

WEATHER SHIPS

GENERAL

After World War II, the passenger aircraft replaced the passenger liner for travel across the Atlantic and Pacific Oceans. With the advent of this service, good weather forecasting became necessary. Actual weather observations taken on a regular basis had to be performed from various areas of these two oceans in order to develop forecasts. The world's major political powers came together on this idea in London England and as a result, Ocean Weather stations were created in 1946. Canada was placed in a position of assisting the United States in manning one of these stations exclusively.

These stations were designated at various positions throughout both oceans and the positions chosen so as to fill the gaps where there were no shipping lanes and from where no weather reports came. Each position was assigned a letter for identification purposes. The first half of the alphabet became the Atlantic areas and the second half, Pacific areas. Canada and the United States were to share station 'B'. Since this undertaking became the responsibility of the International Civil Aviation Organization (ICAO) the International Telecommunication Union (ITU) assigned a block of call signs for their use. This block spanned from 4YA to 4YZ. The ships were not only to provide surface weather observations but also of the upper air pressure, temperature, humidity, wind direction and speed. They were also equipped for search and rescue operations for both ships and aircraft.

HMCS St. Stephen as a weather ship. The Royal Canadian Navy had to supply a ship for weather station 4YB so they assigned the River Class Frigate HMCS ST. STEPHEN. She carried out these duties on a rotational basis with an American Ship from 1947 to 1950. Since the weather branch of the Canadian government was a part of the Air Section of the Department of Transport (D.O.T.), HMCS ST. STEPHEN carried a few weather observers from this organization along with her Navy crew.

4YP, was Canada's exclusive weather station at 50°N, 145°W from 1950 onwards. 4YB at 56.3°N, 51°W was shared between Canada and the US until 1950.

After one of the ICAO meetings, Canada was given the job of maintaining station 'P' in the North Pacific and relinquished her half share in station 'B' mentioned above. Three of these River Class Frigates were taken over by the Department of Transport and extensively modified for complete D.O.T. crews. One Frigate was the HMCS ST. STEPHEN, a three-year veteran of station 'B'. Naturally, all three were assigned D.O.T. call signs.

CGGP STONE TOWN
CGGQ ST. CATHARINES
CGGR ST. STEPHEN

ST. CATHARINES was the first to take up station in December 1950. She and STONE TOWN provided this service for sixteen years. Although ST. STEPHEN had been converted she was never required. The other two provided the service alone leaving ST. STEPHEN as an emergency backup but she was never needed.

By 1970, the World Meteorological Organization (WMO) was assigned an additional block of calls C7A to C7Z. The only C call sign ever heard was C7H. Station 4YH was using C7H for some unknown reason and it is not clear as to why the WMO needed an additional block of call signs. Each station was identified with a letter and this letter was the suffix of the call sign. There were seventeen stations only so one would assume the 4YA to 4YZ calls would have been sufficient. The station assignments are summarized in the following table:

ATLANTIC STATIONS			PACIFIC STATIONS		
STATION	POSITION	OBSERVER	STATION	POSITION	OBSERVER
4YA	62N 33W	USA & Netherlands	4YN	32.3N 135W	USA
4YB	56.3N 51W	USA & Canada until 1950	4YP	50N 145W	Canada
4YC	52.45N 35.3W	USA	4YQ	43N 167W	USA
4YD	44N 41W	USA	4YS	48N 162E	USA
4YE	35N 48W	USA	4YU	27.4N 145W	USA
4YH	36.4N 69.35W	USA	4YV	31N 164E	USA
4YI	59N 19W	Great Britain	4YX	39N 153E	Japan
4YJ	52.3N 20W	Great Britain & Netherlands			
4YK	45N 16W	France & Netherlands			
4YM	66N 2E	Norway			

The United States built 98 ships from the plans of the River Class Frigates and called them the Tacoma Class Patrol Frigates. They were naval ships as in USS but they had U.S. Coast Guard crews. As a matter of fact the first two, PF1 ASHEVILLE and PF2 NATCHEZ were built in Canada. Some of these Patrol Frigates were used as weather vessels during the war. Many vessels assigned these ocean stations after the war were these former Patrol Frigates.

Barry Hastings was one of the Radio Officers in the three former Frigates assigned to station P. He describes the radar fit. "The radar equipment aboard the River Class frigates ST. CATHERINES and STONE TOWN, which manned 4YP for many years, was the British designed type 277Q [1]. With all the right adjustments one could track an aircraft but this was really tricky. We used to do aircraft plots on these rigs while on station 4YP and we got pretty good at it. Propeller aircraft were typically tracked up to 80 miles and on occasion 95 miles but all we could get on him was a quick bearing, distance and that was all. "

When on station, a ship had to stay within a ten-square mile area of the assigned position. Once in position, a beacon was turned on which keyed the 4YP call sign in Morse code mainly for the use of aircraft flying across the Pacific. Once the ship was outside the boundaries of the station area, the beacon would be shut off. Occasionally an aircraft would call the ship and request that the beacon be turned on and have the ship tell the pilot which map grid square they were currently sailing in.

Those who communicated with these River Class Frigates will remember them best by the call sign 4YP, which was used only while on station. Weather ships also provided a radio beacon for navigation for other ships and aircraft in addition to their weather observing duties plus communications for ships and aircraft acting as a rescue vessel if necessary. Since two ships managed to carry out their duties without ever having to use the reserve ship, it has to

say something for the rugged construction of these Frigates. Two newer ships, especially built for the task, replaced these old frigates in 1967. These two lasted until 1981 when ocean station 'P' was terminated. Modern technology rendered the weather ship obsolete.

Notes:

[1] Type 277 was a 10 centimetre surface/low air search set introduced into naval service in 1944. It was intended for accurate height finding. Power output was 500 kw. Except for the antennas , it is identical to the 293 set. A detailed description of that set can be found here.

Contributors and Credits:

- 1) Spud Roscoe <spudroscoe(at)eastlink.ca>
- 2) Frigates of the RCN 1943-1974 by Ken Macpherson
- 3) MSN Encarta Maps <http://encarta.msn.com>
- 4) From America To United States: The History of the Long Range Shipbuilding Program in the USA- Part 4
by L.A. Sawyer and W. H. Mitchell
- 5) HMS Collingwood Museum ,Chide, Fareham England.

Bob, thought I would add a bit to your Weatherships email.

It must be remembered that the Coast Guard ran weathership Patrols before WWII also. Spencer and Campbell for instance ran patrols off Newfoundland that were also called Neutrality Patrols and Spencer made at least two weather patrols on a station 750 miles NW of the Azores. Can't remember letter designation but remember contacting PanAm flights when they were 100 miles away using 24" Arc Searchlight.

After the war we manned station Victor halfway bewteen Midway and Japan on double Victor patrols where we were on station 30 days then into Yokosuka, Japan for 10 days and back on station 30 more then return to West Coast. I did this as Exec on Chautauqua once.

Just a little extra info.