

4-17-2015

“An unusual voyage in far northern waters”¹ The Royal Canadian Navy’s first postwar forays into the Arctic, 1946-1950

Richard O. Mayne

Recommended Citation

Richard O. Mayne (2015) “An unusual voyage in far northern waters”¹ The Royal Canadian Navy’s first postwar forays into the Arctic, 1946-1950, *Canadian Military History*: Vol. 22: Iss. 4, Article 4.
Available at: <http://scholars.wlu.ca/cmh/vol22/iss4/4>

This Article is brought to you for free and open access by Scholars Commons @ Laurier. It has been accepted for inclusion in Canadian Military History by an authorized administrator of Scholars Commons @ Laurier. For more information, please contact scholarscommons@wlu.ca.

: "An unusual voyage in far northern waters" 1 The Royal Canadian Navy's first postwar forays into the Arctic, 1946-1950



“An unusual voyage in far northern waters”¹

The Royal Canadian Navy’s first postwar forays into the Arctic, 1946-1950

Richard O. Mayne

No one in Canada knew it was there. The automatic weather station set up on the shore of northern Labrador by the German submarine *U-537* in October 1943 was undiscovered until 1981, when a German researcher alerted Canadian authorities. Yet the fact that the Royal Canadian Navy (RCN) virtually ignored the country’s Northern littoral during the Second World War was understandable. Despite this single incursion into what at the time was the British colony of Newfoundland, Germany did not have the technology to threaten Canada’s North. This state of affairs quickly changed in the immediate postwar period.² The emergence of the Soviet Union as a threat to Western security and the development of new technologies, such as long-range aircraft, made the Canadian Arctic a potential frontline in a future conflict.

Abstract: Looking at the Royal Canadian Navy’s operational record between 1945 to 1950 it would appear that one exercise, two deployments, and a scientific expedition in the Arctic was not the type of commitment that matched the growing strategic significance of this area in the immediate postwar period. Analysis of documents from this time, however, shows that the RCN not only was keen to explore the extreme and unique challenges that this region posed to naval operations, but also that the navy was eager to protect the nation’s interests in the Arctic. This article, therefore, looks at early RCN attitudes towards the Arctic as well as the tactical and operational factors that impacted these early Northern forays. In doing so it argues that it was government cutbacks and limited resources that prevented them from doing more.

At least that was the conclusion drawn by the United States Navy (USN) whose increased interest and activity in the Arctic raised Canadian concerns about sovereignty. This created an awkward situation for the RCN, which was caught between a worried ally and a new adversary who were both eyeing a region of the nation in which Canadian forces had little tactical or operational experience.

Important studies have addressed the larger strategic context of challenges to Canadian sovereignty in the Arctic during and immediately after the Second World War.³ This article, by contrast, focuses on the RCN’s activities in the Arctic between 1946 and 1950 from a tactical and operational perspective. It does so because this approach yields important insights into the RCN’s attitudes towards the Arctic and the unique operational challenges they faced in this region. Indeed, the operational records from this period (which show that the RCN only initiated one exercise, two northern deployments and a scientific expedition⁴) suggest that the Canadian Arctic was not only “the sole domain of the USN,” but also that the RCN failed to represent the national interests in the North prior to the commissioning of *HMCS Labrador*, the Navy’s first (and only) icebreaker, in 1954.⁵ However, closer examination of these documents reveals that after 1945 the Navy gave the Arctic a high priority and stretched its extremely limited resources as much as possible to establish a presence there in spite of the challenges posed by the great distances and extreme environment.

Opposite: The Royal Canadian Navy only made it into the Arctic a few times prior to the commissioning of *HMCS Labrador* in 1954, and that creates a perception it was not interested in this area in the immediate postwar period. In reality, northern operations were a focus of the Navy from 1945 on and were limited only by a paucity of available resources.

There were two things that the Americans had come to accept about the Arctic in late 1945. The first was that growing tensions with their former Soviet partners would increase the strategic significance of the region, while the second was that any defence preparations in the Arctic would involve thorny negotiations with their Canadian allies. Certainly that was the conclusion drawn by historian George Stanley who observed that the American government's 1946 unilateral announcement of the dispatch of a US Navy expedition to Melville Island "had...the effect

of spurring Canada into a greater watchfulness [and] activity in Arctic development."⁶ In reality, this supposed trigger to Canadian naval involvement in the Arctic was never pulled; this myth was the product of erroneous assumptions made by an over-anxious national media.⁷ Not only did the Americans ask permission to visit and establish a weather station on the island, but they also respected the fact that the Canadian cabinet had deferred a decision on whether to commit to this venture until 1947.⁸

Although the significance of the Melville Island incident has been

exaggerated, there is ample evidence that Prime Minister William Lyon Mackenzie King's Liberal government did not want Canada to be the spark that ignited the simmering tensions between the US and Soviet Union. In fact, the government was willing to go to considerable lengths to avoid the appearance that it was siding too closely with the Americans in Arctic defence. Discussions in late 1945 regarding the joint Canadian Army-Royal Canadian Air Force Operation Musk-Ox (a 3,100-mile trek from Churchill, Manitoba, to Edmonton, Alberta, to test equipment in cold weather environments) provided a good example of these sensitivities. Suggestions that American observers wear Canadian uniforms to conceal their identities were viewed with grave scepticism south of the border. Similarly, the Canadian government's desire to publicize the mission as "peaceful" and "purely scientific" in nature brought the US Naval Attaché in Ottawa to mockingly observe that the Soviets were "not... born yesterday" and were "not swallowing this explanation."⁹ The Americans were right and King knew it. King brooded in his diary that the "Musk-Ox expedition," had been "folly" and had gone a long way to increasing Soviet suspicions of the West.¹⁰

The American desire to operate in the Arctic only served to heighten these Canadian fears. For instance, the appropriately named Operation Frostbite in early 1946 saw the large attack carrier USS *Midway* sail into

The USS *Midway*, a large US fleet carrier, participated in Operation Frostbite in March 1946 which involved sailing the carrier and its support vessels into the icy waters of the Davis Strait between Labrador and Greenland. Top: The *Midway* passes through icy water. Bottom: A Corsair on the deck of the carrier needs to be cleared of ice and snow before flying operations can commence.



US Navy photos



Davis Strait to test the effect of cold weather on air operations. While the ships that carried out Frostbite did not actually sail into Canadian waters, those assigned to Operation Nanook, also in 1946, did manage to do so (this was the operation that was originally going to establish the Melville Island weather station). Consisting of five warships and one Coast Guard vessel, Nanook was primarily a reconnaissance and training exercise designed to familiarise the USN with Arctic conditions. Despite an invitation for Canadian observers to participate, King's government remained concerned about appearances. Although giving their blessing for Nanook, the government again asked that any publicity surrounding the

exercise be kept as "undramatic as possible with emphasis on scientific knowledge acquired rather than on purely defence aspects."

King was clearly nervous about military activity in the Canadian north, yet there is a well-told story in an important popular history of the Canadian Navy that the service only took an interest in the region because the prime minister was willing to acquire a replacement aircraft carrier for HMCS *Warrior* providing the new vessel was "Arcticized."¹¹ Upon closer examination, however, this support for the Navy operating in the North actually came from the new defence minister, Brooke Claxton, rather than King. The prime minister remained unrelenting in his belief that Canada's northern policy should

be "primarily a civilian one," and while his government was willing to co-operate with the Americans in northern defence he privately argued that "our best defence in the Arctic was the Arctic itself" – a rather naïve belief that inhospitable conditions in the north were enough to deter any aggressor.¹² His thoughts about replacing *Warrior* were even more direct, as he confided to his diary that the idea of procuring the British carrier *Magnificent* made him "shudder."¹³

Claxton, moreover, did not understand that "Arcticizing" *Magnificent* was simply a term for modifications that would allow her to operate more comfortably in the cold weather environment of the North West Atlantic. The



A strong sign of the RCN's early resolve in the North: the new aircraft carrier, HMCS *Magnificent* (left), accompanies two destroyers, HMCS *Nootka* (right) and HMCS *Haida* into Arctic latitudes during Northern Cruise 1948.

Navy, however, was willing to use this angle if it helped shore up the defence minister's support for the acquisition of the carrier. But King's attitude towards the Arctic was an obstacle. The chief of the naval staff (CNS), Vice-Admiral H.E. Reid, was already in trouble with King for openly criticising the deep budget cuts that were making it extremely difficult for the Navy to maintain its current responsibilities in the Atlantic and Pacific.¹⁴ More to the point, Reid's objection to the government's funding and manpower ceilings underscored a recurring theme that would haunt the RCN's efforts in the Arctic between 1946 and 1950; namely, that they would have to respond to the growing significance of the region with limited resources.

The fact that the RCN was struggling to meet its current commitment to two oceans led some to believe that the Navy was not interested in Arctic defence. Certainly that was the impression formed by the Army when the vice chief of the general staff, Major-General Churchill Mann, wrote to the Navy on 30 September 1946 advising that his boss, the chief of

the general staff, was surprised that the neither the RCN nor RCAF were putting proposals for Arctic exercises before the Chiefs of Staff Committee. It was for that reason that Mann was pushing an Army proposal involving naval assets with the aim that it could be useful to start "a 'Navy baby.'"¹⁵ The concept itself was ambitious, calling for either a 4,700 or 10,000 ton naval headquarters ship to be "frozen in" so it could support a purely Canadian Arctic Expedition from 1 September 1947 to the end of August 1948. Of course, the Navy did not have any ships that met

this requirement and viewed the idea of borrowing and adapting an American Tank Landing Ship (LST) for this task as impractical. Although the concept of a Northern operation was highly desirable, the Naval Staff had no choice but to recommend that the Army be told that the Navy was in no position to participate in this particular exercise.¹⁶

The rejection of the Army proposal did not mean that the Navy was bereft of its own ideas. In fact, according to the assistant chief of the naval staff, Commodore H.G. DeWolf, the Plans division

Horatio Nelson Lay and his famous uncle, Prime Minister William Lyon Mackenzie King during the Second World War. In the postwar years Lay played a pivotal role in getting the RCN into the North.



had been "cooking up" various Arctic schemes that were not entirely dissimilar to the one that the Army had contemplated. Some within the Navy wanted to act independently of the Americans, as in the Army's proposal. This was certainly the view held by the director of naval plans and intelligence, Captain H.N. Lay, who had recorded that it was inadvisable to approach the Americans about converting a Tank Landing ship because it "would almost certainly mean the USN would wish to be the dominant partner in the

expedition, and I believe if Canada is able to do it herself, she should do so." As the prime minister's nephew, Lay undoubtedly had the inside track on King's fears of aligning too closely with the Americans, possibly explaining why he saw a unilateral approach as the Navy's best option. In the short-term, the Naval Staff seemed to agree as plans were hashed out to send the destroyer HMCS *Nootka* on an "exploratory expedition" to the Arctic sometime over the summer of 1947.¹⁷

Commodore DeWolf, however, had reservations about this approach. Unconfirmed reports that a Russian submarine was operating in the Davis

Strait only served to re-enforce the notion that the RCN would have to find ways to operate in the North, yet DeWolf recognized that Canada simply did not have the maritime assets to patrol the region alone.¹⁸ From his perspective, the better option was to participate with the USN's next northern deployment. Even that, however, would be a challenge as DeWolf confided to Major-General Mann that the Navy was "anxious to send a ship along [with the Americans], if we can spare one, but to do so we will certainly stretch our resources."¹⁹

The chances of the RCN joining an American operation in 1947 were

slim, but not for the reasons that DeWolf gave. Commodore Frank Houghton was disappointed to learn that the Americans were only sending a token force of three ships on what was essentially a supply mission.²⁰ Moreover, while the Americans were favourable to a Canadian ship sailing with this miniature task force, they did have some reservations about the "suitability and practicability of including light-hulled vessels, such as destroyers, in a Force of this kind."²¹ It was a salient point. This task force required an icebreaker because it was operating at a time of year when heavy ice was still present, a circumstance that drove home the

Top: HMCS *Magnificent*, the RCN's newest aircraft carrier, with Sea Fury aircraft on its flight deck while coming to anchor in Northern waters; Bottom: HMCS *Nootka* (R96) refueling from HMCS *Magnificent* on the Northward journey from Halifax.

DND Photo



DND Photo



DND Photo



PHOTO NDHQ

DND Photo



reality that the RCN's current ships could only head north when ice conditions were most favourable.

The impracticality of joining the US Navy's mission in 1947 was good news for Lay's plan for a purely RCN northern cruise. Indeed, because the Americans were not planning anything on the same scale as Operation Nanook, the Naval Staff saw little value in a joint endeavour. Capitalizing on the moment, Lay immediately pushed his own agenda, reminding the Naval Staff that no RCN warships had ever entered Hudson Strait or Bay and that "in the light of the present interest in the Canadian Arctic it is considered that such a cruise would be of benefit to the Canadian defence programme." The Naval Staff agreed, and with a nationalistic fervour observed that they were "of the firm opinion that it would be preferable to undertake a northern cruise under Canadian auspices." On 29 April 1947 the Naval Board gave its blessing, and with that the RCN had set a tight deadline for its plan to embark on its first Arctic foray.²²

The RCN clearly understood the growing importance of the Arctic as well as the urgent need to show the flag there, but they also realized that this pioneering excursion would pose new logistical and operational challenges. Planning for Operation Iceworm, which was the codename for the proposed Cruise, clearly bears this out. The concept itself was simple: the destroyers HMCS *Nootka* and *Micmac* would embark on a five to six week northern familiarization deployment to conduct radio communication tests,

Top: RCN personnel involved in a Northern deployment get a good sense of exactly how far away they are from their home port of Halifax while visiting Padloping Island; Bottom: Sailors from HMCS *Swansea*, possibly on Padloping Island, meeting with members of the local community.

bathythermographic exploration, hydrographic and magnetic observations.²³ Defining the mission was the easy part; the complications soon followed. Indeed, just as the Americans had warned, the window of opportunity for operating lightly constructed destroyers in the North was small as ice conditions dictated that the cruise would have to arrive before mid-August and leave no later than mid-September. But by far the greatest obstacle facing the planning staff was one that would haunt all the RCN's Arctic ambitions, and that was the issue of fuel.

refuelling vessel. Each method had its drawbacks. For instance, the *Dundalk* had neither a gyroscopic compass nor radar, both of which were essential for the extreme navigational challenges in the iceberg-infested, magnetically confused North. Nevertheless, this latter option - in conjunction with a decision to send only a single destroyer (*Nootka*) - still seemed the better one. The expense of transporting naval fuel via rail to Churchill and St. John's was just too high. Worse yet, even after refuelling at St. John's, *Nootka* would have only 25 percent fuel left in reserve by the

have established its presence in the country's own Arctic waters in the summer of 1947. Although a letter from Houghton to an American admiral makes it clear that it was Claxton who cancelled the cruise, it is uncertain why he did so.²⁶

Despite this setback, the RCN was undeterred. In addition to forwarding a submission for the acquisition a Canadian naval icebreaker to the defence minister, the Naval Board, at its 25 February 1948 meeting, declared the intention to dispatch HMC Ships on northern cruises during ice free periods.²⁷ The Naval Staff also took



A great sea level view of *Haida*, *Nootka* and *Magnificent* on their transit North.

The intended passage, from Halifax to Churchill, Manitoba, on Hudson's Bay and back, was a distance of some 4,800 miles, required the destroyers to refuel. However the two points where this could occur, St. John's, Newfoundland, and Churchill, either did not have the suitable type of fuel or sufficient quantities of it. There were two possible solutions to this problem. The first was to use tank cars to transport fuel to St. John's and Churchill, while the second was to give the soon-to-be mothballed Canadian Naval Auxiliary Vessel *Dundalk* a temporary reprieve by turning her into an Arctic

time she reached Churchill, leaving no margin for exercises or diversions en route.²⁴

Fuel was a thorny issue for other reasons as well. Getting a single destroyer to Churchill and back was going to consume a considerable amount of the RCN's yearly operational allowance. This was particularly problematic since the government's cuts had just forced the Navy to reduce that appropriation by 25 percent.²⁵ Nevertheless, the Northern Cruise obviously had momentum, and had it not been for the intervention by the defence minister, Claxton, the RCN would

advantage of the time provided by Iceworm's cancellation to plan a new and far more ambitious cruise scheduled for 2-28 September 1948. Although the aims would remain the same as Iceworm, the forces assigned were considerably larger. Along with the destroyer *Nootka*, the RCN was now planning to send her sister ship *Haida*, as well as the new aircraft carrier HMCS *Magnificent*.²⁸ Because the minister's support for the acquisition of *Magnificent* had been partly contingent on her ability to operate in cold weather environments this deployment so early in her career was smart politics even if she was



A good example of the distances that RCN ships had to travel to reach Canada's arctic waters exposing why fuel was always a concern on round trips from Halifax.

not going to participate in the full voyage. Instead, *Magnificent* would conduct air operations with the RCAF while sailing with the destroyers up the Labrador coast to Wakeham Bay. After topping up the destroyer's fuel, *Magnificent* would head back to Halifax, while *Nootka* and *Haida* would make a stop at Erik Cove before continuing on to Churchill through Hudson Strait and Bay. On the return voyage the destroyers, having fuelled in Churchill, would sail to Coral Harbour on Southampton Island followed by Port Burwell where *Dundalk* would be waiting with one last consignment of fuel.²⁹

The fear of running out of fuel and stranding a destroyer in northern waters was still a dominant anxiety, explaining why the Navy was now willing to employ both the tank car and *Dundalk* methods of refuelling that had been explored for Iceworm.

There were other risks as well. *Dundalk* in particular was vulnerable. There was no time to install radar, and that left some officers worried about her operating off the often foggy and ice-packed Labrador coast with inadequate charts.³⁰ The fact that Captain A.H. Storrs was about to replace Captain H.F. Pullen as the commanding officer of *Nootka* was also a point of concern for the flag officer Atlantic Coast who considered it "unfair...to have him make his first voyage...in these poorly charted waters."³¹ While Naval Service Headquarters saw this as overly cautious and even suspected that Pullen was lobbying to extend his command for the trip, they were in the process of exploring other precautions, such as additional shackles for potentially deep anchorages, propeller guards, as well as assigning specialized

personnel to the cruise. They also examined the possibility of acquiring 25-foot motorboat cutters equipped with echo sounders that would scout out areas for the destroyers where depth information was scanty.³²

Although careful planning and preparations resulted in a cruise that was a tremendous success there were disappointments. The Navy had already admitted that *Magnificent's* part in the exercise was "a small one," but inclement weather ensured that her role was diminished further.³³ This particular aspect of the voyage was a setback, especially since Navy and Air Force planners had gone to such lengths to produce creative war scenarios. Situations where *Magnificent's* aircraft would have covered a fictional wartime Hudson Bay-bound convoy, or conducted reconnaissance missions looking for enemy refuelling depots, would

have provided invaluable training.³⁴ Instead, *Magnificent's* single day of flying was spent with her fighters countering enemy reconnaissance flights staged by a RCAF Avro Lancaster and Consolidated Canso. Much was learned from these shadowing exercises, but the true significance of *Magnificent's* presence was that the RCN had shown its resolve to send its most valuable asset into the Arctic.³⁵ It was a brief, but shinning, moment as *Magnificent* would never again sail this far north in North American waters.

This cruise was undoubtedly the high point of the RCN's involvement in the Arctic in the late 1940s, the more so since the rest of the deployment went so well. Much intelligence was gleaned, equipment successfully tested and invaluable scientific data gathered, but the cruise was also a success for a number of other reasons. Both *Nootka* and *Haida* reported that they experienced no major difficulties with navigation and found summer operations in the region similar to the western north Atlantic in iceberg season. Future cruises were nonetheless recommended because of the limited area covered as well as the fact that the terrain and atmosphere were so different, a point that was illustrated by the unusually deep anchorage of 40 fathoms in Wakeham Bay. The deployment was also popular with the crew and offered the Navy a good public relations opportunity in Churchill as well as the smaller communities that were visited. As was anticipated, ice and fuel were the only serious concerns during the cruise; small growlers and "berg bits" were not always detected while the destroyers' consumption rate left "little margin for unforeseen contingencies."³⁶

The force sent to the Arctic in 1948 was a relatively large one by Canadian standards, but unfortunately the RCN could not afford to repeat this powerful

expression of sovereignty during the following year. Instead, they settled for three smaller deployments. The voyage of the frigate HMCS *Swansea*, which travelled from Halifax to Frobisher Bay and Godthaab, Greenland, between 24 August and 20 September 1949, was particularly important because it represented an attempt to continue an independent RCN presence in the north. Tasked with the same scientific explorations, familiarisation and training work started by the previous year's cruise, *Swansea's* experience was unsurprisingly similar those of *Nootka* and *Haida*. Nevertheless, an incident at the American base on Padloping Island underscored the need for a Canadian naval presence in the Arctic. "The NCO-in-charge stated that some of his men were wondering why a Canadian Warship was in these waters," wrote *Swansea's* CO: "It was pointed out in a friendly but firm manner that this was not unreasonable since this was Canada."³⁷

The participation of HMCS *Cedarwood* and HMCS *Haida* in two separate joint ventures with the Americans did little to raise the RCN's profile in the region.³⁸ In fact, *Haida's* involvement in Exercise Noramex demonstrated how the RCN's limited resources left Canada with little choice but to rely on the USN to help defend its North. Designed to prevent an enemy force from turning a Labrador weather station into an airstrip, the 33 American ships and 3,500 marines dwarfed the lone Canadian destroyer assigned to the exercise. The RCN had wanted to provide additional forces, but operational commitments elsewhere prevented them from doing so.

The dream of sending Canadian destroyers and frigates on yearly cruises to the North had already come to an end, but things only got worse in 1950.³⁹ Further manning reductions and anti-submarine requirements in the Atlantic and Pacific were making

it hard for the RCN to join Noramex II, but just as they had done over the past four years the Naval Board was willing to go to extreme lengths to scavenge personnel to man *Nootka* for this particular exercise. It was all for naught as once again operational factors (this time the outbreak of hostilities in Korea) placed these Arctic ambitions on the backburner.⁴⁰

The RCN would not return to the Arctic until HMCS *Labrador*, the Navy's new icebreaker, sailed into these waters in the summer of 1954, and this long gap would suggest that the RCN's capabilities did not match the large operational significance the service attached to the region. In reality, the 1948 Northern Cruise represented the type of presence that the RCN wanted regularly to maintain in the Arctic during the summer months. Unfortunately, those ambitions could not be realized in the face of budget cuts, manning shortages, existing operational commitments, and ship limitations, as well as restrictions imposed by logistical and fuelling constraints. But one thing was clear: the Navy's desire to work in the North between 1946 and 1950 was there even if the resources were not.

Notes

1. The title for this article is taken from a Report of Proceeding [ROP] from HMCS *Nootka*, Directorate of History and Heritage [DHH], 81/520/8000, Box 71, file 5. The author is indebted to his former colleagues at DHH, particularly the postwar naval team led by Mike Whitby as well as members of the Arctic integrating concept team at Chief of Force Development whose insights on defence issues related to the Canadian North helped with the development of this article.
2. There is currently only one known file that deals directly with suspected U-boat operations in Hudson Bay during the Second World War. For more information see: "Submarines - Enemy Activities - Activities in Arctic Ocean and Hudson Bay, Library and Archives Canada [LAC], Record Group 24 [RG 24], Vol. 4027, file 1062-13-22. Michael

- Hadley, *U-boats against Canada: German submarines in Canadian Waters* (Kingston: McGill-Queen's, 1985), pp.163-165. While German records show that all sightings in the North were false, there was one case where a U-boat was indeed operating in Canada's Northern waters. In October 1943, a landing party from *U-537* erected a weather station at Martin Bay off the Northern tip of Labrador. For more information see W.A.B. Douglas, "The Nazi Weather Station in Labrador," *Canadian Geographic* 101, no.6 (December 1981/ January 1982), pp. 42-47.
3. One of the best accounts of *Labrador's* efforts in the North can be found in J.M. Leeming, "HMCS Labrador and the Canadian Arctic," in James A Boutillier, ed., *RCN in Retrospect, 1910-1968* (UBC Press, Vancouver, 1982), pp.286-287. For works that address the larger naval and maritime strategic context of the Arctic to Canada during and just after the Second World War see Shelagh Grant, *Sovereignty or Security? Government Policy in the Canadian North, 1936-1950* (Vancouver: UBC Press, 1988); Elizabeth B Elliot-Meisel, "Arctic Focus: The Royal Canadian Navy in Arctic Waters, 1946-1949," *The Northern Mariner X*, no.2 (April 1999), pp.23-39.
 4. For an excellent summary of the scientific expedition see Isabel Campbell, "Making a Difference in Arctic Naval Research: HMCS *Cedarwood*, 1948 to 1956," *Canadian Naval Review* 8, no.1 (Spring 2012), pp.10-14 while an account of HMCS *Swansea's* 1949 deployment can be found in Richard Mayne, "'An Art of its own': Corporate knowledge, the Canadian Navy, and Arctic Operations," *Canadian Naval Review* 5, no.3 (Fall 2009), pp.10-16. For one of the most interesting studies that highlights the significance of a US Arctic endeavour on the Canadian government's Northern policy see: Peter Kikkert and P. Whitney Lackenbauer, "Setting an Arctic Course: Task Force 80 and Canadian Control in the Arctic, 1948," *The Northern Mariner XXI*, no.4 (October 2011), pp.327-358.
 5. Tony German, *The Sea is at our Gates* (Toronto: McClelland and Stewart, 1990), pp.249-251.
 6. George Stanley, *Canada's Soldiers: The Military History of an Unmilitary People* (Toronto: Macmillan, 1960), p.411; Moira Dunbar and Keith Greenway, *Arctic Canada from the Air*, (Ottawa: Queen's Printer, 1956), p.238.
 7. "Ottawa Scotches US Plan to Man Weather Bases in Canadian Arctic," *Toronto Financial Post*, 20 July 1946; "Canada Must Frame Policy for Arctic," *Toronto Financial Post*, 20 July 1946.
 8. Chiefs of Staff Committee, 9 April 1946, DHH, Raymont Collection, 73/ 1223, Box 59, file 1301; Permanent Joint Board on Defence Journal of Discussions, 29 April 1946, DHH, Canada-United States PJBD fonds, 82/196; Cabinet Conclusions, 12 June and 27 June 1946, LAC, RG 2, vol.2638, Reel T-2364; House of Commons Debates, 19 July 1946, 3606. The available evidence suggests that this station could not be established in 1947 because of the inability of the expedition to get to the island.
 9. Cabinet Conclusion, 19 December 1945, LAC, RG 2, vol.2637, reel 2364.
 10. William Lyon Mackenzie King Diary, 4 February 1946, LAC.
 11. German, *The Sea is at our Gates*, p.250.
 12. Text of Joint Statement issued in Ottawa and Washington, 12 February 1947, DHH, 82/196, file 5, meeting 58; King Diary, 22 November 1946, LAC; Stanley, *Canada's Soldiers*, 2p.68.
 13. King Diary, 9 April 1948, LAC; King Diary, 9 January 1947, LAC.
 14. Cabinet conclusion, 15 November 1946, LAC, RG 2, vol.2639, reel T-2364; King Diary, 13 November 1946, LAC.
 15. C.C. Mann to ACNS (H.G. DeWolf), 30 September 1946, LAC, RG 24, vol. 8153, file NSS 1660-18, vol.1.
 16. D/DNP to DNPI, 10 October 1946, LAC, RG 24, vol.8153, file NSS 1660-18, vol. 1; Naval Staff Meeting, 28 October 1946, DHH, 81/520/1000-100/3, Box 32, file 2; Naval Board meeting, 6 November 1946, DHH, 81/520/1000-100/2, box 22, file 3.
 17. Naval Staff Minute, 28 October 1946, DHH, 81/520/1000-100/3, Box 32, file 2; Naval Staff minute, 27 January 1947, DHH, 81/520/1000-100/3, Box 32, file 3.
 18. DNPI to ACNS, 21 October 1946, LAC, RG 24, vol.8153, file NSS 1660-18, vol.1.
 19. DeWolf to Mann, 19 December 1946, LAC, RG 24, vol.8153, file 1660-18, vol.1.
 20. Report on the Engineering Aspects of the Operations of US Task Force 68, 24 November 1947, DHH, 79/134.
 21. Houghton to Jones, 6 March 1947, LAC, RG 24, vol.8153, file NSS 1660-18, vol.1; Jones to Houghton, 12 March 1947, LAC, RG 24, vol.8153, file NSS 1660-18 vol.1.
 22. Naval Staff Meeting, 21 April 1947, DHH, 81/520/1000-100/3, Box 32, file 3; Naval Board meeting, 29 April 1947, DHH, 81/520/1000-100/2, Box 22, file 3.
 23. DNPI to ACNS, 23 May 1947, LAC, RG 24, vol.8153, file NSS 1660-18, vol.1; Joint planning Committee, 95th Meeting, 13 May 1947, LAC, RG 24, vol.8153, NSS 1660-18, vol.1.
 24. DNPI to ACNS, Operation *Iceworm*, 23 May 1947, LAC, RG 24, vol.8153, file NSS 1660-18 vol.1.
 25. Naval Staff Meeting, 17 March 1947, DHH, 81/520/1000-100/3, Box 32, file 3; Naval Staff Meeting, 21 April 1947, DHH, 81/520/1000-100/3, Box 32, file 3.
 26. Memo note, 18 June 1947 and Houghton to Jones, 21 June 1947, LAC, RG 24, vol.8153, file NSS 1660-18, vol.1.
 27. Naval Board Meeting, 25 February 1948, DHH, 81/520/1000-100/2, Box 22, file 4.
 28. SO (Operations) to VCNS, 17 February 1948, DHH, 81/520/1650-239/2, Box 105, file 7.
 29. A Brief History of HMCS *Nootka*, nd, DHH, 81/520/8000, Box 71, file 5; A Brief History of HMCS *Haida*, DHH, 81/520/8000, Box 44, file 1; FOAC to SCNOA, Northern Cruise, 25 August 1948, LAC, RG 24, vol.11193, file ACC 1650-26 SUB I.
 30. E EinC to A/CNTS (ships), 26 July 1948, and Alterations and Additions, CNAT "Dundalk" and "Dundurn," 29 July 1948, LAC, RG 24, vol.8153, file 1660-18, vol.1.
 31. FOAC to NSHQ, 19 May 1948, LAC, RG 24, vol.8153, file NSS 1660-18, vol.1.
 32. Captain D, Nootka to FOAC, Boats Echo Sounding Gear, 10 June 1948 and Proposed Northern Cruise, 4 June 1948, LAC, RG 24, vol.11193, file Acc 1650-26 SUB I.
 33. SCNOA to Captain D, 9 June 1948, LAC, RG 24, vol.11193, file Acc 1650-26 Sub I.
 34. Joint RCN FOAC/ RCAF 10 Group Operations Order no.1/48, and SCNOA to FOAC, 25 July 1948, LAC, RG 24, vol.11193, file Acc 1650-26 Sub I.
 35. CO *Magnificent* to FOAC, 7 December 1948, LAC, RG 24, vol.8153, file NSS 1660-18, vol.18.
 36. CO HMCS *Nootka* to FOAC, Northern Cruise 1948, 7 October 1948, LAC, RG 24, vol.11193, file ACC 1650-26 Sub I; HMCS *Haida* ROP, September 1948, DHH, 81/520/8000, Box 44, file 3. That latter point was further rammed home the following year when the frigate HMCS *Swansea* was forced to deviate from her operational schedule during her Arctic cruise to rescue the RCAF re-supply vessel *Malahat* off Diggs Island. A Brief History of HMCS *Swansea*, nd, DHH, 81/520/8000, Box 203, file 27.
 37. HMCS *Swansea*, Report of Northern Cruise and Operation *Malahat*, 24 August to 28 September 1949, DHH, 81/520/8000, Box 102, file 5; Maritime Group Headquarters' Operational Order, LAC, RG 24, vol.11195, file ACC 1660-41.
 38. *Cedarwood* feature, October 1956, DHH, 81/520/8000, Box 21, file 1. The *Cedarwood* was participating in a joint operation with the United States Naval Electronic Laboratory.
 39. Proposed Combined Canada-US Winter Exercise 1949-50, DHH, 73/1223, file 1324; Naval Staff Meeting, 4 April 1950, DHH, 81/520/1000-100/3, Box 33, file 3; Defence Council, 8-9 May 1950, DHH, 81/609.
 40. Naval Board Meeting, 19 April 1950, DHH, 81/520/1000-100/2, box 23, file 1.

Dr. Richard Oliver Mayne, CD, received his MA from Wilfrid Laurier University and a PhD in military history from Queen's University. He is currently the Director of Air History and Heritage with the RCAF and has authored, co-authored, or co-edited a number of works on various aspects of Canadian military history and defence issues. Prior to being employed as an historian for the RCAF he was a defence analyst with the Chief of Force Development as well as an historian with the Directorate of History and Heritage both at National Defence Headquarters in Ottawa.