. & York \end{array}$
GIMPEL, John C	(X)5	STANFORD, Ro	bert G	. P2AW(X)4Cataraqui
GRAINGER, George D	P(X)1York	THORNTON, P	atricia M	. C1RT(X)8
HAWKINS, Kenneth G. C2CV HUMBLE, John D. P2PW HUMFORD, Clifford S. C1CR	(X)5	TOOMBS, Hillan	rd S	$.$ WP2NP($\dot{\mathbf{X}}$)4
HYNES, Donald SABQN	1(X)1Cabot	WALKER, John	E	.ABTD(X)1Chippawa
IRWIN, Wm. B		WHITE, Audrey		. P1TD(X)4
KUCZYNSKI, B. ALSBD	(X)3Griffon	WYMAN, John	E	.P2BX(X)5Griffon
LALIBERTE, Jean L ABAW LAROCQUE, Lilianne MWACC	(X)1 $Montcalm(T)1$ $Carleton$.ABCR(X)1Tecumseh .WACO(R)1Chippawa



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