

Floating Weather Stations



AIR travellers enjoying smooth sailing and a cocktail, in the crisp skies high over the Atlantic, relax happily detached from the more mundane activities of their fellow mortals at lesser altitudes. For example, they seldom see, far below them, the floating weather observation stations throwing turbulent ocean swells off their wind-swept decks. Yet the comfort of their journey is due in no small way to the presence of these special weather ships maintaining lonely vigils in mid-Atlantic.

When post-war trans-Atlantic air service

Not a man from Mars, but a member of the crew of the "St. Stephen," Canada's link in the chain of North Atlantic ocean weather stations. Special clothing must be worn to protect personnel from icy spray and freezing temperatures encountered when the ship is at sea.



reached an unprecedented high frequency, member nations of the International Civil Aviation Organization recognized a need for more adequate weather observation, air navigation and rescue facilities for the northern trans-ocean air routes. The result: many a weatherman has donned a sou'wester, turned sailor and joined ICAO's Weather Patrol.

The plans for the Weather Patrol were laid down by ICAO at London in September 1946. They called for thirteen ocean reporting stations. Seven were allotted to the U.S.; two to the United Kingdom; one to France. The remainder were to be jointly provided by Canada and the U.S.; Belgium and Holland; and the United Kingdom, Norway and Sweden.

Now these nations, all represented by airlines flying the North Atlantic, are cooperating through ICAO in the maintenance of a sea-going weather station network. Arranged in a pattern to give coverage to the area's major air routes, the chain of ships make regular reports of atmospheric conditions, aid navigation (continual beacon service to aircraft) and provide rescue facilities if required.

Canada's obligations to the Weather Patrol are fulfilled by HMCS "St. Stephen," a River class frigate with an impressive war record entered in her log. Now, her armament replaced with special meteorological equipment, including radar and signalling devices, the "St. Stephen" is engaged in the

H.M.C.S. "St. Stephen" leaves Canadian shores for her post at Station Baker as a weather reporting station. Stripped of guns and depth charges, the vessel is fitted with a new foremast possessing a special type radar aerial and meteorological instruments. On the after deck is a "balloon" hangar to house weather balloons.

All photos
from RCN.

Weathermen from eight nations have gone down to the sea in ships to fill in the gaps on their weather maps as an aid to international trans-Atlantic flying.

no less important and arduous peace-time duties of guiding aircraft of all nations on trans-ocean flights.

The "St. Stephen" puts in a regular 21 day tour of duty at "Station Baker" located at the entrance to Davis Strait, midway between the southern tip of Greenland and Labrador. The frigate only sails beyond 120 miles of her central position at 56 degrees, 30 minutes North and 51 degrees West on special missions; or to return to Halifax for provisioning and crew rest. Station Baker is shared turn about with a similar American vessel so that a weather ship is continually on duty.

In addition to a naval complement of 92 officers and men (including two naval meteorological observers) the "St. Stephen" carries a special meteorological staff of five provided by that branch of the Department of Transport. On board is all the usual equipment of a land weather station for recording temperatures, barometric pressures, wind direction, velocity, etc. New radar equipment helps trace the speed and paths of weather fronts and storms.

Normal duties of the nautical meteorologists are to procure upper air data by means of radiosonde balloon ascents. Temperatures at 65,000 feet have been obtained. They also take surface observations which are available to aircraft or to land stations for transmission to ships at sea. Surface winds, air and water temperatures, visibility, cloud height, pressure and upper air data are recorded. Winds aloft, up to 50,000 feet, are measured by

means of radar tracking the radiosonde balloons.

Life aboard a weather ship is anything but easy. North Atlantic winter weather is extremely severe. Hurricane winds are not uncommon. During the "St. Stephen's" first tour of duty in December, winds of 50 miles per hour were almost continuous; at times they reached 70. The person launching the huge six foot weather balloons had to be securely fastened by stout rope to prevent being blown overboard.

This international ocean-going weather service has already demonstrated its value in contributing to the safe and regular operation of trans-Atlantic airliners. ICAO experts, who guide the system, estimate that the weather station network will mean a saving to airline operators of approximately twice the cost of maintaining the stations by contributing nations.

When their "office" is pitching in the teeth of a gale, the seafaring weathermen probably watch the airliners flying through tranquil skies with some degree of envy. Their assignment calls for enduring the barnacles of monotony and tedium. But they do have the satisfaction of knowing that their Weather Patrol is making a formidable contribution to the comfort and convenience of trans-ocean air travel, and the people of all nations passing above.

For her peacetime duties as a weather ship, the "St. Stephen" was provided with a new mast, crowned by a radar aerial. The radar tracks weather balloons released from the ship enabling observers to determine wind speed and direction at various altitudes.

