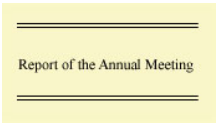
Report of the Annual Meeting of the Canadian Historical Association
Rapport de l'assemblée annuelle de la Société historique du Canada



Some Aspects of the Battle of the Atlantic

Gilbert Norman Tucker

Volume 25, Number 1, 1946

URI: https://id.erudit.org/iderudit/290020ar
DOI: https://doi.org/10.7202/290020ar

See table of contents

Publisher(s)

The Canadian Historical Association/La Société historique du Canada

ISSN

0317-0594 (print)
1712-9095 (digital)

Explore this journal

Cite this article

Tucker, G. N. (1946). Some Aspects of the Battle of the Atlantic. *Report of the Annual Meeting of the Canadian Historical Association / Rapport de l'assemblée annuelle de la Société historique du Canada*, *25*(1), 84–91. https://doi.org/10.7202/290020ar

SOME ASPECTS OF THE BATTLE OF THE ATLANTIC

By GILBERT NORMAN TUCKER
Director of the Naval Historical Section

THE Battle of the Atlantic during the recent war was principally a campaign by U-boats against allied merchant shipping, and a defence of that shipping by various means. Raider warfare against trade has been the expedient of the weaker naval power. The principal weapon employed for this purpose was, in sailing days the frigate, later the cruiser, and latest of all the submarine reinforced in the Second World War by the bomber. Several measures of defence have been employed against the raider, the most successful being the escorted convoy. This practice of sailing merchantmen in a group accompanied by warships, during hostilities, goes back to ancient times and was a normal procedure during the naval wars of the seventeenth and eighteenth centuries. The submarine as used by Germany and her allies in the First and Second World Wars was the most successful type of commerce raider ever let loose upon the seas, and during the First War, convoying was generally introduced in the threatened areas. The considerable success which the convoy system scored in 1917 and 1918, and the development of the asdic detector, caused the submarine as a raider to be underestimated between the two wars. Nevertheless, when the Second World War began, shipping on the more important and vulnerable routes was immediately placed in convoy.

Commerce raiding by submarines and the countermeasures which it called forth, in both the world wars, possessed three very striking characteristics which were almost unique in the whole domain of warfare. Submarines, whether employed directly or in retaliatory measures, were not a shield against other submarines: the effective opponents of the U-boat were units wholly unlike herself. The submarine, moreover, was the poor man's weapon if ever there was one; for the men and materials which were necessary to maintain a given offensive by submarines against shipping were hugely out of proportion with those needed for meeting such an attack. The third characteristic was that undersea warfare was inevitably inhumane. It was normally impracticable for a submarine to capture a merchant ship and send her in as a prize. Assuming that the warfare was to be carried on at all, the only feasible procedure was to sink her; in which case, as also in that of a warship sunk by a submarine, the undersea attacker had small means of providing for the safety of the victim's crew.

The general type of submarine which has made history as a raider, was developed during the First World War and, improved though not radically changed, was employed by the Germans throughout the Second. Unlike all surface warships, this submarine could operate for long periods in the vicinity of an overwhelmingly superior enemy force. For its tonnage, moreover, it possessed a most remarkable combination of striking power, surface speed, invulnerability, and endurance.

In both of the great twentieth-century wars, anti-submarine patrol or escort vessels were required in very large numbers, and they had to be ex-

tremely manoeuvrable vessels, two considerations that made small size obligatory. An effective armament for them could be both light and limited, and could therefore be mounted in a vessel of very modest tonnage. For open-sea work, however, they needed to be large enough to combine adequate speed with endurance and seaworthiness. For anti-submarine work during the Second World War, the Royal Canadian Navy used destroyers, frigates, corvettes, minesweepers of the Bangor and Algerine types, Fairmile motor launches, and, early in the war, converted yachts.

Of all these types there is one that perhaps calls for special attention. When the war began the Admiralty had designs for several types of anti-submarine vessel. The ships of each type were less effective than destroyers, but much easier to produce and man in large numbers. Many years before the war the Smith's Dock Company of South Bank near Middlesbrough, Yorkshire, had begun to design whalecatchers suited to the South Atlantic whale fishery. The hunting of whales and of submarines have much in common, and the Admiralty adopted one of the Smith's Dock designs, modified to meet naval needs, for use against submarines in coastal waters. In the summer of 1939, with the international-relations barometer portentously low and still falling, a group of Canadian business men and engineers went to Great Britain in order to make an inventory of types of war material that could be produced in the Dominion. They returned to Canada a few days before the invasion of Poland, bringing with them, among other things, plans of the Admiralty's version of the Smith's Dock whalecatcher. This design was adopted by the Naval Service, and incorporated in the first war-time shipbuilding programme. Whalecatchers of this type came to be the most numerous and best-known class of operating ship in the Royal Canadian Navy. Early in the war the designation of "whalecatcher" for this variety of vessel was replaced by that of "corvette."

This ubiquitous little warship is roughly depicted by the following figures: displacement, 1,085 tons; length, 205 feet; beam, 33 feet; draught, 16 feet; principal armament, 1 - 4-inch gun and about 90 depth charges; maximum speed, 15-17 knots. It also carried an asdic set. The corvette might be described as the smallest vessel into which could be put the minimum requirements for dealing unassisted with a submarine and for remaining at sea. For its size it was remarkably seaworthy, being reasonably safe in any storm and not very susceptible to weather damage: its propensity to pitch and toss, however, was justly notorious. The corvettes were by no means ideal anti-submarine vessels; yet they successfully filled a most dangerous breach, in circumstances where superior ships might well have failed because they were too few.

As in almost every other branch of warfare during the recent hostilities, the techniques employed by the U-boats and their opponents respectively were constantly changing. The approved tactical procedure of today might have to be abandoned tomorrow, while time and again a new and improved weapon or other mechanical device tilted the scales sharply in favour of one side or the other. The rules of the game, therefore, changed continually as first-rate minds on both sides, with all the resources of science at their disposal, sought to steal a march on the enemy or devise a means of counteracting his latest move. Many of the general statements in this paper allow for the particular process of evolution that lies behind each of them, but

do not describe it. Like portraits, they tend to be more static than their subjects, and to reinforce the thesis that brevity is the enemy of precision. He that is without sin among you, let him first cast a stone.

The Battle of the Atlantic largely consisted in the defence, apart from troop convoys, of two eastbound convoy series, HX and SC, and of two west-bound ones, ON and ONS. In general, convoys in these series were escorted in the waters west of Cape Race, Newfoundland, by warships of the Western Local (later Western) Escort Force, and to the eastward of that point, all the way across, by vessels of the Mid-Ocean Escort Groups. Convoys were divided into classes according to speed: for example, convoys in the HX series contained ships able to maintain speeds of between 9 (later 10) and 15 knots; while the SC convoys were limited to ships with speeds ranging from 7.5 (later 8) to 9 (later 10) knots. At all times, however, ships with a speed of 15 knots or over usually sailed independently and without escort, their speed affording them adequate protection. Ships in convoy normally sailed in several or many parallel columns, and a convoy in the open sea was much wider than it was long, usually in the ratio of three or four to one. In the transatlantic convoys the standard distance between columns was a thousand yards, while the interval between ships in the same column was six hundred yards. In the course of the war, merchant ships with additional functions—rescue ships for picking up and looking after survivors, ships equipped to fly off one or more airplanes, tankers especially fitted for supplying oil to the escort ships at sea, and rescue tugs—were attached to most of the important convoys. A convoy was supervised by a Commodore of Convoy, who was usually, on the transatlantic routes, a retired naval officer of high rank. He in turn was subordinate to the senior officer of the escort, whereby it often happened that a former Rear Admiral was receiving instructions from a Lieutenant Commander.

Anti-submarine vessels were kept in permanent groups as far as possible, because good team work, the importance of which as the war progressed was more and more heavily stressed, was greatly dependent upon the ships concerned being well accustomed to acting together. Through the earlier part of the war all the available groups acted as escorts, providing a protective screen around each convoy. Escorting was primarily a defensive function that kept the warships of the escort, which were often greatly outnumbered by the attacking U-boats, tied by a short leash to their convoy. In accord with a well-established principle of war, therefore, as soon as a sufficient number of anti-submarine vessels had become available, independent groups were organized to act offensively. These groups ranged freely to seek and attack U-boats, and they were not obliged to break off an action lest a convoy be left insufficiently protected. Sometimes they closed a seriously threatened convoy, a proceeding which not only enabled them to reinforce its hard-pressed escort, but also brought them to an area that contained an appetizing concentration of U-boats. At a late stage in the hostilities, the gods of the offensive received a genuflexion that ought to have satisfied even the most jealous of them, when a convoy intended to serve as bait was occasionally routed straight into a known concentration of enemy submarines. Shortly before the war ended, however, the Germans were producing U-boats of revolutionary design, which

would almost certainly have re-cast the Battle of the Atlantic in a shape most detrimental to the interests of the anti-Axis nations.

As the war progressed, the need of air protection for convoys against U-boats had become ever more apparent and pressing. The airplane was in a class by itself for covering a large area of sea, and for instant attack on a surfaced submarine. As far as direct protection of convoys was concerned the greatest advantage of air cover came from the ability of aircraft to circle rapidly around a convoy, well out beyond the screen of escort ships. By this means, submarines in the general neighbourhood of a convoy could often be forced to submerge and stay submerged; and throughout every minute that such a U-boat spent beneath the surface, it was steadily falling astern of the convoy. For until almost the end of the war the speed of a submerged U-boat was less than that of a slow merchant ship. So vulnerable did convoys without protection from the air prove to be, that in spite of the greatest difficulties the transatlantic ones were given air cover farther and farther out to sea, and finally the whole way across.

The provision by Canada of large numbers of new warships and of men to man them, entailed an expansion of the existing naval bases and the forming of new ones. Among these latter works of creation, there was one whose story is especially relevant to the Battle of the Atlantic. Until late in 1940 the German submarines had operated for the most part near the British Isles, and naval escorts had ordinarily accompanied convoys only as far as 15° west. With the passage of time, however, various conditions made it both practicable and desirable for the U-boats to operate farther to the west, and by the end of 1940, the Royal Navy was forced to escort convoys all the way to 30° W.; moreover by the following spring it was necessary to afford protection even farther to the westward. The Admiralty therefore decided to base an escort force on Newfoundland, which in conjunction with similar forces operating from Iceland and the United Kingdom would give effective cover as far as 45° W. St. John's was finally chosen as the base for the Newfoundland force, because it was already defended to some extent and had by far the best port facilities in the island. Its strategic position, close to and a third of the way along the great circle route from North America to Great Britain, was ideal for the purpose.

When the Admiralty's decision reached it on May 20, 1941, the Canadian government immediately offered to escort convoys in the Newfoundland area with a force which would include all the available Canadian destroyers and corvettes under the command of a Canadian officer. The idea of concentrating its forces on a well-defined and vital objective which also was immediately related to the defence of the Dominion, held a strong appeal for the small Canadian navy. The Admiralty accepted this offer, and the Naval Service accordingly began a study of the problems of establishing a base for the Newfoundland Escort Force at St. John's. It was agreed that the Admiralty should pay for and own the base: the development of St. John's accordingly became a joint undertaking in which three governments took part. The British government assumed responsibility for the capital cost; the Newfoundland authorities acted as agent in all matters relating to the acquisition of existing properties; while the Canadian government advanced the necssary funds, placed the contracts and

supervised their carrying out, and bore the cost of administering and maintaining the base. The Canadian Navy in St. John's was something like a tenant living free of rent in a house which he himself had designed, of which he paid for the upkeep, and in which members of the landlord's family were welcome to take shelter.

It was a difficult task to create a base at St. John's. The harbour was very small, and was already filled with commercial wharves of which those that were not essential to the economic life of the city were useless for naval purposes; while both vacant land and existing buildings suited to the needs of the base were almost non-existent. Necessity alone dictated the setting up at St. John's of facilities for a large naval force.

The Newfoundland Escort Force, which consisted almost entirely of warships from the two Commonwealth Navies most closely concerned, began operations from St. John's in the spring of 1941, and during the earliest period their needs were met by a depot ship, a store ship, and an oiler, supplied by the Admiralty. Work on the shore installations was begun in August, and when winter came the work on all the important buildings was well-advanced, but had not been completed. The base was designed to support a force of about sixty escort ships, without recourse to fleet auxiliaries. In July, 1941, the Canadian naval personnel at St. John's numbered 900 officers and men: by November, 1942, the total had risen to 1,962, and by the end of 1944 to 4,747. The Newfoundland Command had been established in June, 1941, as an independent command under Commodore L. W. Murray, R.C.N. After the spring of 1943 it functioned as a relatively independent sub-command under the Commander-in-Chief, Canadian Northwest Atlantic.

In simple terms, St. John's was the western base and turn-around port for ships flying the white ensign that were engaged in escorting, on the lap between Newfoundland and the British Isles, those great transatlantic convoys that formed the principal pipe-line through which the enormous resources and strength of North America were pumped into Europe. For the U-boats in the North Atlantic, that small harbour was a hornet's nest, and the naval activities which were carried on there made an inestimable contribution towards winning the war. The development of the St. John's base was noteworthy from the fiscal point of view, because the responsibility was divided in such an unorthodox way. The project was one among many instances to be found in the recent war of smooth and fruitful co-operation between governments for a common purpose: precedents which would be even more encouraging than they actually are had the common danger been less dire and immediate.

In the widespread war against the U-boats, the North Atlantic area showed certain more or less special characteristics. The shipping lanes that crossed it were, for geographic and other reasons, less subject to the presence of hostile aircraft than were some of those elsewhere. This area was also characterized by the considerable choice of widely dispersed routes that it afforded. Throughout the winter, over the northern part of the region, where the shortest routes lay, and particularly in the western part of it, coldness of air and water, ice, fog, and violent storms, were more than usually prevalent. Among all the ocean regions the North Atlantic was in a class by itself for the volume of shipping that was constantly

moving through it, for the large number of enemy submarines with which it was normally infested, and for the concern with which it was rightly regarded.

The life of the sailors, Canadians and others, who manned the small escort ships was in a general way similar to that of most combatant personnel in any armed service. That is to say that it was monotonous, sordid, and dangerous; but made bearable to most of those who lived it by a sense of serving a cause, by a buttressing consciousness of being an essential part of an important whole, by the continuing exhilaration that comradeship afforded, and by an almost childlike ability to extract the very last morsel of enjoyment from even the smallest pleasures.

Anti-submarine warfare was unusually subject to long and frustrating periods when nothing whatever happened. In action the tension was less extreme than in the hottest kind of surface engagement, but it was apt to be very much more prolonged. In general the strain on personnel is probably greater in small ships than in large ones. An extremely unsatisfactory feature of this form of warfare was the very frequent uncertainty concerning results. This obscurity existed principally because a U-boat was usually submerged at the time when it was, or might have been, damaged or sunk; and most types of tangible evidence such as floating oil, planks, or pieces of furniture, might have been intentionally discharged through the submarine's torpedo-tubes. The extraordinary ability of the U-boats to survive heavy punishment added to the difficulty.

This always annoying uncertainty sometimes resulted in extreme disappointment. For instance, late in the evening of September 21, 1942, off Cap des Rosiers near Gaspé Bay, the minesweeper H.M.C.S. *Georgian* sighted a submarine which almost immediately submerged. *Georgian* attacked with two patterns of depth charges, after the second of which the U-boat surfaced about nine hundred yards astern. The minesweeper went about in order to ram, but before the position had been reached the submarine was seen to turn over on her side and sink. A pattern of depth charges was dropped on the position where the U-boat had disappeared, and large quantities of oil came to the surface. No further movements on the part of the U-boat were detected, and oil continued to come up. In the course of the encounter thirty-four depth charges had been dropped. *Georgian* felt confident that she had a sinking to her credit — but the official assessment was "Probably Damaged."

That the work of the escorts was dangerous goes without saying. Small ships often sank almost instantly if torpedoed, making it touch and go whether or not those below decks could escape in time. Of three torpedoed corvettes, for example, H.M.C.S. *Spikenard* sank in from three to five minutes, while the Fighting French ship *Mimosa* and H.M.C.S. *Charlottetown,* each struck by two torpedoes, sank in about two and three minutes respectively. The work was hazardous even when U-boats were not present, as the experience of H.M.C.S. *Windflower* shows. This corvette was one of the escorts of SC 58, a convoy consisting of forty-nine ships. Off Newfoundland on December 7, 1941, the *Windflower* apparently made a radical change in course, possibly attempting to regain touch with the convoy in the dense fog that prevailed at the time, and her new course led her into collision with a merchant ship in the convoy. The

corvette sank with the loss of twenty-two out of the sixty-six persons on board. Of these twenty-two, nineteen were missing including all the officers except one, and three died after having been rescued. Later in the war, however, a more general and highly-skilled use of improved radar sets greatly reduced this type of hazard.

When escort vessels were torpedoed it was not always practicable to launch boats or floats; a lifebelt afforded no protection against the often deadly coldness of the water; and it was sometimes impossible for other ships to begin rescue work at once. For example, the survivors of H.M.C.S. *Ottawa,* which was sunk on the night of September 13-14, 1942, while helping to escort ON 127, were in the water for between one and two hours before they could be rescued. The crews of escort vessels were often the rescuers rather than the rescued: indeed before it had become customary to attach rescue ships to convoys the escorts did most of the picking up of those who had got into the water. Sometimes they even went into the wholesale branch of the rescue business. In February, 1943, for example, the corvette H.M.C.S. *Trillium* in the escort of ON 166, with seventy-eight persons already packed tightly on board, picked up 160 survivors from three merchant ships. Carrying this great additional mass of space-filling bodies, the *Trillium* contrived during the ensuing three days to take part in a series of difficult anti-submarine actions. In July, 1940, not far from the north-western coast of Ireland, the destroyer H.M.C.S. *St. Laurent* took on board more than 850 survivors of the torpedoed S.S. *Arandora Star.* These survivors, about two-thirds of whom were German or Italian internees, had spent from six to nine hours in boats, on rafts, or in the water. With this tremendous human cargo on board, the destroyer returned to Greenock on the Clyde.

A large amount of research in the interest of survivors was carried out during the war, a work in which Canadian science played a considerable part. Attempts were made by this means and with varying success to provide survivors with improved floats and life-preservers, and with better forms of concentrated food and means of obtaining drinkable water. Careful attention was also given to the physiological effects of prolonged immersion.

The transatlantic convoys, and consequently their escorts as well, followed as far as possible a regular schedule of sailings. This fact imparted to the movements of these escort ships an evenness of rhythm most unusual in war operations. The tendency was for each ship, from one refit to the next, to shuttle back and forth between the same two ports. Thus the crews became very familiar with the external and surface aspects of these towns. His ship, however, was the sailor's home-away-from-home, an advantage for which the soldier may well have envied him.

The time spent at sea in shielding and shepherding those great, plodding, vulnerable convoys, must have been an unforgettable experience for all those who manned the escort ships. Convoy and escorts, scattered across the sea as far as the eye could reach, formed a self-contained and lonely community of several thousand men, strangers made one by danger and because they had the same incentives to face that danger. One large convoy looked very much like another, and any one of them on the horizon looked like an industrial town. To the officers and men of each escort vessel the

other members of the group were old friends ashore and afloat, and the real or supposed peculiarities of each ship were known to all. As his days and nights of steaming, punctuated now and then by the strident tocsin of the action-stations bell, accumulated into months of seatime, the sailor in an escort ship became as it were a native of that watery region in which his ship, equipment, and training, found their fulfilment.

Whatever the lot of the escort sailor, it was on the whole blissful compared to that of his opposite numbers in the U-boats. In general, nevertheless, the morale of the German "submariners" throughout the war proved equal to the strain, and the conduct of the U-boats in this respect was very good. A grotesque exception, however, was *U-501,* the earliest of the Royal Canadian Navy's victims. Early in September, 1941, the corvettes *Chambly* and *Moose Jaw,* in the course of a training cruise south of Greenland, were ordered to reinforce the hard-pressed escort of SC 42. When nearing the convoy shortly after dark, *Chambly,* who had *Moose Jaw* on her starboard quarter, made an asdic contact dead ahead at 1,700 yards. After dropping a 5-charge pattern *Chambly* regained contact and was preparing for a second attack, when the U-boat surfaced close to *Moose Jaw* and proceeded to cross her course. The corvette opened fire; but her 4-inch gun jammed after the first round. *U-501* stopped and *Moose Jaw* ran alongside. A large group of Germans were standing on the U-boat's deck with their arms raised, and one of them, who turned out to be of all people the captain himself, leapt on board *Moose Jaw* without even wetting his feet. He afterwards alleged that he had done this so as to be in a position to insist that his men be picked up rather than left to drown. It is only fair to add that the difference between this and most other U-boats seems to have lain in the quality of her commanding officer, and that she later put up a brief fight before finally surrendering.

As everyone knows, the principal naval effort of Canada in the Second World War was directed against the U-boats. That this would be so, however, only became clear during the early months of hostilities as the character of the conflict began to take shape. It was the wisest policy in the circumstances: for it led to a reinforcing of the weakest part of the anti-axis naval line, by those means which Canada was best fitted to supply, and in a theatre with respect to which she enjoyed a lordly geographic position. In 1939 the shipbuilding industry of the Dominion had been relatively undeveloped, and equipped in the main for building small vessels, while the armament industry had been embryonic. Modern warships are as full of very elaborate apparatus as a forest is of trees, but among them anti-submarine vessels are comparatively simple: to produce these craft and their equipment was therefore undergraduate work suited to the industries concerned. Such ships were also adapted to the resources of Canada's small navy, for they presented the difficult problems of repairing and refitting, training personnel, and manning, in a fairly simple form. At the same time, the Canadian contribution toward winning the Battle of the Atlantic was an offering, not given to the gods of merely local defence, but laid squarely upon the altar of victory itself; for the North Atlantic convoys were the tap-root of those offensive measures in Europe and Africa on which the defeat of the Axis was to depend.