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Canadian theatre: The battle of St. Lawrence and its aftermath, May-October 1942

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by

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ABSTRACT
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The Battle of the St. Lawrence is one of the least discussed engagements in Canadian naval history. The vast majority of those who have dealt with it write off the battle as simply a defeat for the Canadian war effort. On closer examination, however, it becomes clear that the Battle of the St. Lawrence and its aftermath, the closure of the St. Lawrence to shipping, are much more complex. The RCN and the RCAF accomplished much in coastal defence with very little resources, and though no U-boats were killed in the engagement, Canadian naval and air units working in combination gave the *appearance* of coordinated ASW to German submarine commanders. U-boats did not return to Canadian coastal waters in the following shipping season. Furthermore, Canadian defence planners took valuable lessons from the setbacks in the Gulf in 1942 and devised more aggressive doctrines for escort work and air patrols.

The most important contribution of this work is the analysis of the decision to close the St. Lawrence. Whereas most historians contend that the Canadian government closed down a vital maritime artery in a panicked response to losses in the St. Lawrence, it is shown that the decision was the culmination of a carefully drafted policy which had been considered for several years. The policy incorporated the preferences of both Canadian defence planners and the British Ministry of War Transport. The decision to close the St. Lawrence did not have its intended effect, since shipping resumed in the Gulf of St. Lawrence with some restrictions in early 1943. The impact of the Battle of the St. Lawrence on the war effort, conversely to what other historians have argued, was in fact negligible.

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List of Abbreviations

A/S	Anti-Submarine
ASDIC	Allied Submarine Detection Investigation Committee
ASW	Anti-Submarine Warfare
BdU	U-Boat Command
BR	Bomber-Reconnaissance
BT	Bathythermographic
BW	Sydney-Wabana Convoys
COAC	Commanding Officer Atlantic Coast
CWC	Cabinet War Committee
DEMS	Defensively Equipped Merchant Ships
DHIST	Directorate of History and Heritage
EAC	Eastern Air Command
FONF	Flag Officer Commanding Newfoundland
GMT	Greenwich Mean Time
HF-DF	High-Frequency Direction-Finding
KTB	*Kriegestagbuch* (German war diaries)
LN	Montreal-Goose Bay Convoys
M/L	Motor Launch
MWT	Ministry of War Transport
NCSO	Naval Control Service Officer
NOIC	Naval Officer in Charge
NRC	National Research Council
NSHQ	Naval Service Headquarters
PAC	Public Archives of Canada
RCN	Royal Canadian Navy
RCAF	Royal Canadian Airforce
SG	Sydney-Greenland Convoys
SQ	Sydney-Quebec City Convoys
WLEF	Western Local Escort Force

Preface

When I was in high school, 20th-century Canadian military history was boiled down to several significant events, almost entirely disconnected from each other. Vimy, Amiens, Hong Kong, Dieppe, the internment of 'enemy aliens', and the invasion of Normandy were brief highlights given to the students. It was not until my undergraduate history courses that connections became more complex, more obvious, and I became aware of how dissatisfied I was with how these sophisticated engagements and the decision-making process which spawned them were casually mentioned in high school. Since then, I have been particularly sensitive to Canadian naval history, which was entirely neglected in high school (and most introductory undergraduate courses) save to dispense the catch-phrase 'tin-pot navy'.

Strangely, it was here which I found the greatest omission in 20th-century Canadian military history. In all the major studies of Canadian naval participation in the war, it was rarely mentioned how Canadians sought to defend their own shores. The major test of these defences, the Battle of the St. Lawrence, is either conspicuously absent from major works or written off as a Canadian defeat in a few sentences. I offer Desmond Morton's treatment of the subject: "Rarely have two submarines and a timid politician produced so cheap and useful a victory!"[1] I found this treatment of an engagement which terrified coastal communities, strained Canada's export industry, and tested Canada's airforce and navy as dismissive to the point of being insulting.

What follows is an attempt to demonstrate that as in other areas of Canada's Second World War effort, rational decision-making and planning ruled the day in the St. Lawrence. I

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[1]Desmond Morton, *A Military History of Canada: From Champlain to the Gulf War* (Toronto, 1992), p. 199.

have sought to give this Canadian victory the full attention it deserves, and have made extensive use of Canadian and British documents made available at the National Archives of Canada and the Directorate of History and Heritage in Ottawa in order to accomplish this goal. I have attempted to bring to light the motivations and planning of both the Canadian and German participants. Though I did have access to the German U-boat commanders' original war diaries preserved on microfilm, my language skills were not sufficient to translate them, and so I have had to rely on translations available in the Directorate of History and Heritage and upon the excellent study of these diaries conducted by Michael Hadley.

I have been assisted in this work by a number of my former professors, supervisors, friends, and colleagues. First and foremost I must thank Serge Durflinger, the first person who heard about my interest in this field, who has kept me true to the evidence, and who remains a constant source of inspiration. Norman Hillmer overlooked the development of this topic and consistently hammered my writing style into shape throughout my last year at Carleton University. Roger Sarty was enormously helpful even in our short talks on this subject over the years, and helped to point me to the right document collections at exactly the right time. Barry Gough, my supervisor and fellow *Haida*-enthusiast, helped guide this project to where it is and helped me realize my potential. Terry Copp did me a great service by reminding me about the all-important spectre of chronology which sits on each historian's shoulder, and I thank him for intervening at a critical point.

Cynthia Commachio, Leonard Friesen, and George Urbaniak also worked closely with me this year on other projects, but their perspectives opened up whole other fields of history which I would not have even considered without their help. I would like to thank Andy Thomson especially for giving me free rein over the students in his class, that I might teach them to become better writers, if not better historians. My experience at Wilfrid Laurier University would have been much more difficult had it not been for the help of Lynne Doyle,

Administrative Assistant and graduate student's best hope for speedy problem resolution. I cannot begin to thank the sea of faces which helped me at the National Archives and Directorate of History, partly because I never bothered to learn their names, but their services were excellent and I would not have been able to complete the project without them. Special thanks are extended to Library Technician Liliane Reid-Lafleur at the Hartland Molson Library for her help at an early stage of this project.

Finally, I must thank my friends and colleagues. Chris O'Brien gave unwavering support to me throughout the project, and was not afraid to tell me when I was dead wrong. Jim Wood remains an authority on pretty much everything and was a useful sounding board (also a *Haida* enthusiast). Sara Gillespie was always available to hear my latest inspiration, even if she never really understood why I was so excited. Virginia Miller, my most tenacious editor, gave me an outside perspective and offered support in all the important ways. I must extend gratitude to my colleagues in the History Department's graduate program, Ed Jendek, Jeff Nilson, Karen Priestman, for making me feel at home in Waterloo and giving me stiff competition, whether in class or over a game of Axis and Allies. Heather Moran remains a dear friend who has shared all the triumphs and troubles of being a thesis-writer with me over the past year.

I also owe a great debt of thanks (among other things) to the continuing financial support of the Bank of Mom and Dad, without whom none of this would have been possible.

APB
10/2002

The Curtain Opens on Canada

In 1941 the film *49th Parallel*, produced by the British Ministry of Information, was released in Canadian, British, and American theatres. The film opened with a panoramic view of the vast waters of the Gulf of the St. Lawrence, calm and unchanging. Without warning, the black conning tower of a U-boat arose into view, the prow of an intruder shattered the calm waters, spraying white foam among the waves as the U-boat had revealed itself to examine the results of its assault: within moments the viewer was treated to a scene of a steamer, broken and flaming as it slowly sunk to the bottom, leaving behind lifeboats filled with survivors who eyed the submarine warily. Surveying the scene from his post on what was marked as U-37, the U-boat captain remarked grimly: "And so the curtain opens on Canada." Soon after the attack in the film, the U-boat is sunk by a squadron of bombers, but not before a Nazi landing party disembarks to threaten Canadian (and by implication American) security. The small but unwavering landing party traverses the whole of Canada, attempting to recruit German communities, particularly in Manitoba. At the end of the film the party is arrested at the American border.

Truth is often stranger than fiction. The film was designed to convince American film audiences of the importance of the Second World War, but instead accrued enormous profits and became the top-grossing film in Britain. *49th Parallel* won the Oscar for the Best Original Story at the 1942 Academy Awards and was nominated for Best Picture and Best Original Screenplay.[1]

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[1]Director Michael Powell, when approached with the concept for a propaganda film about minesweeping, reportedly replied: "That's First World War Stuff. I want to make a film about Canada... being next to the USA, they will help to bring [them] in." See "The 49th Parallel AKA The Invaders", *Britmovie - Dedicated to British Cinema.* <"http://www.britmovie.co.uk/directors/m_powell/filmography/004.html"> Viewed May 24,

With prominent actors such as Lawrence Olivier on the set, it is not surprising that many found the film entertaining, despite some concerns about the prominence of the German viewpoint throughout the film. After the German declaration of war against the United States, the German Navy (*Kriegsmarine*) gave a much more convincing performance in their excursion in force to the North American Atlantic coast, sinking ships by the dozens in a theatre of war which spanned from Halifax to the Gulf of Mexico.

From May to October 1942, a less-publicized battle raged in the Gulf of the St. Lawrence as U-boats exploited shipping routes in Canadian coastal waters. The Battle of the St. Lawrence, as it came to be known, came quick on the heels of the first major, however unavoidable, defeat of Canadian forces defending Hong Kong, and was the first and only time the war came to Canada's shores. The success was overshadowed by the cost of the Battle. From May-October, 1942 German U-boats sank 27 ships, including a corvette, an armed yacht, and a passenger liner, in addition to the merchant marine casualties. Despite repeated counterattacks by the navy and the air force, not a single German submarine was sunk in the battle. The end of the Battle of the St. Lawrence was heralded by a decision made in the Canadian War Cabinet to close the Gulf of the St. Lawrence to shipping on September 8, 1942. The Canadian Government under William Lyon Mackenzie King, and the Royal Canadian Navy came under attack for this decision, especially from constituencies like Gaspé which had a high economic stake in continuing shipping through the St. Lawrence.[2]

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[2]The industry provided much employment for longshoremen and infusions of capital. Restrictions to shipping in the region did endanger a major industry in coastal communities.

The decision to close the St. Lawrence has come under harsh criticism from those historians who have discussed the Battle of the St. Lawrence in their work. Despite the controversy and fear that the Battle of St. Lawrence generated, both the battle and the decision which brought it to a close have often merited less than a few lines in most histories of the RCN at war, or have been ignored altogether. Those who have studied the battle have tended to treat the decision to close the St. Lawrence as an active retreat from the war, and the German campaign as a complete success.[3] If this were the case then one must ask why U-boats were never again sent in force to Canadian coastal waters in 1943 or 1944. The first campaign was certainly profitable, 27 ships were sunk without a single German loss, so it would only stand to reason that the *Kriegsmarine* would attempt another strike in the following shipping season. No doubt the turning of the tide in favour of the Allies in May 1943 played a central role in containing the U-boat menace, but I have considered an additional explanation for the hesitation to return to Canadian waters: like the captain of U-37 in *49th Parallel*, German raiders found Canadian defences too stiff to remain in the Gulf for long.

As to the outcome of the Canadian 'defeat,' closing the St. Lawrence was never a symptom of withdrawal from the war, but was a reflection of Canada's enormous contribution to the Battle of the Atlantic. Much has been made of the fact that the Royal Canadian Navy possessed the fourth largest navy in the world in 1945, and it is clear that the vast majority of ships of the Canadian Navy served in distant waters far from home. Closing the St. Lawrence River and Gulf was done to facilitate victory in these other locales of the crucial naval war. In

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[3]I discuss the historiography surrounding the Battle of the St. Lawrence and the decision to close the St. Lawrence separately, in Chapters 2 and 3 respectively.

addition, the economic impact of the closure was negligible in the course of the war. In fact, it proved impossible to keep such a major maritime artery tightly locked down for extended periods of time, and concessions had to be made. In short, the St. Lawrence was never fully closed to coastal traffic.

The following chapters will demonstrate the way in which the Canadian military forces prepared for enemy coastal incursions and dealt with it successfully. The first chapter, *Mixed Reviews,* introduces the literature on the subject and offers an historiographical analysis of the Battle of the St. Lawrence. The second chapter, *Bracing for the Drumbeat,* provides the orders given to German raiders for the North American offensive, the defence plans drawn up for the Atlantic Coast by the Royal Canadian Navy (RCN) and the Royal Canadian Air Force (RCAF), the forces available to either side in the Gulf, and the nature of the battlefield itself. The third section offers an account of the Battle of the St. Lawrence from May-October 1942, with details of the sinkings and retaliation by Canadian coastal forces. A discussion of the performance of the RCN and RCAF with their counterparts in Great Britain and the United States during the same period is also in this section.

In the final section, *Hard Decisions: Coping With Defeat*, I will analyze the decision to close the St. Lawrence, its origin and effects. This section will enter into some detail on the attempted re-routing of trade over rail to Halifax, and the eventual forced reopening of the Gulf to coastal traffic and the resumption of convoys. I shall also demonstrate the relative unimportance of the interruption in shipping over the course of the war.

It may be argued that the history of the Royal Canadian Navy is one of patchwork promises and making do with very little. In a war where so much was accomplished in the small

ships abroad, it is not surprising that battle honours were given to those at home only in 1999. At a commemoration ceremony by the Governor General Adrienne Clarkson opening Veterans' Week, Clarkson vividly explained the importance of this battle. "Our citizens became first hand witnesses to the tragedies. As enemy torpedoes tore apart the ships, the villagers along the shores would watching [*sic*] in horror as the occupants struggled to survive in frigid waters. . . . they gathered not just to watch and pray, but to help the blood- and the oil-soaked climb ashore."[4] The Battle of the St. Lawrence is an integral part of Canadian naval history, an excellent study in the harsh lessons of coastal anti-submarine warfare, and should not be written off simply as a defeat. 23 ships were sunk from 1942-1944, with a loss of about 350 lives, including military and merchant marine.

(Pennant for the Battle of the St. Lawrence, Commemorative Distinction 1999)

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[4]"Ceremony to Open National Veterans Week and to Honour Veterans of the Battle of the St. Lawrence: Thursday November 4, 1999, Ottawa, Ontario" *The Governor General of Canada.* <"http://www.gg.ca/media/speeches/archive-1999/veteransweek_e.htm"> Viewed May 24, 2002.

Mixed Reviews

It has been said that though God cannot alter the past,
historians can; it is perhaps because they can be useful
to Him in this respect that He tolerates their existence.
-Samuel Butler, Erewhon Revisited

The assessments which Canadian historians have published concerning the conflict in the St. Lawrence have varied. The actual number of historians who have dealt with this subject is surprisingly low, given the proximity of the war to Canada's coastlines. Only a handful have referred to this engagement on its own: many have dedicated only a footnote or at most a chapter to the incidents of May-October 1942. The first treatment of the Battle of the St. Lawrence as a historic event was in Leslie Roberts' *Canada and the War at Sea*, the companion volume to Stephen Leacock's *Canada and the Sea*, published in 1944. Contrary to later opinion that the battle was kept secret, Leslie Roberts' chapter on the Battle of the St. Lawrence is surprisingly detailed for a wartime publication. Though filled with florid language and written with an obvious slant in favor of the Navy, Roberts' treatment is not far off the mark of what actually happened. Roberts' argument for a Canadian victory in the St. Lawrence lies in the fact that ". . . the battle was won in the aspect which counts for most . . . not merely was the Hun expelled from the Gulf; he did not come back."[1]

On the whole, however, Roberts did not place much emphasis on the naval battles themselves: rather, he contented himself to slam J.S. Roy and the other 'Little Men of Isolationism' for disregarding the Government's call for complete secrecy concerning the details

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[1]Leslie Roberts, "The Battle of the Gulf," in *Canada's War at Sea, Vol. II* (Montreal, 1944), p. 40.

of sinkings in the Gulf. However, for such a short work, Roberts identified what would become the main themes in the discussion of the battle of the St. Lawrence; Canada's ASW record, the physical presence and tactics of the Navy, and the strain placed on the fleet of Eastern Air Command. Roberts leaves the reader with a stirringly optimistic view of the St. Lawrence engagements which does not fully do the German raiders justice. "So went the Battle of the Gulf; a battle of ships and guns and men and shining courage on the broad waters of the St. Lawrence; a battle of words and politics in the nation's Parliament."[2] Roberts' work cannot be considered a scholarly work of history due both to its proximity to the event and the obvious endorsement of the federal government in its publication. However, because of its startling disclosure of events, and the themes identified in the brief chapter, it has become an important asset to the historiography.

One of the first postwar histories of the Royal Canadian Navy was Gilbert N. Tucker's indispensable two-volume official history of the Naval Service, *The Naval Service of Canada.* Using mainly files from Naval Service Headquarters in Ottawa, Tucker's second volume—'Activities on Shore During the Second World War,' dealt not with operational history of the RCN, but rather with the preparations, deployment and organization of the RCN as they developed in the Second World War. His examination of the RCN, however, was divided into three phases: the defence of Canada, the Battle of the Atlantic, and the Last Phase. Tucker emphasized that the purpose of the Naval Services during the war changed from one designed for coastal defence to forming the backbone of the North Atlantic convoy system in the battle of the Atlantic.

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[2]Ibid., p. 43.

Tucker reserved only brief mention of the 'St. Lawrence Problem' in his official history, occupying a total of five pages in his extensive chapter on Merchant trade and shipping. In these pages, the majority of his attention was dedicated to the complications apparently caused by the closure of the St. Lawrence in September 1942. Tucker believed that the ". . . decision to close the river to the bulk of overseas shipping was unfortunate," because though it was originally a wise step, the maintenance of restrictions on river shipping overwhelmed the maritime ports with increased traffic.[3] Tucker argued that the caution exercised by the navy was based on a state of mind created by the 'defeat' of 1942 in the Gulf, and lingered overlong with damaging effects to Canada's war effort.[4] Tucker also argued that the small number of ships available for escort in the St. Lawrence created an environment which was most hospitable for submarine incursions, and that it was a mystery why it had not been exploited earlier by the German forces.[5]

Based on what he could learn from N.S.H.Q. files and the minutes of the 1943 St. Lawrence Operations Conference, Tucker assessed the engagement as an outright defeat of Canadian defences because of the closure, and because of the state of mind it created.[6] Tucker did mention that the U-boat offensive was never again pursued in Canadian waters, but he did not investigate why that might have been. This is no doubt because he did not at that time have full access to the U-boat war diaries or other German memoirs like those of Admiral Donitz. He also was unable to exploit the monthly A/S summaries of Eastern Air Command, which only

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[3]G.N. Tucker, *The Naval Service of Canada,* vol. 2. (Ottawa, 1952), p. 393.

[4]Ibid., p. 392-395.

[5]". . . there could hardly have been a more fruitful return for so small an expenditure in any other area open to the submarine." Ibid., p. 391.

[6]Ibid., p. 392.

became available in 1972. Tucker's focus, I believe, was too narrow to fully encompass the scope of the Battle of the St. Lawrence, and this may have had an effect on his judgement of the engagement as a defeat. For the time, his judgement was sound and thoroughly avoided speculation, and remains one of the most accurate in the historiography.

In his operational history of the R.C.N., *Far Distant Ships*, published in 1961, Joseph Schull seamlessly integrated the attacks in the St. Lawrence into his narrative of the Battle of the Atlantic. Most of Schull's focus in the brief sections dealing with the St. Lawrence is on the area's secondary importance to the sinkings of oil tankers which took place in the Gulf of Mexico during the same period. Though it is unclear what specific sources Schull used to build his history of the Battle of the St. Lawrence, he provided a surprisingly balanced account of the engagements from the Canadian and German naval and aerial perspectives.[7] Unlike Tucker, Schull offered a detailed narrative of the engagements in Canadian coastal waters, which for the first time included the perspectives and movements of the German raiders. This account was most likely based on the interrogation of Hartwig by the Admiralty after he was captured in November 1942 than on the original U-boat War Diary (KTB).[8]

Schull judged that the defence of coastal waters by the RCN was 'meager and unsuccessful, but not inactive,' crediting both the naval escorts and patrolling aircraft with a

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[7]Schull's work contains no footnotes, but there is a brief note at the work's opening stating 'In the writing of this volume the author has been given full access to relevant official documents in possession of the Department of National Defence; but the inferences drawn and the opinions expressed are those of the author himself . . . .' Joseph Schull, *Far Distant Ships* (Ottawa, 1961), p. V.

[8]Ibid., p. 121.

large amount of attacks on U-boats causing minor damage, if not fatalities.[9] Schull agreed with Tucker's verdict that the U-boat campaign in the St. Lawrence was a complete defeat for Canada, but noted that given the number of ships dedicated to overseas service, the defeat was understandable and probably unavoidable. The true battle, Schull conceded, was the battle to keep the trans-Atlantic convoys secure, and the majority of the efforts of the RCN were directed toward ensuring this victory.[10] *Far Distant Ships* offered an important contribution to the historiography because of Schull's balanced account, but there are some faults which are carried over from past works. Schull does mention some of the activities of the RCAF in the St. Lawrence, but only in passing. The reader is only given half of the narrative because Schull's sole focus was on naval operations. Schull failed to address why the U-boats did not return to Canadian waters in force in later years, given their supposedly immutable success during the North American campaign. The closure of the St. Lawrence in 1942 is also strangely absent from Schull's narrative.

What is more peculiar than this omission is the lapse in time between publications dealing with the Battle of the St. Lawrence. After Schull's second edition was published in 1961, it would be over 20 years before historians tackled this issue again. This is even more curious because the relevant document collections (EAC, NSHQ, Naval Control Service) were made public record in the early 1970s. Michael Hadley's 1985 *U-Boats against Canada: German Submarines Against Canada* was well worth the wait. The first work to deal exclusively with the German submarine offensives against Canada, *U-Boats against Canada* is also one of the best,

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[9]Ibid., p. 120.

[10]Ibid., p. 122.

exhaustively researched to provide a near-complete narrative using German records such as U-boat war diaries and Canadian documents from NSHQ to regional bases.

Hadley's work, which deals with U-boat actions against Canada throughout the Second World War has become one of the centerpieces of the historiography. Hadley's principal argument is that Canada went into the Second World War completely unprepared. The 1942 U-boat offensives highlighted this weakness, and further entrenched the principles of isolationism in Quebec.[11] His chapter on the Battle of the St. Lawrence itself was a refutation of Roberts' 'grandiloquent flummery' which Hadley believed painted the engagement as a Canadian victory.[12] Through a very thorough narrative detailing the German movements and limited Canadian reaction, Hadley attempted to demonstrate that the Canadians were ineffective in defending their coasts. This was established by the fact that despite extensive air cover and continual attacks on the intruders, no U-boats were destroyed or disabled in Canadian waters during the 1942 shipping season, and the St. Lawrence was officially closed to transatlantic traffic. Hadley believes that this defeat had continuing implications for Canada both politically and strategically.[13]

However, Hadley did not discuss the short or long term effects of the closure of the St. Lawrence or its impact on the Allied war effort. The brevity of Hadley's discussion on the closure is justified given his concentration on the German narrative. Hadley provided a very extensive and convincing account of the defeat of Canadian forces, but one is forced to question

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[11]Michael Hadley, *U-Boats Against Canada.* (Montreal 1985), p. 20.

[12]Ibid., p. 113.

[13]Ibid., p. 143.

if Hadley has considered that the primary role of the RCN during the Second World War was to maintain the security of the Atlantic sea-lanes. In his chapters on the St. Lawrence attacks, Hadley assumed an essentially isolationist position on what was at the time in question a global problem.

The first portrait of the defensive measures taken by the RCAF in the Second World War which included an assessment of the Battle of the St. Lawrence was the second volume of William A.B. Douglas' *The Creation of a National Air Force*, published in 1986. Little mention is made in Douglas' assessment of the navy's ability to defend coastal waters, but his account brought forward for the first time the immense effort undertaken by the men and aircraft of Eastern Air Command during the Gulf offensive, stating: "If the defence of the St Lawrence was a commitment the navy did not want, then the air force, to an important extent, stood in for the senior service."[14] Douglas was referring to the RCN's conclusion that the lack of escorts should be reinforced by the air rather than by pulling ships in from the Atlantic convoy routes.

Douglas noted that despite constant patrolling and numerous attacks on U-boats during the 1942 shipping season, the failure to sink a single enemy submarine was due more to the lack of effective communication around the Gulf than any other factor. When combined with the unparalleled boldness of the U-boat captains and the advantageous asdic conditions in coastal waters, this paved the way for a clear tactical victory for Donitz and his submarines.[15] Unlike previous scholars, Douglas also attributed the RCAF's efforts in the Gulf as one of the main reasons why the second wave of U-boats sent to Canadian coastal waters did not enter the St.

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[14]W.A.B. Douglas *Creation of a National Air Force*, p. 509.

[15]Ibid., p. 496.

Lawrence, and why they were not sent the following year.[16] Unlike Hadley, Douglas fully realized that the Battle of the Atlantic took priority over coastal defence, and credited both services for resisting the calls from within Quebec to retreat from the critical fight on the ocean convoy routes.[17]

Douglas also introduced and edited *The RCN in Transition 1910-1985,* a volume of papers which resulted from a 1985 conference on naval affairs, focusing on the transition of the Royal Canadian Navy into Maritime Command following the unification of the armed forces in 1968. A number of these papers which sought to address how well the Canadian Navy has been able to defend its shores deal with anti-submarine warfare in Canadian waters. The first, written by Michael Hadley, dealt with the German experience of ASW in the Gulf of St. Lawrence, and is complemented by Marc Milner's similar focus on the Canadian experience. Taken together, Hadley and Milner's appreciation of the Battle of the St. Lawrence is remarkably similar.

Hadley's paper, "Inshore ASW in the Second World War: The U-Boat Experience" contended that the German experience during the Battle of the St. Lawrence and in their brief excursion to Canadian waters in 1942 represented a ". . . 'periscope view' . . . [which] reveals Canadians as weak and inexperienced, operating in a 'no-man's-land between Empire and USA.'"[18] Hadley's main argument was that as Canadian ships left home waters to defend Atlantic shipping routes and the British Empire, a defence gap was created which invited the

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[16]Ibid., p. 509.

[17]Ibid., p. 515.

[18]Michael Hadley, "Inshore ASW in the Second World War: The U-Boat Experience," *The RCN in Transition 1910-1985* edited by W.A.B. Douglas, (Vancouver 1988), p. 126.

'Second Happy Time' for U-boats on the Atlantic coast.[19] While Hadley certainly demonstrated the initiative of the U-boats and their crews in the paper, it is claims such as these which made his argument unconvincing. To blame the lack of Canadian forces for Operation *Paukenschlag* neglects the fact that the majority of U-boat operations off the Atlantic Coast were directed against the United States, not Canadian waters. Hadley also assumed that it was possible to prevent individual submarines from entering the Gulf of St. Lawrence through either of the wide entrances to Canada's own inshore sea.[20]

While Hadley attempted to argue that Canadians were totally unprepared and unable to defend their territory, his description of the German experience in fact demonstrated the efficiency of Canadian defence, perhaps in spite of inexperience and numerical scarcity of the RCN. Hadley demonstrated that while on the offense, German submarines often took advantage of the water layering in the Gulf to obtain kills in the face of small naval opposition. However, in the course of his paper, Hadley mentioned that many attempts to attack were frustrated or entirely disrupted by the RCAF. Hadley did not realize that these aircraft actually were considered adequate compensation for the RCN's low numbers and effectively closed the defence gap which he contended existed.[21] Moreover, the RCAF's patrols did in fact drive U-boats out of the Gulf, but Hadley's focus on naval defence marginalized this accomplishment.[22]

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[19]Ibid.

[20]This assumption is clear from his description of individual initiative of commanders as the key reason for exploitation of Canadian coastal waters; the implication is that had Canadian defences been better, these ships would never have entered and obtained the success they did. Ibid., pp. 127-130.

[21]Ibid., p. 132, 141.

[22]Ibid., p. 134.

Even his assessment of naval defence is slightly prejudiced in favor of the U-boat. Simply because no U-boats were killed in the St. Lawrence due to the fact that the limited number of escort ships were dedicated to getting the convoys to their destination rather than to offensive operations against submarines, Hadley implied that Canadian defence was a failure.[23] In either event, U-boats were still suppressed by escorts, disrupting their targeting and allowing the convoys to escape largely unharmed.

The following chapter, Marc Milner's "Inshore ASW: The Canadian Experience," followed a similar argument as Hadley put forward. Milner argued that the success of the German submarines in Canadian coastal waters was enabled by the extensive operational commitments taken on by the RCN overseas.[24] Unlike previous scholars who discussed the issue, Milner couched his analysis in the context of the effort in the entire Canadian zone in the Northwest Atlantic to gain a better understanding of the unfortunate ASW record held by the RCN during the war. Like Douglas, Milner recognized that the RCAF was the crucial player in inshore ASW, though its forces were often hampered by the dismal weather conditions in the Canadian coastal zone.[25] Milner did not judge the Battle of the St. Lawrence as a defeat or a victory for the Canadian forces, but purely sought to understand why inshore ASW was so difficult for the RCN and what steps were taken to curb the success of future German campaigns.[26] Milner concluded that the weakness of inshore ASW stemmed from two factors; a

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[23]Ibid., p. 132.

[24]Marc Milner, "Inshore ASW: The Canadian Experience in Home Waters," *The RCN in Transition 1910-1985* Edited by W.A.B. Douglas, (Vancouver 1988), p. 143.

[25]Ibid., p. 145.

[26]Ibid., p. 149.

slow understanding of the bathythermographic conditions of the Gulf and its approaches, and to the consistent delivery of the most highly trained support groups to British waters, where the RCN's ASW record was proven.[27] Despite these weaknesses, Milner contended that the trial by fire inshore forced the RCN to develop its tactics and research, and this produced a world leader in ASW in the post-war years.[28] Milner's wider perspective helps to bring the Battle of the St. Lawrence into context with Canadian efforts throughout the coastal zone and operational commitments overseas over the entire course of the war. It was not, however, a detailed discussion of the Battle itself, and draws few judgements concerning 1942. Milner's focus on training foreshadowed his work published in 1994, *The U-Boat Hunters*, discussed below.

The subject was next taken up in 1990 by Commander Tony German in his history of the Canadian Navy, *The Sea is at Our Gates*. German integrated his analysis of the Battle of the St. Lawrence into his well-written chapter on the Battle of the Atlantic. German painted a distinct picture of the strain placed on the RCN by their commitment to the North Atlantic convoy routes, and the scarcity of escorts in coastal waters as a result. German deemed that the outcome of the Battle of the St. Lawrence was a 'signal strategic victory' for the few U-boat captains who ventured to the Canadian coast.[29] German's account, while citing the other motivations for closing the river and gulf ports to transatlantic traffic, argued that the primary motivation came from Admiral Percy Nelles' response to the British request for additional escort ships: "The naval decision was made ultimately by Nelles. There was the old ingrained aye-aye to the RN;

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[27]Ibid., p. 157-158.

[28]Ibid., p. 158.

[29]Tony German, *The Sea is at our Gates* (1990), p. 121-122.

there was the urge to be a major player in a new campaign with the senior Allies; there was the immature show of 'can-do' without really counting the cost to the ships and the men who were at sea."[30] While well-written, German's account offered no tangible evidence to reinforce these claims. German concluded by stating that the decision to close the Gulf was a weak one, in both political and naval terms. German contends that had the Gulf remained open, NOIC Gaspé would have been able to fight it out until the Gulf iced over in December.[31] While an impassioned view of the closure is offered, German really does not contribute much to the academic discussion of the September decision. As a history, *The Sea is at Our Gates* is not a scholarly work. German's work represents a synthesis of his reading of secondary sources with no primary source research or any footnotes. That it is a very readable synthesis does not conceal the fact that German had nothing new to contribute to the historiography. German did not even provide a complete synthesis since he left out much of the details of the aerial defence of the Gulf.[32]

The most detailed discussion of the 1942 decision to close the St. Lawrence was made by Captain Robert H. Thomas in his 1992 article, "The War in the Gulf of St. Lawrence: Its Impact on Canadian Trade." in *Canadian Defence Quarterly.* By assuming a long-term economic analysis of the closure, Thomas assessed the decision in terms of tonnage, railway time, and labour lost to maritime ports, and ostensibly to the United Kingdom. As a result, Thomas argues

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[30]Commander Tony German, *op. cit.*, p. 121

[31]Ibid. One might wish to recall that the Naval Officer in Charge at Gaspé was P.B. German. Might this be a possible relation to the author?

[32]Ibid., p. 341.

that the decision to close the Gulf and River St. Lawrence was 'hasty and ill-advised.'[33] Though Thomas believes that the decision was justified in the short-term, from a long-term strategic perspective he felt that the loss in shipping was out of all proportion to the possible risk from submarine attack.[34] Thomas accused the Canadian government of depriving the United Kingdom of shipping, which he likened to a full year's losses in the Battle of the Atlantic. Thomas used a variety of sources from Britain and Canada, including the Ministry for War Transport and Canadian port authorities; but did not exclude the military perspective to establish his point of view in this balanced discussion.[35]

Marc Milner's 1994 *U-Boat Hunters* begins with a blunt assessment of the closure of the St. Lawrence: "Clearly, the inability — or unwillingness — of the Canadian navy to keep open the nation's principal maritime artery in the face of the mere *threat* of enemy action was a public admission of defeat."[36] However, Milner proceeds to discuss the closure in terms of the plans for the defence of the St. Lawrence for 1943, in which the closure is used to the advantage of the defending forces. The decision is portrayed as a calculated risk on the part of the RCN, tied to plans for effective offensive action without the distraction of convoy operations. According to Milner, the RCN was setting a trap for the anticipated inshore U-boat campaign of 1943. In this way, the RCN was taking steps apace with their allies in the general trend of ASW in early

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[33]Captain (N) Robert H. Thomas, "The War in the Gulf of St. Lawrence: Its Impact on Canadian Trade." *Canadian Defence Quarterly* (April 1992), p. 10.

[34]Ibid., p. 17

[35]Ibid.

[36]Marc Milner, *The U-boat Hunters* (Toronto, 1994), p. 33.

1943.[37] Since Milner's work is based on the battle in mid-ocean, however, his coverage of the closure of the St. Lawrence is closed early in the work, and is not resumed. His perspective was a welcome change in the body of literature surrounding the St. Lawrence.

The most mature account of the Battle of the St. Lawrence to date is found in Roger F. Sarty's 1998 *Canada and the Battle of the Atlantic*: a well-organized history of the Canadian undertaking during this conflict. Sarty makes use of a now-familiar blend of sources from Eastern Air Command, the RCN, and translations of the German experience to recreate the Battle of the St. Lawrence which he believes the Canadians defended well in spite of drastic shortages in the months of crisis. Sarty, who participated in the research and writing of Douglas' account of the battle, incorporated the crucial role played by the aircraft of Eastern Air Command. Sarty argued that the Government and Navy may have been premature in conceding the Battle of the St. Lawrence as a defeat in light of the evidence which suggests ". . . that the defence measures were much more effective than they seemed at the time, persuading Germans to abandon the effort within a few weeks of their greatest successes."[38] Sarty refutes critics like Hadley and Milner for blaming German successes on the lack of numbers in the Gulf, since decision makers had concluded as early as 1918 that the Gulf would require an escort force as large as that along the whole Atlantic coast all to itself.[39] Sarty actually believes that the destruction of the *Caribou* may be taken as evidence of the consequences of the RCAF's and RCN's effectiveness. U-69, according to Sarty, had been pushed out of the Gulf by persistent

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[37]Ibid., p. 37

[38]Roger Sarty, *The Battle of the Atlantic,* (1998), p. 102.

[39]Ibid.

patrols in the air and by sea, which explained why Kapitanleutnant Graf lingered in the Cabot Strait until weather conditions permitted him to surface without fear of attack from the air. At that time, *Caribou* crossed his sights.[40]

With regard to the decision to close the St. Lawrence, Sarty did not depict the government or the RCN as weak or inflexible, but instead, he drew the reader's attention to the growing commitments of the RCN abroad and in North American waters. Specifically, the tasks of the Western Local Escort Force were extremely taxing; the RCN provided escorts between New York and the convoy assemblage point off Newfoundland. ". . . an 1800-kilometre voyage, more than half the length of the 3300-kilometre run from Newfoundland to Northern Ireland."[41]

Despite his argument, Sarty indicated that the RCN performed dismally in the Gulf: "Officers and men were painfully aware only of how much had gone wrong."[42] Eastern Air Command had to shoulder a greater burden with fewer resources to compensate for the inability of the RCN to properly survey the Canadian zones. The sense of defeat, Sarty believed, lingered far longer than it should have in the RCN, and was only compounded by the withdrawal of some Canadian escort groups from the North Atlantic for further training at Churchill's request.[43] While I believe that Sarty's argument is sound, his section on the St. Lawrence is underdeveloped. Sarty could have revealed more about the German experience and about the evolution of RCAF tactics in the Gulf to prove his point. Sarty also does not disclose in his

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[40]Ibid., p. 114.

[41]Ibid., p. 112.

[42]Ibid., p. 115.

[43]Ibid., p. 116.

endnotes the precise sources which lead him to his conclusions; Hadley's 1985 work figures strongly in his evidence. Given the scope of his work, Sarty's account is still the most fair treatment of the battle and its aftermath to date, if forgivably brief.

Moreover, Sarty's work represents a continuing transition in the historiography. Unlike the work of earlier historians who examined the RCN in isolation, Sarty's analysis of the Battle of the St. Lawrence interprets the closure of the Gulf in terms of alliance obligations and other commitments. Defence of Canadian waters was a burden to the RCN whose principal concern was the maintenance of Canadian effort in the Atlantic.[44] This viewpoint was further developed in Marc Milner's 1999 history, *Canada's Navy, The First Century*. In his chapter on 1942, aptly titled '"Taking a Hit for the Team," Milner discloses that the outcome of the Battle of the St. Lawrence was a consequence of the Canadian commitment in the mid-Atlantic. "In short, during the last half of 1942, the Canadian navy shouldered the weight of the U-boat war."[45] The RCN's supporting role in the Battle of the Atlantic, however, led to a 'patch and fill' approach to Atlantic defence that was dependent on circumstances outside the Canadian Navy's control.[46] This created uncertainty and did not permit concrete planning for inshore defence.

In light of this, Milner credits the RCN with far more than had previous historians, including the outstanding record of effective convoying in Canadian waters. "The reason why there was no disaster of global proportions off Canada's coast . . . was not because the area was strategically insignificant, but because the system of convoys made finding shipping and

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[44]The RCN fought for and won the right to maintain a 'prominent national presence in the North Atlantic', satisfying pride and to aid Britain. Ibid., p. 96.

[45]Marc Milner, *Canada's Navy: The First Century* (Toronto, 1999), p. 118.

[46]Ibid., p. 100.

attacking it much less profitable than operations off the U.S. coast."[47] Nevertheless, Milner concluded that the naval attempts to kill U-boats in the Gulf were completely ineffective due to water conditions and the scarcity of patrol ships, leaving the burden on Eastern Air Command.[48] Despite low losses due to convoying and aerial defence, Milner argued that 'by any objective measure,' the closure of the St. Lawrence unavoidably represented a German victory because of its lasting political and economic consequences.[49] Milner mainly referred to Captain Thomas' findings in his section on the St. Lawrence. Though Milner attributed the closure to the selflessness of the RCN, as in his 1994 work it was portrayed as a German victory. Despite this, Milner's focus on Allied commitments does represent a shift in the interpretation of the Battle of the St. Lawrence in recent histories.

A further shift is found in the most recent work dealing with the St. Lawrence, Roger Sarty and Brian Tennyson's *Guardian of the Gulf: Sydney, Cape Breton, and the Atlantic Wars*, published in 2000. An attempt to contribute to 'a new search to understand Canada's military past in fresh contexts and in greater depth,' Tennyson and Sarty's work focuses not on national efforts or policy, but on the local organization and activities at Canada's primary Atlantic fortress city: Sydney, Nova Scotia.[50] Regardless of their focus, the conclusion the two authors reach is identical to Sarty's earlier work: the Germans permanently withdrew from the Gulf of St. Lawrence because in their perspective, it was too well defended. Part of the Canadian victory

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[47]Ibid., p. 103.

[48]Ibid., p. 108.

[49]Ibid., p. 109.

[50]Brian Tennyson and Roger Sarty, *Guardian of the Gulf*, (Toronto, 2000), p. 8.

was the successful repulsion of the uneventful second wave of U-boats in Autumn 1942 which has either been overlooked or marginalized by previous historians.[51] This victory was overshadowed at the time and since, the authors argue, by one of the few and tragic losses in October, the SS *Caribou*. The questions raised in public opinion after this tragic loss about the state of Canada's defence were ironic, because in the words of the authors, "[the sinking] . . . produced tragedy in the Sydney area at the very time the U-boats were admitting defeat."[52] Similarly, the authors' discussion of the closure of the St. Lawrence echoes Sarty's 1998 publication, citing the growing responsibility of the RCN as the major cause of the decision, which, despite the Canadian victory in the Gulf, ". . . over time dislocated shipping much more seriously than had the enemy attacks in the Gulf."[53] Unlike previous works, Sarty and Tennyson indicate that there was administrative and economic pressure to close the Gulf of the St. Lawrence in 1942.[54]

Another advantage enjoyed by Sarty and Tennyson in their focus on the port of Sydney is that unlike other scholars, they could examine the impact of the September decision on that specific port (which was found to be negligible). Convoys continued out of Sydney despite the ban on shipping in the St. Lawrence. In this work, the reader finds a new standpoint which not only derides the notion of the Battle of the St. Lawrence as a defeat, but also begins to question the importance of the September decision. As the most recent work in the historiography, this is

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[51]Ibid., p. 282.

[52]Ibid., p. 274.

[53]Roger Sarty and Brian Tennyson, *op. cit.*, p. 271.

[54]Ibid.

most promising, and provides a launching point for my more detailed discussion of the reasons behind the closure and its actual affect on the course of the Battle of the Atlantic in Chapter Four.[55] While most of the authors' account of the battle is similar to those previous, in the latter half of their chapter, the regional focus is pronounced as Sarty and Tennyson bring to light the absolutely central importance that Sydney held during this coastal battle. Sarty and Tennyson also shed some light on the impact of the entry of the United States, with its mammoth port facilities, on the local economy and force deployment in Sydney.[56] The regional focus is a welcome change in the historiography which enables a much more detailed account of how the Battle of the St. Lawrence was waged, and the dangers to airmen and sailors alike during this time of searching and uncertainty. Given the number of sizable communities surrounding the Gulf of St. Lawrence, it is likely that more regional histories of the Battle of the St. Lawrence may be successfully undertaken.

The chief transition in the historiography has been threefold. The first element is the

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[55]There is a more recent addition to the historiography, Nathan Greenfield's short article published in *Maclean's,* "War in Canadian Waters" on May 6, 2002, near the anniversary of the beginning of the Battle of the St. Lawrence. Greenfield appears to be an enthusiast for Canadian naval history and I had the pleasure of meeting him in the Canadian War Museum Library in Vimy House. From a short discussion I learned that he had gone to the Public Record Office in London to obtain much of his information, as well as interview a number of the participants. While a commendable piece of work, Greenfield relies only upon Canadian information and his viewpoint on the closure itself is closer to what one would see 40 years ago. He attributes the closure solely to German submarine attacks and does not comment on its effects. Furthermore, he is in error when he claims that Mackenzie King authorized setting up a minefield in Canadian waters. No such action was ever pursued, and as R.B. Mitchell found out, it was considered an ineffective line of defence. "War in Canadian Waters." *Maclean's* (May 6, 2002).

[56]Ibid., p. 283.

increasing emphasis on the efforts of the RCAF, the second is the growing focus on the Battle of the St. Lawrence as a part of the Battle of the Atlantic, and the third is the growing emphasis on the importance of technology. This last element in the historiography was also introduced by Hadley, who noted that the advanced German radar detection devices on the submarines would constantly be alarming the crew of the presence of aircraft, and forcing wary commanders to submerge their vessels.[57] The aircraft's equipment, however, was often not advanced enough to often detect the U-boats scrambling to avoid attack, and the crew had to rely on visual sightings.[58]

The strong historiographical consensus concerning the outcome of the battle is also erroneous. While one might forgive Roberts' enthusiastic account for lack of objectivity during the war, it would be over forty years until someone expressed similar sentiments about the performance of the Canadian defenders during the battle. The judgements of every historian from Tucker to Milner are completely understandable. The fact that no U-boats were destroyed in the Gulf of St. Lawrence in the summer and fall of 1942 was extremely frustrating for naval officers and aircrew alike, when compared with the 22 ships which were sunk in Canadian waters. It may be said that in the Gulf of St. Lawrence, the U-boats enjoyed a momentary tactical victory over the Canadian forces. To argue otherwise would be foolhardy. There is, however, a distinction between tactical victory and strategic victory. The battle for Vimy Ridge, for

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[57]Michael Hadley, *op. cit.*, p. 96.

[58]The best account of the scramble for the introduction of advanced detection technology into the Canadian air and naval forces is found in David Zimmerman's *The Great Naval Battle of Ottawa* (Toronto, 1989). This work has been used in all the major publications dealing with the Battle of St. Lawrence and with the consequences of lagging technological equipment in the RCN.

instance, was a tactical victory in a larger strategic offensive which failed. The U-boat offensive against North America, as part of a larger offensive in the Battle of the Atlantic, is a similar example. The following chapter examines the resources, equipment and effectiveness of the Canadian defenders and the German invaders in 1942.

Bracing for the Drumbeat

". . . we must sink ships wherever the greatest number of them can be sunk at the lowest cost to us, i.e. where we lose the least number of submarines. We should not concentrate in one area if it means sinking fewer ships."

- Karl Doenitz, Admiral Commanding Submarines. (May 14, 1942)[1]

As GrossAdmiral Karl Doenitz offered his advice to Adolph Hitler, halfway across the world, the invasion of Canadian and American waters was underway, with disastrous results for the defenders. By May 1942, the 'Happy Time' of the U-boat arm of the *Kriegsmarine* in North American waters was coming to its peak. Hundreds of independently-sailing ships along the American coastline previously protected by the pan-American neutrality zone were sent flaming to the bottom of the ocean, in some instances within sight of their U.S. anchorages. Miami provided an especially attractive target, its neon-lit coastline effectively silhouetting ships in harbour from January to March until they were blacked out. Doenitz' confidence at the conference with Hitler was well-placed, for the American defences were incredibly unprepared for the U-boat wolf-packs that ravaged its coasts.[2] Nevertheless, when the Americans began to bolster their defenses in the eastern sea frontier during April and May, Doenitz saw an advantage in moving to different areas along the Atlantic Coast, including the highly profitable Gulf of Mexico.

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[1]Naval Institute Press, *Fuehrer Conferences on Naval Affairs 1939-1945*. "Conference of the C.-In.-C., Navy, with the Fuehrer at the Fuehrer's Headquarters, Wofsschanze, on May 13 and 14, 1942." (Maryland, 1990), p. 280.

[2]The Eastern Sea Frontier was increasingly vulnerable due to the massive number of free, largely unescorted ships, and sinkings passed the 100,000 tons mark by the middle of February. Samuel Eliot Morison, *History of United States naval operations in World War II: The Battle of the Atlantic* (Boston, 1964), p. 132.

A successful U-boat blitz, consisting of as many as six U-boats operating simultaneously against unescorted merchant traffic, ". . . gave the Gulf Sea Frontier the melancholy distinction of having the most sinkings in May . . . of any area in any month during this war."[3] In a similar adventure in early May, Doenitz authorized a foray into the Strait of Belle-Isle, the north-eastern exit from the Gulf of St. Lawrence. This was in keeping with the determination of the *Kriegsmarine* to counter the reduction of available targets in American waters along the east coast.[4]

German submarines had been probing Canada's Atlantic coast since January 1942. Kapitanleutnant Reinhard Hardegen of U-123, a front boat for 2 *Unterseebootsflotille*, sank the British freighter *Cyclops* off the coast of Nova Scotia on 13 January 1942 while moving into American waters to take part in Operation *Paukenschlag,* Doenitz' strategic advance against the North American coast.[5] At a cost of ninety-four lives, the sinking of *Cyclops* jolted some Canadians into the realization that this war was not necessarily foreign; its impact reached to the home shores.

This would be even more important in May 1942 when U-553 made the first incursion of German forces in the Gulf of the St. Lawrence.[6] U-553 was only one of fifteen Type VII U-boats which sailed from Europe in April for operations along the American coast. Three submarines

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[3]Ibid., p. 142.

[4]Karl Doenitz, *Memoirs: Ten Years and Twenty Days*. Translated by R.H. Stevens (London, 1959), p. 216.

[5]"Top U-Boat Aces: Reinhard Hardegen" *uboat.net - The Commanders.* <"http://www.uboat.net/men/hardegen"> Viewed April 19, 2002.

[6]Michael Hadley, *U-Boats against Canada: German Submarines in Canadian Waters* (Kingston, 1985), p. 52.

besides U-553 were deployed to the Canadian coast on orders to disrupt convoys sailing to and from Halifax, Sydney and St. John's and hold Allied ASW forces in Canadian waters.[7] After several days' searching for a large troopship convoy, Kapitanleutnant Karl Thurmann of U-553 was bound for Halifax when he encountered his first target on May 6, an eastbound steamer accompanied by what he perceived to be a corvette.[8] What followed was symptomatic of many of the encounters between U-boats and ASW forces in Canadian waters.

Thurmann's attack on the steamer failed, and U-553 was forced to submerge while the merchant ship's escort retaliated with depth charges. Thurmann and his crew were further harassed by an aircraft the following day which dropped three close bombs, severely damaging U-553 and diverting Thurmann into the quieter waters of the Cabot Strait to conduct repairs.[9] As repairs were completed, Thurmann took the initiative to explore the vast Gulf of the St. Lawrence for targets of opportunity. He did not do so undetected: his position was intercepted by a shoreline High Frequency/Direction Finding (HF/DF) station, and he was attacked again by a B-17 aircraft from the American Air Striking Force based at Gander, Newfoundland.[10] The plane dropped five bombs which caused minor technical damage to the submarine. The aircraft did not quickly report U-553's presence to other Allied ASW forces and the attack was broken off, which allowed Thurmann to escape deeper into the Gulf. Canadian waters had not been kind to Kapitanleutnant Thurmann. Michael Hadley related the troubles facing U-553 even *before* the

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[7]Clay Blair, *Hitler's U-Boat Hunters* (New York, 1996), p. 570.

[8]Hadley, *op. cit.*, pp. 84-85.

[9]Blair, *op. cit.*, p. 570.

[10]HF/DF stations surrounded the Gulf of the St. Lawrence, and were often the only way to detect intruders in coastal waters. Sonobuoys were not present in Canadian waters in 1942.

Battle of the St. Lawrence began: "U-553 had not only been seen; it was suffering technical problems . . . its periscope required welding, the motor for the bow-planes malfunctioned; repairs on the bow-planes themselves . . . might betray its position . . . . Equally disturbing, the transmission of the target acquisition equipment was malfunctioning as well."[11] Indeed, the reported sightings had already warranted Eastern Air Command to commence air patrols over the Gulf.[12]

Despite the unpromising portents for the hunters, Thurmann's patience and persistence in exploring the Gulf paid off. On May 11, 1942 Thurmann intercepted five freighters leaving the St. Lawrence River, heading east to a rendezvous in Cabot Strait.[13] Thurmann fired four of his torpedoes while surfaced and sank the Dutch-owned 4700-ton *SS Leto* and the British-owned *SS Nicoya*. The Battle of the St. Lawrence began, not on explicit orders from the *Kriegsmarine,* but as a result of the fortunes of war and the initiative of a single commander.

The repercussions of this attack were much stronger than those felt after U-123's incursions: the 'St. Lawrence Incident' came as a shock both to Ottawa and to Berlin. While Berlin quickly capitalized on the victory for propaganda purposes, and initiated steps to exploit this newly-opened theatre of operations, the Canadian government and Naval staff took steps to control the situation. Angus L. Macdonald, the Minister of Naval Services, made a surprisingly frank public announcement about the sinkings in an attempt to counter the propaganda broadcasts emerging from Berlin.

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[11]Hadley, *op. cit.*, p. 87.

[12]Brian Tennyson and Roger Sarty, *Guardian of the Gulf* (Toronto, 2000), p. 263.

[13]Stephen Leacock, *Canada's War at Sea* (Montreal, 1944), pp. 39-40.

> . . . this morning the German radio announced with great glee that a ship had been sunk in the St. Lawrence by one of their submarines; that this was the greatest distance from home their submarines have ever operated; that the whole thing had produced tremendous consternation . . . and generally played the news up to the utmost degree. It is obvious that if they attach such importance to the matter, we also should attach similar importance to it, and we cannot dash around, giving out information which may in any way endanger the safety and lives of our men or the safety of our own or allied property . . . .[14]

For their part, the RCN put defence plans into effect to freeze local traffic and organize tight convoys to maximize security. Thurmann remained beyond their grasp. After a fruitless search for further targets in the St. Lawrence and numerous commendations received over the radio including a personal congratulations from Doenitz himself, Thurmann eventually left the Gulf of the St. Lawrence silently on 21 May to lurk off the coast of Newfoundland before setting sail for home.

Before discussing the actual Battle of the St. Lawrence in August, it is important to examine the resources available to both the German and Allied combatants: what ships did they possess, what were their relative strengths and weaknesses, and what plans were in place for the defence of the Gulf? It is fairly clear that the German raiders suffered a distinct disadvantage, namely their distance from friendly seas and skies. The very distance of the North American coastline from submarine pens in France, some 3000 nautical miles, dictated that only long-range U-boat designs such as the Type IXB were useful. The Type IXB was a big submarine, 250 feet long with a displacement of 1430 tonnes and designed specifically for operations far outside

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[14]Canada. House of Commons, *Debates*. (13 May, 1942), p. 2390. The policy of silence on future sinkings was further elucidated to the press in a number of notes from the Director of Censorship to newspapers and broadcast directors noting the dangers of revealing too much information. DHIST 1650/239-16B v. 1 *Sinkings in the St. Lawrence, May 11, 1942: Notes on the Publication of News Stories.* May 21, 1942.

home waters with an increased range of 12000 nautical miles at 10 knots on the surface. The IXB was also well-provisioned with torpedoes, each submarine was equipped with twenty-two, with four bow tubes and two in the stern.

The increased range and larger number of torpedoes allowed for a longer, more profitable patrol in North American waters. The IXB were among the most successful U-boats, each averaging about 100,000 tonnes of sunken shipping. Reinhard Hardegan's attack in January, 1942 was conducted in a Type IXB.[15] The IXB was in short supply during the first stages of the North American offensive, with only twelve of the twenty available ships not engaged in patrol or requiring extensive overhauls.[16] U-123 and five others were the only ships to be sent to the American coast originally in order to deliver a psychological blow in Operation *Paukenschlag.* In order to sustain the attack, however, Doenitz was forced to turn to the more numerous workhorses of the *Kriegsmarine,* the Type VIIC U-boat.

Type VIIC was far more limited operationally than their larger cousins. Smaller at 220 feet and with a displacement of 517 tons, their range was substantially less than the type IX: only 8500 nautical miles at 10 knots in calm conditions. The Type VIICs were also equipped with far fewer torpedoes, further decreasing their usefulness at long-range (even if one assumed that all the torpedoes worked properly, which they often did not.)[17] Regardless, U-Boat Command's (BdU) calculations predicted that an effective patrol could be established in the Nova Scotia-

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[15]"Type IXB: Most Victorious," *uboat.net - U-boat Types.* <"http://www.uboat.net/types/ixb.htm"> Viewed May 7, 2002.

[16]Clay Blair, *op. cit.*, p. 438.

[17]"Type VIIC: The Workhorses," *uboat.net - U-boat Types.* <"http://www.uboat.net/types/viic.htm"> Viewed May 7, 2002.

Newfoundland area which would permit a reasonable patrol duration and the fuel capacity to travel at high speeds for short periods of time.[18] The patrols could only be sustained if U-boat tankers (known as 'milch-cows') were present, but there were few available for long-range operations in early 1942. Seven Type VIICs were sent to the North Atlantic coastline to supplement the Type IXs in January, 1942, but terrible weather conditions curtailed any success in Canadian waters. As the crews and ship's engineers found ways to stock more fuel and use it more efficiently through experimentation and initiative, however, the Type VIIC's effective radius of action increased substantially, allowing longer patrols in American waters.[19]

U-boat Command's control over the deployed forces' tactics was much less centralized than was suspected by Allied intelligence. Given the large distances between headquarters and the submarines, U-Boat Command depended on the initiative of the individual U-boat commanders in both Operation *Paukenschlag* and later deployments to seek targets of opportunity on their own rather than in 'wolf packs.' As Clay Blair relates, the North American offensive was tactically similar to the first U-boat campaign in European waters: U-boats operated independently over a wide area, and struck simultaneously when the signal was given.[20] Guidelines in *The U-Boat Commander's Handbook* indicate the importance of creativity and flexibility for commanders facing the enemy. "In all operations against the enemy, the commander of the submarine is entirely independent, and free to make his own decisions, unless

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[18]Karl Doenitz, *op. cit.*, p. 201.

[19]Ibid., p. 205. The manner in which the U-boat crews helped themselves rather than wait on supply ships is keenly illustrated in Lothar-Gunther Buchheim's *U-Boat War*. Translated by Gudie Lawaetz. (Toronto, 1979), Chapters "VII-C" and "Preparations".

[20]Clay Blair, *op. cit.*, p. 441.

special cooperation is called for."[21] U-123's attack on SS *Cyclops* and U-553's incursion into the Gulf of the St. Lawrence were both perfect examples of action and exploration by a U-boat captain independent of central orders. In fact, much of U-Boat Command's intelligence, when not transmitted directly from U-boats in operation in North America, had to be pieced together from facts gleaned from newspaper articles and radio broadcasts. Ultimately, given the distance and difficulty of coordinating a largely independent transatlantic strike force, U-boat commanders became the arbiters of life and death in North American waters.

Opposing the U-boats in Canadian waters was a modest naval force. Drawing upon the lessons of U-boat incursions during World War I, the Chief of Naval Staff (CNS) Commodore Percy Nelles wrote the first appraisal of Canada's coastal defences in his 'Defence of Trade' in February 1937. According to his assessment, the only threat with which the Canadian navy needed to be directly concerned was the safe delivery and distribution of troops, food, and materiel to the seat of the Empire. Nelles envisioned that defence from surface ships such as raiders, destroyers and other armed vessels was a more serious threat to open sea routes and terminal ports than submarines. He even predicted aerial assaults on inland communications routes.[22] Nelles minimized the submarine threat for two reasons. He viewed the submarine as an offensive weapon which had been restricted by the adoption of Part IV of the 1930 London Naval Treaty (to which Germany was never bound): submariners would act as surface ships when approaching a commercial vessel, taking the time to inspect its cargo and if no contraband

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[21]High Command of the Navy, *The U-Boat Commander's Handbook* Command 52, No. 4. U. Kdt. HdB, 1942. (Gettysburg, 1989), Paragraph 4-16.

[22]NA, MG 27 III B-5 Vol. 37 D-26, "Defence of Trade" Commodore Percy Nelles, Chief of Naval Staff, 12 February 1937.

was found, the submarine would let the vessel pass unmolested. The second reason for Nelles' lowered estimation of the submarine is clear:

> If international law is complied with, submarine attack should not prove serious. If unrestricted warfare is again resorted to, the means of combating submarines are considered to have so advanced that by employing a system of convoy and utilizing Air Forces, losses of submarines could be very heavy and might compel an enemy to give up this form of attack.[23]

Nelles' predictions about submarines were based largely on the line of thinking then present in the Admiralty. Michael Hadley observes that Nelles shared an assumption with most naval staffers that the new technology of the Allied Submarine Detection Investigation Committee, or ASDIC, would fully neutralize the submarine as an underwater threat.[24] What is more interesting is that Nelles placed the air force, rather than the Navy, as the first line of defence against submarine incursions in Canadian waters. This may have been due to the poor showing of the RCN during the first World War when German submarines sank a number of fishing vessels near Nova Scotia, as well as the increased availability of air cover. In this brief report, Nelles did not draft a specific plan for defence of coastal waters. Rather, he set out some loose guidelines to be followed in the event of the outbreak of hostilities.[25] These included the establishment of general censorship, the control of wireless traffic, enemy aliens, and of aids to navigation (ie light sources and radio beacons), as well as the requisition of shipping and craft required for local

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[23]Ibid.

[24]Hadley, *op. cit.*, p. 11.

[25]NA, MG 27 III B-5 Vol. 37 D-26, 'Defence of Trade' Commodore Percy Nelles, Chief of Defence Staff, 12 February, 1937.

defence of ports, and the control of enemy shipping.[26]

By 1940, any illusions about the weakness of the submarine or the intentions of the enemy to follow international law were long dead. Within the first hours of the war, a passenger liner, the SS *Athenia,* was sunk by a submerged U-boat without warning, killing 112 passengers and crew, Canadian and American civilians among them.[27] With the vulnerability of Great Britain clear even before the fall of France, and the importance of the Atlantic supply-bridge even more so, planners had to look at the question of the defence of the Canadian waters more seriously. At assembly points for Atlantic convoys, merchant ships were especially vulnerable to torpedo attack in large numbers.

These new realities necessitated some changes in Canadian defence planning. With this attitude, 'Plan G' was initiated on March 29, 1940. 'Defence of Shipping in the Gulf of St. Lawrence' was a shrewd plan which foresaw great dangers from submarines entering Canadian waters. Submarine activity was predicted between May 1 and November 1, with a maximum of

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[26]This was not substantially different than the approach taken during the First World War, when the majority of the RCN's local defences were composed of requisitioned ships, converted yachts and trawlers. "In other perhaps even more important matters, in particular the naval defence of important Canadian ports, there had apparently been little planning. See DHH 73/635, *Ships and Vessels of the RCN on the Atlantic Coast in the Great War 1914-1918.*, p. 1.

[27]Though this was evidently an error on the part of the offending U-boat captain, Fritz-Julius Lemp of U-30, even after the attack he did not follow the Prize Rules: he did not report the sinking to his command and did not offer any aid to the survivors before continuing his patrol. The sinking shocked and angered Canadians, who had not yet declared war on Germany on September 3, 1939. Furthermore, the sinking of the *Athenia* led to a direct order from Hitler forbidding attacks on passenger ships regardless of nation or location. Tonya Allen, "The Sinking of the SS Athenia," *uboat.net - Articles* <"http://www.uboat.net/history/athenia.htm"> Posted 21 March, 1999. The Canadian response is seen in a number of newspaper articles. A good example is found in Drew Middleton, 'Survivors' Pathetic Stories: Many Women and Children Among Dead and Injured' *The Ottawa Evening Journal*, September 5 1939, p. 1.

three submarines expected. Two of these submarines were expected to lay magnetic and contact mines along the shallows. It was expected that aircraft under Eastern Air Command would help search for U-boats in addition to the local naval defence forces, one or two destroyers and approximately 12 armed yachts and motor launches. Plan G established a system of defence which required the allocation of A/S ships to either Sydney or Gaspé, the use of aircraft to patrol during daylight hours, and the grouping of ships into escorted convoys. The convoys were directed to specific routes in the Gulf, following the deepest water possible to avoid possible damage from mines.[28] Most notable for the purpose of this investigation, however, is the final point of Plan G. "The final phase of this plan, Phase VII, is *obviously the closings of the Gulf and River St. Lawrence to shipping entirely, and the routing of all ships to Halifax.* [italics mine]"[29] The decision to close the St. Lawrence, which is discussed in greater detail below, was considered by the author of 'Plan G,' future Chief of Naval Staff Commodore L. W. Murray as an acceptable defensive measure as early as 1940.

The formula set out by Plan G carried over into the next two defence plans, GL and GL2. Plan GL, issued April 18, 1941, proposed much the same program, with four phases of defence. The first phase was the opening of navigation: all ships were to sail independently. Phase II was initiated in the event of a definite enemy sighting - all ships would be diverted as far as possible away from the last sighted location, and the nearest hunting group and a limited number of aircraft would be sent to patrol the area. Murray attempted to establish a central guiding

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[28]"Defence of Shipping in the Gulf of St. Lawrence, Short Title--Plan G," April 29, 1940, PAC, RG 24 6788 NSS 8280-166/16/v.1.

[29]Ibid.

principle for coastal defence with regard to shipping: "The general principle to be followed will be to attempt to avoid any dislocation of naval shipping unless a series of enemy reports or actual attacks indicate that enemy operations . . . are of a serious and concentrated nature."[30] Phase III would take place if concentrated attack were experienced. Slow ships were slated to be placed in convoy with two escorting ships in four day cycles. Ships with speeds exceeding 12 knots were to sail independently, zig-zagging to reduce their chances of being struck with a direct hit. Finally, Phase IV called for the closure of the St. Lawrence to Gulf and river traffic, with the necessary goods to be shipped over rail and land to Halifax or Sydney. The plan also encouraged close cooperation between the RCN and merchant shipping to ensure safety, indicated a growth in the corvette shipbuilding program (four corvettes were to be allocated to Gaspé in the event of attack)

The plan adopted closest to the outbreak of the battle of the St. Lawrence was Plan GL2, issued April 1, 1942. The plan recognized the U-boat as the primary threat to shipping, foreseeing an attack in the shipping season, but by torpedo, not by minefields. This plan had three phases of naval control of shipping: first, a dividing line separating naval traffic into ingoing and outgoing lanes, the second commencing when new construction ships were completed, and the third phase, a confirmed *attack*, not sighting, would initiate the convoy system at Quebec and Sydney, with an assembly anchorage south of Bic Island. Close cooperation with R.C.A.F. was demanded to compensate for a small naval force. Oddly, Plan

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[30]"Defence of Shipping-Gulf of St. Lawrence, Short Title--Plan GL," April 18, 1941, PAC, RG 24 6788 NSS 8280-166/16/v.1.

GL2 made no mention of the closure of the St. Lawrence.[31] However, when the first attacks took place in May 1942, Plan GL was initiated, not GL2, which *did* make provisions for the cessation of shipping in the event of a persistent attack. What is also very interesting is that *none* of the plans envisioned since 1937 called for a diversion of naval strength from the ocean routes in the event of a threat to Canadian waters.

Canadian naval forces available to combat the German raiders from May-September 1942 were, in a word, sparse. Plan GL2 made provisions for the St. Lawrence Naval Force which consisted of twenty warships and was based at Gaspé, to escort convoys and respond to attacks under the control of the Naval Officer-In-Charge (NOIC Gaspé). These ships were divided into groups of five each consisting of one corvette, two Bangor Class minesweepers, and an armed yacht.[32] The corvette represented the backbone of the RCN in the Second World War. Used in every theatre, the corvette was an extremely convenient choice for expanding the RCN, because its low cost and quick shipbuilding schedule allowed for vast numbers to be built in a short period of time. They were originally designated as coastal patrol vessels, because their single-screw propulsion and short, forward-placed forecastles made the corvette unsteady in the heady waters of the Atlantic and a very wet ride indeed.[33] By the end of the war, some 130 corvettes of

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[31]"Defence of Shipping-Gulf of St. Lawrence-1942 (Short Title--Plan GL2)," 1 April 1942, PAC, RG 24 6788 NSS 8280-166/16/v.1.

[32]DHIST 1650-239/16B v. 1 'Naval Aspect of the Defence of the Gulf & River St. Lawrence', p. 1. The corvettes were His Majesty's Canadian Ships *Weyburn, Arrowhead, Charlottetown, Hepatica, and Lethbrandy*. The minesweepers were HMCS *Burlington, Medicine Hat, Chedabucto, Clayoquot, Verreville, Red Deer, Grandmere*, and *Truro*.

[33]'FLOWER Class,' *Haze Gray And Under Way - The Royal Canadian Navy of Yesterday and Today* <"http://www.hazegray.org/navhist/canada/ww2/flower/"> Viewed May 13, 2002.

different classes had been built in Canada alone, most of which were serving in the Atlantic as escorts. In calm waters, the corvette had a distinct advantage over other warship designs: ". . . she could turn on a dime, the only Allied warship with a turning circle tighter than that of a submarine, and in consequence she was the master of the U-boat in manoeuvering [sic] duels that would foil any other surface escort."[34] The corvettes serving as escorts in the Gulf of the St. Lawrence were, with some exception, Flower Class corvettes, the first design approved by the Admiralty in 1939, commissioned into the RCN in early 1941.[35] The Flower Class was a small ship, displacing 950 tons, and approximately 205 feet in length. At their maximum speed of 16 knots, most corvettes could easily overtake any U-boat, surfaced or submerged. With a maximum complement of 95 men, the corvette was bristling with small arms - each was in possession of at least four twin heavy machine-guns and a single 4-inch Mk IX gun on the forward deck. The Flower Class possessed 40 depth charges, capable of delivery either by two rear depth-charge rails or two side Mk II depth charge mortars, or 'throwers'.[36]

Only one of the corvettes serving in the Gulf was a revised Flower class corvette, the ill-fated HMCS *Charlottetown*. The revised Flower class corvettes were designed to supplement the overworked Flowers, the revised class was slightly heavier at 1015 tons. The best improvement in the revised Flower class corvettes were the extended forecastles and longer range than their predecessors, and were more heavily armed. The revised class had a 2-pounder anti-aircraft gun as well as two 20 mm Oerlikon machine guns. Though the revised Flower class is listed as being

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[34]James B. Lamb, *The Corvette Navy* (Toronto), p. 3.

[35]"FLOWER Class", *op. cit.*

[36]Ibid.

armed with a forward ASW mortar, or 'Hedgehog', it is not clear that HMCS *Charlottetown* was so equipped.[37] This revised corvette class was also equipped with four depth charge throwers instead of the two featured on their cousins. However well-armed and formidable the corvette was in coastal waters, sometimes mistaken for destroyers by U-boat observers, their number in the Gulf of the St. Lawrence was too small to be terribly effective - there were not enough ships to serve in concentrated patrols in the event of an attack and also maintain coastal convoys.

Bangor class minesweepers were available in larger numbers. The Bangor class was well-suited for patrol on the Great Lakes, but was more unstable at sea than the corvettes. At 650 tons and approximately 170 feet in length, the Bangor minesweepers were capable of being built and manned quickly, and were just as powerful as corvettes. Their maximum speed was 16.5 knots in calm water, and they were powered by either diesel or steam engines, depending on the time of their construction.[38] Though most Bangor class ships were equipped with electrical minesweeping gear, those held by the RCN for coastal patrol were converted into dedicated ASW vessels capable of carrying 90 depth charges, delivered via depth charge rails and two throwers.[39] Their surface weaponry was similar to that found on the Flower class, with a 4 inch gun or smaller, and two 20 mm Oerlikon machine guns.

The backbone of the coastal patrol forces were the various armed yachts, motor torpedo boats and motor launches that built up rapidly in coastal waters during the first years of the war.

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[37]"Revised FLOWER Class," *Haze Gray and Underway - Royal Canadian Navy of Yesterday and Today* <"http://www.hazegray.org/navhist/canada/ww2/revflowr/"> Viewed May 13, 2002.

[38]"'Bangor,' 'Bathhurst' and 'Algerine' Classes," in *The Complete Encyclopedia of Weapons of World War II.* Edited by Chris Bishop, (Etobicoke, 1999), p. 515.

[39]Ibid.

Though very small and limited in range, these ships were valued by the RCN as an efficient and thrifty solution to protecting Canadian coastal waters. ". . . by the provision of M.T.B.'s and M/L.'s, a fast and efficient striking unit is provided against any raider, surface or submerged, who may approach our harbours. All these vessels are therefore an invaluable auxiliary to our destroyers, which are the main striking force of the Canadian Sea Forces."[40] The armed yachts were actually private vessels chartered either from other government departments or purchased from private citizens, and designated as Animal class warships. A number of these vessels were purchased from the United States, where they had been used as coastal patrol craft in the Great War. Their size, speed, space and armament varied, but most coastal escorts were fitted with one primary deck gun and depth charge rails. With the appearance of corvettes and the minesweepers, however, these aging vessels were slowly becoming outclassed in the RCN. None were kept on after the war, most were either returned to their original owners or bought by Atlantic coast businesses. Only two of the Animal Class yachts were lost in the duration of the war.[41]

The motor launches featured prominently in the RCN ship-building programs from 1940 onwards. They served as dependable speedy coastal escort and patrol craft for the duration of the

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[40]'Appreciation: Canada's Naval War Effort During 1941' PAC, RG 24, D-10, Vol. 11506

[41]"History and Heritage: Ships of the RCN 1939-1945," *Project Pride.* <"http://www.navy.dnd.ca/pride_html/history/ships_39_45/ships_39_45a1_e.htm"> Viewed May 15, 2002. The yachts in service with the RCN in the Second World War were HMCS *Acadia, Beaver, Caribou, Cougar, Elk, Grizzly, Husky, Lynx, Moose, Otter, Raccoon, Reindeer, Renard, Sans Peur, Vison*, and *Wolf.* For information on the specific details of their commission and eventual disposal, see 'Armed Yachts Requisitioned for the Royal Canadian Navy,' DHIST 73/1232, 27 June 1973.

war, and actually replaced the Animal class yachts at the end of 1945. The primary class of motor launch was the Fairmile Type 'B', a 108 foot long launch with a narrow beam and low silhouette. With a compliment of 20 ratings, the Fairmile was a cramped vessel. The Fairmiles were armed with a 3 pound gun, twin aft machine guns, and twelve depth charges. Their top speed of 20 knots enabled quick pursuit and deployment to anywhere in the Gulf, and their design was perfect for coastal ASW.[42] The 1940-1942 RCN procurement program provided 36 motor launches, with all but one flotilla designated for service in the Gulf. Only the 73rd Flotilla operated outside Canadian waters, serving off the coast of Florida until the spring of 1943.[43] The small ships served one of the most important roles in the Battle of the Atlantic by replacing the bulk of larger ships such as corvettes in coastal escort duties, permitting better protection in the Atlantic sea-lanes.

All of the Canadian ships in the Gulf had an added advantage which the Germans did not: near infinite supply from the naval bases, refueling stations and depot ships in coastal waters. An example of the importance of these stations was HMCS Fort Ramsay, a naval base newly constructed and commissioned on May 1, 1942 at Gaspé, Quebec. Though the base continued to expand until 1944, upon its commissioning, HMCS Fort Ramsay served as both a naval and seaplane base. Fort Ramsay and its predecessors at Halifax and Sydney were equipped with a hangar, wharf, reserve jetty, barracks and full administrative facilities, and were well-

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[42]For cutaway design plans, see DHIST 85/703. For further technical information, consult the Fairmile B entry in *The Encyclopedia of Weapons of World War Two.*

[43]A flotilla consisted of six of these motor launches. "History & Heritage: Ships of the RCN 1910-1939," *Project Pride.* <"http://www.navy.dnd.ca/pride_html/history/ships_39_45/ships_39_45c2_e.htm"> Viewed May 16, 2002.

provisioned with workshops and reserve fuel tanks and a marine railway. The base itself used A/S boom defences (an anti-submarine and torpedo net controlled by gate vessels, typically former Great War Battle Class trawlers), and was a strategic deployment point for Fairmile motor launches to anywhere in the Gulf.[44] Over the following months, HMCS Fort Ramsay was a welcome addition to Canadian defences in light of the renewed submarine offensive in August, 1942.

The Royal Canadian Air Force played a substantial role in the Battle of the St. Lawrence. When compared to the coastal forces of the RCN, RCAF squadrons were much better supplied with patrol and reconnaissance craft of different makes, based at a number of locations surrounding the Gulf.[45] The Lockheed A-28 Hudson and the Consolidated PBY Catalina Flying Boat, dubbed the 'Canso'. Both were purchased from the United States at the beginning of the war. Thereafter Canadian manufacturers obtained a license to build them to RCAF specifications.

The Consolidated PBY-5A Catalina Flying Boats were acquired by the RCAF early in the war, and were in great demand for coastal defence both at home and overseas service with

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[44]Pictures of the construction, plans and final format of HMCS Fort Ramsay are found in DHIST, R F - Fort Ramsay, HMCS. The base was slated as one of three defensive East Coast naval bases in case the United Kingdom should be overrun in 1940 and the Royal Navy required new harbours. As the threat to the United Kingdom faded over time, the focus shifted from safe harbours for the Royal Navy to a defensive hub in possible future German submarine campaigns in Canadian waters. "The Gaspé Base," *Veterans Affairs Canada* <"http://www.vac-acc.gc.ca/general/sub.cfm?source=history/secondwar/battlegulf/gaspe"> Viewed May 16, 2002.

[45]Most prominent and important among these bases were located in Gaspé, Chatham, and Sydney.

RAF Coastal Command. Starting with a skeletal force of 14 Catalinas, Canadian Vickers and Boeing produced an additional 369 aircraft of this model by May, 1945.[46] Named the Canso Flying Boat in Canadian service, these large aircraft had a 104 foot wingspan and carried a crew of nine. The maximum speed of the Canso was 288 kilometers per hour, and each had a maximum range of 4095 kilometers. Armaments aboard the aircraft were heavy, with two 12.7 mm machine guns in the bow turret, another machine gun in each beam blister and a bomb or depth charge load capacity of 4000 pounds.[47] The long range and heavy armament of these flying boats made them perfect for long patrols, though there was some concern that its size and reduced maneuverability made it an easy target for submarine anti-aircraft fire.[48] Other flying boats were used in coastal service in the RCAF, such as the Digby Flying Boat and the Supermarine Walrus, but these were fewer in number.

The Lockheed A-28/A Hudson was another important addition to RCAF coastal defences, serving as an extensive AS patrol and convoy escort craft. During the war, approximately 247 Hudsons flew in the RCAF, a number of which were based around the Gulf. Much smaller than the Canso flying boats, these medium bomber aircraft had a wingspan of 65.5 feet, and were much faster with a maximum airspeed of 394 kilometers per hour. Their range was much less than the Cansos, but still quite functional for coastal defence at 3136 kilometers. Weaponry aboard the Hudsons was also extensive, with two fixed 7.7 mm machine guns in the

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[46]"Historical Aircraft: Consolidated PBY Canso," *Canada's Air Force Equipment.* <"http://airforce.forces.gc.ca/equip/cansolst_e.htm"> Viewed May 17, 2002.

[47]"Consolidated PBY Catalina", *The Complete Encyclopedia of Weapons of World War II,* Edited by Chris Stephens, p. 370.

[48]It was for this reason that the proposal to equip the Catalina with torpedoes was rejected. See the discussion among Coastal Command staff in DHIST AIR 15/488.

nose of the aircraft and two in the dorsal turret. The Hudsons had a much lower bomb capacity at 1400 lbs of bombs or depth charges.[49] The Hudsons were far more maneuverable than other aircraft which served with the RCAF in defence of the Gulf.

The actual availability of aircraft for coastal defence and their location was outlined in a conference held at Eastern Air Command headquarters in Halifax, Nova Scotia. Eastern Air Command, as defined in the minutes of the conference, was the RCAF section responsible for the sea area north of the U.S. coastal zone, along the Canadian Atlantic Coast as far as aircraft range would permit and as far north as aircraft could operate. In short, Eastern Air Command (EAC) was responsible for the defence of Canadian waters and their approaches during the Second World War. The forces were universally Canadian with the exception of the area covered by the U.S.-leased base in Argentia, Newfoundland.[50]

The majority of aircraft available for defending the Gulf and its approaches were grouped into A/S Bomber Reconnaissance (BR) Squadrons. The minutes from a 1942 Eastern Air Command conference indicate that aircraft were dispersed among the following bases:

a) Torbay, Newfoundland: One Flight (4 Hudsons) of No. 11 BR Squadron

b) Gander, Newfoundland: No. 10 BR Squadron (10 Digbys)

c) Sydney, Nova Scotia: No. 119 BR Squadron (15 Bolingbrokes but rearming with Hudsons)

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[49]Forest Garner and Emmanuel Gustin, "Fighting the U-boats: Aircraft and Air-forces, Lockeed Hudson Patrol Bomber," *uboat.net* <"http://www.uboat.net/allies/aircraft/hudson.htm"> Viewed May 17, 2002.

[50]"Notes and Recommendations Resulting from a Discussion at Eastern Air Command Headquarters on February 11, 1942." NAC, RG 24, vol. 3894, NSS 1034-3-8 v. 1.

d) Dartmouth, Nova Scotia: No. 5 BR Squadron (5 Cansos and 7 Canso Amphibians)

: No. 11 BR Squadron (7 Hudsons)

: No. 116 BR Squadron (5 Catalinas, 2 Cansos, 6 Canso A's)

e) Yarmouth, Nova Scotia: No. 113 BR Squadron (15 Hudsons)[51]

By the time of the St. Lawrence Incident, 79 aircraft were readily available to partake in coastal patrol sweeps or aid in the protection of coastal convoys. This figure does not include the Air Striking Force squadron of the USAF based at Gander or the AS & General reconnaissance squadron based at Argentia. Expansion was also underway during this period, with an additional 54 Canso flying boats slated for purchase and construction by 1943, as well as ambitious plans to base a number of fighter squadrons under Eastern and Western Air Commands for use in the event of attack by enemy aircraft. These plans were put forth in a letter dated 28th April, 1942 from the Director of Plans in the Air Ministry Overseas to bolster the RCAF Home Defence Plan.[52]

Cooperation between the RCN and the RCAF in coastal waters had been a vital part of Canadian defence planning since 1940, and proved to be a decisive factor in determining the outcome of any encounter with the enemy. For this reason, the Home Defence Establishment provided for a number of liaison officers to be posted in order to facilitate better communication between the services. The RCAF liaison officer to the Navy, for instance, was posted under the

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[51]Ibid.

[52]DHIST AIR 2-5260

command of a Senior Air Staff Officer with the Operations and Intelligence Section of Eastern Air Command.[53] Cooperation was assured by placing these liaison officers in the headquarters of Eastern Air Command and of the Commanding Officer Atlantic Coast (COAC) Headquarters, respectively. Direct communication between the RCN and the EAC was also established with the installation of a direct telephone line between Air and Naval Operations rooms.

Cooperation between the RCAF and RCN based in Newfoundland was enabled by the proximity of the EAC Headquarters and the Flag Officer Commanding Newfoundland (FONF).[54] To an extent, cooperation was also predicated on the RCAF's dependence upon the intelligence gathered at Naval Services Headquarters in Ottawa. The intelligence estimates were accrued by plotting the sightings of U-boats, intercepted D/F transmissions, torpedo attacks, Admiralty reports on approximate submarine positions. In general all information was plotted on a map and recorded permanently. Specific submarines were given a letter designation and once recorded could be effectively tracked. Through the use of these 'Y estimates', aircraft patrols could be directed over danger areas in the submarine's probable patrol route, just as coastal convoys could be directed away from them. In fact, the RCAF Operations relied completely on the Y estimates information emanating from NSHQ (Ottawa) for sending out convoy coverage and patrols.[55] In later sections I will assess how effectively this intelligence and cooperation were used when in contact with the enemy.

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[53]'Eastern Air Command--Organization' PAC, RG 24 Vol. 5216, E-1-b, 19-6-1.

[54]"Notes and Recommendations Resulting from A Discussion at Eastern Air Command Headquarters on February 11, 1942.' PAC, RG 24, vol. 3894 N.S.S. 1034-3-8, v.1.

[55]"Report—Course of Instruction: Naval 'Y' Intelligence" PAC, RG 24, E-1-b, vol. 5272, 28-5-10.

The nature of the battlefield itself would contribute to the character of the Battle of the St. Lawrence. The Gulf of the St. Lawrence, a large body of water, spans hundreds of nautical miles, and is like a coastal sea all on its own. Apart from the adverse weather conditions in the often fog-bound area, the Gulf of the St. Lawrence possesses a hydrographic property which is unique on the Atlantic Coast and quite advantageous to submarines.

> The Gulf was a huge mixing ground of fresh and salt, cold and warm, and the subsequent layering of water into strata, each level at a slightly different temperature from those above and below it, made the sonar sets . . . almost totally useless. . . . a submerged submarine was as safe as a church anywhere in the Gulf.[56]

This mingling of fresh and saltwater, and the separate temperature layers caused the detection beam emanating from ASDIC sets to become refracted through the layers, reducing the chances of locating a submerged U-boat.

The bathythermographic peculiarity was noted and investigated by the RCN following the Battle of the St. Lawrence. One report which resulted from these investigations was submitted to the NOIC (Gaspé) by Staff A/S Officer G. A. Maclachlan on November 2, 1943, a full year after the conclusion of the Battle of the St. Lawrence. Maclachlan reported that though several areas of the Gulf of St. Lawrence contained very poor ASDIC conditions, generally the conditions in the Gulf were considered fair to good. Many had non-submarine echoes due to fish, however, and visible temperature gradients were considered troublesome for inexperienced ASDIC operators.[57] Maclachlan's findings were disputed in a memo to the Commander-In-Chief

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[56]James B. Lamb, *On the Triangle Run.* (Toronto, 1986), p. 99.

[57]"Report on A/S Conditions in Gulf of St. Lawrence Area May-November 1942" PAC, RG 24, Vol. 12009, D-10, G:23-4-1.

North West Atlantic, however, which stated that the ships used to carry out the A/S sweeps in the report were small motor launches, and the findings were highly subject to weather conditions. "Further, with a wind of greater force than three, A/S operations in M/Ls [motor launches] are greatly hindered due to masking and quenching."[58] Later reports were also disputed because they omitted Gulf depths, echo ranges, and types of bottom encountered at location of A/S sweeps. Suffice it to say, these preliminary investigations conducted *after* the Battle of the St. Lawrence might well have contributed more to the uncertainty of A/S officers and defence planners about the efficacy of their level of training than about the problems of conducting ASW operations in the Gulf itself. Upon an examination of the conduct of the combatants and outcome of the Battle of the St. Lawrence, it soon becomes clear that members of the RCN were no strangers to uncertainty.

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[58]Ibid.

The Battle of the St. Lawrence

"The decision of the Government of Canada, following the recent losses in convoy, to close the River St. Lawrence to all Ocean shipping . . . undoubtedly represents a severe moral and physical defeat to Canada's war effort."[1]
-Cdr R. B. Mitchell, NCSO (Sydney), 15th October, 1942

Mitchell's judgement came just two days after the Sydney ferry, SS *Caribou*, was sunk in the Gulf by Kapitanleutnant Graf of U-69. The final blow of the Battle of the St. Lawrence, the loss of *Caribou* had the worst consequences, 136 passengers and crew died, including both civilians and military personnel, as well as a nursing sister. The battle itself was one marked by constant tension both by the defenders and by the U-boat commanders themselves. Of no less importance were the people living by the coast and depended on the seaborne trade of the St. Lawrence, who felt extremely threatened by the German incursions so close to home, and demanded answers to their questions about the conduct of the war at home. Although not readily acknowledged until much later, the Battle of the St. Lawrence began when Karl Thurmann in U-553 sank two vessels in the Gulf on the evening of May 11-12, 1942.

The official reaction from the Government was brisk but remarkably revealing. On May 12, 1942, the Minister for Naval Services, Angus L. Macdonald, announced that a ship had been sunk in the St. Lawrence by an enemy submarine and that no further sinkings would be announced publicly. The following day, however, Macdonald once more announced to the House of Commons that a second ship had been sunk in the same incident, and further explained why censorship was so important to the war effort. Macdonald's revelations about the sinkings were detailed, but his assurance that the matter was of utmost importance to the Canadian Navy

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[1]'Naval Control Service Officer HMC Dockyard Sydney, N.S. to Naval Officer in Charge, Sydney, October 15, 1942,' DHIST 1650-239 vol. 1.

did not satisfy his audience. The outcry in the House of Commons was immediate; the member representing Broadview, T. L. Church, demanded to know whether Macdonald ". . . was aware of the of the invasion by German submarines over the past year of the deep creeks and inlets and harbours of the islands of St. Pierre and Miquelon and flashing . . . signals at night to sink shipping?"[2] This line of questioning, clearly without a factual basis even at the time posed, was ignored by Macdonald and thrown out by the Speaker of the House. Another critic was not so easily quelled; for the duration of the Battle of the St. Lawrence the member representing Gaspé, J. S. Roy, became a constant thorn in the Government's side.

In a fashion, Roy was doing his duty by voicing concerns about the submarines operating so close to his constituency; after all, the survivors of SS *Nicoya* had landed at Gaspé.[3] It is evident that a vast difference of opinion existed between J.S. Roy and the Government about the purposes of the Navy. Several days before the May sinkings, Macdonald articulated the Navy's role in the war as one best served away from coastal waters. ". . . up to the present the task of convoying ships has been the main task of the Canadian navy. In a war of this kind the convoying of ships is a matter of the greatest importance."[4]

Roy, by contrast, clearly felt that increased patrols were needed to prevent the invasion which he felt would soon be forthcoming, based upon his proclamations in the House. Roy

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[2]Canada. House of Commons. *Debates*. May 13, 1942, p. 2390.

[3]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—Nicoya,' PAC, RG 24, D-1-b-i, S-1062-13-10 v. 10.

[4]Canada. House of Commons. *Debates*. May 7, 1942, p. 2219. Macdonald felt that service overseas fulfilled all three requirements of naval defence: to defend the coasts of Canada, escorting convoys, and taking aggressive action against the enemy wherever possible, because the greatest threat to Canada, the vast majority of U-boats was in the Atlantic, not in coastal waters.

continually demanded that a secret session be held so that he could divulge secret information which threatened Canada. Roy often went so far as to violate the proclaimed ban on revealing future sinkings publicly in July, an action which gave rise to the ire of both Mackenzie King and the Opposition leader, R.B. Hanson. The final word on the matter, after Roy was lambasted by Hanson for his lack of stoic patriotism when compared to those 'endangered constituents' in Halifax, came from Angus Macdonald.

> If he thinks for one moment that the whole Canadian Navy is going to line up along his shores and defend those shores only, letting the convoy system we have . . . go to the dogs, he is making a tremendous mistake. I am not ready to change the disposition of one ship of the Canadian navy for him or all the questions he may ask from now until doomsday.[5]

Macdonald's position was similar in private, during meetings of the War Cabinet Committee. There is little evidence among the minutes of the War Cabinet Committee that the battle which renewed in the St. Lawrence in July after a month's lull even rated as a concern for the War Cabinet. Issues which took the most importance over the summer were the defence of the Pacific in light of the Japanese threat, the dire situation of the war in Russia, cooperation with the United States and the United Kingdom; and even the formation and Canadian participation in the Allied Food Board was mentioned. The only mention that coastal defence merited was Macdonald's recommendation to build more harbour craft, and this was accepted without debate.[6] In fact, it is clear from a review of the Cabinet War Committee minutes as well as those of the House of Commons over the period which is described as the 'Battle of the St. Lawrence' that the Government did not consider the German operations in coastal waters as

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[5]Canada. House of Commons. *Debates*. July 16, 1942, p. 4126.

[6]DHIST 83/245 'CWC Minutes — May 28, 1942'

separate or any more threatening than the Battle of the Atlantic. The Canadian naval and air forces evidently felt the same, given the plans drafted over the years and the forces allocated and coordinated in coastal waters. As in the Atlantic, both viewed the threat of attack as omnipresent. As it turned out, nearly two slow months of waiting occurred before the U-boats would strike again, this time in force.

The initial German offensive against the American coastline had diminished by the middle of June 1942, owing much to the introduction of the convoy system along the east coast and the intensification of air patrol.[7] For the rest of May and June, ships passed through the St. Lawrence Gulf and River unmolested by U-boats. By early July 1942, the focus of the German submarine operations had shifted back into the mid-Atlantic convoy routes. The slow production of operable U-boats in the winter of 1941-1942, when combined with the tightening of defences along the North American coast and the reduction in daily shipping losses throughout June dictated that another 'soft spot' in Allied shipping should be exploited. By shifting back into 'the Black Pit', where no air cover was possible, the U-boats obtained ". . . their greatest freedom of action, for wolf-pack tactics could be employed without interference in all phases of surface operations, and that we could in consequence expect to achieve the maximum possible success."[8] Notwithstanding this withdrawal, German submarines still patrolled the coastal waters of North America, sustaining the tension felt by the defending forces. This tension is reflected in Eastern Air Command's monthly anti-submarine report for July, 1942. The author reported that despite a number of submarine sightings in the Gulf of the St. Lawrence, very few ships were sunk in June

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[7]Doenitz, *op. cit.*, p. 237.

[8]Ibid.

and July. It was concluded that this was either because the sea and air patrols had caused submarine commanders to be very wary of their actions, or more likely that the submarines on patrol were simply gathering intelligence for a later offensive. ". . . the fact that submarines are not doing damage in proportion to their number is puzzling."[9] The possibility that U-boats were saving their torpedoes for a grand strike later at vital areas was, to Eastern Air Command, 'disconcerting'.

Eastern Air Command overestimated the German strength in Canadian waters in the early summer of 1942, for the St. Lawrence was empty of all but one U-boat in this period. The sole U-boat which remained certainly did enough damage on its own. June passed without incident, but the tension was once more broken in July 1942 by Kaptleutnant Ernst Vogelsgang's attack on the Quebec-Sydney convoy QS-19 in U-132 on July 6, 1942. U-132 was the lone U-boat in Canadian waters in July, assigned to the operational area BB-14, the stretch of the St. Lawrence between Gaspé and Anticosti Island.[10] It was here on July 6 that Vogelsgang made a concentrated and devastating attack against QS-15, sinking three large vessels. Approaching the fog-bound convoy on the surface, Vogelsgang loosed four torpedoes, only two of which succeeded in hitting their targets.[11] The first was SS *Hainaut*, a Belgian 4312-ton steamer, which sank quickly at 49°13' N, 66°49' W. One fireman aboard was killed in the attack. The second, the 3382-ton SS *Anatasios Pateras*, was hit on the starboard side between the cross bunkers and the stoke hold, and immediately listed to an angle of 10 degrees, sinking quickly with the loss of

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[9]'Eastern Air Command Monthly A/S Report - July 1942,' PAC, RG 24, Vol. 11027, COAC 7-21-2 vol. 1.

[10]Hadley, *op. cit.*, p. 101.

[11]Ibid.

three firemen.[12]

As the convoy scattered after the initial volley of torpedoes hit home, U-132 sailed close to SS *Dinaric*, a British steamer carrying 957 tons of lumber. A single torpedo was fired, hitting *Dinaric* dead amidships at water level, crippling her. Four crew were killed in the attack, and a further two injured. The vessel was abandoned by the crew twenty minutes later, and was eventually towed to St. Anne Bay by HMCS *Chedabucto*.[13] Unlike SS *Nicoya* and *Leto* sunk by U-553 in May, however, these three ships were in convoy, and their escorts made quick pursuit. U-132 was immediately accosted by HMCS *Drummondville.* After a failed attempt to ram U-132, which submerged on *Drummondville's* approach, depth charges were dropped over the diving position. According to U-132's war diary (*Kriegestagbuch*), three of these depth charges were well placed: the boat's main ballast pump was broken, one of the ballast tanks was ruptured, and four cubic meters of oil were lost.

Vogelsgang was forced to withdraw to deal with these mechanical difficulties, and his makeshift repairs to the pumping system were not completed until July 16, 1942.[14] The day following the attack, Hudson 648 (U) on detached duty at Mont Joli carried out an A/S sweep in the area south of the Seven Islands, where U-132 had last been sighted. A 'periscope feather' was observed in the position 49°58' N, 66°23' N, and an attack was carried out. The Hudson attempted to straddle the submerged U-boat with four depth charges, and though there was little indication of damage, the crew suspected that the since the U-boat was turning to starboard

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[12]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—ANATASIOS PATERAS,' PAC, RG 24, D1-b-i, 4025, S-1062-13-10 vol. 10.

[13]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—DINARIC' PAC, RG 24, Series D1-b-i, 4025, S-1062-13-10 v. 10.

[14]U-132 War Diary, July 6 1942 in Hadley, *op. cit,* pp. 101-102.

during the attack, it might have turned directly into the last explosion. The official assessment of the attack by EAC concluded that the U-boat was 'probably given quite a shaking up, but no evident damage.'[15] The attack does not appear to be mentioned by Vogelsgang in U-132, though while repairing he did notice a discouraging amount of aircraft on patrol, and after a number of fruitless days of observation he decided to declare the area operationally unfavourable.[16]

Vogelsgang revealed his position again only to attack Quebec-Sydney Convoy 19 on July 20. The last casualty in the St. Lawrence in July was the 4367-ton steamer SS *Fredrika Lensen.* Escorted through heavy fog by three Fairmile motor launches and two corvettes, Vogelsgang's attack on QS-19 was bold. Two torpedoes were fired at the convoy, only one of which connected. Four men in the engine room were killed when SS *Frederika Lensen* was hit amidships, listing immediately.[17] The survivors were picked up by HMCS *Weyburn* as Fairmile M/L Q074 attacked a good submerged contact, dropping a number of depth charges which did not damage the escaping submarine. The attack was broken off once the contact was lost, and Q074 proceeded to screen HMCS *Weyburn.*[18] Aircraft from the R.C.A.F. training establishment on an exercise in the area saw U-132 crash-dive, and reported its last seen location to HMCS *Fort Ramsay*, which sent the armed yachts HMCS *Sans Peur* and HMCS *Wolf* and two Fairmiles to investigate with no result. Vogelsgang left the Gulf of the St. Lawrence through the Cabot

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[15]'Eastern Air Command Monthly A/S Report - July 1942', PAC, RG 24, Vol. 11027 COAC 7-21-2, vol. 1.

[16]U-132 War Diary, July 12 1942 in Hadley, *op. cit.*, p. 103.

[17]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—FREDERIKA LENSEN' PAC, RG 24, vol. 4025, S-1062-13-10, vol. 11.

[18]Despatch from Commanding Officer H.M.C.M/L Q074 to NOIC Gaspé, 'Disabling of Frederika Lensen in QS-19, July 22, 1942' PAC, RG 24, vol. 11105, COAC 5-2-3-A.

Strait soon after the attack on QS-19, bringing his damaged boat home. The month-end EAC report reflected that the sinkings which took place in the Gulf in July was ". . . a very considerable coup for one U-boat at one place."[19] Eastern Air Command was not alone in this judgement. U-132's success in the Gulf of the St. Lawrence, despite heavy air and sea patrols, was not matched elsewhere in the North American theater. Doenitz at U-boat Command decided to pull back most of the ships in North American coastal waters at the end of July, with the exception of Canadian waters. Eastern Air Command also took steps to prepare for future attacks on submarines by suggesting a change in patrol tactics. It was suggested that reconnaissance-bombers patrol from a much higher altitude, as this would give the pilots an increased chance of catching the U-boats on the surface when attacking.[20]

On August 7-8, 1942, three Type IXC U-boats out of the eight in the August patrol sailed from Kiel, sent on a separate mission to operate at the St. Lawrence estuary by Admiral Doenitz. German code-breakers had provided a wealth of information about North Atlantic convoys, but U-boats in the area had difficulty locating these potential targets.[21] Doenitz and his staff suspected that the U-boats would have more luck finding the convoys departing through the Gulf of St. Lawrence, and so two of the three Type IXs sent to Canadian coastal waters operated near the Belle-Isle Strait.[22] KL Paul Hartwig in U-517 and Fregatenkapitan Eberhard Hoffman in U-165 converged on a US convoy which was en route from Sydney to Greenland (SG-6), the first

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[19]'Eastern Air Command Monthly A/S Report - July 1942', PAC, RG 24, Vol. 11027 COAC 7-21-2, vol. 1.

[20]Ibid.

[21]Clay Blair, *op. cit.*, p. 685.

[22]Donitz, *op. cit.*, p. 250.

attack in force in Canadian waters. The ships in convoy were divided into two sections and were lightly escorted by Coast Guard cutters such as the *Mojave,* as well as HMCS *Trail.*

Hartwig struck the first blow on the 5649-ton US troopship *SS Chatham,* bearing over 500 U.S. Army personnel. *SS Chatham* was struck by a single torpedo in the boiler room, exploding her starboard boilers and turning the ship 180° in the water before it began sinking slowly. The 26-minute descent of *Chatham* made it possible for U.S. forces and nearby Canadian ships such as the corvette HMCS *Trail* to rescue all but 13 of the passengers and crew. 293 of the survivors were landed at Sydney, an undeniable public sign of the attack which accentuated the fears already present in coastal communities.[23]

Hoffman fired a volley of torpedoes into the second section, striking the 3304-ton steamer *SS Arlyn* and the 7300-ton tanker *SS Laramie*. *Arlyn* was hit amidships with one torpedo, killing three immediately and causing a panic amongst the crew, for their ship was loaded with 400 tons of dynamite and high test aviation fuel. Luckily, this did not explode, and all but 12 crew were saved before U-517 gave *Arlyn* the *coup de grace.*[24] *SS Laramie*, carrying 55,000 gallons of oil as well as 361,000 gallons of aviation gas, had her port bow torn open by Hoffman's torpedo, with a loss of five crew. Along with her escort, *Laramie*'s Captain Peter M. Moncy managed to bring the ship back to Sydney before it sank, and was later awarded the U.S. Navy Cross.[25] Hoffman and Hartwig, having completed their first successful attack without significant retaliation then passed into the Gulf of St. Lawrence to hunt independently. The

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[23]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—CHATHAM' PAC, RG 24 , Vol. 4025 S-1062-12-10 v. 10.

[24]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—ARLYN' PAC, RG 24 , Vol. 4025 S-1062-12-10 v. 10.

[25]Clay Blair, *op. cit.*, p. 686.

Canadian forces responded by increasing convoy and aircraft escorts immediately to counter the latest incursions.[26] According to the Naval Control Service Officer at Sydney, N.S., R.B. Mitchell, the attack on SG-6 also brought about 'greatly improved liaison and relations' between Canadian naval authorities at Sydney and U.S. authorities residing at Argentia.[27]

After having received permission from U-boat Command, Hartwig and Hoffman independently patrolled south through Belle Isle Strait into the Gulf of St. Lawrence. Their progress was slowed to a great extent by the constant patrols of aircraft which forced the large U-boats to avoid detection and possible attack damage by remaining submerged beneath the waves.[28] On the evening of September 3, 1942, Hartwig approached two Montreal-Goose Bay convoys passing one another, the outbound LN-7 and the inbound NL-6, each escorted by two ships. Hartwig closed in on LN-7 and fired one torpedo when surfaced, hitting the 1781-ton Canadian Steamship Lines barge *Donald Stewart* on her stern, killing three crew. The survivors abandoned ship as it (and the aviation fuel it was carrying) caught fire and sank, and were later picked up by HMCS *Shawinigan*.[29] Hartwig withdrew as HMCS *Weyburn*, which had been escorting NL-6, pulled away to ram U-517. As Hartwig submerged, *Weyburn* opened fire with her 4-inch gun, but did not cause any damage. Depth charges were dropped, but no further

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[26]By September, the number of aircraft escort missions taken on were increased tenfold from what they had been in January, and the number of patrols increased fivefold. 'Eastern Air Command Monthly A/S Warfare Summaries and Reviews—September, 1942' PAC, RG 24, Vol. 11027, COAC 7-21-2.

[27]'Monthly Report of Naval Activities at Port of Sydney--September, 1942.' DHIST, 81/520/1000-5-21, vol. 2.

[28]DHIST, 1650 U-165.

[29]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—DONALD STEWART,' PAC, RG 24, Vol. 4025 S-1062-12-10 v. 10.

contact was obtained and the attack was broken off as Hartwig escaped further into the Gulf.

Hartwig did not travel far before being harassed by the aircraft protecting the Gulf. On the day of the attack on LN-7, Digby 756 of 10 (BR) Squadron, which had been escorting LN-7, carried out an attack on Hartwig's boat. The attack was not considered by Eastern Air Command to have been successful, since Hartwig hurriedly submerged, and one of the depth charges dropped by Digby 756 exploded on contact with the water, damaging the right wing lightly. The following day, a US aircraft reported attacking a submarine contact with little success.[30] The constant patrols and two sudden if unsuccessful attacks in as many days severely shook the confidence of Hartwig's crew. "All his officers had . . . advised him [Hartwig] of their preference to stand on their watch submerged. They no longer felt confident about the patrol situation on the surface."[31] However, once the submarines penetrated deep into the fogbound internal Canadian Gulf, these anxieties eventually faded.

On September 5, U-165 attacked the independently-sailed *Meadcliffe Hall*, an 1895-ton steamer sailing from Buctouche, N.B. to Ogdensburg, N.Y. at the position 46"33"N, 61"02"W. Hoffman fired one torpedo which missed the ship and exploded on the shore at Fame Point. The miss was observed by Walter Melsop Bowen, master of *Meadcliffe Hall*, who considered it to be a very 'poor shot'.[32] On the same day , U-513, the third Type IX which remained outside of the Gulf conducted an audacious surface assault upon the Wabana Island anchorage off the coast of Newfoundland. A salvo of four torpedoes struck two ships at anchor, weighed down with iron

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[30]'Eastern Air Command Monthly A/S Warfare Summaries and Reviews—September, 1942' PAC, RG 24, Vol. 11027, COAC 7-21-2.

[31]War Diary, U-517, in Hadley, *op. cit.*, p. 115.

[32]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—MEADCLIFFE HALL,' PAC, RG 24, Vol. 4025 S-1062-12-10 v. 10.

ore. At 1407 GMT, the 5454-ton steamer SS *Saganaga* was hit and sank immediately, with a loss of 33 crew. Moments later, the 7353-ton SS *Lord Strathcona* was hit and began to sink quickly. In his report, the ship's master, Captain Charles Stewart considered that the crew behaved very badly 'considering they abandoned vessel before being torpedoed.'[33] Shore batteries opened fire but could not locate U-513, as well as a number of ships at the anchorage. The Free French ship P.L.M. 27 opened fire in the probable direction of the U-boat, which quickly submerged. Hudson and Digby aircraft were present in the air, but a low ceiling prevented their being used to the best advantage.[34] In response to concerns that U-513's attack raised in Newfoundland, a new convoy became necessary between Sydney and Wabana to ensure that additional escorts would intimidate prospective attackers. The new system became known as the B.W. series convoys.[35]

On September 7, Hartwig (U-517) and Hoffman (U-165) once more cooperated in intercepting and decimating the Quebec-Sydney convoy 33 (QS-33), sinking five ships including one of the commissioned armed yachts of the RCN employed in escort, HMCS *Raccoon*. The attack off Cape Chat commenced in the evening, with Hoffman attacking the port quarter of QS-33, sinking the 2988-ton Greek steamer *Aeas*, carrying a cargo of steel and lumber to the United Kingdom. Hoffman's torpedo struck *Aeas* between her bunker and No. 3 hatch, killing two crew.[36] HMCS *Arrowhead*, screening the convoy ahead, returned to pick up survivors and carry

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[33]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—SAGANAGA and STRATHCONA,' PAC, RG 24, Vol. 4025 S-1062-12-10 v. 10.

[34]'Monthly Report of Naval Activities at Port of Sydney--September, 1942.' DHIST, 81/520/1000-5-21, vol. 2.

[35]Ibid.

[36]'Particulars of Attacks on Merchant Vessels by Enemy Submarines—AEAS,' PAC, RG 24, Vol. 4025 S-1062-12-10 v. 10.

out an A/S sweep but could find nothing, and returned to position.[37] While HMCS *Arrowhead* was investigating *Aeas*' demise, the crew heard HMCS *Raccoon*'s whistle for three seconds. HMCS *Raccoon*, which had been lagging behind the port quarter of the convoy, had been struck by Hoffman's torpedo and sank quickly, leaving no trace of either the ship or its four officers and 33 crew. It was only when the convoy arrived at its destination that her disappearance was noticed.[38]

Hartwig had received a signal by Hoffman earlier in the evening that he had tracked a large convoy, and proceeded to intercept QS-33. An aircraft at the head of the convoy failed to detect Hartwig before he submerged in order to assume a firing position 18 miles from Cape Gaspé in the early hours of the morning on September 7.[39] Three torpedoes of the four fired into the oncoming convoy struck their targets. The 5720-ton Greek steamer *Mount Pindus*, carrying eight Mk-II Ram tanks and general cargo, was struck in the starboard side bunker, killing two. The smaller 3285-ton *Mount Taygetos*, also carrying tanks and cargo to Sydney, sank immediately after being struck between the boiler and the engine room, killing five. *SS Oakton*'s

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[37]At a board of enquiry conducted later at HMCS Fort Ramsay, HMCS Arrowhead's R.D.F. operator testified that he had problems picking up Fairmiles unless they were at very close range, and could not locate any small ships inside a half-mile range. This was due in part to the weather and also to the outdated radar system with which HMCS Arrowhead was equipped. 'Board of Enquiry—Sinking of HMCS Raccoon.' RG 24, v. 4111, 1156-496/18.

[38]While looking through the files on HMCS Raccoon's loss, I came across a letter apparently found in a sealed bottle adrift in the vicinity of Glasgow Point near Halifax. The letter read 'We are adrift on a Carley float help us please [unreadable] from Racoon [sic]'. Given that the letter was written in pencil, and the location of its retrieval, it is likely that this is a forgery, if a distasteful one. 'Sinkings—HMCS Raccoon,' RG 24, v. 6890, NSS 8870 496/18.

[39]War Diary, U-517 in Hadley, *op. cit.* , p. 118. Details also related in DHIST, 1650 U-165.

crew was far more fortunate, as the 2289-ton coaler sank with no casualties.[40] Still submerged, Hartwig made his escape, tracking a number of eastbound neutral ships.

As enquiries were held into the mysterious loss of HMCS *Raccoon*, both sides of the conflict in the St. Lawrence continued to carry out patrols. On September 9, Hudson 403 of 113 (BR) Squadron in Chatham carried out an attack on a 'camouflaged submarine' south of Anticosti Island, most likely U-517, since U-165 reports no attack. In a low-altitude pass, the Hudson machine-gunned the U-boat's conning tower as it submerged and proceeded to drop four depth charges, which EAC calculated to have been dropped within lethal range of the pressure hull. Several hours later, a large oil slick developed, spanning a mile and trailing for several miles. This was reported by Canso 971 from 117 (BR) Squadron in Gaspé, which drew the conclusion that ". . . these sighting reports show that once a submarine is located; it can be followed and harried if weather conditions permit."[41]

Also on September 9, 1942, at a meeting of the Cabinet War Committee, Angus L. Macdonald advised and Prime Minister William Lyon Mackenzie King agreed to close the Gulf of St. Lawrence and river to ocean shipping. This was done in part to liberate escort corvettes for use in Operation Torch in North Africa, but as will be discussed below, economic planning and convoy routing also played a major part in the decision. The stripping of Canada's coasts was nearly complete, and convoys could not be conducted under these conditions. This will be further discussed in the next chapter, but it should be noted that a by-product of the Cabinet War Committee decision was that it effectively expedited the end of the Battle of the St. Lawrence by

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[40]See sinking reports, RG 24, v. 4025, S-1062-13-10, v. 10.

[41]EAC A/S Report, September 1942, *op. cit.*

reducing available targets within the operating patrol of U-boats. The battle was by no means over, however. On September 11, two ships of the Gulf Escort Force, the corvette HMCS *Charlottetown* and minesweeper HMCS *Clayoquot* were heading toward Gaspé when they came under attack by U-517. The weather was marked by heavy fog and neither ship was zig-zagging, making them easy targets for Hartwig. HMCS *Charlottetown* was struck by two torpedoes; the first exploding into the engine room on the starboard quarter, blowing off her propellor, the second struck the No. 2 boiler room.[42]

Though most of the crew managed to survive the initial explosions, as the ship sank, one or two of the depth charges on board exploded in the water, killing *Charlottetown*'s commander, LCdr John Willard Bonner, and injuring several others. HMCS *Clayoquot*, upon seeing the attack, immediately conducted an A/S sweep, obtaining an ASDIC contact and attacked U-517 four times, but could not complete the counterattack. One of the depth charges dropped by *Clayoquot* exploded early, jarring the ship badly and putting her gyro and ASDIC sets out of commission.[43] After the survivors were landed, some questions were raised about the operation of both HMCS *Charlottetown* and *Clayoquot*, namely: why had they not been zig-zagging and why were *Charlottetown*'s depth charges not set to safe? It appears from the minutes taken at the Board of Inquiry that *Clayoquot* did not refuel at Rimouski and thus barely had the fuel to reach Gaspé. The depth charges, according to the testimony of survivors, had been set to safe the previous day, and it was considered likely that the initial explosions cracked their safety pins.[44]

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[42]'Minutes taken at the Board of Inquiry on board HMCS Fort Ramsay at 1430, 12 September [sic], 1942.' RG 24, v. 11108, 55-2-1-138.

[43]RG 24, v. 6889, NSS 8870-331/22.

[44]'Minutes taken at the Board of Inquiry on board HMCS Fort Ramsay at 1430, 12 September [sic], 1942.' RG 24, v. 11108, 55-2-1-138.

The actual incident was initially suppressed by NSHQ, but when an official statement was released, it was made to look as though HMCS *Charlottetown* was lost in an Atlantic convoy battle.[45]

The final coordinated attack upon merchant shipping by U-boats in the St. Lawrence took place against Sydney-Quebec convoy 36 on September 15-16, 1942. The convoy was composed of 22 ships, organized into seven columns. Unlike other convoys which drew the attention of Hoffman and Hartwig, SQ-36 was substantially better armed, with a destroyer escort HMS *Salisbury* directing the convoy in addition to the usual corvette, minesweeper and Fairmiles. Hartwig first approached the convoy submerged, crossing the stern of the convoy port to starboard, firing torpedoes at the heavy, well-protected ships.[46] Torpedoes struck the 2741-ton steamer *Saturnus*, shattering its stern, and the 2166-ton *Inger Elisabeth*, both of which sank quickly with a loss of four crew. U-517 was forced to dive as HMCS *Arrowhead* and HMS *Salisbury* began an A/S sweep, but another threat came from three Defensively-Equipped Merchant Ships (DEMS) which engaged the submarine at fairly close range.[47] After his escape, U-517 signaled to Hoffman that the convoy was approaching. Hoffman received the message and intercepted SQ-36 in the morning of 16 September near Cap Chat. Submerged, Hoffman fired three torpedoes, sinking only one ship, the 3667-ton *SS Joannis*. *SS Essex Lance* was also struck, hit between the propellor and the rudder, flooding her engine room. The ship was abandoned on

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[45]Darlington and McKee, *The Canadian Naval Chronicle* (St. Catharines, 1996), p. 68.

[46]DHIST, 1650 U-517.

[47]One of these, SS *Janeta*, claimed to have fired four rounds at a periscope seen in the midst of the convoy, blowing the periscope to pieces before the submarine disappeared. There is no record of this damage from U-517's experience. 'Report by G.W. Griffin A/Led, DEMS Gunner on Board SS. Janeta, Bri. Sq-36, 17/9/42' RG 24, v. 4025, S-1062-13-10, v. 11.

orders from HMCS *Vegreville*, which took her in tow to Quebec.[48]

HMS *Salisbury* closed on the periscope, establishing a contact and dropped five patterns of depth charges before ordering HMCS *Summerside* and *Arrowhead* to continue the hunt. Meanwhile, the convoy was ordered to reform in five columns and zig-zag. The attacks on U-165, according to the reports of escorts, resulted in a large oil patch on the surface, indicating probable damage. However, this cannot be corroborated with U-165's log.[49] U-165 did escape, however, if only to be surprise-attacked later in the day on the surface by a white-hulled Hudson of 113 (BR) Squadron from Chatham. Attacking from a high altitude, the Hudson raked the U-boat with 361 rounds of machine-gun fire and dropped depth charges before gaining altitude to patrol the area for a further two hours. Oil patches developed, but no other indications of damage were observed. It was thought that the white camouflage was the reason that the aircraft managed to catch the U-boat on the surface.[50]

The attack on SQ-36 was the last successful attack in the Gulf of St. Lawrence during September, due to the dwindling traffic as a result of the decision made in the Cabinet War Committee earlier in the month. The marked reduction in traffic was noticed by both the Germans and the authorities at port. In fact, it was thought by the Naval Control Service Officer at Sydney that the attack on SQ-36 was the reason why the Sydney-Quebec convoys had trickled to a halt.[51] The reduction in traffic placed the U-boats at a distinct disadvantage, as Hartwig soon

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[48]'Details of Attack on Merchant Vessels by Enemy Submarine—SS Essex Lance,'

[49]'Report of Proceedings of SQ-36 and QS-35.' DHIST; 81/520/8280.

[50]EAC, September 1942.

[51]'Monthly Report of Naval Activities at Port of Sydney--September, 1942.' DHIST, 81/520/1000-5-21, vol. 2.

found out. Over the course of September 17-29, 1942, U-517 was attacked four times in rapid succession with increasing accuracy by the aircraft of EAC as he searched for potential targets without success. The crew of one of the attacking aircraft remarked that ". . . this submarine should carry back to Germany a very flattering record of our aircraft's readiness off this coast - one sighting and two attacks in less that six and one-half hours on the same submarine."[52] Hartwig was indeed impressed, for it was only extreme fortune that allowed him and his crew to leave the St. Lawrence alive. After one of the aircraft attacks in late September, Hartwig surfaced to discover a depth charge lodged on his weather deck. The crew managed to dislodge it with a crow-bar and when it sank to depth, the charge exploded. Had Hartwig submerged to a lower depth, the submarine may well have been destroyed or seriously disabled.

Just as the prospects for the success of a second German offensive were fading, however, the German U-boat Command was enthusiastic about the results which Hoffman and Hartwig reported, according them high honours, including a Knight's Cross for Hartwig.

By comparison, the autumn offensive in Canadian waters was extremely unprofitable. A number of Type VIIC submarines already in U.S. waters were ordered at the end of September to follow up the summer offensive by patrolling in the Gulf of St. Lawrence. U-69, piloted by KL Graf, and U-106 (KL Rasch), were the only boats to actually locate targets within the Gulf, due to the reduced traffic and constant air patrols. On October 9, U-69 boldly struck a blow against convoy NL-9, less than 250 nautical miles from Quebec City. U-69 fired a single torpedo, hitting *SS Carolus* in the No. 2 hold on the port side, killing 11 crew and injuring one. The remaining survivors were picked up by the escorts, HMCS *Hepatica* and *Arrowhead* after an ineffective

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[52]EAC, September 1942.

sweep for the submarine.[53] Following the attack, U-69 left the carnage to head southeast, toward the Cabot Strait.

U-106 also had minimal success in the Gulf of St. Lawrence, sinking only one ship from convoy BS-31 on course from Cornerbrook to Sydney. Carrying newsprint and sulphite and escorted by only an armed yacht and a Canso flying boat, the 2140-ton *SS Waterton* was hit by two torpedoes on the port side from U-106. The aircraft swept down to locate the submarine after the first explosion, but was caught in the smoke and spray from the second that ripped into *Waterton*'s side. Despite being equipped with 'special equipment', or Air-Surface radar, the aircraft was unable to make a contact or spot a periscope, and was forced to patrol the area.

Before leaving the Gulf of the St. Lawrence, KL Graf attacked what he described as a 2222-ton British steamer in the midst of the Cabot Strait on the evening of 13 October, 1942.[54] In reality, the British steamer was the Newfoundland Ferry, the SS *Caribou*, carrying about 250 passengers. This parting shot of the Battle of the St. Lawrence was the one which hit the hardest, for it was the ". . . greatest loss of life of any wartime marine disaster, off this coast."[55] The ferry's escort, HMCS *Grandmere*, rounded on Graf's submarine as it crash-dived, viewing the conning-tower as she approached. *Grandmere* dropped 12 depth charges, and reported seeing an oil patch which spanned 20 square yards on the surface, but throughout the attack, there was no ASDIC contact. The attack was broken off to pick up survivors, a lengthy process. As soon as reports of the sinking came in, the agent of the Newfoundland Railroad Co. chartered every available vessel in Port-aux-Basques for rescue purposes, and called Grand Bay for

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[53]'Details of Attack on Merchant Vessels by Enemy Submarine—CAROLUS,'

[54]DHIST, 1650 U-69

[55]EAC, October 1942.

reinforcements. Work continued until late the next day, but soon all the crews were rescuing were bodies of those who had drowned.[56]

The immediate reaction after the sinking of the SS *Caribou*, the last of the 1942 shipping season, was that the Canadians had experienced a calamitous failure. Angus L. Macdonald issued a statement to refute the more damaging rumours about the state of Canadian defence, but with limited results. Some still asked questions about the sense of allowing the Caribou to traverse the Gulf at a time when submarines were patrolling. The reassurances of the Minister for Naval Defence rang hollow in some ears. "If the naval defence of these coasts is above reasonable criticism, that fact should have been made clearer than the Minister's statement of Tuesday has made it."[57] As a result, several officers in the RCN believed that a reassessment of the current tactics and notions of defence was due in light of the maritime disaster.

For those Canadians living in coastal communities who grasped what had transpired in the Gulf of St. Lawrence, the Battle was interpreted as a series of terrifying defeats, as oil-soaked survivors came ashore with no visible response from the RCN. Indeed, Commander R.B. Mitchell, Naval Control Service Officer attached to Sydney shared the perspective of his community. R.B. Mitchell was an innovative officer whose concerns no doubt were motivated by the demands of the community following the loss of *SS Caribou* when he sent a secret memorandum to Captain C.M.R. Schwerdt, the Naval Officer in Charge at Sydney, Nova Scotia.

Mitchell's judgement of the Battle of the St. Lawrence, voiced above, was that it had

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[56]PAC, RG 24, v. 11015, COAC 5-2-3-D

[57]"Was the Caribou under 'Adequate Escort?'" *St. John's Daily News*, Nov. 30, 1942. The Office of the High Commissioner for Canada in Newfoundland, C.J. Burchell forwarded a number of cynical editorials such as the one found in *The Fisherman-Workers Tribune*, Nov. 20, 1942.

been a complete defeat for Canada's war effort, and that new measures needed to be put in place in order to defend Canadian waters. "On paper the River is easy to defend, possessing as it does only three narrow entrances . . . and it is proposed that full advantage of the natural features of these narrow gateways be taken by eliminating the first, controlling the second and patrolling the third."[58] Mitchell's proposed plan included the closure of the Strait of Belle Isle through use of a surface and deep minefield spanning the Strait. Cabot Strait, the largest entrance to the Gulf, was to be controlled through two deep minefields and surface and air patrols, with access to vessels limited solely to daylight hours. Mitchell contended that the Gut of Canso, an uninviting 'stretch of water for a stranger to traverse' could be patrolled constantly by Fairmile motor launches. Mitchell, recognizing that the RCN had neither the vessels, material nor personnel to carry out his plans, believed that the Royal Navy would give the RCN minelayers and necessary equipment. The personnel, he argued, could be trained in the winter.[59] While an innovative solution, Mitchell's proposal was plagued by faults which were pronounced by the Naval Staff when they reviewed the proposal in December 1942. Mitchell's defence plan was formally rejected at the St. Lawrence Operations Conference held in Ottawa in February 1943, due to a number of objections. The Naval Staff had concluded that due to the combination of the length of lines required to close the entrances to the Gulf and River; the depth of water in these straits, the strength of the current in these areas which would cause mines to 'dip', rendering them useless; the traffic of icebergs and ice in these regions; the lack of minelaying vessels and mines, and the possible danger to Canadian shipping due to floating mines and to common low visibility

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[58]DHIST; 1650/239 v. 1

[59]Ibid.

in these areas.[60]

Certainly, the establishment of minefields could have taken place, but the expenditure would have proven wasteful given the other strains placed on the RCN. Mitchell's proposal to acquire ships from the RN was infeasible. It was unlikely, given the disposition of the RN in 1942, that offensive vessels would be provided to the RCN which did not *seem* capable of defending its own waters. Furthermore, Mitchell's proposed training would place an additional burden on an already strained training system for the rapidly-expanding RCN. The conclusion of the Naval Staff reflects that they did not share Mitchell's pessimistic view of the Battle itself, and were more concerned with the effective deployment of vessels in the St. Lawrence by the time that the Operations Conference took place.[61] Part of the reason for this is that there is little indication that the Naval Staff believed that the Battle of the St. Lawrence was truly over by the early months of 1943, and this is reflected in defence planning.

If the Naval Staff remained confident in the ability of the RCN to defend Canadian waters, Eastern Air Command was positively optimistic. It was felt that the increasing air patrols and training flights were proving most effective: during November and December, EAC launched 8600 A/S patrols over the Canadian zone, making 40 attacks on U-Boats, 16 of which 'probably caused more or less damage'. In a report titled 'Comment on Eastern Air Command Anti-Submarine Report', written just previous to the St. Lawrence Operations Conference on

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[60]'Minutes of the St. Lawrence Operations Conference held in Ottawa—February 22nd-24th, 1943.' PAC, RG 24, vol. 6789; NSS 8290-166/16 vol. 3.

[61]Much smaller issues were addressed at this conference as well; the policy of extinguishing coastal lights was given far more attention than Mitchell's proposal, and the deployment of ships was discussed at length, including the organization and control of the Fairmiles which Mitchell wished to have placed along the Gut of Canso. Ibid.

February 17, 1943, commented on the low kill record of EAC aircraft:

> RAF Coastal Command experience averages approximately one authenticated kill in each 50 or 60 attacks. Hence, although there is doubtless room for improvement in bombing accuracy, the absence of any definite 'kill' by E.A.C., while naturally disappointing, is not so far indicative of any demonstrable inferiority of performance in comparison with Coastal Command using the same tactics.[62]

Efforts had been undertaken during the Battle of the St. Lawrence to consistently improve the tactics of Eastern Air Command bombers, based on the experience and initiative of individual aircrews.[63] There are indications that Coastal Command in the United Kingdom did not consider Eastern Air Command's progress very promising. Critical comments were made to members of RCAF Overseas Headquarters to the effect that Coastal Command did not feel sufficient communication was in place between the two services, and there was not enough time to put their tactics into operation in Eastern Air Command. However, the suggestions made by Coastal Command were vague, encouraging experimentation, since a variety of tactics appeared to garner the best results.[64]

Cooperation between the RCN and RCAF was certainly put in place before the Battle of the St. Lawrence, as discussed in the previous chapter, but the Battle put those structures to the test. As mentioned previously, EAC was dependent upon NSHQ's intelligence estimates, but there was a lag between NSHQ's detection of a submarine and EAC's ability to seek out and

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[62]'Comment on Eastern Air Command' Anti-Submarine Report February 17, 1943. PAC, RG 24, v. 5270, 28-3-2

[63]For instance, the attack on U-517 by a white-painted Canso caught Hartwig completely by surprise on the surface and caused considerable damage to the submarine. Based on an attack on July 7, 1942, plans were drawn up to improve EAC tactics: to undertake higher altitude patrols in order to better gain the element of surprise.

[64]PAC, RG 24, v. 5272, 28-5-11

destroy the intruder. This was due to a fault in the infrastructure: no secret telephone lines existed between Ottawa and EAC headquarters in Halifax, so no secure method was in place to report submarine locations in an effective fashion. As a result, many sorties were flown in order to respond to sightings by members of the Aircraft Detection Corps, lighthouse keepers, and private citizens along the coast.[65] No structure was in place to ensure an economy of air effort, and this had an effect on the ability of EAC to effectively cooperate with RCN ships on patrol; often the appearance of coordinated inter-service patrols was entirely coincidental. EAC aircraft were available to patrol dangerous areas and were often quite effective at following up on sightings made on patrol, as they were able to cover a larger area for a longer period of time. In October, 1942, just previous to the attack on SS *Caribou*, steps were taken to resolve the lack of effective communication between NSHQ and EACHQ by the development of the 'extended VITAMIN code'. This complex code permitted secure intelligence transmission between the two agencies in order to economize on sorties of trained AS personnel and hopefully destroy more submarines. [66]

Despite these minor hindrances, it was believed that cooperation between EAC and the RCN was significantly advanced when compared to the efforts to coordinate ASW patrols in the United States. RCAF Liaison Officer Wing Commander S. S. Blanchard, in his report on his work with the 1st Air Force, U.S.A.A.F. of June 24, 1942, painted a grim picture. It was his observation that the tactical practices of the USAF were ". . . not as advanced as those of the

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[65]EAC monthly A/S reports all contain a list of sighting origin and locations in their appendices.

[66]'Air Operations Against Submarines, Oct. 10, 1942', PAC, RG 24, v. 5272, 28-5-10.

R.C.A.F. were at the start of the war."[67] Blanchard also railed against the USN in his report, stating they were the least willing to learn the lessons available from British and Canadian experience during the first of the war to coordinate their actions with the U.S.A.F. Most telling of Blanchard's ability as a Liaison Officer was his assertion at the conclusion of his report that no one at 1st Air Force H.Q. was greatly interested in any of the RCAF's methods or information.[68]

Though both the RCN and EAC obviously felt there was some inexperience with coastal ASW to overcome, there is little evidence to suggest that they considered the setbacks in the Gulf of St. Lawrence as a strategic defeat. What remained unknown to contemporaries was the German perspective, and their view of the *effectiveness* of Canadian defences which they were exposed to in the summer and autumn of 1942. The Canadian experience of anti-submarine warfare was unsatisfying; dropping depth charges on a swirl of water formed in the wake of a U-boat's dive to safety. An early 1942 operational analysis of the A/S effort undertaken by EAC highlighted the disappointment felt by aircrews; it was believed that the low numbers of attacks reflected a weakness at detecting submarines. The summary concluded that submariners were outwitting Canadian defences or were extremely vigilant. What was unknown to the author at the time was that this apparent weakness which kept submarines submerged was actually a

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[67]'Report on Liaison Work with the 1st Air Force, U.S.A.A.F., June 24, 1942'. PAC, RG 24, v. 5216, E-1-b, 19-6-1.

[68]Blanchard was replaced soon afterwards by Squadron Leader V.B. Corbett, because the Air Vice Marshal A.A.L. Cuffe wanted someone for the position who was 'Canadian-born and possess the type of personality which would assist him to gain ready access to the more senior officers and, at the same time, enjoy their confidence." AAL Cuffe to Secretary, DND for Air, July 16, 1942. PAC, RG 24, v. 5216, E-1-b, 19-6-1.

strength![69]

For each pleasant memory which Hartwig could recall about the security and unpreparedness of Canadian waters for his intrusion, he had a chilling account of near-fatal encounters with Canadian aircraft or ships. The same might have been said of U-165's commander, had his diaries been found amongst the shattered hulk of his submarine, destroyed soon after its campaign in Canadian waters. The attacking RCN and RCAF crews knew nothing of the terror experienced by all the U-boat crews in the Gulf. This was caused by two factors. The first was the odd conditions of the Gulf and the layers of water pressure discussed above. Despite their propensity to disguise the U-boat from detection, they also had an adverse effect. The war diaries of U-517 give the reader a sense of just how aggravating the conditions were. These unpredictable water layers could provide resistance, buoyancy or density that caused the submarine to bob or dip uncontrollably, upsetting the calm, calculated maneuvers that were often required for evasive diving. Paul Hartwig (U-517), in his frustration, wrote in his diary 'Damn the layers!'[70]

A more tangible threat to the U-boat was the constant presence of aircraft. As the experience of U-553 began, aircraft immediately descended upon its position to attack. As time went on and the number of sinkings increased, the level of coordination between sightings and attacks grew as well. Air defence quickly compensated for the lack of naval escort.[71] The earlier successes in Canadian waters led Doenitz' headquarters to give the submarines headed to the

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[69]See 'Summary of A/S Air Effort of EAC, Halifax February, 1942' RG 24, v. 5270, 28-3-2.

[70]Paul Hartwig as translated by Michael Hadley, "Inshore ASW in the Second World War," p. 135-136.

[71]Tennyson and Sarty, *Guardian of the Gulf*, p. 270.

Gulf the impression that defences were weak, limited to direct convoy escort. The submarines in the Gulf have testified otherwise. From September onwards, the amount of tonnage sunk in the Gulf had become meager, and almost not worth the trip. This was partly attributed to the closure of the Gulf, but also to the increasingly effective air cover provided over the Gulf and in particular over the straits entering the Gulf.[72] There were 17 airfields and seaplane bases surrounding the Gulf several of which ran daily and nightly patrols.[73] Surfaced U-boats which encountered patrolling aircraft often experienced a narrow escape. Repeated bombings and strafing caused U-boat commanders to either break off attacks on crippled convoys or remain submerged, a highly demoralizing situation for the crew. Hartwig's report to Doenitz' headquarters on 25 September 1942, reflected the reduced opportunity for targets and the 'constantly strengthened' air patrols.[74] U-69, the U-boat which sank *SS Caribou*, reported that his attacks caused a strong reaction: ". . . strong sea patrol and constant patrol by aircraft with radar . . ."[75] U-183, its captain already nervous about some mechanical defects, never made it *into* the Gulf, since three aircraft appeared overhead as he closed upon the Cabot Strait. U-183 set a course along the coast of Cape Breton instead.[76]

Though no sinkings had been achieved by the strafing and bombing of U-boats by aircraft, the amount of time spent 'bottoming', remaining underwater to avoid detection, lowered the morale of submariners. This caused U-boat captains to view surfacing with trepidation, and

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[72]Ibid., p. 271.

[73]These were Mont Joli, Gaspé, Chatham, Summerside, Charlottetown, Greenwood, Halifax, Yarmouth, North Sydney, Syndey, Botwood, Gander, and Torbay. Ibid., p. 259

[74]W.A.B. Douglas, *The Creation of a National Air Force*, v. II. (Toronto, 1986), p. 504.

[75]Ibid., p. 507.

[76]Tennyson and Sarty, *Guardian of the Gulf*, p. 281.

attacks were made with a careful eye on the skies.[77] Each time an aircraft passed, hostile or not, discretion forced U-boats to crash dive, weakening their capacity. The energy required for a crash-dive used a lot of battery power, and each time the submarines resurfaced they had to blow their tanks of high-pressure air. Both of these commodities were precious to U-boats, especially if they had no sanctuary where they could recharge.[78] 1590 individual sweeps had been made over the Gulf by aircraft since May, with a total of 23 attacks on U-boats. In Canadian waters, as in the greater Battle of the Atlantic, it was aircraft coverage that turned the tide in favor of the Allies. German records indicate that it was aircraft more than anything else which diverted a second wave of U-boats including U-570, U-521, and U-522 to the Halifax area.[79] If the goal of Doenitz' autumn offensive in Canadian waters had been to destroy as many ships and materiel as possible, the sinking of only three ships could not compare to the much more valuable offensive held in the summer.

Despite some limited success, the tonnage lost in the St. Lawrence decreased at the same time as the losses in other North American waters abated substantially. This caused Donitz to doubt the worth of diverting U-boats from the much more fruitful waters of the Black Pit.[80] The

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[77]The Air-to-Surface-Vessel radar system, mounted in most attack and training aircraft, was often detected by the 'Metox' system developed as a defensive warning against the approach of aircraft. Though the captains often doubted the authenticity of a threat, they had little choice but to submerge. U-132 characterized its tour of Canadian coastal waters as 'dolphin-like' for this very reason, and this unproductive use of fuel and batteries caused U-132 to withdraw. Hadley, "Inshore ASW in the Second World War", p. 134.

[78]"Addendum to Hints on Anti-U-boat Warfare: Coastal Command Tactical Memorandum #22," PAC, RG 24, v. 5272, 28-5-11, v. 1.

[79]DHIST; 1650 U-165

[80]That measure of water in the Atlantic still not covered by aircraft. Karl Doenitz, *Memoirs: Ten Years and Twenty Days*. Translated by R.H. Stevens. (London, 1958), pp. 250-253.

Battle was over, and Germans left in disappointment. The U-boats did not return to Canadian coastal waters as a serious offensive threat in 1943.

As the RCN, EAC, and citizens of Canada braced themselves for more devastating losses, Canadian defence planners would have to cope with the decision made on September 9, 1942 to close the Gulf of St. Lawrence to ocean-going shipping, denying major ports in Quebec their usual, essential traffic. In the following chapter we will examine why steps had been taken to close the Gulf of St. Lawrence, why it did not constitute a strategic German victory as almost all historians have argued, and the negligible impact of this decision on the Allied war effort and the Battle of the Atlantic.

Hard Decisions—Coping with 'Defeat'

"Canadians were fighting a war. Could they not expect a knock or two? There were no Churchills in Canada to bluntly put that kind of view"
--Commander Tony German, The Sea is At Our Gates

The closure of the St. Lawrence was surely the most remarkable outcome of the battle which raged quietly from May-October 1942. This decision closed the Gulf and River to ocean-going traffic for the whole of 1943, and has come under intense criticism from contemporaries and historians alike as a sign of Canada's weakness. It is apparent, however, that the diversion of additional escort vessels from Canadian waters and the closure of the St. Lawrence was a symbol of the Canadian government's resolve to take part to the fullest extent in the Battle of the Atlantic, and in the invasion of Europe. Had Canada possessed unlimited ASW vessels for use in the Gulf, the closure may not have been necessary. In addition, pressure was exerted on the Canadian government by the British Ministry of War Transport to close this maritime route. Based on the information and priorities that both Canadian and British decision-makers possessed at the time, closing the Gulf of the St. Lawrence was the most practical and reasonable conclusion to reach for a number of strategic economic reasons that will be discussed below.

Though no public announcement was ever made of the full restriction on Gulf traffic, the effects soon became apparent to both German raiders and to coastal constituencies.[1] In the weeks after the sinking of the SS *Caribou*, the coastal communities and their representatives in Parliament were occupied with questioning the government about the state of Canadian defences in light of the exaggerated number of sinkings that had been reported in the press.

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[1]Discussion of the closure is only found in the minutes of the Cabinet War Committee meeting, and even in those files it is scarcely mentioned.

Sixty years after the fact, it becomes clear that with regard to the decision to close the St. Lawrence, cooler heads prevailed within the Government and among defence and trade planners. This becomes evident once we observe the initial Canadian attitude toward the St. Lawrence as a shipping route. Certainly, it is the largest entrance to Quebec ports and a convenient way to ship manufactured and raw goods, thus a major economic artery. What is clear from a study of Canadian defence planning from 1937 onwards is that it was *not* viewed as an essential maritime artery. Percy Nelles' 1937 memorandum, "The Defence of Trade," predating all the structured defence plans, contained a recommendation that in the event of attack, the St. Lawrence may need to be closed to ocean shipping. Submarines had little place in this vision, instead, Nelles perceived armed merchant ships or large surface ships as the principal threat.

Later plans followed in the same vein. The seven-stage defence plan drafted on April 29, 1940, Plan 'G', explicitly advised that "The final phase of this plan, Phase VII, is *obviously* the closing of the Gulf & River St. Lawrence to shipping entirely, and the routing of shipping to Halifax. [emphasis added]"[2] In 1941, Plan 'GL' was drafted, with different stages of defence and different objectives, but with the same result. Phase IV of GL was as before the closure of the St. Lawrence to the ocean shipping. Stress was placed in this plan on a general principle to avoid any dislocation of normal shipping until intercepted enemy reports or actual attacks indicated a concentrated campaign in the Gulf of St. Lawrence.[3] This stress was applied in order to economize on shipping by keeping ships out of convoy for as long as possible. The closure of the

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[2]PAC, RG 24, v. 6788, NSS 1048-48-22, "Defence of Shipping in the Gulf of St. Lawrence." March 5, 1940.

[3]PAC, RG 24, v. 6788, NSS 1048-48-22, "Defence of Shipping - Gulf of St. Lawrence. Short Title - GL", 18 April 1941.

St. Lawrence was regarded as an order of last resort, but still a rational defence measure. As a matter of fact, the *only* defence plan drafted prior to the Battle of the St. Lawrence which did *not* contain provisions for the closure of the maritime artery was the 1942 plan, GL2. This peculiar aberration, I believe, was brought about by the fact that by this point the RCN had been exposed to submarine warfare on the East Coast and it was felt to be manageable. As the plans over the five years prior to the battle indicate, in terms of the priorities of Canadian defence planners, the St. Lawrence was an expendable maritime artery.

From a wartime economic perspective, it is also clear that the St. Lawrence was not favored. As Roger Sarty and Brian Tennyson intimated, there was indeed some pressure from overseas to eliminate the St. Lawrence from the convoy shipping routes. The Ministry for War Transport, represented in Canada by George D. Huband, met throughout 1941-1942 to discuss the state of Canadian shipping and the effectiveness of Canadian port facilities. The first meeting of Ministry of War Transport Board in Canada took place in October 1941, and it was expanded to include prominent businessmen in shipping, such as A.L.W. MacCallum, Manager and Secretary of the Shipping Federation and Director of the Canadian Shipping Board.[4] At subsequent meetings, the MWT Board sought to address the lack of cooperation and rivalry between Canadian railway systems and port facilities throughout Eastern Canada. At a meeting called between the Board, railway and steamship representatives on January 7, 1942, Huband noted a distinct lack of cooperation between interests, ". . . a sluggish attitude which is somewhat disheartening after two years of war."[5] The Board took steps to resolve this discrepancy by

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[4]DHIST MT 62-34, October 1 1941.

[5]DHIST MT 62-34, January 7 1941.

arranging weekly meetings between rail and steamship interests.

What is remarkable for our purposes was the early interest of the Ministry of War Transport, both overseas and through its representatives in Canada, in allotting the majority of Canadian shipping to both Halifax and St. John's rather than use the St. Lawrence ports. Their reason was that as full-year ports, they were not being used to their full potential, and the additional distance to the St. Lawrence ports was 'uneconomical'.[6] Steps were taken in early May 1942 to resolve crucial labor disputes at the Halifax railheads which would damage potential railway/shipping synchronization. Labor was replenished at Halifax through a Government Order-in-Council which established a new controller for the region.[7]

When coastal shipping was placed in convoy after the Battle of the St. Lawrence began in May 1942, the additional time taken for convoy assembly was viewed as a heavy loss, as fast ship coastal convoys took an additional number of days to load at River ports. Though there was some conflict within the Board, it was decided to pressure the Government to close the Gulf of St. Lawrence to shipping in the 1943 season.[8] The Board's recommendation to close the Gulf and River St. Lawrence reflected both economic and strategic concerns, for it was felt that the

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[6]Navy estimates indicated that there was the possibility of saving at the least three day's steaming round-trip if the ships loaded at Halifax instead of Montreal or Quebec City. DHIST 59/940 'Huband to Shipminder London', 07/02/42

[7]DHIST, MT 59/1835

[8]J.V. Rank from the Ministry of Food, for instance, objected to the measure because he felt that the combination of shortages of labor and possible overtaxing of the port facilities at Halifax would cause terrible delays in the shipment of cereals and refrigerated cargo. The decision of the Board was framed to reassure such detractors: ". . . as some of our heaviest movements of military and non-military stores have taken place during the period the St. Lawrence is closed, I cannot foresee that . . . proposals for the summer of 1943 will create any insuperable difficulty." DHIST, MT 59/1835, August 18-19, 1942.

closure would both save time and ". . . may . . . result in the enemy deciding not to pay attention to the Saint Lawrence . . . ."[9]

In reality, the transfer of traffic from the St. Lawrence ports to the year-round maritime ports was already under way by the beginning of August, 1942. Though members of the Board recognized that the closure of the Gulf was radical, the fact was that the 'thin edge of the wedge had been driven already'. Grain and bacon ships were approved for transfer by C.D. Howe, Minister of Munitions and Supply, to Maritime ports in a measure to retain longshoremen and repair workers at these ports during the summer months. As a result, the amount of traffic handled at Halifax from May 1, 1942 to August was in excess of 250% higher than had been managed at the port during the previous year. As of August 1, 1942, an agreement was reached that all fast ships would load at Saint John's and Halifax instead of at the St. Lawrence ports.[10] For these reasons, though the Board was aware that the political consequences of moving shipping from Quebec to Halifax might be grim, prompting charges of discrimination, it was evidenced that they had at least general support from Ottawa on the idea, and believed that C.D. Howe would brook no opposition from Quebec if the proposals went through. The final recommendations from the Board in Canada to the United Kingdom was that the ideal arrangement for shipping in Canada was the total elimination of the trip up the St. Lawrence, but owing to the need to avoid congestion, they would have to settle for restricted use of the St. Lawrence.[11] This would include a number of ships per month in convoy to load coal and grain at

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[9]DHIST MT 59/592, July 30, 1942

[10]DHIST MT 59/592, Ibid.

[11]DHIST, MT 59/940, July 30, 1942. It was also concluded that ports in Portland, MN would be able to handle any overflow from Canadian railways.

Sydney in reduced QS-SQ convoys. Despite some doubts, both the Board and the Ministry of War Transport in the United Kingdom appeared confident that they could fulfill Canadian shipping requirements without the need to traverse the extra hundreds of nautical miles through the Gulf to Montreal and Quebec City. The final word, it was recognized, lay with the opinions of the Navy and the ability of Canadian rail and shipping interests to deliver on their promises of smooth transportation of cargo.[12]

Given the inclination away from the St. Lawrence as a principal shipping route both in the eyes of the Royal Canadian Navy and various economic and administrative groups such as the Board of the Ministry for War Transport, it is not surprising that the Government decided to close the St. Lawrence in September, 1942. These inclinations, however, did not constitute reasons to close the St. Lawrence. On their own, plans and proposals for the closure meant little without an actual threat to shipping in order to justify such a transfer in maritime and rail traffic. The presence of German submarines in the Gulf placed a severe strain on the limited escort forces in Canadian waters on a scale equal to the strain placed on the Royal Canadian Navy in the North Atlantic during the same period.[13] As the sinkings mounted, increased pressure was placed on the RCN to resolve the Battle of the St. Lawrence. As demonstrated in the previous chapter, the RCN and the RCAF gave the appearance of coordinated ASW to German

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[12]'Shipments from the St. Lawrence During the 1943 Season' August 28, 1942. DHIST, MT 59/940.

[13]Marc Milner's *North Atlantic Run* and *The U-Boat Hunters* provide perfect narratives of the strain placed on the Royal Canadian Navy in terms of a rigorous convoying schedule in unforgiving waters with enormous training problems owing to the rapid expansion of the RCN in the first years of the war and the vast responsibility of the RCN in the Battle of the Atlantic.

submariners.[14] What is also clear is that the RCN and RCAF did not at any point feel completely overwhelmed by the submarine menace. Despite defence plans which included the closure of the St. Lawrence, the German submarine offensive on its own did not pose enough danger to justify the September decision. After all, the sinkings during the 1942 shipping season in the St. Lawrence were reported to constitute a loss of only .03 percent of the total transport tonnage passing through the region, significantly less than the sinkings in the Atlantic, along the U.S. coastline, and in British waters.[15]

The end came in early September 1942, at a meeting of the Cabinet War Committee. On September 9, William Lyon Mackenzie King read a secret personal communication from British Prime Minister Winston Churchill to the Committee. Churchill had requested the loan of Canadian escort vessels from both coasts in order to participate in 'planned operations in European Waters'. In this case, the operation was the invasion of North Africa, 'Operation Torch', though this was not revealed in the meeting.[16] The Minister for Naval Services, Angus L. Macdonald, said he could commit 17 corvettes from both coasts, however "Such a diversion would certainly weaken the forces off our shores. *In view of the importance of the operations in question, however*, it was felt that these ships would be withdrawn and made available to the Admiralty. This course was therefore recommended. [emphasis added]"[17] The risks of such a

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[14]This was thanks mostly to the frequent sorties by Eastern Air Command, which undertook the burden of coastal defence during the war.

[15]'Return to the Order of the House of Commons No. 280' DHIST 1650/239/16B vol. 1

[16]Present at the meeting were the Prime Minister, Crerar, Power, C.D. Howe, and Angus L. Macdonald.

[17]Cabinet War Committee Minutes, September 9 1942, DHIST 83/245 mfm vol. 10.

diversion were discussed in the Cabinet War Committee; the estimated five enemy submarines operating in the Gulf would probably sink more ships as a result of any weakening of coastal escorts. Macdonald advised that twelve corvettes could be released from the Atlantic Coast, but *only* by closing the St. Lawrence to ocean traffic. The only condition Macdonald imposed on the loan was that a time limit should be placed on the period which the corvettes would be absent from Canadian waters.[18]

For two of the corvettes, the time limit would not matter. They would be sunk during the operation in European waters. It is clear from Macdonald's recommendation that operations outside Canadian waters were held to be more important than the direct defence of the Canadian coastline. When historians such as Tony German criticize the decision to send more ships abroad, they appear to be overlooking this central fact. True, as German contends, the 17 corvettes could have aided Sydney and Gaspé to fight the submarine menace until the close of navigation in December, but given the ASW record in 1942, the German submariners felt far more threatened by the aircraft of Eastern Air Command than they did by the RCN.[19] Besides which, the role of the Canadian Navy even though it was a junior ally in the Battle of the Atlantic, was to ensure the defence of the United Kingdom and the success of Operation Torch. In terms of a global war, the front line was in Europe, *not* in the St. Lawrence. Mackenzie King knew that the decision to divert RCN ships and therefore maritime traffic would draw criticism. "The Government were under primary responsibility to provide for the protection of the Canadian coasts, and Parliament would expect the government to explain what steps had been

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[18]Ibid.

[19]Tony German, *op. cit.*, p.

taken to discharge their responsibility."[20] One cannot help but detect the isolationist sentiment which served King so well in the interwar years in this statement. Angus L. Macdonald, and by extension the Royal Canadian Navy understood the defence of Canada's coastline differently. As Macdonald laid bare in the House of Commons in May 1942, the Royal Canadian Navy could provide for the defence of Canada indirectly through attacking the enemy wherever he could be found. In light of this, it is not surprising that Macdonald recommended the diversion of ships for operations in European waters, and the decision to close the St. Lawrence was indeed a rational one.

After the decision was made, however, the issue of the St. Lawrence was far from resolved. There were still powerful economic interests at stake, and questions were anticipated in the House of Commons. A questionnaire was drafted considering these questions and their answers. The first and most likely question was considered to be 'What steps have the Government taken to ensure the safety of Canada's coastline', especially after the sinking of the SS *Caribou*. The minister could also stress that "Every attempt was made to provide as many escorts as possible to a convoy without severely weakening the Ocean Escort Force."[21] This promoted the view that the Gulf was closed in order to maintain Canadian forces in the Battle of the Atlantic. Another issue raised in the questionnaire was the increased use of the railroads to

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[20]Cabinet War Committee minutes, September 16, 1942. DHIST 83/245 mfm vol. 10.

[21]"Naval Service Memorandum," DHIST: 1650-239/16B v. 1., "Votes and Proceedings No. 80.", Ibid.

compensate for the change in navigation of the St. Lawrence. It was argued that the use of land conveyance would counterbalance any change in convoy schedules. However, this was not the case in 1943, because railroads surrounding the Gulf were incapable of handling important shipments. The result was a recommendation by Trade Division to ease shipping restrictions in the Gulf.[22]

The difficulty in closing the St. Lawrence became clear in an early assessment of the general trade situation made by the Trade Division in Ottawa which foresaw great problems as early as January 1943. This evaluation established that the area of the St. Lawrence west of the connection with the Saguenay could reasonably be considered as 'safe' from enemy attack as a result of weather conditions and navigational hazards. With regard to rails, Trade Division forecast that reliance only upon railway transportation of goods would cause dislocation and overburdening. On the south shore of the Gulf of the St. Lawrence, for example, the railroad veers away from the coast for a considerable distance, ". . . leaving ports between Rimouski and Gaspe without any rail communication, though this area of the coast is an important lumber-growing area."[23] Anticosti Island, which had a remarkable pulp output in 1942, could only be served by coastal steamers. Sydney, the most important port bordering on the Gulf, was connected with only a branch single line and train ferry as its sole railway communication. Nova Scotia and the Bay of Fundy, by contrast, were better connected, but from Halifax to Canso there was 'practically no rail communication at all'. Newfoundland, like many of the Gulf ports, was

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[22]DHIST: 1650-239/16B

[23]"Review of General Trade Situation in Canadian Coastal Zones 1942-1943.," DHIST: 1650-239/16B, v. 1.

almost isolated. Apart from a narrow gauge railway, access was limited. ". . . road and other inland communications . . . are either very poor or entirely non-existent."[24]

Trade Division was concerned about estimates which held that the aluminum plant at Arvida required approximately five million tons of bauxite and other raw materials in order to keep producing much-needed aluminum. Though bauxite was fed to Arvida in 1942 by lake steamers and railways, it ". . . has become more and more evident that the strain is far too great on the limited capabilities of the Railroad and a considerable balance of coal, bauxite and finished aluminum will therefore have to be moved by sea . . . . Much of this can probably be done through the protected waters . . . but a fair proportion of the total will still have to pass through dangerous waters."[25] The Trade Division was also anxious about the supply of coal to pulp and lumber mills, which also could only be moved by sea.

Sydney and Cape Breton were large coal-mining districts, in 1942 producing 26% of the total production of Canada. This coal was only moved in 1942 from Sydney by operating the Sydney-Truro railway at full capacity, and running a small series of steamers to the main Trunk Railway piers to compensate for the overflow. Newfoundland, with its deficiencies in food and commodities, could not provide the gasoline by itself to satisfy the wartime needs of the many air and armed forces bases. The vast majority of these supplies had to be shipped to St. John's in 1942 because the Newfoundland Railway could not handle it. Air force bases in Newfoundland required the most maintenance, because they were a strategic asset which covered the Gulf of St.

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[24]Ibid.

[25]Ibid., p. 5.

Lawrence. Many of these bases were still in construction in 1943.[26] Water transport was essential to Newfoundland because it provided the most effective means to hasten construction.[27]

The Trade Division concluded that the local movement of goods in the St. Lawrence needed to be maintained. Their decision was based upon the substantial projected tonnage in the 1943 shipping season, and the assertion that "The livelihood of numerous small communities in the Lower St. Lawrence is absolutely dependent on water transportation."[28] Despite the strict demand for the closure of the St. Lawrence, the Trade Division had decided as early as the end of January 1943 to bend the rules and recommend that local coastal traffic should continue, even in the absence of a strong escort force.

The Trade Division had shown that the railways were not equipped to handle a full diversion of Canadian shipping, because they would become quickly overloaded. J.S. Roy blitzed the government with new criticisms in March 1943, claiming that, had the navy done its job in 1942, ". . . there would not have been so much damage done to the Harbors of Montreal and Quebec. They [the people] claim that the single-track railroad going to Halifax has been overloaded because of all the materials which have to be transported."[29] Both Roy and the Trade Division were right. Captain Robert Thomas produced an excellent analysis of the economic effects of the closure of the St. Lawrence, and he argued that the decision negatively affected the

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[26]The construction of the U.S. Air Force base at Goose Bay, for instance, was delayed for months by the sinking of SS *Donald Stewart* and her cargo of bulk cement and aviation gas in September 1942.

[27]Ibid., p. 8.

[28]Ibid., p. 10.

[29]*Hansard*, March 15, 1943.

Canadian capacity to supply the United Kingdom. Since only two months remained in the 1942 shipping season when the decision was made, in Thomas' opinion, it ". . . *seemed* to be a prudent one. [italics mine]"[30] However, Thomas has shown that there appeared to be a lack of effective analysis of railway capacity to handle the diversion of shipping. As a result of the delay caused by overloaded rail transportation, the monthly export of Canadian goods to the United Kingdom declined, and did not begin to recover until the summer of 1943.[31] Before September, 1942, Canadian shipping had experienced monthly *growth*. The change was evident. Montreal suffered particularly, suffering an 'enormous decrease' that was not compensated by the substantial growth at St. John and Halifax.[32] The most revealing indicator of the unpreparedness of the Canadian rail system was the decision to move Canadian trade through the United States, which ultimately caused a debit of 15,000 box cars by 1945.[33]

Train cars which normally serviced Canadian industry were missing, and the rest of trade had to be strictly controlled. The use of civilian administrative boards and incomplete, parochial planning resulted in this incorrect assessment, with a total decline of potential shipping. This was a cost Thomas characterized as out of all proportion.[34] Evidently the problem lay not in the decision itself but in the resistance of the Trade Division to review the decision in later years.

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[30]Thomas, *op. cit.*, p. 15. It would not be until April 1943 that the ice in the Gulf and River St. Lawrence would clear sufficiently to permit shipping to resume under normal conditions.

[31]Ibid., p. 15.

[32]Ibid., p. 15; see Appendix B.

[33]This represented 13 per cent of the Canadian inventory.

[34]Ibid., p. 17.

All of this is diluted by one of Thomas' closing statements. "The Americans and the British saw the closing of the Gulf as a matter of little consequence. Following the entry of the United States into the war, they became the key source of supply and . . . Canada was almost entirely excluded from the Allied organization for the higher direction for the war."[35] If neither major partner complained about the closure of the Gulf or its effect on Canadian shipping or rail transport, then the situation was unlikely to be reviewed.

The recovery of shipping in the Gulf of the St. Lawrence was a gradual and cautious process. Certain commodities were still required to be transported through the Gulf for ocean-going shipping. These were scheduled at a rate of 12 ships a month. At the St. Lawrence Operations Conference in February, 1943, the Ministry of Shipping permitted an increase to 22 timber ships per month.[36] The Gulf of the St. Lawrence was consequently *never* totally shut down. In the monthly reports on the analysis of the composition of ocean-going convoys, steady growth in ocean convoys loading in Gulf ports is observed. According to these reports, for much of late 1942 and early 1943, no ships operated in the Gulf. This is in part the result of the shorter seven-month shipping season as opposed to the Atlantic Coast ports, which were in operation year-round. By April, 1943, much of the loading was still diverted to Halifax, St. John, and New York, which shipped the bulk of North Atlantic trade throughout 1942 and 1943.[37] From April to September, however, the situation as seen by Trade Division, and in the apparent absence of U-

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[35]Ibid.

[36]"Appendix A - St. Lawrence Operations Conference - 22nd- 24th February, 1943." PAC, RG 24, v. 6789, NSS 8280-166/16 v. 3.

[37]Since the first of the year St. John shipping had shown a gradual and steady increase. "Report of Proceedings No. 38, N.C.S.O St. John," PAC, RG 24, v. 11052, NS 30-1-10, v. 18. March, 1943.

boats as a striking force in the St. Lawrence, caused the Naval Control service to ease slightly. The number of ships which loaded in the Gulf increased steadily over this period, though most were used for coastal shipping.[38] The trend is verified by the correspondence between the Trade Division and the Ministry of War Transport. By July 7th, 1943, the Navy began to permit increased trade down the St. Lawrence, up to 37 ships per month as opposed to the originally planned 10. This was made as a temporary concession: if the situation in the St. Lawrence deteriorated, the Gulf would shut down as tight as a drum.[39] Gulf traffic was heavily restricted in reaction to the Battle of the St. Lawrence, but in a matter of months it had resumed. U-boats did not succeed in killing Canadian shipping.

On September 10, 1943, shipping between Quebec and Sydney and Cornerbrook was taken out of convoy. The Ministry of War Transport continued to increase Gulf traffic regardless of the potential submarine threat. By the 200th meeting of the Naval Staff, it was decided that St. Lawrence convoys could be suspended entirely. The Naval Staff felt this was an acceptable risk granted the current U-boat situation. This decision temporarily allowed ships to move expediently in the St. Lawrence.[40] A series of letters between C.C. Bigonese, the general manager of Gulf Pulp and Paper Co., and the Naval Control Service Officer (Quebec City) dealt with a civilian request to run pulp schooners at night. This proposal was initially rejected, but with the absence of any submarine threat, CNS Murray rescinded the order on September 14,

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[38]"Analysis of Composition of Ocean Convoys," PAC, RG 24, v. 6788, NSS 8280-17. October 1942-December 1943.

[39]"Cpt. E.S. Brand to Cpt. E. Aikman, Ministry of War Transport." RG 24, v. 6789 NSS 8280-166/16 v. 4. July 7, 1943.

[40]"Suspension of St. Lawrence Convoys.," RG 24, v. 6789, N.S. 1048-48-22, v. 2.

1943, allowing independent sailing at night.[41] The correspondence between the Trade Division and the Ministry of War Transport, and the eventual relaxation on shipping restrictions undertaken by the Naval Control Service, proves that the German victory in the St. Lawrence was fleeting. The Gulf was never really shut down to shipping, despite both the German attacks and the Ministry of War Transport's preferences.

All of the trade planning for 1943 fell in line with the assumptions and tactics adopted in May 1943 with the issue of 'The Defence of the Gulf of St. Lawrence 1943 - Short Title - GL 43'. The first assumption explains the Trade Division's apparently timid limitations on movements within the Gulf. "It is well known that the Germans are methodical people and somewhat bound to precedent and therefore operations this year in the Gulf will be greatly influenced by the operations last year of U-517. . . ."[42] Despite overly cautious shipping controls, the defence plan for 1943 contained much more aggressive language and a far more aggressive doctrine. While the emphasis of previous plans had been on defence, the main effort in GL 43 was to create an environment similar to that established in the fall of 1942- ". . . untenable for U-boat operations by means of concerted air and surface offensive action by striking forces strategically placed to reach any part of the Gulf in the shortest possible time."[43]

Air patrols were established to accomplish this, covering all entrances to the Gulf , and new 'Striking Forces' composed of Fairmiles were assembled. The Striking Forces were designed to be elastic in their disposition. Defensive measures adopted earlier were carried over

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[41]RG 24, v. 6789, N.S. 1048-48-22, v. 2.

[42]"Defence of the Gulf of St. Lawrence 1943 - Short Title - GL 43." PAC, RG 24, v. 11579, D16-59-19. May 25, 1943.

[43]Ibid.

in GL 43, such as sea-air cooperation. For example, the 76th M.L. Flotilla and the 716th Squadron were indelibly linked in their operations.[44] This was noted in the Appendix of GL 43. "The closest cooperation is to be exercised between naval and air authorities at Gaspé and Sydney so that everybody is fully in the picture and agreed regarding disposition and intentions. . ."[45] Sydney, which lost its importance as a key port after the 1942 shipping season, undertook an entirely new role. Sydney adapted into the central airfield of Eastern Air Command and the hub of all coastal convoy traffic.[46] It was clear in 1942 that, despite the harrowing German experience, no submarines were destroyed. Inexperience with coastal ASW by both the air force and the navy were blamed for this. EAC could not compare to the record of the R.A.F. Coastal Command, which boasted one authenticated kill for every 50 attacks. These results, while disappointing for Canadian airmen, meant that improvements could be made and ". . . is not so far indicative of any demonstrable inferiority of performance with Coastal Command using the same tactics."[47] Despite the different strategies employed by Coastal Command and EAC, certain changes were made in an attempt to improve the kill ratio. These measures included 12 hour patrols of two aircraft, and added expenditure which would increase sightings, attacks, and kills. The report concluded: "An A/C has the power, if the pilot uses his imagination, to cause more

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[44]"Additions to Standing Orders - - 76th M.L. Flotilla," PAC, RG 24, v. 11506. March 26, 1943.

[45]Appendix I, GL 43.

[46]"Summary of Convoy Season 1942; N.O.I.C. Sydney," RG 24, v. 11079, 48-1-11, v. 2.

[47]"Comment on Eastern Air Command Anti-Submarine Effort, February 17, 1943.," RG 24 v. 5272, 28-5-11, v. 1.

heart flutterings around a U/B's crew than any other form of A\S warfare."[48] The first steps to align strategy with the British, who were better equipped and trained than their Canadian counterpart, took place in July 1942, when the ambitious and well-admired Squadron Leader N.E. Small of EAC adopted British sweeping tactics.[49] Small's tactics showed quick results. U-753 was sunk off the coast of Nova Scotia within the month. The changes in EAC sweeps resulted in the intense attacks made on U-517 and U-165 in the Gulf.[50]

The RCN also underwent changes in the aftermath of the Battle of the St. Lawrence. With its poor escort record, plans were initiated to modernize the tactics of the Western Local Escort Force (W.L.E.F.) to reflect the more aggressive stance adopted in GL 43. Captain J.D. Prentice, author of the 'Hints on Escort Work,' created an innovative blend of escort forces designed to make the best use of the coastal RCN's limited resources and specializations.[51] Bangor minesweepers, with their better asdic equipment, were tasked with a forward screen while destroyers were limited to surface sweeps with radar. Corvettes were transferred to rescue and salvage duties. As Milner points out, the W.L.E.F.'s aggressive new posture was untried.[52]

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[48]"Addendum to Hints on Anti-U-boat Warfare: Coastal Command Tactical Memorandum #22," PAC, RG 24, v. 5272, 28-5-11, v. 1.

[49]Roger Sarty, *The Maritime Defence of Canada.*, (Toronto, 1996), p. 201. The essential difference between the national services was the altitude of the sweeps. The British swept from a much higher altitude, reducing visual sightings and allowing a dive out of the clouds, which proved much more effective than the low convoy covered by the North American tactics.

[50]Marc Milner, "Inshore A.S.W.: The Canadian Experience," in *The RCN in Transition, 1910-1985*. Edited by W.A.B. Douglas, (Vancouver, 1988), p. 147.

[51]The 'Hints on Escort Work' were circulated regularly within the RCN and contained exactly what the title describes- ways to preserve fuel, evade fire, better patterns for depth charge attacks, etcetera.

[52]Ibid., p. 148.

There was no German offensive in 1943, though the corvettes assigned to Prentice's formula were better equipped for anti-submarine warfare. Some corvettes had obtained the modern type 271 AS radar, essential for night fighting.[53] In fact, it was the technological backwardness of the Royal Canadian Navy both at home and abroad which gave Angus Macdonald reason to replace the 'tired and ill' Chief of Naval Staff Nelles with L.W. Murray in 1943.[54]

Lacking any clear and present danger, the RCN sought to determine the troubles with U-boat detection in the areas where U-517 was so successful. Surveys were conducted in oceanographic positions between Cap Gaspé and Anticosti. The RCN appealed to the National Research Council to help ascertain the conditions which rendered asdic sets so ineffective. ". . . it is sufficient to note that the German inshore campaign of 1942 forced the RCN to take a more scientific approach to the problems of ASW. The resulting BT [bathythermographic] surveys by the NRC in 1943 formed the groundwork for the navy's developing understanding of the physical properties of coastal waters."[55] These discoveries had little application in 1943, because

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[53]The 271 set was sought after by the Canadians throughout the war. Reserved mainly for the proven British ships, the 271 set allowed for shorter wavelengths, meaning shorter aerials 'down to the size of your little finger.' The SW1C, with which most coastal vessels were equipped, had a 90 foot aerial which needed to be cleaned regularly and sweeps had to be made by hand. James Essex, *Victory in the St. Lawrence,* p. 83. The deficit of proper equipment forms the backbone of Marc Milner's argument that technical deficiency was at the root of Canadian inability to safeguard convoys during the crisis period of 1942, when four escort groups were recalled to European waters for training. "Special pleading and the pressure of operations forced the British to divert some of their equipment to Canada by the end of 1942, but not before the RCN endured its worst period of the war." Milner, "The Implications of Technological Backwardness in the Royal Canadian Navy, 1939-1945," in *Canadian Defence Quarterly,* v. 19, (Winter 1989), p. 47. David Zimmerman's *The Great Naval Battle of Ottawa,* (Toronto, 1989) contains the most detailed narrative on the process of achieving 271 for the Canadian Navy.

[54]Ibid., p. 52.

[55]Marc Milner, "Inshore ASW: The Canadian Experience," in *op. cit.*, p. 150.

U-boats did not threaten the Gulf. The last attempt to assault North America came in 1944, after the Battle of the Atlantic had been decided in the Allies' favor with the closing of the Black Pit, denying the U-boats any safety from air cover. Michael Hadley describes this period as a 'restless interlude,' distinguished by ". . . an almost complete absence of enemy."[56] When the enemy did return, the U-boats used new defensive measures to keep them better protected from aircraft, the 'schnorkel'.

Type IXC U-boats equipped with the 'schnorkel' came into operation in June and July 1944, just as Allied armies began their invasion of Normandy and the two-month campaign which followed. The Admiralty feared the 'Snort', because the U-boat ". . . could now remain submerged for up to ten days without presenting any target detectable by radar or visually except at close range."[57] The type IXC represented a new threat to Canadian shipping, because the schnorkel worked best in areas with small inlets and narrow channels. The assignment of a U-boat to Canadian waters in the summer and fall of 1944, despite few successes and the constant anxiety caused by air patrol, provided the crew with a peaceful scene in contrast to the unsafe European waters they had left. In fact, many returning U-boats were sunk on their voyage home.[58] With this background, U-541 and U-802 pressed into the Gulf to begin the second campaign of the Battle of the St. Lawrence. As in 1942, both the U-boats were struck at first with the oceanographic conditions which made them feel ". . . as secure as in the bosom of

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[56]Hadley, *U-boats against Canada*, p. 194.

[57]Ibid., p. 224.

[58]Ibid., pp. 225-226.

Abraham."[59] More importantly, the air cover suppressed the U-boats as it had done in the first campaign.[60]

While some losses were incurred in this second expedition, there was little public controversy that had been experienced in 1942. This was the result of several factors. First, Canada was by now fully into the war, its interests and hopes pinned to the war in Europe. While the *Montreal Star* and other newspapers published some of the details of the worst sinking in the Gulf in 1944, HMCS *Shawinigan*, there was no public outcry by the local representatives of the lower St. Lawrence or Quebec. The RCN had already instituted controls and was more prepared to accept losses from a U-boat threat, whose back had been broken in 1943. Unlike 1942, NSHQ had access to the 'Triton' Enigma codes which had been blacked out, and the campaign in Europe quickly denied the U-boats their home ports. Furthermore, the RCN realized the essentially secondary nature of the security of the Gulf. As a message from the Admiralty in summer 1944 illustrates, "Admiralty's policy is to accept greater risks . . . in order to meet Overlord commitments. . . . It may be necessary to accept strength as low as 5 for trade vessels."[61] The real battle of 1944 took place in the English Channel, where supply lines were under threat from German E-boats and scattered U-boats. The RCN experienced much heavier action in European waters, as part of destroyer or minesweeping flotillas, than in Canadian waters.

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[59]Ibid., p. 228.

[60]Leaving the Gulf, U-802 reported that his radio silence had been due to a damaged antennae which he dare not surface to fix in an area where "no U-boat gets through on the surface without an air attack." Ibid., p. 234.

[61]"Admiralty to NSHQR/CinCWA CinCNA ScNOL," RG 24, v. 11506 D-19, June 19, 1944.

Canada was unprepared for naval anti-submarine warfare so close to home. There was a shortage of effective equipment and ships in coastal waters, and coordination between vessels and aircraft was absent. Often, W.L.E.F. vessels would operate in violation of the 'Hints for Escort Work'.[62] The seemingly inadequate naval defence in Canadian waters was offset by escalating air cover in the Gulf and its entrances. U-boats were forced to submit to a dolphin-like experience, exhausting the crew. Repeated airborne and depth charge attacks caused costly damage both to torpedo gyros and other vital equipment. The sinkings off the coast of Quebec caused isolationists to demand better North American defences to protect local industry from enemy incursion. To calm the public nerve, the Government imposed strict censorship and suppressed news of sinkings. At the behest of Great Britain, the Ministry for Naval Services approved the withdrawal of seventeen coastal escorts to support Operation Torch. The projected strain on the convoy system resulted in the decision to close the Gulf. The decision to close the Gulf allowed the RCN to fulfill its primary purpose: support to the Empire in areas that were strategically more important. The decision also nullified one of the key objectives of the German offensive against North America: to hold Allied ASW forces in coastal waters. Furthermore, the use of aircraft suppressed the U-boats, convincing Admiral Doenitz that the North American zone was frankly not worth the trip.

The closure of the St. Lawrence, despite some negative effects, did not matter. The gulf was not sealed for long. The decision only limited the amount of ocean-going traffic, allowing year-round Maritime ports to absorb the overflow. As time passed and demands for greater

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[62]A. Darlington and Commander Fraser M. Mckee, *The Canadian Naval Chronicle 1939-1945*. (St. Catharines, 1996), pp. 68-70.

shipments grew, the Gulf opened to greater shipments and loading began again at Gulf ports by the beginning of the 1943 shipping season, contrary to the expectations of those who had made the 1942 decision.

The attitude of the Trade Division and Naval Service in accepting the possibility of greater losses in 1943-1944 was addressed in a memorandum from E.S. Brand, head of Trade Division, to the CNS before the Gulf shipping season began in 1945. Brand recognized that expanded attacks by U-boats were possible in 1945; after all, some losses had been incurred by U-boats in 1944. The export program that was necessary to sustain the Allied war effort called for immense shipping. The program required 80-90 ships per month, necessitating full use of ports in the Gulf of the St. Lawrence. He dismissed any anxiety about the safety of shipping. "If losses occur, they must be faced, since it is only by taking this attitude that we shall be able to get Canadian exports to the war zones they are urgently required."[63] The Canadian troubles in coastal defence relating to anti-submarine warfare point to inexperience through a hastily-trained local escort force, but by no means represented a lasting defeat of the Royal Canadian Navy and Air Force or the people they served to defend.

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[63]"St. Lawrence Operations, Summer 1945," PAC, RG 24 v. 6788 NSS 8280-166/16, v. 2.

Curtain Call

Let us then address ourselves to our task, not in any way underrating its tremendous difficulties and perils, but in good heart and sober confidence, resolved that, whatever the cost, whatever the suffering, we shall stand by one another, true and faithful comrades, and do our duty God helping us, to the end.
-Winston Churchill, December 30, 1941[1]

The Battle of the St. Lawrence is a fascinating case study of a number of issues: the state of Canada's coastal defence and ASW in 1942, defence planning and intelligence, and the complicated process of policy-making and execution in wartime. It is these three key areas which I have explored above, and which I believe are central to understanding the outcome of the conflict in Canadian coastal waters. After exhaustive research and study into the issue, the central lessons to be taken from this engagement are clear. It must be said that in terms of coastal defence, the Royal Canadian Navy accomplished a great deal with a skeletal escort force. An effective convoy system was established which ensured the safety of the overwhelming majority of shipping which traversed the St. Lawrence during the Battle. However, it proved to be the air coverage provided by Eastern Air Command which bore the burden of coastal defence and ultimately suppressed U-boats which operated in Canadian waters.

Although the Canadian Government closed the St. Lawrence to shipping during the Battle of the St. Lawrence, I have demonstrated that it was not a hasty retreat from the war or a defeatist response to the German successes in the Gulf, but a carefully and rationally planned policy. In

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[1]Speech given at a Joint Session of Parliament in Ottawa a day after Churchill attended a Cabinet War Committee meeting in Ottawa. Robert Rhodes James, ed. *Churchill Speaks 1897-1963: Collected Speeches in Peace & War.* (New York 1980), p. 790.

addition, the cost of the decision was negligible, since restricted coastal shipping resumed at the beginning of the 1943 season and restrictions were gradually relaxed until the end of the war.

A review of the historiography in my first chapter revealed that the Battle of the St. Lawrence, though an integral part of Canadian naval history, has been virtually ignored by historians, and is almost unanimously written off as simply as a defeat. More recently, however, historians such as Michael Hadley and Roger Sarty have come to discuss the Battle of the St. Lawrence in more detail. These closer examinations have forced a transition in the historiography which has exposed the importance of the RCAF in coastal defence, growing emphasis on the Battle of the St. Lawrence as another theatre of the Battle of the Atlantic, and the importance of technology in ASW during the Second World War. Sarty and Tennyson's most recent work is especially encouraging because their focus on the communities of Sydney and Cape Breton exposes other layers to the conflict and how it was waged. Though nothing is yet certain, it is likely that the forthcoming official history of the RCN, *No Higher Cause*, will contain as detailed an account of the Battle of the St. Lawrence and its importance as I have attempted to provide above.

In the second chapter I demonstrated that the German offensive in North America had two strategic goals. The first, as Doenitz articulated to Hitler in early 1942, was to sink as many merchant ships as possible while losing as few submarines as possible, with the ultimate goal of seriously disrupting Allied shipping. The second was to put pressure on the North American coast in an attempt to divert escort ships away from Atlantic Ocean routes. The Canadian strategy was based on one overriding goal, found in every plan for coastal defence from 1937 to 1942 - to ensure the safe delivery of men and materiel to their Allies in the United Kingdom and

elsewhere.

A balance sheet of the strengths and weaknesses of both the Canadians and the Germans in the St. Lawrence was also drawn up. While Canadians were well-supplied with multiple bases surrounding the Gulf, possessed a sparse naval escort force which had to be bolstered extensively by the RCAF in order to serve as an effective defence of shipping. The U-boats in the Gulf possessed a distinct disadvantage because their distance from friendly seas and skies was so great, there was little chance of renewing supplies. Due to limited fuel reserves, German submarines were forced to limit their time in Canadian waters to brief forays. This was offset, however, by the bathythermographic conditions of the Gulf of the St. Lawrence, which neutralized the ability of RCN and RCAF escorts to detect the German raiders.

My account of the Battle of the St. Lawrence demonstrates an important aspect of Canadian ASW in 1942—a story of inexperience overcome. Throughout the battle, not a single German submarine was sunk, though RCN vessels and RCAF airplanes effectively suppressed U-boats following attacks on convoys. Tactically, the Germans won the Battle of the St. Lawrence, sinking 23 ships at no cost to themselves. The frustrating experience of repeated attacks on U-boats without success galvanized the RCN and RCAF to devise new tactics and methods of cooperation in order to improve ASW in coastal waters. For instance, the VITAMIN code was put in place after the Battle of the St. Lawrence in order to economize on anti-submarine patrols and improve communication between EAC and the RCN escorts. This was only one of the measures taken to perfect maritime command by Naval Services Headquarters in Ottawa. The defence plan for the St. Lawrence in 1943, 'GL-43', incorporated many of the lessons drawn from the engagement, and coastal defence was reorganized with a much more

aggressive doctrine which coordinated sea and air elements in patrol and escort activities.[2] This doctrine remained untested in coastal waters, however, because the submarines did not return the following season as predicted.

The German accounts of the battle found in Admiralty interrogations and in the war diaries of participating boats, however, highlight several achievements of the Canadian defenders. The constant presence of aircraft, despite the absence of any kills, still severely shook the confidence of German submarine commanders and their crews, driving them beneath the waves and disrupting their searches for available targets. EAC aircraft alone were enough to convince Vogelsgang, the commander of U-132, that the St. Lawrence was operationally unfavourable. In addition, the RCN and the RCAF gave the *appearance* of coordinated defence to German submarine commanders. U-Boat commanders eventually were forced to leave the St. Lawrence after the Canadian Government closed it to shipping for the remainder of the season, because the submarines became increasingly exposed to air patrols during their search for targets. After a dismal autumn offensive with few sinkings, the Germans left the St. Lawrence, never to return in force.

The strategic failure of the German offensive is highlighted in my fourth chapter, *Coping with 'Defeat'*. The process surrounding the decision to close the St. Lawrence was incredibly complex. Despite what other historians have argued, the decision was *not* based solely on the German successes from May-October 1942. Rather, it represented the final stage in a long

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[2]A Gulf Striking Force was created at HMCS Fort Ramsay as a rapid response to any submarine sightings in the Gulf, which would work closely with EAC. This measure was put in place in part to reduce the lag time between aerial sighting reports and the response by surface ships.

process of shifting traffic from the Gulf and River St. Lawrence to Canada's year-round ports. The St. Lawrence was not considered essential by defence planners, who considered closure as an acceptable defence measure as early as 1937. Furthermore, the British Ministry of War Transport and its representatives in Canada contended that in order to economize on resources, it was in the best interests of the war effort to shift traffic to Halifax and St. John's, thus eliminating hundreds of nautical miles from the voyage which required escort. This recommendation was strengthened by the fact that a shift in shipping to the eastern coasts was already underway in early August 1942. These stresses, combined with the German offensive, certainly made a convincing case for closing the St. Lawrence. However, there is little indication that the situation was so dire as to require the closure of the maritime artery; the Canadian forces defending the Gulf had little problem with continuing their convoy and ASW operations in the 1943 season. The decision to close the St. Lawrence was reached in order to liberate escort ships from convoy duty in Canadian waters that they might be able to participate in Operation Torch. If one of the German strategic objectives was to divert escorts back into North American waters, surely the decision proves that this strategy failed.

In addition, the U-Boat's 'accomplishment' of disrupting Canadian shipping was fleeting. It was simply impossible to shut down the St. Lawrence, given the bulk of traffic shifted to the east coast. The closure of the St. Lawrence was only really in place during the last month of the 1942 shipping season. Convoys resumed in early 1943 in the Gulf of the St. Lawrence, and shipping increased gradually from month to month until the end of the war, by which point the convoy system was removed from Canadian coastal shipping. Certainly, there were reductions in Canadian shipping due to the difficulties of transporting the bulk of traffic by rail to the east

coast, but I believe this says more about the problems of coordination between rail and shipping interests than it does about Canadian defence. Since neither the United States or the United Kingdom complained about the decision to close the St. Lawrence, one can argue that the overall impact of the decision on the war effort was negligible.

The history of the Canadian navy has always been one of shortage of men, ships and equipment, but is also one of endurance against the odds. For myself, the Battle of the St. Lawrence remains a symbol of the Canadian commitment to the Battle of the Atlantic, and a testament to the difficulty experienced by a small-ship navy in defence of coastal waters.

Attacks in the Gulf and River St. Lawrence, May-October 1942

Date dd/mm/yy	Name of Vessel	Commanding Officer/ Convoy	Class of Vessel	Tonnage	Cargo	Casualties	U-Boat	Commanding Officer
11/05/42	SS Leto	Egbert Hendrik Vanderveen	Steamer	4712	—	12	U-553	KL Thurmann
12/05/42	SS Nicoya	Ernest Henry Brice	Steamer	5364	—	6	U-553	KL Thurmann
06/07/42	SS Dinaric	Marijan Zadrijevac/QS-15	Steamer	2555	957 tons Lumber	4 dead, 2 injured. Ship crippled: Sank later while towing.	U-132	KL Vogelsgang
06/07/42	SS Anatasios Pateras	Petros Pontiros/QS-15	Steamer	3382	—	3	U-132	KL Vogelsgang
06/07/42	SS Hainaut	Leon Castelain/QS-15	Steamer	4312	—	1	U-132	KL Vogelsgang
20/07/42	SS Frederika Lensen	B. E. Russell/QS-19	Steamer		—	4	U-132	KL Vogelsgang
27/08/42	SS Chatham	Edward A. Anderson/SG-6	Troopship	5649	Troops	13	U-517	KL Härtwig
27/08/42	SS Arlyn	Eyolf Wennesiand/SG-6	Steamer	3304	Dynamite, High Test fuel	13	U-165	KL Hoffman
27/08/42	SS Laramie	Peter M. Moncy/SG-6	Tanker	7253	Oil	5 crew: Ship made it back to port safely.	U-165 U-517	KL Hoffman KL Hartwig
03/09/42	SS Donald Stewart	D.W. Percy Nolan/LN-7	Laker	1781	Aviation Fuel, Concrete, cable	3 crew	U-517	KL Hartwig
05/09/42	SS Meadcliffe Hall	Walter Melson Bowen	Cargo Vessel	1895	—	Attack failed	U-165	KL Hoffman

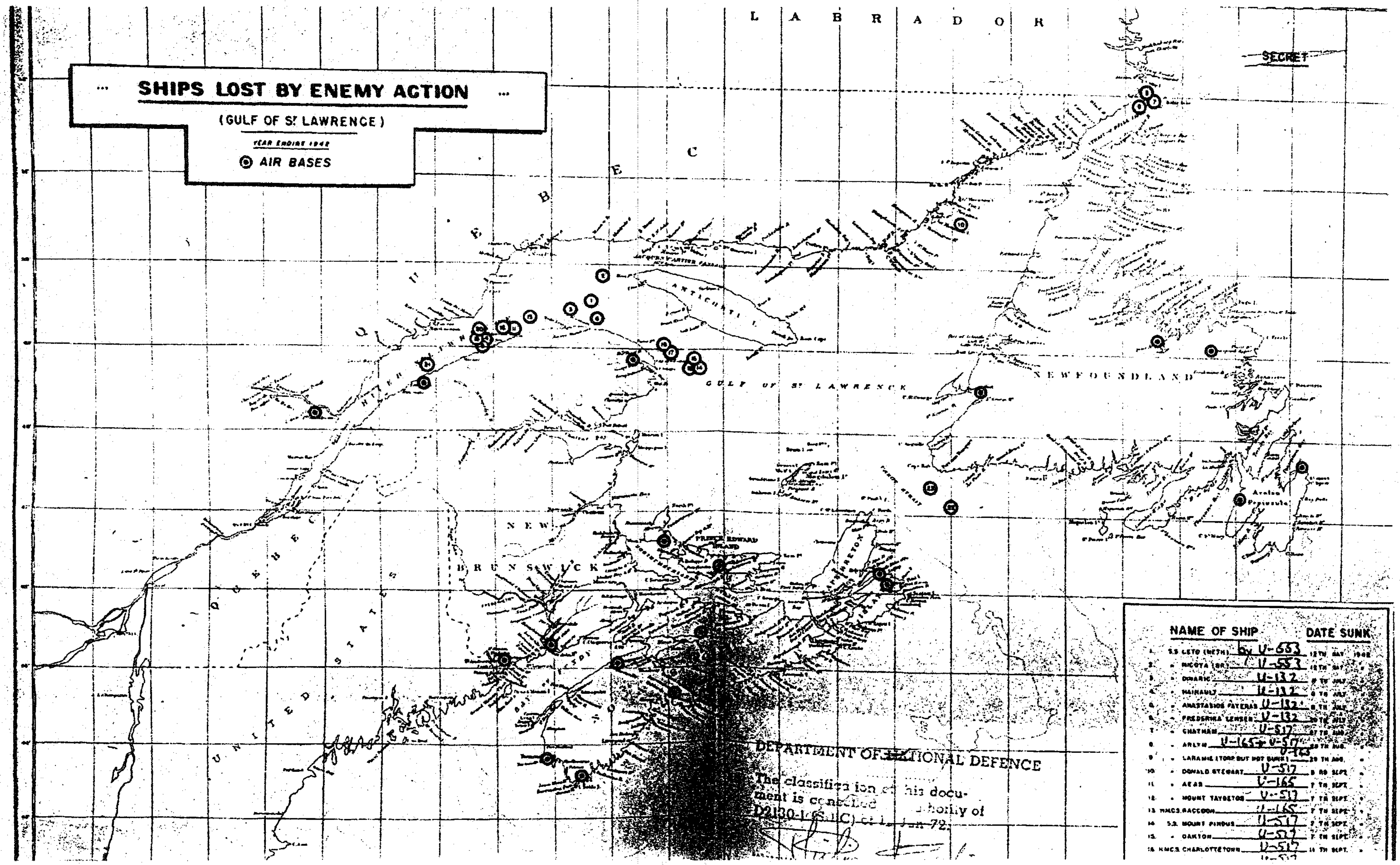
05/09/42	SS Lord Strathcona	Charles Stewart	Cargo Vessel	7335	Iron Ore	None	U-513	KL Ruggenberg
05/09/42	SS Saganaga	A.W. Duguid Mackay	Cargo Vessel	5454	Iron Ore	33 crew	U-513	KL Ruggenberg
07/09/42	SS Aeas	John Skinitus/QS-33	Cargo Vessel	2988	Steel, lumber	2 crew	U-165	KL Hoffman
07/09/42	HMCS Raccoon	LCdr J.N. Smith, RCNR	Armed Yacht		Crew	4 officers, 33 crew	U-165	KL Hoffman
07/09/42	Mount Pindus	A. Farmakides/QS-33	Cargo Vessel	5729	8 Tanks, war material	2 crew	U-517	KL Hartwig
07/09/42	SS Taygetus	John Simigalalas/QS-33	Cargo Vessel	3826	8 Tanks, war material	5 crew	U-517	KL Hartwig
07/09/42	SS Oakton	Alfred Edwin Brown/QS-33	Cargo-Carrier	1727	Coal	0	U-517	KL Hartwig
11/09/42	HMCS Charlottetown	LCdr J.W. Bonner, RCNR	Corvette	970	Crew	13 dead, 20 injured	U-517	KL Hartwig
15/09/42	Saturnus	Jacob William Korthagen/SQ-36	Cargo Vessel	2741	Ballast	4	U-517	KL Hartwig
15/09/42	Inger Elisabeth	Andreas Seim/SQ-36	Cargo Vessel	2166	—	0	U-517	KL Hartwig
16/09/42	SS Essex Lance	Capt. MacKirdy/SQ-36	Cargo Vessel	6624	Ballast	Repaired, returned to service.	U-165	KL Hoffman
16/09/42	SS Joannis	George Mandarakas/SQ-36	Cargo Vessel	3667	—	—	U-165	KL Hoffman
16/09/42	SS Pan York	SQ-36	Cargo	4570	—	Attack failed	U-165	KL Hoffman
09/10/42	SS Carolus	William Bronner/NL-9	Cargo Freighter	4000	—	12 crew	U-69	KL Graf
11/10/42	Waterton	William Lutjens/BS-31	Cargo Freighter	2140	Newsprint, sulphite	0	U-106	KL Rasch
13/10/42	SS Caribou	Pilot Officer J. H. Barrett	Ferry	2222	Passengers, Mil. Personnel	137 passengers and crew	U-69	KL Graf

Appendix B

Total Foreign-going Cargo

Year	Halifax	St. John	Montreal	Quebec	Trois-Rivieres
1939	690,345	1,096,450	3,144,189	158,039	445,390
1940	1,375,772	1,848,417	3,975,777	311,029	633,916
1941	2,329,753	2,408,599	4,078,207	320,263	472,626
1942	3,012,149	2,666,106	1,600,935	142,308	306,360
1943	3,364,989	3,227,429	1,089,447	162,243	320,728
1944	3,472,020	2,658,481	2,291,525	237,433	376,707
1945	2,683,160	2,721,266	4,904,744	544,280	871,455

Source: National Harbours Board Annual Reports, 1939-1945. Compiled by Robert H. Thomas


SECRET
SHIPS LOST BY ENEMY ACTION
(GULF OF ST LAWRENCE)
YEAR ENDING 1942
AIR BASES
LABRADOR
QUEBEC
ANTICOSTI I.
GULF OF ST LAWRENCE
NEWFOUNDLAND
NEW BRUNSWICK
UNITED STATES
PRINCE EDWARD ISLAND
NAME OF SHIP
DATE SUNK
1. S.S. LETO (NETH.) by U-553 12TH MAY 1942
2. " NICOYA (BR.) " U-553 12TH MAY "
3. " DINARIC U-132 6 TH JULY "
4. " HAINAULT U-132 6 TH JULY "
5. " ANASTASIOS PATERAS U-132 6 TH JULY "
6. " FREDERIKA LENSEN U-132 20 TH JULY "
7. " CHATHAM U-517 27 TH AUG. "
8. " ARLYN U-165 + U-517 28 TH AUG. "
9. " LARAMIE (TORP. BUT NOT SUNK) U-165 28 TH AUG. "
10. " DONALD STEWART U-517 3 RD SEPT. "
11. " AEAS U-165 7 TH SEPT. "
12. " MOUNT TAYGETOS U-517 7 TH SEPT. "
13. HMCS. RACCOON U-165 7 TH SEPT. "
14. S.S. MOUNT PINDUS U-517 7 TH SEPT. "
15. " OAKTON U-517 7 TH SEPT. "
16. HMCS. CHARLOTTETOWN U-517 11 TH SEPT. "
U-517
DEPARTMENT OF NATIONAL DEFENCE
The classification of this document is cancelled ... authority of D2130-1 ... Jun 72.

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