CANADIAN NAVAL REVIEW

VOLUME 3, NUMBER 2 (SUMMER 2007)

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Photo: CNMT Trustee Lt (N) Ian Urquhart (Ret'd)

*HMCS **Sackville** in Halifax Harbour.*

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Editorial: International Command and Recognition

The recent pictures of HMCS *Huron* meeting an unceremonious sinking by gunfire on the West Coast could not help but conjure up reflections of a proud ship with an amazing capability. It was amazing in many ways, but let me just note its computer system, which began with about a 32-k memory capacity cleverly configured by Canadian ingenuity to deliver much more than that. During the first Gulf War *Huron*'s sister ship *Athabaskan* had the same computer system operational for eight months straight, 24 hours a day – those who sailed in her know that the system was 'down' for a total of an hour and a half in that time-frame

Photo: MCpl Charles Barber, SNMG1 Staff Photographer

*HMCS **Athabaskan** in 2006 as the flagship of SNMG 1.*

– an unbelievable tribute to the navy's early computer experts, technicians and operators. The *Iroquois*-class earned international recognition of its capability as a command ship. This is indeed important in that not every class of warship has a 'command of others' capability.

The commander of a multi-faceted, multi-ship, submarine, air and combat operation must have the equipment, space and personnel to command others competently. The equipment must have the capacity to process huge amounts of data which provide the commander with sufficient information to command the operation. The space in the ship must be sufficient to accommodate about 35 experts who are not normally carried but who are essential to command others in a conflict. These additional personnel include explosive ordnance experts, lawyers, air commanders, weapon system specialists, padres, targeting experts, army system and weapon support experts. The space and equipment to accommodate such additional staff are inherent in the *Iroquois*-class. The navy had four such ships – two for each coast. This made abundant sense as they could conduct home and away command duties from each coast.

The sinking of *Huron* was a sad reflection that lack of crew – or rather lack of will by the navy to fight for the 300 members to crew *Huron* – meant the ship's demise. The decisions to forego the crewing and subsequent refitting of *Huron* meant the loss of a huge capability to command others. The loss was disproportionate. There was no gain, no replacement, no additional compensation. I, for one, would like to challenge those who made the decision to 'pay off' *Huron* to provide readers with their rationale, and explain to us the pressures at the time.

One of the few reasons that the remaining *Iroquois*-class ships were saved the same fate was the acceptance by the government that Canada should command NATO's Standing Naval Force in turn every six years. If Canada is to be seen as pulling its weight in NATO and demonstrating the ability of its sailors to command others, then command capability is required in a recognized international organization – the best and most successful being NATO. The only ships capable of this task are the *Iroquois*-class ships updated to operate with NATO allies. Since the introduction of the class in the early 1970s, Canadian commanders and their personnel earned the reputation for excellence in regular command of NATO's seagoing forces. Indeed, it was the demonstration of such expertise that was one of the factors used in designating a Canadian commander to command from *Athabaskan* the Allied Combat Logistic Force during the Gulf War in 1990, the only non-American to be given such a responsibility.

Recently some senior officers opined that Canada gets little or no recognition for taking its turn in commanding NATO's Standing Naval Forces. How short-sighted. How else would the ships have been modernized, how else would personnel obtain multinational command experience and training in preparation and during naval combat

operations? The kicker is that the Canadian Patrol Frigate is not configured to have the space, equipment, or accommodation to provide a 'command of others' capability. If Canada did not take its turn in NATO command, the international community would notice, and the navy would be negatively affected in its overall experience level. Having served in command in NATO for three years, I can attest to the fact that other members were envious of Canada's Task Group Command capability. We must never forget how *Huron* disappeared from the naval inventory.

The perception that little recognition is being given to what the navy (and its capability) provides to the government was eloquently summed up in a recent article by Senator Colin Kenny. He made a great case as to why Canada needs a navy – three oceans, trade by sea, surveillance and regulating Canada's waters, and on and on. Sometimes both government and the public appear to forget the importance of the navy when prosperity at home demands less regulation and more health and welfare. They forget that security is fundamental – with no security there is no prosperity. The world is full of examples where security is absent and the results disastrous.

Senator Kenny also highlighted the "Silent Service's" silence at the political level. This silence is a serious concern. We live in a time of economic prosperity and continuing concerns about security – but, paradoxically, both the federal government and Canadians in general do not see how prosperity and security are connected to the navy. The *Canadian Naval Review* has attempted to make some noise about the navy, and the introduction of the online forum, "Broadsides," has provided another forum for discussion and debate. "Broadsides" has been very successful, and indeed it receives thousands of 'hits' on discussions following on from press articles concerning the navy, the armed forces and security of our world. It is this kind of interaction which can educate through debate and discussion.

The means of communication are vastly different in 2007 than they were at the time of the Second World War but, unfortunately, a certain ignorance remains about the major contributions Canada has made to world peace and security both then and now. Regrettably, most Canadians are ignorant of the naval contribution to the Second World War. Senior officers of the day lamented the fact that little credit was given to Canada for commanding the northwest Atlantic approaches, for commanding the convoy crossings, for crewing the little ships – the Canadian *Flower*-class corvettes – that helped win the Battle of the Atlantic. The battle lasted for six years, and was a crucial victory in which Canada played a part. In 1942 the tide turned against the German U-boats as the Canadian corvettes became proficient at U-boat detection and destruction. HMCS *Sackville* battled three U-boats in a 36 hour period and triumphed in each.


Photo: MCpl James Barber, SNMG1 Staff Photographer

Chief of Defence Staff General Rick Hillier with Commodore Denis Rouleau, Commander SNMG1, with Lt (N) Paul Mountford in the background.

The navy, and the corvettes in particular, played a major role in one of Canada's greatest international exploits. And yet few people know about this contribution. Promoting discussion and debate about the current navy is a necessary objective, but we must also recognize the role the navy has played in Canada's history and its contributions to Canadian security over many years. One of Canada's historic wonders is HMCS *Sackville*, the only surviving *Flower*-class corvette out of 123 built in Canada and 269 worldwide.

Lovingly restored to a 1944 configuration, *Sackville* was designated as Canada's Naval Memorial by the federal government in 1985. The ship has been looked after by the Canadian Naval Memorial Trust ever since. Significant funds are now needed to house this memorial in a complex which will preserve her from the elements. The government has a responsibility to every naval veteran and every Canadian to see to it that their naval memorial is preserved. And the navy must not let its silence about its modern-day role extend to silence about its proud history. The Vimy Memorial withstood years of neglect but it was finally refurbished after much heated public pressure. *Sackville* must not be allowed to fade quietly into history. Canada came of age at sea during the Battle of the Atlantic and has a national treasure in *Sackville*. The ship commemorates and symbolizes the courage and determination of Canadians who fought and who lost their lives at sea.

Sackville helps us to educate Canadians on the contribution of the navy today and yesterday. We must recognize internationally and nationally the courage of those who went to sea for Canada and fought for world security. And we must start fighting for the navy, and make clear to Canadians and the government the connection between our continuing prosperity and the navy that patrols the oceans across which so much of our trade flows. We must also start convincing the government that Canada should continue to command multinational naval forces. *Huron* has been ignominiously sunk but we must not let the Canadian Navy sink with it. Canada's navy has a lot to offer and has offered a lot – and we must never let that change.

Vice-Admiral (Retired) Duncan Miller

The Superior-Simple Ship Fleet Construct

Ken Hansen*

On 23 March 2007, 15 Royal Navy and Royal Marines personnel from the 'stretched' Type-22 frigate HMS *Cornwall* were captured off the Al Faw Penisula. They were returning from an inspection of a small Indian merchant vessel in two ship's boats when they were 'swarmed' by six larger and more heavily armed motor patrol boats from the Iranian Republican Guard Corps Naval (IRGCN). Seeing no reasonable chance for success in resistance, the British contingent surrendered without a shot being fired by either side. *Cornwall* did not intervene in the event and the Iranians departed uncontested with their prisoners.

Post-event analysis indicates that *Cornwall* was unable to come to the assistance of her boats because the boarding took place in shallow inshore waters where the frigate's draught would not allow her to venture. In addition, *Cornwall* had recovered her helicopter just minutes before the swarming, eliminating that option for intervention. It appears that the timing and execution of the action were the result of meticulous Iranian planning.

The captives were released on 5 April. British media sources levelled very heavy criticisms against Commodore Nick Lambert, RN, for allowing the boarding to take place while the boats were out of sight from his flagship. The incident and the behaviour of the captured personnel also received criticism within the armed forces. Retired British General Sir Michael Rose said, "the navy is no longer fit for modern warfare" and "the captured sailors and marines displayed a woeful lack of military fibre." Retired American Admiral James Lyons, a former commander of the US Pacific Fleet, said, "Winston Churchill and Lord Nelson were turning in their graves."[1] American reports indicate that the US Navy is now conducting a thorough review of its boarding procedures and the RN will also do so.[2] But it is not just the RN and USN that will feel pressure to change – ripple effects will be felt in other navies too.

All rhetoric aside, this incident provides many doctrinal lessons. But, as usual, none of them are new. The fact the IRGCN employed swarming tactics should not have come as a surprise; they had been observed practising them for some time. Moreover, warnings that operations by large destroyers and frigates (over 2,000 tonnes) inshore are impractical and unadvisable have been in the professional literature for years. This author raised both these points during the Dalhousie Maritime Security Conference in June 2005.[3] In that presentation, it was noted that a superior ship-simple ship surface fleet construct for an effective, efficient and economical two-armed force structure has been rejected repeatedly by Canadian naval force planners. The navy's dogged objections to the idea of small warships in the 'regular force' fleet stem from a historical penchant for uniformity among its principal warship types. Since the failure of the Royal Canadian Navy's (RCN) homogeneous fleet structure during the Second World War has already been analysed, some examples of effective mixed-ship force structures from that same period in history will be instructive. The doctrinal theory that underpins these observations can be applied to both the historical examples and the current situation.

If the strategic context is complicated, changing, or uncertain, a diversified fleet structure is required.

The key to understanding whether or not a uniform fleet structure is appropriate to the strategic circumstances is in knowing which of the naval functions a fleet will be required to fulfil (Table 1). If the strategic context is stable and only one or two closely related functions are called for, then a uniform fleet structure is adequate, but only so long as that condition persists. If the strategic context is complicated, changing, or uncertain, a diversified fleet structure is required.

The maritime threat assessment for Canada in 1939 envisioned the following: incursions by major enemy warships or auxiliary cruisers for shore bombardments; attacks on merchant shipping and engagement of local naval forces; attacks on shipping and naval forces by submarines; occasional bombing raids by enemy aircraft (seaplanes launched from warships or auxiliary tenders) against shore facilities, shipping and naval forces; and sea mines laid by enemy vessels. It was thought that these attacks would occur in 'focal areas' near major ports or in geographic chokepoints that would have a 'funnelling effect' on merchant shipping.

The RCN had to maintain sufficient naval strength to act as a deterrent to enemy incursions, however sporadic they might be, and to counter them if they did occur.

Table 1. Military Functions of Naval Forces

Functions	Capabilities	Missions	Tasks
Power Projection	Strike/Move/Impose	Capture/Secure/Invade/Raid/ Evacuate	Sink/Disable/Land/ Withdraw
Fleet Engagement	Attack/Defend	Destroy/Protect	Engage/Patrol/Screen
Fleet-in-Being	Attack/Defend	Contain/Protect	Distract/Patrol/Engage
Trade Warfare	Attack/Defend	Destroy/Protect	Sink/Escort/Patrol
Exclusion	Prohibit	Intercept/Inspect	Stop
Support	Sustain	Replenish	Provide
Sealift	Move	Transport	Embark/Carry/Disembark

In other words, Canada's warships were expected to perform two of the functions of naval power – trade warfare and exclusion – but not fleet engagement (although the naval leadership pursued it covertly), power projection, fleet-in-being, support, or sealift. Accomplishment of the associated missions and tasks required proficiency in several warfare areas – anti-surface, anti-air, anti-submarine and anti-mine. Because of the nature and location of the focal points, the RCN was required to operate both inshore and on the open ocean, either close to or at moderate distances from a sustaining base.

To satisfy this diverse set of requirements, on 6 August 1939 the First Sea Lord, Admiral Sir Ernle Chatfield, recommended to Prime Minister Mackenzie King a superior-simple ship fleet construct based on a combination of a few cruisers and several escort sloops. The Chief of Naval Staff, Rear-Admiral Percy Nelles, argued for a uniform fleet of 16 destroyers on the basis of economy and efficiency. Although Nelles won the argument, he was wrong on both counts.

The types of vessels used in other navies for trade warfare tasks were high endurance cruisers, sloops and cutters. The broad range of operating conditions required a balancing act among high-capability major warships and low-capability minor ones. The main question for both types was: How much capability is enough for the cost? For the superior ship, it proved to be nearly impossible to provide an ideal balance between speed, endurance, protection, armament, sea keeping and habitability within the 10,000-ton limit. The *Kent*-class was the first British attempt to build a long-range 'heavy' cruiser under the Washington Naval Treaty limits.[4] The first generations of heavy cruisers built by all states were considered disappointments, being either too costly or much too heavy.[5] While their armament, protection and speed varied significantly, the common factors were their high endurance (about 7,000 nautical miles at 15 knots) and good sea keeping qualities.

The perennial problem in cruiser design was how to provide such essential characteristics while balancing off other demands. By reducing the main armament from 8-inch to 6-inch guns, the *Leander*-class light cruisers probably represented the ideal cruiser for the RN. They possessed excellent endurance (7,000 miles at 14 knots on 1,800 tons of fuel), a good balance of speed and armament, superb sea kindliness, and some armour, all on a displacement of only 7,000 tons. Significantly, both the Royal Australian (RAN) and New Zealand Navies selected *Leanders* (or derivative sub-classes) as their superior ship.

At an average cost of $6.6 million, the *Leander*-class cruisers were expensive, making large purchases prohibitive. To complement their few cruisers (earlier, the RAN also acquired *Kent*-class heavy cruisers), inter-war Australian and New Zealand fleet planners chose sloops, rather than destroyers, for their simple ship. The origins of these utilitarian vessels dated back to the Victorian era. Arnold Hague described them as:

> ... small, relatively long endurance, steam warships with, initially, sail as auxiliary propulsion, which were extensively employed on distant stations to supplement the small cruisers operated there; the smaller version of the type enjoyed the even more evocative term of "gunboat". The second half of the 19th Century history of the Royal Navy contains innumerable examples of the employment of these vessels overseas where they provided reasonably economic examples of seapower in the colonial era.[6]

In order to remain outside of the Washington Treaty tonnage allocations for destroyers, sloops could not have a maximum speed of 20 knots or torpedo armament. However, they were built entirely according to naval standards and were armed with 4-inch and 3-inch dual-purpose guns plus some anti-submarine sensors and weapons. Their propulsion was by a low temperature and pressure steam-turbine system. They were equipped for service in the tropics. All sloops had endurance superior to that of contemporary destroyers.

The American equivalents to sloops were cutters built for the US Coast Guard (USCG). They were designed to commercial standards with a fuller hull form that allowed a large fuel capacity. They had a less powerful but highly fuel-efficient turbo-electric propulsion system, giving them very high endurance. Their strengthened hulls made them suitable for service on the Newfoundland-Greenland Ice Patrol. They were armed with fewer but more powerful 5-inch guns. The General Board of the USN, which was the approving authority for all USCG designs, insisted on space being reserved for additional armament and an increase in crew size to satisfy their military role in times of war. The *Lake*-class cutters built in the mid-1920s cost about $900,000 each.

Both the British sloops and American cutters were in the 250- to 265-foot range for length. Pre-war sloops displaced just less than 1,000 tons while cutters, due to their sturdier and fuller hull forms, displaced around 2,000 tons. The much longer (327 feet) and more modern *Secretary*-class cutters cost $2.5 million in 1935, but displaced a comparable 2,000 tons. The endurance of the *Tampas* was very good, at 8,000 miles at 10 knots on only 335 tons of fuel, while the *Secretarys* could make an extraordinary 12,300 miles at 11 knots on 572 tons of fuel. The theoretical endurance of Canadian destroyers was 5,500 miles at 15 knots on 450 tons of fuel, but a variety of factors that did not affect sloops and cutters as severely (principally, hull form and propulsion) reduced this figure considerably.

The first class of inter-war sloop was designed in 1924, following the Admiralty's appreciation that "building vessels of the minimum size compatible with their duties permitted the maximum number to be built during times of financial stringency."[7] Treasury restrictions imposed a dual-purpose design capable of functioning as both a minesweeper and a patrol vessel in distant waters. In subsequent versions, a non-minesweeping patrol sloop had a deeper hull form, higher endurance, more powerful engines, improved anti-submarine sensors and weapons, plus modern weapon direction equipment. Both sloops and cutters had a smaller crew than destroyers.

By 1936, a *Grimsby*-class patrol sloop cost $772,000 while a *Bramble*-class minesweeping sloop cost $525,000. Both of these vessels were considered for acquisition by the RCN but were rejected in favour of purchasing second-hand destroyers. Admiral Nelles substituted less capable corvettes and minesweepers for sloops in an attempt to save human and capital resources for destroyers. This was false economy (see Table 2).

A uniform fleet structure is only appropriate in times of strategic political stability.

The cost of two complete eight-destroyer flotillas (two leaders plus 14 others) was significantly higher than other fleet options. The eight *A*-, *C*- and *D*-class destroyers purchased by the RCN cost $8,489,377. To add another eight used destroyers, at an average cost of $1,061,172 each, would have raised the total cost to $16,978,752. However, Admiral Nelles was adamant about acquiring *Tribal*-class destroyers, which he viewed as 'mini-cruisers.' The average cost for Canadian- and British-built *Tribals* was $3,017,391. To add eight *Tribals* would have totalled $32,628,504. This figure compares very poorly with the cost of two *Leander*-class light cruisers (flotilla leaders) and 14 *Grimsby*-class patrol sloops, or two *Secretary*-class cutters (leaders) and 14 *Lake*-class cutters.

Destroyers were by far the heaviest consumers of fuel. They were also less effective in both the anti-raider and anti-submarine roles than a cruiser-sloop force, and vast-

Table 2. Cost Comparisons of Fleet Plans

	River-Class	Tribal/River	Cruiser/Sloop	Cutters
Numbers	16	16	16	16
Cost	$16,978,752	$32,628,503	$24,008,000	$17,600,000
Personnel	2,320	2,725	2,540	1,604

ly less effective in the anti-submarine and anti-air roles than the cutter force. Patrol sloops also earned a good reputation for combat effectiveness, due in large part to their high endurance and sea kindliness, making them the favourite platform for escort group commanders.

It is a myth that simple ships designed primarily for the constabulary role can have little utility in war.

While the strategic posture of the Canadian government in the late 1930s was decidedly defensive, the navy was soon engaged in deployed operations from foreign locations, which led to employment in the power projection function. Once deployed and engaged, the requirement for the sustainment and sealift functions became obvious. The RCN's involvement in fleet engagement was peripheral, at best. The degree of capability required within each of these functions increased as the war progressed. Clearly, a uniform fleet structure could not satisfy all of these demands and, as a result, the fleet grew phenomenally in size and diversity.

Admiral Nelles, if the historical record is to be believed, could not conceive of viable roles for the employment of naval patrol craft in naval service. This lack of Canadian imagination stands out in sharp contrast with the wide range of naval tasks that the General Board of the USN conjured for naval gunboats and USCG cutters in both peace and war. Instead, successive Canadian Chiefs of Naval Staff stubbornly defended the acquisition of a homogeneous force of expensive, short-legged destroyers.

It has been argued that even if trade warfare had been given higher priority before the Second World War the result would have been escorts of limited endurance.[8] This assertion contains the same error in logic as the RCN's flawed assumption about the endurance characteristics of minor warships, which ignored the existence of interwar British sloops and American cutters. The endurance requirements that were so important in the trade warfare function grew out of the range and sea kindliness needed to satisfy peacetime sovereignty patrol tasks. Sloops or cutters presented force structure options for the RCN that merited serious consideration. The *Secretary*-class cutters proved to be capable command and control ships, able to coordinate the activities of a small escort group. Their unrivalled rate of success as U-boat killers has gone unnoticed. Cutters were the epitome of Canada's need for a simple and robust platform appropriate for rapid construction by unsophisticated shipyards.

What doctrinal lessons can be drawn from this history? First, a uniform fleet structure is only appropriate in times of strategic political stability. In the Cold War, when a formal alliance led to a policy of niche-capability, it was sensible to concentrate naval resources and strive for superlative tactical proficiency within one naval functional area. Because of the catastrophic consequences of failure, the diplomatic and constabulary roles of the navy could be relegated safely to a secondary status. However, a uniform fleet structure will not be as cost-effective as a more diversified one.

Second, the unpredictability of war can lead to unforeseen circumstances, rendering a uniform fleet structure less combat effective than anticipated. In such cases, it will be difficult for political and senior military leaders to resist accepting missions and tasks for which their fleet's capabilities are unsuited. The superior ship must, therefore, encompass as many advanced capabilities as the state can afford as it will be the major enabler for new missions.

Third, it is a myth that simple ships designed primarily for the constabulary role can have little utility in war. It is possible to design durable, effective, high-endurance and sea kindly vessels of both limited tonnage and length. These ships make it possible for fleets to operate in areas and in ways that are both inappropriate and unsuitable for superior ships.

The incident off the Al Faw Peninsula illustrates to naval planners the limitations of a 'one-size-fits-all functions' approach to fleet design. Naval history contains many similar examples. When these incidents are related to naval functions, the doctrinal lessons are timeless.

Notes

* The views presented here are the author's own and do not represent the views of the Canadian Navy or the Department of National Defence.

1. James Lyons, "Commentary," *The Washington Times*, 4 May 2007, available at http://www.washingtontimes.com/commentary/20070503-084344-6415r.htm.
2. Andrew Scutro, "US Revisits Procedures after Hostage Ordeal," *Navy Times*, 9 April 2007, available at http://www.navytimes.com/news/2007/04/navy_britain_iran_070406w.
3. Kenneth Hansen, "Starting Over: The Canadian Navy and Expeditionary Operations," available at http://centreforforeignpolicystudies.dal.ca/pdf/msc2005/msc2005toc.pdf.
4. Under the theory of warship employment of that era, 'heavy' cruisers were intended primarily for trade warfare, while 'light' cruisers were used as leaders of the scouting and screening forces in fleet engagement.
5. Anthony Preston, *Cruisers* (Prentice-Hall, 1980), pp. 96, 108-109. See also Roger Hayward, *Cruisers in Camera* (UK: Stroud, 2000), pp. 85-86.
6. Arnold Hague, *Sloops*, 1926-1946 (London: World Ship Society, 1993), p. 9.
7. H.T. Lenton, *British & Empire Warships of the Second World War* (UK: Greenhill, 1998), p. 241.
8. Christopher Bell, *The Royal Navy, Seapower and Strategy between the Wars* (Stanford, CA: Stanford University Press, 2000), pp. xvi, 112.

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New Era or False Dawn?

AIMP Aurora and the Canada First Defence Strategy

John Orr

Two Canadian CF-18 Hornets with a CP-140 Aurora fly in formation off the coast of Hawaii in celebration of Canada Day 2006. They were there for RIMPAC 2006, the world's largest biennial maritime exercise.

In a January 2007 article in the *Ottawa Citizen*, journalist David Pugliese reported that a draft of the Harper government's much delayed Canada First Defence Strategy recommends cuts in a variety of weapons systems in order to free up enough money to purchase new equipment for the Canadian Forces.[1] According to Pugliese, one of the proposed cuts is to eliminate the Aurora Incremental Modernization Project (AIMP) upgrades for six (of 16) aircraft and cancel the Aurora Structural Life Extension Plan (ASLEP).

Since its introduction into the Canadian Forces in 1980, the CP-140 Aurora has performed a wide variety of tasks including under-sea and open-ocean patrols in the Atlantic, Pacific and Arctic Oceans, sovereignty patrols over the Arctic landmass, support to other federal government agencies and departments as well as search and rescue duties. AIMP is the much-delayed mid-life update project for the Aurora which was finally begun in an incremental fashion in 1998 in order to provide Canada with "a multi-mission aircraft that can provide over-land surveillance and reconnaissance in addition to its traditional coastal functions" by 2010.[2] Blocks I and II of AIMP addressed deficiencies in the Aurora's navigation and communications equipment while Block III, the upgrades which are apparently about to be cancelled, is intended to modernize the Aurora's obsolescent sensor package. In conjunction with AIMP, a structural life extension project (ASLEP) was proposed to lengthen the life of the aircraft to 2025.

It is understood that most, if not all, of the contracts for the Block III AIMP conversion have been awarded. ASLEP is unfunded but given the fact that the aircraft have operated for more than 25 years in a high corrosion environment, the requirement for a life extension project cannot be in doubt if the Aurora is to be maintained as an operational weapons system.

In his article, Pugliese also noted that the draft Canada First Defence Strategy states that replacing the Aurora for "domestic surveillance and overseas operations" will be 12 aerial drones or Uninhabited Aerial Vehicles (UAVs) to be located at Comox, BC, and Greenwood, NS. It is suggested that the first of these UAVs will be operational in 2008 with the purchase of further long-range drones to be considered in the future.

There have been no official announcements concerning the fate of Block III of AIMP or ASLEP. Accordingly, it can be concluded that the fate of the AIMP Aurora in the Canada First Defence Strategy is being vigorously debated inside the Department of National Defence.

This article is intended to contribute to that debate; not by descending into a squabble about the trade-off of one platform for another but rather by examining the theoretical underpinnings of both AIMP Aurora and UAVs in 'domestic surveillance and overseas operations.' The intention is to demonstrate that rather than being considered as competing weapons systems, the AIMP Aurora and UAVs are, in fact, complementary systems necessary for the conduct of missions essential to Canada's security.

The Theory of Maritime Surveillance

Maritime surveillance (now termed 'marine domain awareness') of the surface, sub-surface (and air) approaches to Canada is imperative.[3] Being able to control and influence what happens in its waters is fundamental to a state's sovereignty and security. Recent challenges to Canada's sovereignty in the high Arctic bring this issue into sharp relief.

In any system of marine domain awareness (MDA), there is a requirement to perform three basic functions: surveillance, patrol and response.

- Surveillance requires the detection of the 'known knowns,' the 'known unknowns' and even the 'unknown unknowns' to a reasonable degree of

The Halifax Marine Security Operations Centre.

confidence.[4] Any MDA surveillance system will likely be a layered system of systems with each sub-system supporting the other. Once the various inputs have been assessed from the surveillance sensors, a 'recognized' picture is prepared and disseminated, highlighting any anomalies that require further investigation.

- Patrols are carried out to demonstrate 'presence' in areas of interest to national authorities. They can be random but are likely to be tied to areas in dispute, choke points or seasonal activity such as fishing.
- Response relates to the action carried out to counter a threat to national security or violations of sovereignty or regulations.

Like any state, Canada has long been mindful of the importance of knowing what is happening off its coasts and indeed the requirement for MDA has existed in varying degrees since Confederation. However, the impetus for the current greater emphasis was a 1990 Treasury Board study led by Gordon Osbaldeston.

This study, entitled *All the Ships that Sail: A Study of Canada's Fleets* (now referred to as the Osbaldeston Report), created the Interdepartmental Program Coordination and Review Committee (IPCRC) which in turn established subordinate coastal sub-committees concerned with, among other things, coordination of surveillance (MDA) across the various federal departments with marine security and enforcement mandates. Unfortunately, IPCRC withered due to a lack of bureaucratic support and, in a supreme irony, was shut down in September 2001 immediately prior to the terrorist attacks in New York and Washington.

The Osbaldeston Report established a preliminary framework for MDA in Canada. In more recent and formal statements through the *Ocean's Act* (1997) and the subsequent Ocean's Strategy (2002), the federal government has affirmed the necessity to establish "a coordinated system of surveillance and monitoring" to ensure that Canada is aware of what is happening in its marine environment.[5]

Despite the demise of IPCRC, improvements in MDA have been taken by the government, mainly in the aftermath of the attacks of 11 September 2001. At the national strategic level, steps have included the promulgation of the National Security Policy (*Securing an Open Society*, 2004), the reorganization of federal security agencies into a Public Security Department and the formation of a Cabinet-level Foreign Affairs and National Security Committee.

Recommendation 1. *Continue with Block III of AIMP. It provides critical operational capability in the near term and is already contracted.*

At the federal interdepartmental/interagency level, an Interdepartmental Marine Security Working Group (IMSWG) has been established and presented Cabinet with various 'gap analyses' concerning marine security including measures designed to improve MDA. These include increased funding to the Department of Fisheries and Oceans (DFO) for civilian-manned surveillance flights, additional funding for DND's High Frequency Surface-Wave Radar project and the establishment of interdepartmental Marine Security Operations Centres (MSOCs) on both coasts.

The army's unmanned aerial vehicle (UAV). Members of 5 Regiment Artillerie Legere du Canada, place a UAV on its launch platform at Kandahar Airfield, Afghanistan.

A National Plan for Marine Domain Awareness

While considerable progress has been made in the Canadian approach to MDA, a vital element is missing – a national plan for marine domain awareness. Such a plan would provide a doctrinal basis for MDA and outline the responsibilities of the various players along the lines of the National Counter-Terrorism Plan. MDA touches a variety of federal, provincial and municipal governments as well as private enterprise, but without an agreed national focus, MDA is a mission that belongs to everyone yet belongs to no one.

Ultimately, a national plan for marine domain awareness must address the following five questions:

- What information is required?
- In which geographic area will it focus?
- To what level of confidence will it operate?
- By whom will the information be acquired and assessed?
- To whom will the assessed information be provided?

Through the respective coastal MSOCs, Canada currently has the ability to handle effectively the 'known knowns' (vessels which comply with national and international conventions regarding their routing, cargoes and ports of call). In many cases, it is also possible for the MSOCs to deal with the 'known unknowns' usually through patrols or detailed analysis of related information. What cannot be dealt with at the present time is the 'unknown unknowns' which can only be handled by a broad area sensor system.

There was some expectation that the High Frequency Surface Wave Radar Project would address the broad area sensor requirement and thus it was provided with funding through the IMSWG. However, the project has been quietly returned to research status and there is no obvious replacement system available, although Project Polar Epsilon, using data from the Canadian RADARSAT 2 satellite and slated for completion by May 2009 holds out some promise. Unfortunately, while satellites have an obvious application as broad area sensors, they are expensive and several satellites must be operated in a constellation for continuous coverage.

Consequently, Canada lacks a broad area sensor capability in its exclusive economic zone (EEZ) and over the high Arctic. While those responsible for MDA are aware of this weakness, the lack of a national plan for MDA allows this deficiency to continue since there is no identifiable requirement to provide this capability.

Recommendation 2. *Continue with ASLEP but stretch it out over a longer time-frame to fit available funding.*

With respect to patrol and response capabilities, Canada is in somewhat better shape. Patrol functions can be carried out by a variety of surface, air and even sub-surface platforms belonging to various federal departments. Response missions are principally carried out by fixed wing aircraft. They have the necessary speed of reaction, loiter time and equipment fit to resolve ambiguities that may appear in the 'recognized' picture. Depending on the range and endurance of the aircraft, they may also perform the patrol mission. However, while it is possible to perform the broad area surveillance mission with fixed wing aircraft, this is generally seen to be a misemployment of a valuable asset.

In Canada, fixed wing aircraft are operated by or contracted to the Department of National Defence, Fisheries and Oceans Canada, the RCMP, Transport Canada and the Atmospheric Environment Service. The Aurora is the only Canadian long-range fixed wing aircraft engaged in this activity and, in the past, a certain number of flying hours have been allocated by the air force to the navy, DFO and the RCMP to support their respective missions.[6]

Provincial Aerospace Ltd. (PAL) operates three modified King Air aircraft, principally under contract to DFO, for missions on both coasts. The PAL aircraft fly standard patrols in the EEZ and have developed considerable expertise in this area. Transport Canada operates a modified Dash 8 in the pollution surveillance role.

The Aurora, with its higher speed and considerably longer endurance, augments the PAL aircraft in the DFO mission when necessary, especially at the extremities of

A Canadian Forces CP-140 Aurora prepares to leave Naval Air Station Sigonella, Italy, prior to a patrol in the Mediterranean region in November 2004 as part of NATO's ***Operation Active Endeavour****. Its tasks included monitoring and surveillance of activity at sea, hailing ships, and tracking contacts of interest.*

the EEZ. It is, however, in the open ocean and high Arctic that the Aurora excels. Missions such as those involved with Canada's contribution to countering high seas drift-net fishing in the northern Pacific can only be handled by the Aurora and covert operations, such as those in support of civilian law enforcement authorities, are also unique to the Aurora.

UAVS in Marine Domain Awareness

Uninhabited Aerial Vehicles (UAVs) are relative newcomers to MDA and while there are a number of different types in existence, the discussion here will be limited to those platforms classified as High Altitude, Long Endurance (HALE) or Medium Altitude, Long Endurance (MALE).

Generally, UAVs are most useful in 'dull, dirty or dangerous' roles. Surveillance is a 'dull' role par excellence with the additional possibility of 'dirty' added in certain areas such as the Gulf of Alaska or the North Atlantic. HALE/MALE UAVs have the ability to loiter on station at high or medium altitude for a significant time and have sufficient payload to carry a broad array of sensors. Due to their 'persistence,' they are ideally suited to covering a large area for prolonged periods of time.

A *Flight International* report of June 2006 indicates that DND "is formally establishing a project office to oversee a planned acquisition of up to five medium-altitude, long-endurance (MALE) unmanned aircraft systems to enter operational service between 2009 and 2012."[7] DND efforts to acquire this capability fall under the Joint Unmanned Surveillance and Target Acquisition System (JUSTAS) project managed by the air force. An April 2007 report in the *Ottawa Citizen* indicates that the 2009 to 2012 time-line may slip as plans for sole-source acquisition of 10 to 18 Predator UAVs have been turned down by Cabinet.[8]

Although operational experience with UAVs in the MDA role is limited, through the Canadian Forces Experimentation Centre, Canada has trialed their employment in two exercises – the Pacific Littoral ISR Experiment (PLIX) in July 2003 and the Atlantic Littoral ISR Experiment (ALIX) in August 2004.

While official press releases evaluated ALIX as a success, others were more critical. As illustrated by this exercise, the challenges to the employment of UAVS in a MDA role can be categorized as environmental, geographic and regulatory. First, despite the fact that the exercise took place in August from Goose Bay, Labrador, the weather imposed a number of difficulties. In one flight, strong cross-track winds significantly decreased the endurance of the UAV (an Altair UAV) due to the drag of the belly-mounted radar. In another flight, high winds caused the UAV to arrive on station on the Grand Banks in four hours but spend 10.5 hours returning to base. Finally, despite forecasts of relatively clear air for a flight over the North Atlantic, the UAV was unable to visually identify targets because it was incapable of operating in icing conditions that unexpectedly appeared.

Second, in the high latitudes above the Arctic Circle, communications with the UAV for command and control had to be handed off from the high capacity satellite

networks in near geo-synchronous orbit (and therefore at low line of sight angles above 66 degrees) to the Iridium satellite network which had insufficient bandwidth to handle the data stream.

And third, difficulties were also encountered with airspace control coordination between Canadian Flight Information Regions despite extensive pre-exercise coordination with Transport Canada. Additionally, air traffic control authorities (NAV Canada) were uncomfortable with the way in which the UAV shifted between modes of control and one scenario was terminated early as a result.

While ALIX demonstrated that a UAV makes a poor choice as a patrol/reaction vehicle, due mainly to its relatively slow speed and inability to handle icing conditions, UAVs undoubtedly have a role to play as a broad area sensor given their mission sensors, persistence and ability to operate well above civilian air traffic flows. Developing a national HALE/MALE MDA capability into an operational system will, however, be a slow process, particularly if Canada decides to go it alone. And, as a further caution, a DND air force website warns, "Caution should be exercised when declaring UAVs as a cheap alternative to manned platforms. As with manned systems, the cost of a particular class of UAV is directly proportional to capability, size, complexity as well as the required support infrastructure."[9]

Recommendation 3. *Establish a national plan for marine domain awareness in order to establish a national (as opposed to departmental) requirement for each of the surveillance, patrol and response missions.*

The utility of UAVs as broad area sensors has been recognized by the US Navy which is now pursuing the Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS) Project. The objective of BAMS is to have five stations or orbits around the world permanently manned by a UAV to support the major USN fleet commanders and to operate in conjunction with the USN Maritime Patrol and Reconnaissance Force which will perform the patrol/response function. Initial operational capability for BAMS is scheduled for Fiscal Year 2013 and, intriguingly, the USN has partnered with Australia in this project.

The benefits to Canada of joining such a program include mitigation of technical risk and interoperability with two traditional allies as well as the overriding utility of a Canadian broad area surveillance capability in the Arctic, Pacific and Atlantic areas of Canadian responsibility. Perhaps this could even be the basis for the much-discussed 'Naval NORAD' with the sharing of sensor information along the lines of the shared data from the radars of the North Warning System. The main drawback from a Canadian perspective would be that deployment of an operational system depends on the BAMS time-line which will achieve operational capability after that proposed for the JUSTAS Canadian UAV project.

Expeditionary Intelligence, Surveillance and Reconnaissance

The broad requirements of marine domain awareness in the domestic role – i.e., surveillance, patrol and response – apply equally to intelligence, surveillance and reconnaissance (ISR) operations in the expeditionary role. The principal difference, of course, is the increased possibility of hostile action.

As in MDA, fixed wing aircraft are best employed in the response and patrol roles. In this capacity, they are normally part of a coalition effort to perform ISR functions in the theatre of operations. Due to their autonomous nature and onboard sensors, fixed wing aircraft have the ability to work with a number of coalition partners in a variety of roles of differing complexity. Fixed wing aircraft, particularly long-range patrol aircraft, are, however, at a disadvantage in expeditionary ISR due to the requirement to carry capable self-defence equipment and the necessity, in some cases, to operate at suitable standoff ranges.

During *Operation Apollo*, Aurora aircraft flew patrols in just such an expeditionary ISR role over the Arabian Sea and Gulf of Oman operating under the operational control of coalition authorities. Unclassified reports indicate that these operations were highly successful and it is precisely for missions such as these that the proposed improvements in the Aurora's sensor capability (Block III of AIMP) are intended.

Once again, as in the case for MDA, HALE/MALE UAVs are best employed in the surveillance role. They are especially useful in expeditionary ISR since the role is not only dull and sometimes dirty, it can also be quite dangerous.[10]

As for fixed wing aircraft, UAV expeditionary ISR operations will likely be conducted in conjunction with a coalition force. Given the degree of sophistication required

for and sensitivity of such operations, the lead state will undoubtedly be the United States. Integration of UAVs into a coalition ISR effort, a critical combat capability, will require an extremely high degree of interoperability if not commonality. 'One-off' national systems will either be relegated to unimportant tasks or simply not invited to participate.

While Canada has had experience in Afghanistan of operating tactical UAVs, there is no information publicly available that indicates that Canada has employed or experimented with HALE/MALE UAVs in the expeditionary ISR role.

Conclusion and Recommendations

Within the Canadian Forces and even within the air force, the Aurora is tainted with the reputation of being a manpower-intensive Cold War relic, useful only for hunting submarines. UAVs, on the other hand, are seen as the modern answer to the requirement for domestic surveillance with the added benefit of possible employment in expeditionary ISR operations. This makes replacing the Aurora with a HALE/MALE UAV seem very attractive. As discussed above, the reality is that the Aurora and UAVs perform different functions in both MDA and expeditionary ISR. They are *complementary* not *competing* systems, at least for the near and medium term.

> ***Recommendation 4.*** *Given Canada's lack of a primary broad area surveillance sensor and its need to cooperate with the United States, Canada should participate in BAMS.*

The unforeseen consequences of eliminating key capabilities – as illustrated by the decision to dispose of Canada's Chinook helicopters now desperately needed in Afghanistan – should lead to caution in any similar decision regarding the Aurora especially since there is no keystone national plan for marine domain awareness to establish an operational requirement for the patrol/response function.

Fielding a DND UAV capable of conducting 'domestic surveillance and overseas operations' means making a significant investment in terms of equipment, time and personnel as well as a degree of technological risk. The ALIX experiment revealed that HALE/MALE UAVs such as Altair, face challenges in contributing to marine domain awareness, principally in their inability to operate in harsh climates and the difficulties of integration

Photo: Sgt Frank Hudec, Canadian Forces Combat Camera

Captain Lisa Reimer, a pilot with 405 Maritime Patrol Squadron, Greenwood, NS, waits for a pre-departure clearance, aboard a CP-140 Aurora at Naval Air Station Sigonella, Italy, in November 2004.

into civil airspace. There is much work to be done before maritime UAV surveillance systems evolve from the conceptual realm to reality.

In this regard, the USN Broad Area Maritime Surveillance (BAMS) project, which combines both UAVs for surveillance and fixed wing aircraft for patrol/response missions, appears to offer a realistic solution to the dilemma facing the Canadian Forces. The active participation of Australia in this project is a positive sign for Canada and likely reflects both Australia's more acute appreciation of the national requirement for MDA and the willingness of the USN to seek partnerships with other states.

There can be no doubt that DND is facing a critical shortfall in funding for capital projects and difficult decisions have to be made. It flies in the face of logic, therefore, that an already contracted project, such as Block III of AIMP, should be cancelled since any potential cost savings will undoubtedly prove to be illusory. Furthermore, there is simply no other platform available to fulfill the patrol/response mission in the distant reaches of Canada's EEZ and the high Arctic or to conduct expeditionary ISR in the near term. The first recommendation, therefore, is:

Captain Roch Ouellet, a tactical navigator with 405 Maritime Patrol Squadron, Greenwood, NS, works in the tactical compartment of a CP-140 Aurora en route to Naval Air Station Sigonella, Italy, after a patrol in the Mediterranean during ***Operation Active Endeavour****.*

- **Recommendation 1**. Continue with Block III of AIMP. It provides critical operational capability in the near term and is already contracted.

Admittedly, ASLEP is an unfunded liability and will have to be addressed but it would be wasteful in the extreme to have the updated Aurora grounded for structural defects. This leads to the second recommendation:

- **Recommendation 2**. Continue with ASLEP but stretch it out over a longer time-frame to fit available funding.

Beyond platform-specific issues, the lack of a national plan for marine domain awareness is a critical weakness in establishing national requirements and responsibilities. It is unfortunate but true that *no operational requirement* equals *no priority* and may lead to unilateral cuts in capability by one department that are sorely needed by another. This leads to the next recommendation:

- **Recommendation 3**. Establish a national plan for marine domain awareness in order to establish a national (as opposed to departmental) requirement for each of the surveillance, patrol and response missions.

Under BAMS, development of a Canadian HALE/MALE UAV operational capability can be achieved in the medium to long term. Furthermore, participation with the United States (and Australia) will mean that Canada will not face the significant costs and technological risk associated with developing a unique national capability. BAMS would also address issues relating to interoperability and compatibility in expeditionary ISR operations. This leads to the final recommendation:

- **Recommendation 4**. Given Canada's lack of a primary broad area surveillance sensor and its need to cooperate with the United States, Canada should participate in BAMS.

Together, an updated Aurora and BAMS will meet Canada's requirement for an effective system for marine domain awareness as well as provide a capability to carry out expeditionary intelligence, surveillance and reconnaissance missions.

Notes

1. David Pugliese, "Forces want to Scrap Gear, Save for New: Aircraft, Destroyer, Refueling Ships to be Eliminated under Defence Plan," *Ottawa Citizen*, 31 January 2007, p. A1.
2. Details of Blocks I and II of AIMP can be found on the air force website at CP-140 Aurora Future Plans <http://www.airforce.forces.gc.ca/equip/CP-140/future_e.asp>.
3. To avoid confusion with the policing aspects of 'domestic surveillance,' the term 'marine domain awareness' is now used to define the activity associated with the collection, analysis and dissemination of information relating to activities on, under or above a defined marine area.
4. While the concept of 'known knowns', 'known unknowns' and 'unknown unknowns' is associated with Donald Rumsfeld, it was popular in intelligence circles well before being reported as a 'Rumsfeldism.'
5. Canada, Department of Fisheries and Oceans, *Canada's Oceans Strategy*, Ottawa, 2002, pp. 17-18. Additionally, the Standing Senate Committee on National Security and Defence (SCONSAD) has written four reports concerning surveillance and monitoring: *Defence of North America: A Canadian Responsibility* (2002); *Canada's Coastlines: The Longest Under-Defended Borders in the World* (2003); *The Government's No. 1 Job: Securing the Military Options it Needs to Protect Canadians* (2006); *An Update of Security Problems in Search of Solutions – Coasts* (March 2007).
6. The status of the agreements between the air force and navy for the provision of Aurora support is not clear since the establishment of Canada Command and its assumption of responsibilities previously exercised by CAS and CMS. The agreements with other government departments remain in place. Of note, the initial phases of the AIMP project have removed the number of operationally available aircraft from the fleet causing a reduction in the number of flying hours to half that available in the early 1990s.
7. *Flight International*, "Canada Plans for Expansion of UAV Inventory," 13 June 2006.
8. David Pugliese, "Tories Kill Sole-Source DND Contract," *Ottawa Citizen*, 20 April 2007.
9. See Crew Brief, Fall 2006, Vol. 4, No. 2, Equipment & Capabilities Joint Unmanned Surveillance and Target Acquisition System, <http://www.airforce.forces.gc.ca/news/crew/06-10/03_e.asp#5>.
10. The Predator MALE can also be used to carry weapons but that is beyond the scope of this paper.

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A New Marine Commando Regiment

Dave Perry

Photo: MCpl Robert Bottrill, Canadian Forces Combat Camera

*HMCS **Ottawa**'s naval boarding party team practices weapon drills on the flight deck while sailing in the Arabian Gulf.*

Of the various components of the leaked Canada First Defence Strategy and the subsequent series of articles by the *Ottawa Citizen*'s David Pugliese, one item largely overlooked by the maritime community is the proposed creation of a 250-member Marine Commando Regiment (MCR) to be based in Comox, BC. As described by Pugliese, the MCR will be a special operations force (SOF) focusing entirely on maritime operations, with a primary mission of countering sea-based terrorist incidents, and responsibilities for non-combatant evacuation operations for Canadians in areas accessible by sea. Although the full details, to the extent they will ever be released, of the MCR await the long-overdue defence strategy, there is room to speculate about the role this new unit will play in the Canadian Forces (CF), and the challenges it will face. As with other aspects of Canadian SOF, the literature on this subject is slim, and focused virtually exclusively on land-based capabilities. Accordingly, information on allied SOF, particularly in the maritime domain, will be used to speculate about the Canadian example.

Canadian Special Operations Forces

An expansion of SOF capabilities has been common in Western militaries post-9/11, and particularly following the decisive role of allied SOF and air power in the initial invasion of Afghanistan. The United States, for instance, has increased defence allocations for SOF units by 81% since 2001, Britain has called for increases in the strength of its special forces and investments in new equipment, and NATO is currently implementing a Special Operations Forces Transformation Initiative.[1] Canada too has seen significant attention focused on developing SOF capabilities since 2001. Two post-9/11 budgets

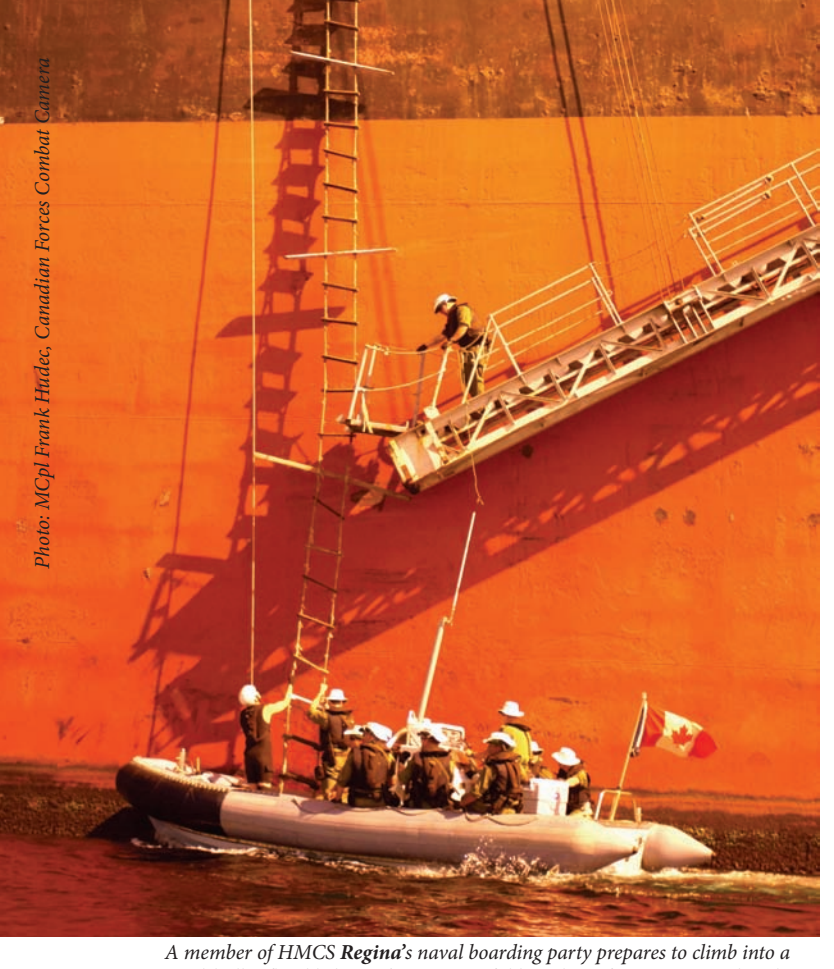

Photo: MCpl Frank Hudec, Canadian Forces Combat Camera

*A member of HMCS **Regina**'s naval boarding party prepares to climb into a rigid-hull inflatable boat after a successful boarding of a suspect vessel in the Gulf of Oman during **Operation Apollo** in April 2003.*

have allocated increased defence funding specifically for Canadian SOF. Budget 2001 increased the budget of Joint Task Force 2 (JTF2) by $119 million with the goal of doubling its capacity, and more recently budget 2005 allocated an unspecified share of a $2.75 billion increase for specialized facilities for the unit.[2]

Canada's SOF capability has furthermore been given significant policy direction, beginning with the 2005 International Policy Statement (IPS) which called for enhanced training capabilities, expanding the military's Joint Nuclear, Biological and Chemical Defence Company (JNBCDC), and enlarging JTF2 to increase its ability to undertake missions at home and abroad. The IPS also outlined the creation of a joint Special Operations Group encompassing JTF2, a Special Operation Aviation capability, the JNBCDC and supporting land and maritime forces.

Arguably the most significant development was the 1 February 2006 standing up of a new battalion-sized Canadian Special Operations Regiment (CSOR) and the creation of Canadian Special Operations Forces Command (CANSOFCOM) which encompasses all of the aforementioned components of the Canadian special operations community and, presumably, will soon include the MCR. In addition to generating SOF, CANSOFCOM can deploy domestically in support of Canada Command (CANADACOM), and has assumed from JTF2 the responsibility for providing Canada's primary counter-terrorist response. CANSOFCOM can furthermore deploy outside the country, either in support of Canadian Expeditionary Forces Command (CEFCOM), or autonomously, conducting out-of-area operations ranging from small protection teams, to special operations task forces based upon a core of either the CSOR or JTF2.

Although JTF2 has deployed abroad in the past, CF operations in Kandahar since 2006 appear to include the most significant SOF mission to date, with the first operational deployment of the CSOR in support of JTF2 representing the first deployment of a Canadian SOF task force. As some authors describe the creation of Special Operations Command (SOCOM) in the United States as the 'coming of age' for American SOF,[3] the creation of CANSOFCOM and its deployment to Afghanistan surely represents the coming of age for Canadian SOF. In this context, the creation of the marine commando regiment is one amongst a series of other changes to Canada's SOF, and follows previous policy direction by providing the supporting maritime forces called for in the International Policy Statement.

Why a Marine Commando Regiment?

Although a general assumption has been made that SOF capabilities are relevant, the creation of a new unit bears some examination, especially considering JTF2 currently has responsibility for both maritime counter-terrorism and non-combatant evacuation operations. While the creation of a maritime SOF unit in Canada might seem prescient given that our American allies have directed increased force levels for their Navy SEAL teams, SEALs are responsible for missions not yet envisaged for the MCR. In fact, it is most likely their extensive participation in direct action and special reconnaissance missions in Iraq and Afghanistan that is driving the desire for more maritime SOF in the United States. Although such an assumption may prove unfounded, given the clear tasking of the CSOR for direct action missions such as intelligence gathering and raids on enemy targets, it seems unlikely to this author that a new unit would be tasked with duplicating these direct action functions. Therefore, what is the requirement for a maritime counter-terrorist capability and evacuation response in Canada?

Measuring the probability of maritime terrorism is a complicated matter at best. While the potential for large-scale disruption exists, the same factors that warrant the creation of a maritime SOF, namely the challenges of operating at sea, simultaneously increase the difficulties involved in conducting a successful attack.

It is likely as a result of such complicating factors that seaborne incidents represent a mere two per cent of international terrorist attacks in the last 30 years.[4] Nonetheless, as a maritime country Canada has multiple potential sea-based terrorist targets, and has been publicly targeted for attack by Al-Qaeda, the group behind the bombings of the USS *Cole* in 2000 and M/V *Limburg* in 2002. Furthermore, Al-Qaeda has previously counted a maritime-planner amongst its upper echelons, is reputed to possess a maritime fleet, and is known to target the type of infrastructure found in Canadian waters.[5] These vulnerabilities include offshore oil platforms, commercial shipping, port facilities, cruise ships, and passenger ferries – the latter two having received specific mention by Rear-Admiral Roger Girouard when discussing the MCR's creation. Given these potential maritime targets, a special operations force dedicated to operating on the water appears to make sense, especially in the context of a new 'Canada First' defence focus.

According to a report by Business Research & Economic Advisors, cruise ships made 880 calls to Canadian ports, carrying over 1.5 million people in 2003.[6] With the largest of these vessels carrying over 3,000 passengers, the potential for a terrorist incident that could cripple the cruise industry is very real. Similarly, with passenger ferries on either coast carrying over 1,000 travelers, there are multiple opportunities for mass-casualty terrorism in Canadian waters. While destroying a passenger ferry would be less dramatic than destroying a passenger aircraft, ferries lack a security regime comparable to the aviation industry and therefore present softer (and perhaps tempting) targets.

From an economic/strategic perspective, commercial ports and shipping as well as the oil and gas industry present several opportunities for disruption of economic activities on the water. Almost 450 million tonnes of shipping passes through Canadian ports, with 17 per cent moving oil and gas, upon which eastern Canada is highly dependent. Canada's offshore oil and gas industry produces billions in economic benefits annually, there are currently plans to create eight liquefied natural gas terminals at Canadian sites, and the country's largest oil refinery, slated to double in capacity, is serviced via tanker traffic off Saint John, NB. A terrorist attack on any part of this critical infrastructure could create significant economic hardship, and for this reason, the United States, Norway and the Netherlands have all moved in recent years to develop their maritime SOF capabilities. US Northern Command has increased the collaboration of its anti-terrorist 'Red Teams' with Homeland Security,

*HMCS **Regina**'s naval boarding party makes its way to a suspect vessel in the Gulf of Oman.*

and both Norway and the Netherlands have dedicated maritime SOF units with specialities regarding offshore oil platforms. For any of these scenarios, responding to a maritime-based terrorist threat would presumably require more than a basic ability to get in and out of boats, so following the example of our allies and dedicating one force to operating in and on the water seems prudent.

Our extensive experience in the Persian Gulf has demonstrated that the Canadian Navy has the ability to conduct boarding of vessels suspected of involvement in terrorist activities. To date, however, the navy does not conduct opposed boardings, so this may represent a key mission for the new MCR. Previous experiences, such as those with the successful boarding of GTS *Katie*, and JTF2's failed attempt to board a Spanish fishing trawler during the 1995 Turbot War, have demonstrated the need for an effective opposed boarding capability.[7] Although the Department of National Defence (DND) has refined its contracting procedures since the *Katie* incident, Canadian Operational Support Command is reliant upon commercial options for strategic sealift, currently using ad hoc commercial shipping to support operations in Afghanistan until a contract for a full-time charter vessel is signed in the fall of 2007. While logistics officers are confident in the new contracting measures, maintaining an ability to protect vital CF equipment at sea seems prudent.

The MCR's secondary mission is non-combatant evacuation operations. The largest ever evacuation of Canadians – almost 15,000, from Lebanon in June 2006 – provided ample demonstration of the need for a maritime evacuation capability, so it is not surprising that the government would include such an role in the unit's proposed mandate. With the Lebanon extraction acknowledged to have been 'seat of the pants' by the Foreign Affairs official in charge, there is an obvious need for the development of a permanent capability.[8] According to a report by the Asia Pacific Foundation, approximately 2.7 million Canadians live abroad; almost 650,000 in Asia, with over 200,000 in Hong Kong alone.[9] This is one of the few reports on the subject and the numbers are debatable. Little work has been done to determine the exact number of Canadians living overseas and, as the Lebanon situation demonstrated, once the scope is expanded to "Canadian Entitled Persons," the numbers increase significantly.

Photo: MCpl Frank Hudec, Canadian Forces Combat Camera

*Master Seaman Samir Saeed, a naval reservist from Victoria, BC, is an Arabic translator with HMCS **Regina**'s naval boarding party in the Gulf of Oman.*

While responsibility for extracting Canadians from potential hotspots is the purview of the Department of Foreign Affairs, a recent report by the Standing Senate Committee on Foreign Affairs and International Trade recommended that for large-scale evacuations like Lebanon 2006, DND and the Canadian Forces should coordinate and lead the government's evacuation effort.[10] Canada lacks the ability to remove such persons on naval vessels and under current policy will not explore an amphibious capability until 2010 at the earliest. The navy nevertheless seems the logical choice to lead such missions. Given the high degree of public support for the operation in Lebanon, and public expectations that the government will come to the rescue in similar circumstances, it would be prudent for military leadership to explore this option. While we might not possess the ships to evacuate our people, there is still a need for on-the-ground special operations forces which can quietly slip into the war-torn state, establish communications between the embassy, the port and the embarking ship, coordinate the evacuees, and protect them while they go aboard. In this respect the MCR could fulfill a role similar to that of the American Marine Corps in evacuation operations.

Unresolved Issues

Despite a demonstrated need for such an organization in the roles outlined above, several issues remain unresolved. The first consideration is the associated costs involved with creating such a unit. SOF units are exceedingly expensive, in terms of equipment, personnel and training budgets. Such a unit would presumably require an equivalent of the MK-VIII SEAL Delivery Vehicle and Mark V Special Operations Craft, and it has been estimated that a US Navy SEAL takes three years to train at a cost of over $800,000 for the first year of training alone.[11] With an estimated initial force of 250, where these funds would come from is a mystery, given CF-wide funding challenges and the looming replacement of the maritime fleet. Such resource scarcity might well lead to opposition from those who would view the unit as a drain on future funding. In this author's opinion, while such opinions are understandable, a desire to move Canada's maritime forces into the new security environment should take precedence.

> *Ultimately, however, the unit's location may not be driven by military utility.*

A second consideration is where the unit would be located. Basing the MCR at JTF2's current, landlocked base at Dwyer Hill outside of Ottawa makes little sense. But with JTF2 slated to move to CFB Trenton on the shores of Lake Ontario, access to maritime training facilities in a central location would not be out of the question. However, given the need to conduct operations at sea, a base on the coast seems more reasonable. Presumably, fiscal restraints allow for the creation of only one base, and placing it in British Columbia will give Canada SOF capability in the region for the 2010 Vancouver Olympics.

A BC base makes more or less sense, however, depending upon the primary focus of the unit. If its proposed counter-terrorist mission is driven primarily by shipping considerations, the West Coast has the highest volume of both commercial shipping and cruise visits. However, if

*Sailors or Marines? Members of HMCS **Winnipeg**'s naval boarding party receive orders on the ship's deck prior to operations in the Gulf of Oman.*

protecting critical infrastructure is more important, the East Coast would seem a more appropriate choice, as it hosts Canada's offshore oil and gas industry, largest refinery, and the majority of proposed liquid natural gas terminals. In terms of evacuation operations, the large Canadian diaspora in Asia makes a base on the West Coast advantageous, but the possibility of an amphibious capability located at CFB Shearwater would warrant location on the East Coast. Regardless of what coast ultimately receives the base, there surely remains a requirement for a similar capability on the other coast, given the flight times involved in responding. Ultimately, however, the unit's location may not be driven by military utility. Politically, the choice of Comox may well represent a face-saving means of partially fulfilling a Conservative Party campaign pledge to boost the military's presence in BC.

A third issue is how the creation of the unit will fit into CANSOFCOM and the Canadian Forces as a whole. While the unit would presumably reside within CANSOFCOM, rather than the navy, this remains to be fully resolved. If it is attached to CANSOFCOM, its relationship with other units will need clarifying, given JTF2's current responsibility for both counter-terrorism and evacuation operations. Through its Maritime Section, JTF2 is the current lead for counter-terrorist activities involving merchant ships, port facilities and offshore oil platforms, and was given the evacuation mission by the International Policy Statement. This has likely contributed, at least in part, to speculation that the unit might simply be staffed by the maritime component of JTF2. There would seem to be overlap as well with the newly formed CSOR, as its commander has envisioned an amphibious beach assault capability and maritime counter-terrorism role.

Part of the answer might lie in applying a tiered differentiation to CANSOFCOM units. Thus, JTF2 could remain Canada's Tier One unit – i.e., capable of the full range of SOF functions – and the CSOR and MCR could function as Tier Two supporting organizations. The MCR might function as the supporting maritime forces envisioned in the IPS, rather than replicating all SOF functions in a maritime context, akin to the US Navy SEALs. Given the overall size of the CF, however, there seems little room for such duplication of effort, due to both cost and personnel deficiencies. It might, therefore, make sense to give greater emphasis to the unit's role in evacuation operations, which was only recently assigned to JTF2, and assign the unit a supporting role in maritime counter-terrorism.

Finally, and most importantly, is the problem of finding enough exceptionally fit, and well-trained CF members to staff the regiment. Having recently been forced to scale back the planned force expansion, the CF personnel situation is murky at best, and the navy in particular seems hard-pressed to retain its current strength. In June 2006, Rear-Admiral Girouard described a unit comprised of naval personnel, and the most logical sailors would be the members of naval boarding parties who already possess many of the desired skills. Given the proposed size of the unit, however, such a move would seriously affect the navy's ability to deploy standard boarding teams. Restricting the unit to naval members would furthermore


Photo: DND

A new Canadian naval requirement? A group of SEALS take up positions after securing the beach during and amphibious landing exercise.

set it apart from both JTF2 and the CSOR which recruit from all three environments. Opening the ranks to all CF members would allow a greater potential pool, but with JTF2 and the CSOR both expanding, one wonders how the new unit would be able to recruit the needed talent. Alternately, the MCR might simply steal some, or all, of JTF2's maritime counter-terrorism personnel, but this would pose coordination challenges. Any of these options must ultimately fit into a rapidly expanding CANSOFCOM, which currently encompasses just under 1,000 personnel, and is slated to expand to 2,300 personnel by the end of the decade.

A brief examination of the American SOF community reveals that finding adequate personnel will likely prove troublesome, no matter what route is followed. To expand to its current two per cent of the American military, SOCOM was forced to offer significant retention bonuses, and adopt a controversial direct entry program.[12] The slated further expansion of SOCOM has caused great unease that it will dilute the SOF talent pool and create unhealthy competition, both between SOF units and between SOCOM and the conventional military for the best officers and NCOs. In Canada, the planned expansion of CANSOFCOM to 2,300 by 2010, would have made it relatively the same size, had the CF not already failed in its goal of expanding to 100,000 regular and reserve forces.

With naval SOF in particular, however, there seems to be even greater difficulty in attracting people. US Naval Special Warfare Command represents roughly 1.6% of the US Navy, while the proposed MCR would require almost 2.6% of the already understaffed Canadian Navy. These numbers might seem insignificant, but since 2001 the SEALs have failed to meet their authorized enlistment levels, while trying simultaneously to expand beyond present strength.[13] Finding the requisite numbers within the Canadian Navy seems implausible, and it remains to be seen how even the entire Canadian Forces could generate 250 highly capable marine commandos, as the other components of CANSOFCOM expand.

Despite the challenges its creation will pose, a Marine Commando Regiment could arguably represent a significant positive development for Canada's maritime forces. We need both a maritime counter-terrorist force and evacuation capability, and a unit dedicated to the maritime environment would be prudent. So too would following the lead of the CSOR, and making the unit a public face of Canada's maritime SOF, rather than employing the stringent secrecy surrounding JTF2. With the navy in search of an image that will resonate with the public, a unit responsible for both protecting Canadians from a tangible threat at home, and rescuing them abroad might be it. Devoting real resources, in terms of personnel and finances to a marine commando unit's creation would serve the long-term interests of Canada's maritime forces.

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Why Does Canada Still Need a Navy?*

Peter T. Haydon

A Canadian naval task group – multi-purpose, combat-capable!

A person could be forgiven for thinking that the Canadian Navy appears rudderless today. Major programs to modernize the fleet and to replace proven naval capabilities seem stalled, and basic naval policy has to run the gauntlet of public opinion any time the navy makes the headlines. The Canadian Navy has never been well entrenched in the national fabric, but until recently there has always been a politically-approved 'core' naval policy that provided the rationale for maintaining the fleet as the first response to crisis and for helping to ensure sovereignty at sea. Why have things changed? To answer this, we need to go back to first principles.

Why do States Maintain Navies?

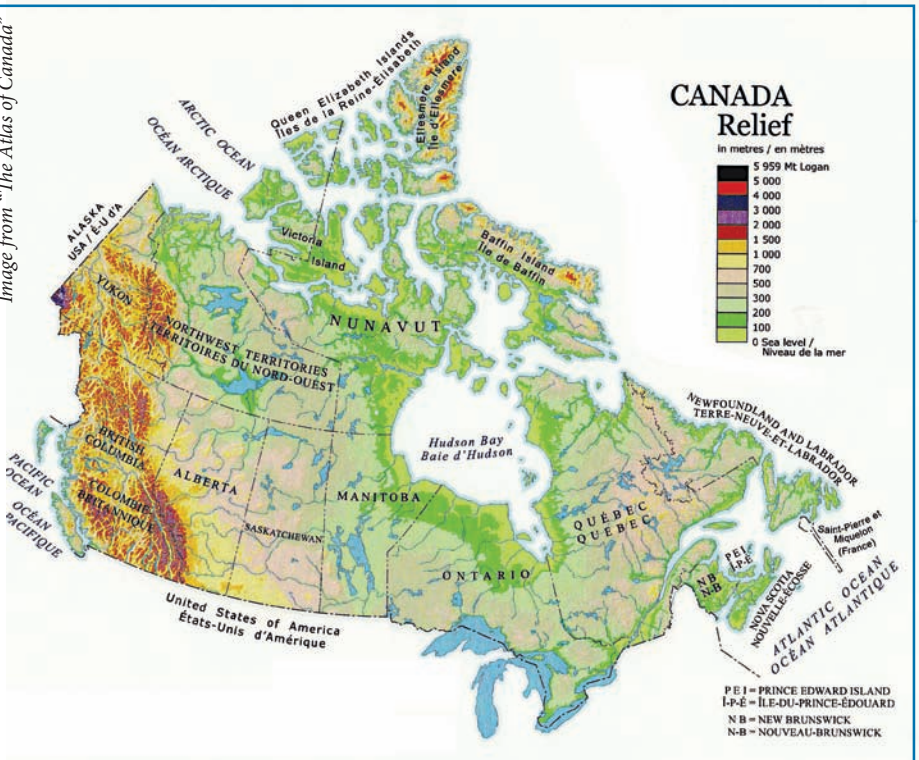
Navies have always been, and will doubtless remain, political instruments – to a far greater extent than either armies or air forces. This has more to do with the inherent operational flexibility of naval forces and the fact that international law regards a warship as an extension of the sovereign state than with the view that sea power is merely "continuation of policy by other means."

Over the years, as the oceans became increasingly and necessarily subject to political control, navies (and in some cases coast guards) have become instruments of state policy at sea in four ways:

- to enforce national and international laws governing the use of the oceans;
- for self-defence in home and adjacent waters and thereby assert sovereignty in waters under or claimed to be under national jurisdiction;
- as instruments of foreign policy; and
- to wage war.

The extent to which states maintain and use navies in these tasks is determined by a range of variables that include geography, dependence on sea-borne trade, overseas interests, national security and, of course, domestic politics.

A state that decides to maintain a navy for some or all of those tasks must not only develop the necessary operational capabilities but also maintain those forces in a way that ensures they are available when needed. There is absolutely no point in having naval forces if they are not readily available to do the bidding of their government. To maintain the necessary operational capability, the naval force structure is best managed as a single entity under a concept whereby replacement ships and support systems are routinely funded in a way that always retains operational integrity of the fleet. Ideally, the replacement of warships and auxiliaries should be done under a



Map of Canada. The distance from Halifax to the entrance to the Northwest Passage is almost the same as the distance from Halifax to the English Channel.

steady building program that allows necessary industries and technical skills to be maintained. The entire process requires a pre-existing and politically-endorsed naval policy that serves as the rationale for modernization and for the acquisition of new ships, aircraft, and other equipment. Unfortunately, that policy does not exist today.

Canada's Maritime Strategic Setting

With ocean responsibilities for an area almost as big as the landmass, albeit only partly useable, and with extensive ocean-related international interests and concerns, especially shipping which is the lifeblood of the economy, Canada has maintained a navy for almost 100 years. Over that period the rationale for the navy has changed to reflect its strategic imperatives and the varying balance between domestic and international priorities. For instance, after the Cold War, the Canadian Navy was heavily committed to international security operations in places like the Persian Gulf, Somalia, the Adriatic, the Caribbean and Southeast Asia. Only limited attention was paid to domestic security concerns because, until the terrorist attacks of September 2001, Canada's oceans were seen as generally benign save for a few fishing violations and some instances of smuggling which were handled by the RCMP and the Canadian Coast Guard. This is no longer the case, the domestic requirements have risen in priority again.

With greater concern today for national security in its widest sense, including environmental issues as well as the physical safety of shipping using Canadian waters, and the need to counter international crime at sea, the international role of the navy is no longer dominant. Spurred on by concerns over the impact of global warming on the Arctic, the government has adopted a 'Canada First' security policy. Although still poorly defined, the new policy has the potential to change the course of naval policy in Canada. Faced with new challenges and possibly new responsibilities, the Canadian Navy needs to re-develop its force structure in a way that provides the greatest amount of flexibility to operate both in support of national maritime security and as an instrument of foreign policy. In this, some basic capability requirements exist including: warships for use in self-contained naval task groups and individually at home and overseas; sealift to support joint operations at home and overseas; and ships and aircraft to patrol all waters under Canadian jurisdiction including Arctic and northern waters.

Although national laws can be enforced in waters under Canadian jurisdiction by the RCMP and the coast guard, there are times when their operations need to be supported by the superior force and authority implicit in the navy. Just as respect for Canadian sovereignty is a function of the respect for Canada's ability to use force as the means of last resort, law enforcement requires that there be sufficient force available to compel compliance with the law. On its own, a non-military coast guard cannot provide the necessary guarantee of compliance, and certainly would not be able to manage violence should the need arise – this is a naval task. Moreover, the navy is the only organization capable of coordinating complex joint and multi-agency security operations at sea. But without a coherent and overarching national naval policy, it is increasingly difficult to develop the programs to transform the navy to meet the challenges of the 21st century.

*HMCS **Ottawa**, a highly flexible high readiness response to almost any situation anywhere.*

What Should the Future Naval Policy Be?

A sound Canadian naval policy for the 21st century must address both domestic and international requirements, creating a new balance between the two missions. Domestic requirements are a combination of deterrence and response supported by a comprehensive information management system. These capabilities are needed to ensure that national and international laws and conventions are respected in Canadian waters and that those waters are not used for illegal purposes. This requires that the government must be able to control whatever takes place in the waters under its jurisdiction. Not doing that is tacit acceptance that others can use those waters as they please without regard or respect for Canadian laws, essentially an abrogation of sovereignty.

Internationally, Canada has been well served by the naval task group concept, and there is every indication that the types of situation in which Canadian task groups have been deployed in the past will continue to exist. It is also reasonably certain that Canadian governments will find it necessary to remain involved in international crisis management; national interests are too compelling to do otherwise. Thus, the timely replacement of the core elements of the naval task group (the command ships, escorts, fleet support ships, submarines, and helicopters) serves Canada's best interests now and in the longer term. To abandon the proven, naval task force capability makes absolutely no strategic sense. It is the nucleus around which any future multi-ship or multi-capability formation, whether joint or interdepartmental, will be formed. Why would any sensible government willingly give up a capability that has served it well for 15 years under a wide range of international and domestic situations and will certainly be called upon to do so in the future?

Why does Establishing a Canadian Naval Policy for the 21st Century Seem so Difficult?

Systematically over the last decade the concept of a politically-approved core naval policy has eroded, and now there is no overarching political guidance for the development of a coherent force structure. This needs to be corrected urgently by re-introducing a core naval policy. The essence of that policy is that the navy needs to be able to function efficiently in home waters as well as globally in protecting Canada's extensive maritime interests. Basic capabilities to make this happen include:

- collecting and analysing information on the use of all Canadian waters and coordinating operations of all government departments and agencies in those waters;
- patrolling all waters under Canadian jurisdiction and making timely responses to incidents that have the potential to threaten Canadian security;
- deploying warships (as both self-contained naval task groups and individually) for use at home and overseas with the ability to integrate into US and multinational naval formations;
- providing sealift to support joint operations at home and overseas under a range of situations that include supporting Canadian embassies and evacuating people from threatening situations; and
- maintaining the necessary support infrastructure (e.g., command, communications, logistics, engineering, training support systems) to support those operations.

Photo: Formation Imaging Halifax

*HMCS **Toronto** and HMCS **Windsor**. Versatile instruments of Canadian sea power now and in the future.*

Determining the precise force structure needed to meet those capabilities is a subordinate process in which compromises between naval recommendations and political expectations are struck. However, in the end it is what the government is willing to buy rather than what the navy wants that establishes the nature of the fleet. Yet, without a politically approved core naval policy every program is subjected to departmental review within a very broad menu of force requirements, long and short term. A politically-approved core naval policy not only establishes the broad capability requirements, it also determines the respective priorities.

Overall, not maintaining an effective naval force is tantamount to surrendering one's sovereignty at sea. An effective navy is a prerequisite of statehood; a country with an ocean but without a navy cannot claim to be truly sovereign. Thus, defining an appropriate broadly-based naval policy that provides continuing guidance for the development and maintenance of the necessary force structure is fundamental to establishing a sound national maritime security policy. That policy does not exist at the moment and its absence is an obstacle to the necessary replacement and modernization of the Canadian fleet and thus hampering its ability to meet the challenges of the 21st century.

Note

* This paper is a shortened version of a more comprehensive analysis (under the same title) which is available as a Maritime Security Working Paper on the Centre for Foreign Policy Studies website http://centreforforeignpolicystudies.dal.ca/index.php.

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Ship Portraits: Tug *Champion* Towing Ship *Leicester Castle*

Eric Ruff

"Tug Champion Towing Ship Leicester Castle" by William Edgar (oil on canvas, 23" x 34").

The painting illustrates the *Leicester Castle* being towed from Auckland, New Zealand, to Sydney, Australia, in 1909. This painting is by William Edgar, an Australian ship portrait painter. Like others of his day, he worked for one of several companies that produced photographs and paintings of visiting vessels for their customers. This seems to be unique to Australia – European and American artists were generally 'freelance' artists.

Interest in this painting lies more with the story behind it than in the picture itself. Although we can learn a number of things from this portrait, perhaps the most interesting question is why would Captain Charles C. Hunter, who took command just prior to this incident, be interested in a painting that featured a tug more prominently than his own ship? Many of these Australian artists actually went to sea to photograph incoming vessels and then used photos to produce their paintings. So the answer to our question may be that since the ship being towed would not be under sail or, as in this case, would be damaged, the resultant painting would not show the ship at its best. And at this point in the ship's history, the towing situation would be of interest. As well, this painting might have suited Captain Hunter, as it would indicate that he had been entrusted to take command, refit and sail the ship back to Europe.

Leicester Castle was an iron-hulled full-rigged ship built in 1882 at Southampton, England by Oswald, Mordaunt & Company. It was 273.4' x 40.3' x 24.2' and was 2009 Registered Tons, 2067 Gross Tons. Her port of Registry was Liverpool, England, 1882-1911, and Drammen, Norway, 1911-1923, where she was known as *Vik*. Her final fate was to be broken up in the United States in 1923.

Our story began on 12 May 1908 when the *Leicester Castle* left Cardiff, Wales, with a cargo of coal bound for Pisagua on the west coast of South America. On 11 October the ship arrived at Montevideo, Uruguay, towed by the steamer *Washtenaw*, having been picked up at sea in distress. Her master, Captain Robert Brown,[1] in a 29 June 1909 interview with a reporter from the *Auckland Star*, mentioned that "he had to put back from the Horn to Montevideo as a result of some of the iron work carrying away." The cargo had to be sold and the damage repaired. After this the ship left in ballast for Newcastle, New South Wales, Australia, on 12 April 1909. Presumably her reason for heading to Newcastle was to load coal

there to complete the charter to deliver a cargo to Pisagua.

The *Auckland Star*'s reporter tells of a voyage filled with mishaps. Eight days out, in a fairly quiet sea, the ship was suddenly struck by a high tidal wave. Reports indicate that the wave was at least 100 feet high and the ship was at such an angle that she seemed to be on her beam ends. Those on deck were thrown off their feet, and the ship looked as if it had been struck by a tornado. Although this was Captain Brown's first tidal wave, he was convinced that it was due to a seismic disturbance on the ocean floor.[2]

It was two major storms, however, which significantly damaged the ship – one in late April 1909 in the South Atlantic and the other in mid-June off Australia's east coast, only 200 miles from her destination. These storms caused significant damage with the loss of several masts and spars and causing mayhem in the rigging which threatened to bring down more masts. The captain was forced to put her before the wind and make for Auckland.

The owners must already have been dismayed with Captain Brown's report of initial damage to the vessel and his subsequent loss of her cargo. This further report was too much. They decided that Captain Hunter of Yarmouth, Nova Scotia, who was then in command of their ship *Irby*, and already on the Australian coast, should take command of *Leicester Castle*.[3] He assumed command in Auckland in July 1909 and was aboard for the tow to Sydney.

The following article from the *New Zealand Herald*, of 23 July 1909, tells the story of the trip to Sydney:

> **A Long, Long Pull. Towing a Ship to Sydney**
> The tug *Champion*, which has been engaged to tow the ship *Leicester Castle* from Auckland to Sydney, arrived from Newcastle yesterday morning and berthed at Queen Street Wharf.
>
> The *Leicester Castle* put into Auckland on the 28th ult. in a dismantled condition, having met a gale while on a voyage from Monte Video for Newcastle. She was then in command of Captain R. Browne, who has since proceeded to England under instructions from his owners. He was succeeded by Captain Hunter, formerly of the ship *Irby*.
>
> When the *Leicester Castle* put into Auckland it was thought she would be repaired in Auckland but the owners decided to engage a tug and have the ship towed from Auckland to Sydney, to which port new spars and rigging will be sent from England. The cost of re-rigging and repairing the ship will amount to close on £5000, while it is stated that an extra £1000 will be spent in towing fees.
>
> The *Champion* is a powerful steel tug of 307 gross tons and 135ft in length, owned by Messrs. J. and A. Brown of Newcastle and Sydney. She can steam at 14 knots an hour. Captain Halcrow is in command of the *Champion* and Captain Larsen is the towing master. The latter officer has been associated with the tug for the past 12 years.
>
> The distance from Auckland to Sydney is 1,281 miles and with the *Leicester Castle*, a vessel of 2009 tons gross, the tow will not be an easy one, nor without risk. Given fine weather, the *Champion* will tow the ship at an average speed of eight miles an hour. The *Leicester Castle* has been equipped with towing sails, which will be used when the wind is favourable.
>
> This is not the first occasion on which the *Champion* has been despatched on a deep-water voyage to pick up a tow. A few years ago she was sent to Suva to tow the French barque *Beaumanoir*, which had been ordered to Sydney for repairs, and prior to that visited Melbourne for the purpose of towing the ship *Port Patrick* to Newcastle. She was also among the fleet of vessels that was sent in search of the Federal-Houlder-Shire liner *Perthshire*, which broke her tail-shaft between Australia and New Zealand, and on another occasion she was despatched from Sydney to the south of New Zealand on what proved to be a fruitless quest for the Milburn liner *Port Stephens*, which it was believed was then drifting about in the southern latitudes.
>
> The tug ... will set out on her long journey with the *Leicester Castle* this evening.

New iron masts and yards were sent from Europe for fitting during the lengthy refit in Sydney. Several months later, *Leicester Castle* left Sydney for the coal port of Newcastle, just 60 miles to the north, arriving there on 11 November. While there, loading coal for Gatico, Chile, the owners were securing charters for the return trip to Europe. *Leicester Castle* sailed from Newcastle on 5 May 1910, arrived at Gatico on 27 June then in September sailed north for the nitrate port of Caleta Buena from which port she sailed on 11 November for Falmouth for orders.[4] Calling there on 25 February 1911, she was ordered to Rotterdam.

The owners wasted no time in selling the *Leicester Castle* to some interested Norwegian buyers although managing to get only £4,000 for her – far short of the cost of her lengthy refit. The whole enterprise had been a total disappointment – their ship had left Cardiff in May 1908 returning to Europe almost three years later in March 1911 having delivered only two cargoes in that time. This had not exactly been an unqualified success. The vessel

was renamed *Vik* and she sailed under this name until she was broken up in the United States in 1923.

Captain Hunter was transferred to a four-masted barque *Crown of India*. He later went 'into steam' commanding several of the *War*-class ships carrying coal from Sydney, Nova Scotia, to Halifax during the Great War and later became captain of the Steamship (SS) *Prince Arthur* on the Boston to Yarmouth run. He died in Yarmouth in 1925.

Shipping at the Time

These events took place in the days when ships sailed off and were not heard from until they arrived at their destination. Wireless telegraphy aboard ships was yet to come (1909) and a ship at sea had to be self-sufficient with the master in complete command. The advent of telegraphy and undersea cables in the middle decades of the 1800s, however, ensured that owners could contact agents and repair facilities and, in this case, their captain when he arrived in port, on the far side of the world with relative ease. Today an owner can be instantly in touch with his masters at sea and his agents ashore.

These were the latter days of sail, almost 40 years after steamers had begun to outnumber sailing vessels at sea. The larger sailing vessels, which continued to be built until the 1920s, were substantial vessels equipped to deal with all weather conditions. Ships are still lost today in spite of our knowledge, rules and regulations for safety and shipbuilding, and weather forecasting.

There was little 'romance' to going to sea in 'the glorious days of sail.' It was a business with costs and profits being topmost in the minds of the owners and, to some extent, the masters of the vessels. From the point of view of the masters, officers and sailors it was a hard life sometimes years away from home, few comforts, and periods of boredom while in port waiting for cargoes to be discharged and loaded. The *Leicester Castle* was over four months unloading coal, shifting between ports and taking in nitrates in Chile. Waiting for months to load guano off the South American islands was common and there is one instance, in San Francisco, when the ship *County of Yarmouth* waited a full year for increases in freight rates for grain to Europe (and then, when they did not rise, she sailed for Puget Sound to load wood). In the case of the latter the crew was, of course, discharged in California.

Ship Portrait Project

Just as a portrait of a person is an image that reflects his or her physical characteristics, so a 'ship portrait' is a formal image of a vessel showing its characteristics. While a seascape or marine scene may include ships, in a 'ship portrait' the vessel is the primary subject of the painting. The Yarmouth County Museum (YCM) in Yarmouth, Nova Scotia, contains the third largest ship portrait collection in Canada (after the provincial collections of the New Brunswick Museum and the Maritime Museum of the Atlantic in Halifax).

The YCM's collection consists of some 140 paintings that, with the exception of two portraits, are of vessels formerly registered in Yarmouth or vessels commanded by Yarmouth captains. The collection includes paintings of such ships as the famous clipper ship *Thermopylae*, the well-known Australian emigrant ship *Marco Polo*, and the steel ship *Balclutha* which is presently the main feature of the San Francisco Maritime Museum.

Between 1874 and 1885, Yarmouth was the second largest port of registry in Canada (behind Saint John, New Brunswick) in terms of total tonnage of its vessels. Ships from Yarmouth travelled the world carrying goods between the ports of North and South America (east and west coasts), Europe, the Far East, Australia, New Zealand, and Africa.

The portraits were treasured by the owners and masters of these vessels and were painted by ship portrait artists in many of the ports visited. The collection includes paintings from several North American ports (including Halifax and Yarmouth), Sydney (Australia), Cape Town, Shanghai, Hong Kong and Calcutta with the majority being from various British and European ports. The paintings generally date from 1851 to 1909, although there are portraits of several steamers, mainly Yarmouth to New England passenger vessels, which date up to the 1920s.

Ship portraits provide a fascinating glimpse into the world of yesteryear. They tell us about travel, defence, history, technology, social conditions, the economy, and art. The Yarmouth County Museum collection is the subject of the author's research, and will, it is hoped, yield a book of photos and illustrations on this fascinating subject.

Notes

1. Robert Brown(e) was interviewed as master of the vessel in Auckland but from April 1908 to August 1909 the *New York Maritime Register* listing departures and arrivals for this voyage gives 'White' as the master.
2. Alan Ruffman, Geomarine Associates Ltd., has confirmed via the US Geological Survey that there was no earthquake in the area at that time and that the wave must have been what is now commonly called a "rogue wave."
3. *Yarmouth Herald*, 15 June 1909, stated, "Yarmouth, June 15: Captain Charles C. Hunter of the ship Irby has been transferred to the ship Leicester Castle, 2389 tons, same owners, due at Newcastle, New South Wales, Australia, where Captain Hunter awaits her."
4. An 'order port' such as Falmouth near the western extremity of Britain (and Europe), was a port where a ship, before the advent of radio, would call to receive orders concerning the port to which it should proceed to discharge or load its cargo.

Eric Ruff, FCMA, is Curator Emeritus at the Yarmouth County Museum and Archives.

Making Waves

Debating "Why is No One Making Waves?"

Commodore Kelly Williams
Assistant Chief of Maritime Staff

I feel compelled to comment on Rear-Admiral David Morse's observations in the Spring 2007 edition of *Canadian Naval Review* ("Why is No One Making Waves?"). He posed some interesting questions: "Why don't sailors make waves?" "Where are the opinion pieces, the heartfelt response to the media's thirst for information, the comment to raise awareness about maritime operations?" He suggested that sailors are institutionally disposed to avoid debate even when we have been invited to do so, and concluded that perhaps "mixed signals from departmental and military senior leaders" might be the root cause. While I agree with his observation that some dated regulations related to the subject of Canadian Forces members expressing personal views on military issues are in need of review, I have to tackle head on his assertion that "sailors are, by nature, reluctant communicators" and that "the lack of institutional safeguards for informed and vigorous debate act to deter comment from serving sailors."

Admiral, I hope you are wrong. I have just spent the last two weeks traveling coast-to-coast and re-acquainting myself to the navy after two years adrift in the 'centre.' I have to tell you that I found debate about our future, the options and solutions to address our current operational challenges and human resources pressures is raging in the wardrooms of our fleet as well as in the offices on both coasts, in Quebec City and here in Ottawa. I was overwhelmed by the informed opinion and insights from those determined to make me understand what they are thinking, what they are worried about and what they believe to be important to the navy. They are the ones that are living the experience and have real views on what they perceive to be wrong with the 'system.'

Reluctant communicators ... not in my experience. Trust me, the navy debating team is alive and well. The dialogue is frank, honest and actually kind of fun. But, you have a point. While we might not be reluctant communicators we just might actually be unenthusiastic writers. In fact, I understand that to date the *Canadian Naval Review* has received more articles and submissions from serving foreign naval officers than from the sailors in our fleet. We need to change this. Indeed, when the *Canadian Naval Review* was established a couple of years ago, its aim was to provide a voice and forum for informed debate and expression of contemporary Canadian and international maritime issues. It was to be our voice and expression to the world. What an idea – a professional forum where we could develop and debate ideas freely to help to explain and develop a wider understanding of the naval or maritime contribution to Canadians. A forum where new policies and ideas could take shape instead of waiting for yet another 'good one' to emerge from NDHQ. (I should know – as I have spent the last two years generating 'good ideas' and in hindsight some of them weren't that good at all!)

We have a lot to say and in many cases have already said a lot. Now we need to pause for a few moments to write some of it down. So I am challenging Commanding Officers, Executive Officers, perhaps entire Wardrooms, and even 'the dreaded staffs' to begin to tell us what your ideas are and what you are thinking about regarding the contemporary Canadian naval/maritime environment.

Need some prompting – here are some ideas:

- Delivering strategic maritime effects for Canada – deployed operations and operations and large-scale exercises at home and abroad.
- The Maritime Security Operations Centres – changing the way government thinks and operates.
- An evolved Canadian Naval Task Group – what does it look like? What makes sense for our navy?
- Why is anti-submarine warfare really important to a soldier?
- A naval voice in the desert – naval explosive ordinance disposal (EOD) teams. How might a naval provincial reconstruction team in Afghanistan look/work?
- The long road home – waiting for the chance to command and creating opportunities for

command earlier and at more junior rank.

- Go North Young Man – leveraging the Arctic to better link with Canadians.
- Press Ganging Canada – solving our recruiting and retention problems.
- Is Canada truly a maritime nation or just a big coastal state?
- It's our Pacific Century – how do we re-balance our fleet and posture ourselves to forward deploy halfway around the world?
- The pursuit of a national shipbuilding policy. A review of the cyclical nature of justification, organization and recapitalization of Canadian naval warship acquisition. What were the solutions then and how can they be applied now?
- As the stomach churns – the sea keeping effectiveness of the *Kingston*-class. Is an offshore patrol vessel a better instrument of national sovereignty?
- Port Security – value and effectiveness.
- 'More better' as opposed to 'more lesser' – an examination of the respective strengths and weaknesses of a fleet composed of fewer but more capable major warships vice that of more numerous and diverse but less capable platforms, especially in the Canadian context.

Hey Admiral ... and everyone else who's paying attention ... put on your life jacket. We're about to make some waves as we work to build a better navy and a better Canada.

Why No One is Making Waves

Michael Young

In the Spring issue of *CNR*, Admiral David Morse asks the question "Why is no one making waves?" He wonders why sailors don't make waves. He then postulates several theories and even quotes various orders and regulations regarding the expression of opinions in public fora by serving personnel. I take from his discussion that he believes that the "lack of institutionalized safeguards" deters "informed and vigorous [public] debate" by the serving naval community.

I think the answer is much simpler. Our people are just too busy doing their everyday jobs to have the luxury of engaging in written public debate on weighty maritime issues. Even those in the rarefied atmosphere of the Staff Colleges are more focused on meeting the requirements of their current class assignment than on producing articles that challenge the strategic direction of government policy and are controversial enough to appear in the *Globe and Mail* or even *CNR*.

From my relatively limited observation, I believe that most of today's officers and sailors are working at such a high intensity that they expend so much time and intellectual effort on their jobs that they have little left to engage in public policy debates. This is especially true at the more senior levels. I recall that, as a junior and mid-level officer, the free time I enjoyed was devoted to revitalizing my own mental health and giving time to my family. At a more senior level, I was too busy making convincing arguments to internal authorities about certain courses of action or policies to consider engaging in public debate. Except for two minor and non-controversial articles, one for *Trident* and the other for the *Maritime Tactical Bulletin*, it was only long after I had left the service that I found the time to write for publication. I am sure that if the Admiral looked back on his own career he would come to the same conclusion. How much public discussion did he, or could he, engage in before he became a Flag Officer?

We demand much of our people today. They are living in an operational tempo that has not been seen since World War II. In Exercise Teamwork in 1980, we steamed in two watches for nearly 28 days in HMCS *Ottawa* (III) and I thought that was a very demanding task for the time. Nowadays our ships do that for much longer periods and their crews take it completely in their stride. And they do it in a real hostile environment not just in an exercise. So we should not take them to task for not speaking up outside the navy family.

On the other hand, I do believe the senior leadership of the navy should be engaged in educating the wider general public on the maritime dimension of Canada. Years ago the Royal Navy established what amounted to a 'Speakers' Bureau' as a means of raising public awareness of what the Royal Navy was all about. It still exists as the Royal Navy Presentation Team (see http://www.royal-navy.mod.uk/server/show/nav.3546). We should do the same. All it takes is for the leadership to make the right people available and the resources to make it work. Anyone living in the Ottawa area can attest to how successful this can be, even on a modest scale, given the extraordinary (in my view) local publicity that the small team from HMCS *Ottawa* received when in town at the end of May. It is much more effective when such bright, personable and dedicated young people tell the story than when the message comes from grumpy former naval persons or academics! Start there and the wider debate will follow.

Should the Navy Return to the Arctic?
Amphion

Canada's Navy is on the cusp of yet another transformational moment. The government's plan to build a modest fleet of Arctic patrol vessels is clearly an invitation to the navy to adjust its thinking and embrace a new mission – in fact, it would be to *re*-embrace that mission because the navy was a prominent player in the Arctic 50 years ago. That said, one has to wonder whether the navy will fumble the ball or rise to the occasion and make the necessary policy shift.

It would not be an easy change to make. Some will argue that the history of the last 15 years proves that the Canadian Navy's primary function should be to support foreign policy and international security initiatives and that taking on a new Arctic mission will detract from the expeditionary function. Others will argue that this is truly a new strategic era and that the navy needs to be even more flexible in embracing both 'home' and 'away' tasks. And there are even calls to focus entirely on domestic issues and abandon the expeditionary mission.

But the new naval policy is not the only issue in play here; for instance, do we really understand the strategic requirement that is driving the need for change? Sceptics will argue, not incorrectly, that the new Arctic requirement is an over-reaction to the alignment of two constellations: the continuing groundswell after the 9/11 tsunami; and the 'sky is falling' reaction to the possible effects of global warming. However, both situations do have implications on national security that cannot be ignored. Yet, the new challenges need to be kept in perspective. For instance, will terrorists use Canadian northern waters to launch attacks on the North American heartland? Probably not; the distances and the complexity of the logistics of doing so are too great. The same goes for the drug smugglers. It is much easier to find a soft landing place further south where ample unguarded inlets and shorelines exist.

Is the Arctic really warming? Most certainly – as it has on numerous occasions before. Ask the Vikings about farming in northern Newfoundland and Greenland one thousand years ago! Will the effects of the present period of warming be as calamitous as some predict? We just don't know. There isn't a valid framework against which to measure the present changes. What is certain is that the Eastern Arctic will see an extended shipping season and that could well lead to greater use and thus a higher likelihood for abuse.

Greater access to the Eastern Arctic will lead to more probes into the Northwest Passage seeking the new route to the Pacific. This will not happen quickly. One reason is the increase in ice blocking the western end of the Passage – a fact conveniently overlooked by many activists. What may happen though, is a new round of challenges to the Canadian claim that those waters are 'internal' and thus owned by Canada. The difficulty with this is twofold: first, the Northwest Passage isn't fully open as a credible transit route and not likely to be for some time; and second, without a pattern of regular usage there is no basis to claim the Passage as an established international strait. All that aside, the consensus seems to be that maintaining a strong government presence in those waters and in the north generally strengthens the claim of ownership against the inevitable challenges.

Greater access to the waters of the Eastern Arctic will almost certainly lead to greater use by fishing vessels in their quest for fresh resources as other areas are denuded of marketable fish. Adventure tourism will also increase as those with large disposable incomes seek out new experiences on the so-called 'last frontier.' Both activities will require policing and oversight especially from a safety point of view. The prospect of a major marine disaster in those waters is truly frightening.

In addition to the obvious 'use them or lose them' situation, there is a clear need for greater government presence in the Arctic and other northern waters. The question is whether this should be done by the navy or by the Canadian Coast Guard. The navy already has responsibility for the coordination of intelligence at sea and for the coordination of constabulary and search-and-rescue operations, and it would make no sense to allocate those functions in the north to any other government agency. In those waters, time and distance will invariably determine the course of action taken.

Operational coordination in the north will be complex and situations will arise when an on-scene commander

is necessary. While the temptation may exist to do this from shore, the best way of doing it is from a ship in the vicinity. That ship will need a full suit of communications and information management equipment available all the time. Monitoring what is happening in those waters will be a full-time job as will the management of available resources to take action should it be necessary. These requirements tend to make the case for naval rather than commercial vessels forced to operate under union constraints. Thus, it would make sense for the new Arctic Patrol Vessels to be naval rather than coast guard.

Can the navy rise to that challenge? One hopes so! The difficulty for the naval leadership lies in convincing their political masters and the army and air force generals that taking on the new Arctic mission has to be done without sacrificing the expeditionary capability that has been such a valuable Canadian contribution to international security for the last 15 years. It is not an either/or situation. The navy has to be capable of carrying out both missions. Giving up the expeditionary mission makes absolutely no strategic sense. Explaining that to all and sundry will take determined leadership on the part of the admirals.

The Arctic: What Should the Navy be doing Now?

Poseidon

It appears that the government wants our navy to acquire and operate Arctic Patrol Vessels (APV). What should the Canadian Navy be doing pending the delivery of these ships?

Well, it should *not* be sitting on its collective duff and waiting for the ships to arrive – that could take many years given the glacial speed (even in these days of global warming!) of new ship construction programs! Our northern waters are largely unexplored and un-surveyed – where are the dangerous pinnacles and uncharted shoals, for example? Could the navy be part of a project to survey the north? This would also provide the benefit of building familiarization and corporate knowledge with those waters and coastlines.

How else might naval officers learn about northern operations? They could be attach-posted to Canadian Coast Guard (CCG) and other navy Arctic/Antarctic courses, and to icebreakers conducting polar operations. Briefings from those experienced in northern waters should be included in courses and professional development sessions. Staff College students should be required to conduct research and write papers on Arctic and northern issues. Navigation courses should include exposure to northern and ice operation issues – the Joint Support Ship will have a much better capability than the current AORS in those waters and we will need skills to operate them safely and to best advantage. Exchanges of personnel that will lead to practical sea experience should be sought with other countries. Is it well known that the Maritime Warfare Centre in Halifax has an Arctic Reference Library?

I have heard that the manning solution for APVs may be to crew them with reservists, as a replacement for the current Maritime Coastal Defence Vessels. Is that really a good idea? The Norwegian *Svalbard*, apparently the best APV design at the moment, is twice the length and some six times the displacement of an MCDV, and will usually have a helicopter embarked – operating such a vessel to its maximum capability would be a challenge to the most capable sea officers the Canadian Navy can find. Also, we need to build expertise in northern operations and this cannot be readily accomplished with part-time sailors! The reserves can fill some of the positions to augment regular force manning of an APV, and if they continue to accept contracts to serve at sea they would gain useful experience, but then they become – in reality – a permanent force by another name.

Do we have to wait for shiny-new APVs to arrive in Halifax or Esquimalt? What about leasing/borrowing vessels for the northern summer navigation season and manning such ships with naval crews augmented with specialists on loan from shipping companies, coast guard or other navies while we learn about such operations, pending delivery of purpose-built APVs. Perhaps a core-crew of experienced people could be part of the lease agreement, especially in the early years.

Unfortunately it could take quite a few years to acquire APVs. If Canada is serious about gaining the capability to operate in its north, let us hope we can accept a proven but simple design such as *Svalbard* and keep the cost down, as the Norwegians seem to have done. In the meantime the Canadian Navy needs to gain broad-based experience wherever it can be obtained so that we will not be rank amateurs in our own north when *our* ships finally arrive!

Plain Talk: Making the Navy Sexy

Sharon Hobson

Photo: MCpl Colin Kelley, Formation Imaging Services Halifax

*Is this what appeals to people? HMCS **Toronto**'s boarding party underway in the Persian Gulf after conducting a boarding.*

How do you convince Canadians – and politicians – that Canada needs a modern navy and that billions of dollars should be spent buying new ships? In essence, how do you make the navy sexy? (Apologies to sailors who do not consider this an issue.)

It certainly won't be easy. In a recent op-ed in the *Ottawa Citizen*, Senator Colin Kenny gave a perfect summary of the Canadian public's attitude towards the navy. He wrote, "The ships go out. The ships come back. What was that all about? No guns or torpedoes were fired, so what were they doing out there? And those ships are expensive. They're always getting refitted. Who needs them?" He answers his own question by saying "We do, and we're going to for a long time." He also explains in plain language what the navy does and why it's necessary. But the Canadian public isn't interested in or knowledgeable about the Canadian Navy. Why? And what can be done to change that?

There are several reasons for this general lack of interest or knowledge. First, although Canada has the longest coastline in the world, the majority of the population lives far from the sea. From that perspective, it's difficult for people to recognize the importance of sea-borne trade to our economic well-being.

Second, the focus right now is on the army in Afghanistan. When people think of the Canadian Forces, they think infantry, tanks and helicopters (admittedly, not ours), fighting terrorists and insurgents in a Third World country. They don't think about ships patrolling off the Canadian coasts.

Third, even when the navy is deployed, as it was for the first two years of the Afghanistan conflict, there is no immediacy to naval actions to get the public's adrenalin flowing. Patrols on flat, open ocean, may deter the smuggling of arms and men into war zones and thus be vital to the success of a land mission, but to the public they just sound and look boring. In contrast, soldiers in full pack, carrying weapons, humping up and down mountains in search of Al Qaeda have a sense of urgency and danger to them that stirs the public's imagination.

And finally, the navy has had – intentionally or not – a low profile for the past seven years. The 1990s could be seen as the heyday of the modern Canadian Navy with new and modernized ships being commissioned into the fleet – 12 *Halifax*-class frigates, four modernized *Iroquois*-class destroyers, and 12 *Kingston*-class maritime coastal defence vessels – and numerous operational deployments to all areas of the globe (Somalia, the Adriatic, Haiti, East Timor, Arabian Sea). Since 2000, however, the navy has had less to talk about. Not only are there no major shipbuilding programs underway which can be promoted in terms of naval capability and economic benefits, but the one major capital project undertaken over the last 10 years, the four *Victoria*-class submarines, has verged on a public relations disaster.

As well, the navy's major deployment – six ships sent to the Arabian Sea in October 2001 as part of the war against terrorism – was not well explained to the public. For the first three months, the navy – apparently on instructions from the Privy Council Office – was not allowed to talk about its mission other than in the vaguest terms. And then later, operational security kept the publicly available information to a minimum. So the involvement of the ships in the protection of the US marines embarked in the Amphibious Ready Group (ARG) off the coast of Pakistan went unnoticed by the general public. Even two years later, when HMCS *Calgary*, the last of the Canadian ships sailed for

Photo: DND

Or is it the challenge of the technology?

home, the captain was unable to provide any real information on what the navy had been doing. Commander Dan MacKeigan said to reporters, "Did we have an effect on the bad guys? A lot of that is obviously classified, but I tell my crew that we made a very distinct difference, and we could see we were making a difference." Unfortunately, the Canadian public could not.

The navy, watching from the sidelines as the army gets whatever resources it needs, is trying to connect with Canadians and overcome what it has termed "maritime blindness." It has instituted various PR programs such as deploying a ship to the Great Lakes, appointing influential people as honorary captains, and fostering ties between individual cities and their namesake ships. But while all of that will help, it is still not enough. The navy needs to reach a wider audience and it needs to touch people on a visceral level.

There are two aspects to this. One is to speak plainly and often about what the navy does. Senator Kenny's two-part series on the navy was an excellent example of how to put complex concepts into plain language. Talking about the need for a 'command and control ship' means little to the average Canadian. But put it into concrete terms, with examples, and people begin to understand. The navy could use the details of what it did in support of the US ARG off Pakistan. Similarly, it shouldn't just talk about the 'task group' concept, but give very specific examples of how and when this has worked, and what the consequences would have been if there was no task group ready to deploy. The navy needs to drop the jargon, and the careful, circumspect wording, and tell people what it really does, using active verbs and everyday nouns.

The army is undergoing a resurgence right now because of Afghanistan. Canadians, regardless of how they feel about Canada entering the war, are proud of their soldiers for the job they are doing. And they can see what the soldiers are doing because embedded reporters are filing stories that show Canadians the challenges that they face, and the courage and determination they show every day of their deployment.

Canadians need to see sailors in the same detailed, dynamic way. Nobody is wishing for a naval war in order for this to happen, but perhaps the lesson is to open up to the public and let them see more of what the navy does, from the preparations for a distant and dangerous deployment, to the quick responses to coastal intruders, to the training for submarine warfare and air defence. Canadians apparently think the navy can be pulled together the minute we decide to go to war. That's not surprising given that the public does not get to see the work that goes into training, maintaining and storing. So the navy needs to find ways to let the public in.

The navy has already done some of this. David Pugliese of the *Ottawa Citizen* spent four days at sea in the submarine HMCS *Windsor* last fall, giving readers a terrific insight into the life of a submariner (definitely a special breed) and the new roles planned for the submarines. Media

Photo: DND

Or just the adventure of going to sea? HMCS ***Regina*** *dips her bow in a wave.*

access pays huge dividends, but it shouldn't be a one-off deal. The navy has to keep the information flowing by taking advantage of other opportunities to show off and help the public understand what the navy does.

Incidents such as the illegal immigrants showing up off the West Coast in 1999, the fisheries 'war' in 1995, and the boarding of GTS *Katie* in 2000 to reclaim army equipment being held 'hostage' in a contract dispute, explain the need for a navy much better than talking about 'sovereignty protection' or a 'foreign policy instrument.'

When I was growing up, there was a romance to being a sailor. The image was dedicated and brave young men (it was just men back then) setting sail for months at a time, to travel the world and do whatever was necessary to protect us citizens at home. Technology and political correctness have changed the image but that is still what our sailors do. The navy needs to tell people that.

Sharon Hobson is an Ottawa-based defence analyst and Canadian correspondent for ***Jane's Defence Weekly****.*

Warship Developments: Aircraft Carriers Great and Small

(Part II)

Doug Thomas

Artist's impression of the USS ***Gerald Ford****.*

This is the second part of an article on aircraft carriers, the 'capital ships' of many medium and large navies. In this part, I will discuss several developments in larger ships and draw several conclusions.

In the United States, the USS *Gerald R. Ford* will be the first of a new class of nuclear-powered carriers that will leverage the experience gained in operating the 10 *Nimitz*-class ships over the past 30 years. CVN 78 will be laid down in 2008 to replace USS *Enterprise*, the first nuclear-powered carrier, in 2014 at which time *Enterprise* will have been in commission for 53 years! Although this may seem a very long time, the planned lifetime for all current and future CVNs is 50 years. Perhaps that is just as well, considering their huge cost.

Some of *Ford*'s unique features will include the Electro-Magnetic Launching System (EMALS), replacing the current bulky and maintenance-intensive steam catapults, and a much improved and more efficient flight deck employing 'NASCAR Pit Crew' concepts to service aircraft rapidly. The *Ford*-class will also have the largest electrical power production of any ship in the US Navy, more than two and a half times the electrical power of a *Nimitz*-class aircraft carrier. Other changes include:

- enhanced flight deck with increased sortie rates;
- redesigned island superstructure;
- new nuclear power plant;
- allowance for insertion of future technologies;
- improved weapons movement that will more than double the capacity to produce and deliver smart munitions over that of the *Nimitz*-class design; and
- reduced manning by 30 per cent, which correspondingly increases deployment availability by 25 per cent.

In the United Kingdom, the 1998 Strategic Defence Review envisaged an expeditionary capability with global reach, centred on two 65,000-ton aircraft carriers to be fitted with a ski-jump bow-ramp and operating the V/STOL variant of the joint strike fighter. Much of the supporting capability for this expeditionary strike group has been acquired, including such modern amphibious ships as *Bulwark*-class LPDs and *Mounts Bay*-class LSDs, but government approval for the carrier program is still pending, contingent upon British shipbuilders consolidating their operations and their agreement to build these ships, to be named HMS *Queen Elizabeth* and HMS *Prince of Wales*, for a fixed sum of about £3.6-£3.8 billion.

Artist's impression of CVF 2.

The Royal Navy has made many hard choices in order to safeguard funding for the carriers, including deep reductions in numbers of destroyers and frigates, submarines, mine countermeasure vessels, possible closure of Portsmouth naval base, and personnel cuts. These cuts have all been made for what may yet be an empty promise to replace the three small *Invincible*-class carriers designed in the 1970s to operate the VTOL Harrier 'Jump Jet.'

The French Navy is planning a variant of the CVF design as a second carrier to complement the nuclear-powered *Charles de Gaulle*. However, unlike most non-US carriers, the new carrier would operate conventional take off and landing (CTOL) aircraft and would be equipped with catapults and arrestor wires so that the French Rafale fighter and other fixed-wing aircraft could form its air group.

Another country of interest when we talk about aircraft carriers is India. The Indian Navy plans a three-carrier fleet. In addition to the very elderly carrier INS *Viraat* (ex-HMS *Hermes*), India has purchased the carrier ex-*Admiral Gorshkov*, INS *Vikramaditya*, which is undergoing an extensive refit in Russia before delivery to India and commissioning in 2008. In addition, an indigenously produced 37,500-ton vessel is currently under construction at Cochin shipyards for delivery in about 2012, which will give India its three-carrier navy. With three ships, two should be available for operations while a third is in refit. However, considering the age of *Viraat* (launched in 1944), a new third ship will be necessary if a fleet strength of three carriers is to be more than momentary.

Both *Vikramaditya* and the new carrier will operate up to 30 helicopters and MiG 29K fighter planes employing the Short Take-off But Arrested Recovery (STOBAR) method of flight operations with a bow ski-jump ramp and arrestor cables.

No discussion of this topic would be complete without mention of China. As Joe Varner pointed out in the spring issue of the *Canadian Naval Review*, it is likely that China will eventually acquire an aircraft carrier. And, if the unfinished and derelict ex-Russian *Varyag* can be brought back to life or reverse-engineered, perhaps that capability will be acquired relatively soon. Nevertheless, learning to operate even the most basic helicopter carrier in a professional manner takes time. I believe that a gradual approach is more likely for China, which tends to have a long-term vision for the future.

Artist's impression of the recently announced Australian LHD design based on the Spanish ***Juan Carlos 1*** *presently under construction.*

Conclusions

In surveying these developments, I cannot help but think that the UK has taken a wrong turn in its carrier development. Rather than acquire the expensive CVF, two or three *Cavours* or two *Wasp* LHDs might have been a better choice to replace the *Invincible*-class, while retaining a better balanced navy that was not picked clean of escort vessels. After all, the greatness that was Great Britain until World War II was based largely on the fact that this island ruled the seas – not the land! Perhaps a change in government may lead to proper funding of the Royal Navy.

If Canada is to acquire a large ship to transport and support the Standing Contingency Force, it makes sense to me that it have a flight deck and multiple spots from which to operate helicopters, large internal volume for landing force accommodation and their equipment, and a dock in the stern for landing craft to act as connectors to the beach.

I hope that this brief overview of aircraft carriers provides some insight into these complex vessels. They are very flexible and useful instruments of sea power, whether they are great or small.

Book Reviews

Making a Killing: How and Why Corporations Use Armed Force to do Business, by Madelaine Drohan, Toronto: Vintage Canada, 2004, 376 pages, indexed, $23.00, ISBN 0-679-31201-3.

Licensed to Kill: Hired Guns in the War on Terror, by Robert Young Pelton, New York: Crown Publishers, 2006, 358 pages, indexed, ISBN 13: 978-1-4000-9781-4.

Reviewed by Dave Perry

The reconstruction of Iraq created a huge boom in the private security industry as corporate heavyweights won multi-million dollar protection contracts for clients ranging from Paul Bremer to Halliburton. Along the way, questions have emerged about the industry's morality, and some of the biggest players have been accused of malfeasance. For those interested in the industry, Madelaine Drohan and Robert Young Pelton offer two engaging and very readable accounts of private sector security that keep the pages turning by focusing on the human element.

In *Making a Killing*, Drohan offers a historical account of privatized security, exploring how enterprises ranging from Cecil Rhodes' British South Africa Company to Alberta's Talisman Energy either employed security forces of their own, or relied on compliant local governments to ensure the security of their business interests, to the detriment of local populations. Pelton, in *Licensed to Kill*, focuses on the private security industry's participation in the war on terror, first working alongside the CIA hunting Al-Qaeda in Afghanistan, and then in Iraq protecting the reconstruction efforts. Both authors effectively describe how non-state actors, from colonial times to the present, filled security roles normally attributed to nation-states. They did this for corporate profit, to fill a security void and occasionally for ideological reasons.

Drohan cites multiple examples of powerful Western multinationals protecting their profits at all cost in Africa. For example, Royal Dutch Shell and Talisman Energy relied on brutal regimes to secure their oil facilities, Lonrho (a mining company active in Africa) paid protection money to rebels in Mozambique, and Ranger Oil and Rakesh Saxena (a BC-based financier) hired private military companies to engage in combat on their behalf. And she demonstrates the symbiosis between armed commerce and looting in the combined Rwandan and Ugandan war in the Congo. In *Licensed to Kill*, Pelton reveals that the rampant looting that followed Saddam Hussein's overthrow and the Bush administration's refusal to increase troop levels left the companies in charge of Iraq's multi-billion dollar reconstruction responsible for providing their own security. Thenceforth, almost all reconstruction contracts included substantial funds devoted to hiring private security. As he illustrates, the owners of these companies are the real modern mercenaries – men willing to sacrifice the lives of others, including their own employees, for profit and power.

In contrast, by putting a human face on the former soldiers and cops willing to accept exceptional risks for up to $1,000 a day, Pelton portrays contractors as patriots who view their work as service to country, or family men unable to otherwise adequately provide for their families. Although originally meant to serve as defensive security, following the infamous killing and mutilation of four Blackwater contractors in Fallujah, Iraq, Pelton reveals how the men on the ground underwent a major shift in attitude once they realised that the growing insurgency counted them amongst the coalition of the willing. Thus, in battles in Najaf and al-Kut contractors fought to protect American officials because they were "Americans first, and contractors second" and proved, in the heat of battle, more reliable than other coalition troops who were either unable or unwilling to fight.

While Drohan focuses on the men at the top, she shows how the faces of historical private security too were at times motivated by higher purposes. The chapters detailing the actions of Rhodes in South Africa, and King Leopold II in the Congo demonstrate clearly the role of European imperialism in their war with local tribes, while Sir Percy Sillitoe's mercenary campaign against diamond smugglers in Sierra Leone reflected Cold War tensions and anti-communism. In these examples, as with modern contractors in Iraq, factors beyond pure financial gain appear influential, if not deciding, in the use of armed force.

Overall, Drohan illustrates the importance of a combination of latent tribal and ethnic conflict, poverty, perception of the 'other,' and Western governments that were reluctant to intervene at best, and complicit at worst, in promoting conditions that ultimately linked armed force and commerce in Africa. None of the preceding excuses the actions of the corporations and personalities involved, but may serve as a warning about the challenges of doing business in the absence of legitimate, state-provided security and genuine peace.

In contrast to Drohan's focus on the developing world,

Pelton exposes the deficiencies of the world's most powerful military. Following the Church and Pike Congressional Committees (both in 1975) and President Ford's Executive Order banning assassination, the CIA lost most of its capacity to conduct 'black ops' and thus lacked the immediate ability to exact lethal revenge following 9/11. Faced with this deficiency, and given far greater latitude by the Bush administration, the CIA actively recruited ex-Special Forces contractors in the hunt for Osama bin Laden. As Pelton writes, these hired guns provided a capability that was no longer organic to America's security forces, as well as deniability should their actions in Pakistan and elsewhere be revealed.

The common thread in Drohan's book is that corporate or personal bottom-lines have frequently driven morally reprehensible, but not necessarily illegal, actions. Unfortunately, beyond this relatively inauspicious finding, Drohan offers little in the way of explanation or collective analysis, so her book amounts to a series of case studies, albeit well situated in their historical context, from which readers must draw their own analysis. While she obviously did a good deal of research, including numerous interviews for the latter chapters, academics will find her absence of references surprising. Drohan's lack of analysis ultimately prevents the book from advancing beyond an interesting piece of investigative journalism. It does, however, make a valuable contribution as reference material to the emerging literature on non-state security actors, with the three chapters devoted to Canadian corporations of particular novelty.

Pelton too writes as an investigative journalist, embedded with contractor details on the front lines, in addition to his interviews and personal travels, but his contemporary focus is better suited to this approach. From the breathtaking first-hand description of the race from Baghdad International Airport to the Green Zone with a Blackwater security convoy, to interviews with former members of Hamid Karzai's security detail, *Licensed to Kill* is a truly fascinating description of the role of private actors at the 'pointy end' of warfare. Part war reportage, part industry profile, this book should be read by anyone interested in fully understanding the war on terror.

Would you like to review a book about the navy, defence policy or security for *CNR*? If so, contact the Editor at naval.review@dal.ca.

Dreamland: How Canada's Pretend Foreign Policy has Undermined Sovereignty, by Roy Rempel, Montreal: McGill-Queen's University Press, 2006, x, 190 pages, index.

Reviewed by Andrew Forbes

This is an important study that raises legitimate concerns over the direction and practice of Canada's recent foreign policy. Rempel asserts that Canada is in the process of evolving into a protectorate of the United States due to an under-funded, poorly focused and strategically flawed foreign policy. He examines the depressing detail of the considerable gap between the rhetoric of Canadian foreign policy and what is actually achieved. He notes, correctly in my view, that the primary foreign policy consideration should be Canada's relationship with the United States, due to geographical location, common continental defence issues and, critically, trade dependency. However, Canadian governments seem to prefer to deliberately alienate the United States for domestic political gain.

Rempel concentrates on events over the last 10-15 years to mould his argument, whereas a longer historical study might have bolstered his case. As Rempel notes, the concentration on 'soft power' by recent Canadian governments has not benefited Canadian foreign policy, as 'hard power' (military capability) is not only a useful adjunct but a necessary factor in its execution. The rust-out of Canadian Forces' equipment over the last 15-20 years and the chronic under-funding and neglect of the military has affected the ability to generate hard power and compromised the ability to support soft power policies. Actions speak louder than words, and in the period examined by Rempel, Canada has talked big but has not delivered.

In formulating ideas how Canada might reorient its foreign policy, Rempel provides concise case studies of three other medium powers: Australia, New Zealand and Norway. As an Australian, it is always interesting to see how others view our policies. I have no disagreement with his overall conclusions that Australia has a tightly focused foreign policy based on national interests, with a corresponding defence policy based on protecting those interests. But I have reservations over the detail about Australia in the book and the implications drawn.

Rempel implies that the refocusing of Australian foreign and defence policies occurred in 1997. While this was the first and only time that defence and foreign policy documents were written together, Australia's defence policy of self-reliance and major re-equipment programs date

back to 1976 and 1987 respectively. Indeed, there were White Papers or their equivalents, produced in 1972, 1976, 1987, 1994 and 2000; and in lieu of a new White Paper, Defence Updates released in 2003, 2005 and another planned for 2007. These Defence Updates have focused on the issue of terrorism and, more importantly, have highlighted the growing trend towards 'whole of government' responses to foreign and defence policy issues. The real issue in defence policy has been how far into the region the Australian Defence Force (ADF) should deploy and thus, how the ADF should be structured. The major change in the 2000 White Paper was the development of a costed Defence Capability Plan for new equipment for the ADF, although the government has made major capital equipment decisions outside this plan.

Looking at foreign aid, Rempel contrasts the Canadian policy of small donations to many countries with the Australian policy of more significant aid to a small range of countries. In essence, Canadian foreign policy and aid is about promoting values, while Australian foreign policy and aid is about national interests. Rempel implies that Australia's large aid packages to Papua New Guinea and the Solomon Islands allow Australia to influence their political agendas. Actually the situation is more problematic. Aid is given to sustain these countries to ensure Australian security, yet the ability of Australia to influence them is becoming increasingly limited. The recipients are increasingly ignoring donor wishes and the donor is increasingly at a loss as to how to ensure these countries do not become failed states which would adversely affect Australian security. Australia's relationship with both countries is now fraught, as Australia grapples with improving law and order in both countries as well as the perennial issue of good governance.

Rempel also implies there is strong parliamentary oversight of foreign and defence policies. On the surface this may appear so, but the purpose of many of these reviews is to provide an avenue for opposition parties to attack the government, rather than contribute to the foreign affairs and defence debate. Unfortunately parliamentary knowledge of foreign and defence matters remains poor, combined with a virtually non-existent debate over defence force structuring in Australia. The recommendations of parliamentary committees are not binding on governments and are usually ignored.

Rempel concludes that Canada must refocus its foreign policy and rebuild its military capability. To what extent military capability is rebuilt is dependent on how independent Canada's foreign policy should become. These are valid conclusions based on fundamental issues. Whether Canadians like, dislike or are ambivalent to the United States is irrelevant; geography and economics determine the relationship. The question becomes one of how Canada might deal with the United States when it does not agree with American policies. Rempel's proposals go some way towards answering this question. If Canada is seen as contributing to the international system, and North American continental defence, then it might earn some respect and be listened to by the United States, otherwise Canada is doomed to lose its sovereignty to its powerful neighbour to the south. This approach requires a focused, and funded, foreign policy with a commensurate defence policy and appropriate military capabilities.

Attack from the Sea: A History of the U.S. Navy's Seaplane Striking Force, by William F. Trimble, Annapolis, Maryland: Naval Institute Press, 2005, 248 pages, photographs, notes, bibliography, index, ISBN 1-59114-878-2.

Reviewed by John Orr

The 20th century has seen its share of revolutionary (and evolutionary) applications of technology to military science. Arguably, the greatest technological advances have taken place in the field of military aviation and there is the impression that these advances have taken place in a logical progression from the Wright Flyer to the F-117A Nighthawk (Stealth Fighter).

In *Attack from the Sea*, William Trimble reminds us that the path of progress in aviation has not always been smooth and that there have been several false starts along the way. One such false start concerns the topic of this book, the attempt to employ US Navy (USN) flying boats in a nuclear strike role during the early years of the Cold War. The central role in the story is played by the P6M SeaMaster flying boat, but this is more than the account of an individual aircraft. It is, rather, the chronicle of the USN's attempt to maintain its pre-eminence in the immediate aftermath of Hiroshima and Nagasaki when priority shifted to the strategic air forces of the US Army Air Corps and later the US Air Force.

At the end of the Second World War, the USN possessed the world's most powerful fleet, with an overwhelming strength in carrier aviation. While no navy in the world posed a threat to the USN on the high seas, the navy's relevance to the security of the nation (and consequently its funding by Congress) was threatened by its

inability to participate in the nuclear strike role. Coming as it did in the midst of debates about unification of the US Armed Forces, the establishment of the unified US Department of Defense and the formation of the US Air Force, the USN perceived a bureaucratic threat to its prestige.

When, in the heat of the post-war inter-service debates of 1949, the aircraft carrier USS *America* (CVA 58) was cancelled in favour of development of the B-36 strategic bomber, the threat became a reality. Casting about for a means to develop a naval nuclear strike role, the USN postulated the Seaplane Striking Force (SSF) concept based on forward-deployed system of "advanced water-based aircraft in attack, defense and supply roles backed by inexpensive surface tenders and submarines" (p. 4).

The main attraction of the SSF was its economy – carrier groups were and are very expensive since a large number of ships and aircraft are tied up in defending the aircraft carrier itself and the SSF offered a 'cheap and nasty' alternative method for naval forces to deliver a nuclear weapon. The SSF also addressed a critical weakness of naval aviation in the immediate post-war period since none of the carrier-based aircraft of the time were capable of carrying a nuclear weapon over the standoff ranges required for the carrier's survival. Finally, technological developments based on British, American and especially German wartime research into flying boats held out the hope that the sea-based aircraft of the SSF could match the performance of their land-based counterparts.

The SSF concept was first articulated in 1949 and a number of aircraft types were proposed to fulfill the requirement. However, as Trimble relates, the rush to develop operational aircraft led to contracts being awarded with poor program oversight. Both Convair with its Sea Dart sea-based fighter and Martin with its SeaMaster sea-based bomber encountered significant delays due to unforeseen hydrodynamic and aerodynamic problems. These problems, coupled with the loss of prototype aircraft in both programs, meant that by mid-1959, nearly 10 years and half a billion dollars later, little tangible progress had been made toward realising the SSF concept.

By this time however, the USN had acquired sufficiently capable aircraft and aircraft carriers to perform the sea-based nuclear strike role and the *Polaris* submarine-launched missile program had emerged as a capable and secure second-strike weapon system. As a result, the SSF program was cancelled in August 1959, but not without the added ignominy of being singled out by the General Accounting Office as an example of waste and mismanagement.

Attack from the Sea is recommended for both general and specialised readers. Trimble is an accomplished author of several aviation histories and is well versed in the politics of US naval aviation. Despite the sometimes technical nature of the writing, the general reader will find this book absorbing as it gives a thorough account of the cut-throat competition between the US Armed Services in the early years of the Cold War over roles and missions. For those with a more specialised interest in aviation, this volume is a cautionary tale about the challenges of attempting to achieve technological breakthroughs "based on preconceived expectations that they will provide swift and simple solutions to difficult military problems" (p. 142).

*What Canada needs! The historic warship display at the Sydney National Maritime Museum showing HMAS **Vampire** with HMAS **Onslow** alongside and a replica of HMS **Endeavour** in the background.*

Maritime Security Conference Report

Ken Hansen

The 2007 Maritime Security Conference took place 14-16 June at Dalhousie University, drawing 120 delegates from around the world. Participants from Chile, India, Pakistan, the United Kingdom and the United States examined four illustrative case studies. Keynote speakers from the US Coast Guard (Dr. Joseph DiRenzo III), the Canadian Navy (Vice-Admiral Drew Robertson) and the Royal Canadian Mounted Police (Superintendent Blair McKnight) provided a contextual framework for each day's discussions. Conference participation from India's National Maritime Foundation and delegates from Pakistan's National Centre for Maritime Policy Research added a valuable Asian perspective to the proceedings. This year, the conference was organized in partnership between the Centre for Foreign Policy Studies at Dalhousie University and the International Centre for Emergency Management Studies at Cape Breton University.

The conference, "The Maritime Role in National Response to Emergencies: Concepts of Operation, Case Studies and Capabilities," focused on three key questions:

- What have maritime professionals and emergency response agencies learned from the experience of maritime organizations in recent emergencies?
- What concepts are being (or should be) developed to enable maritime capabilities to be employed effectively in responding to future emergencies?
- What maritime capabilities are essential to Canada if it is to respond effectively to emergencies at home or abroad?

Naval and civilian experts with first-hand knowledge of the roles played by maritime organizations in recent emergencies highlighted the maritime perspective, while experts in emergency management addressed the perspective of those who receive such support. Discussions focused on the unique character of maritime capabilities and their utility in emergency response.

The four case studies – Hurricane Katrina, the Indian Ocean tsunami, the evacuation operations from Lebanon, and the Integrated Tactical Effects Experiment – brought several important common lessons to the attention of the delegates. Response to disasters, whether caused by natural or human forces, requires flexibility. Maritime forces have the inherent capacity and mobility to bring resources that can achieve strategically significant effects. Most importantly, their ability to self-sustain and use the sea as the base of their operations reduces the need for a 'footprint' ashore, avoiding diplomatic complications.

However, while warships can be useful in disaster response, their capacity is limited and their on-station endurance is finite. Worse, the logistical capacity of the Canadian Navy is also limited. While other government fleets, such as the Coast Guard, can be employed they are also not an inexhaustible resource. The Canadian merchant fleet does have a few appropriate ships that could be made available, but they are also limited in many important ways. Chartering of international shipping is possible but short notice in an emergency situation will result in a very high premium being paid. In legal terms, the government's authority to requisition ships in response to an emergency is unclear. These issues showed that, while citizens have a clear expectation that assistance will be rendered at home and abroad, the national capacity to do so is very limited. A lively debate about whether Canadian national maritime capabilities need to be restructured to satisfy this requirement ended without resolution. Clearly, the issue of strategic choices and force structures is motivated by deeply-held values. These questions of choice will be explored in future conferences.

The proceedings closed with the announcement of the theme for the 2008 conference, "Breaking the Box: Balancing Maritime Capabilities for 21st Century Canadian Security Needs," which will be held 12-14 June at Dalhousie University. More details can be obtained from Cdr. Ken Hansen, Defence Fellow, Centre for Foreign Policy Studies, Dalhousie University, ken.hansen@dal.ca, or at http://www.cfps.dal.ca.

This year's conference presentations will be available on the Centre for Foreign Policy Studies website in July, and the conference report will be published in fall 2007.

Ensuring HMCS *Sackville* Will Survive Forever

Jacqui Good

Every ship has a story. HMCS *Sackville* has more than one. Like a cat, she has managed to avoid death several times over. She's dodged torpedoes on the North Atlantic and evaded the scrap heap. She's survived bureaucratic apathy and indifference. And now, on what may be her ninth life, she may actually find a way to survive forever.

HMCS *Sackville* is a hero of the Battle of the Atlantic. She was one of 269 corvettes built to shepherd convoys across the treacherous North Atlantic during World War II. Britain and its allies needed supplies but German U-boats were sinking merchant ships laden with cargo. Canada responded by organizing convoys of armed destroyers and corvettes to accompany the merchant ships across the Atlantic, especially the black hole in the middle where there was no air cover.

The 205-foot corvettes, built quickly and cheaply based on a whaling ship model, were supposed to be temporary fill-ins until more grand ships were available. But they proved to be as good at chasing submarines as whales. They became a staple of the Canadian Navy. There's no doubt that they helped win the war. Both Winston Churchill and Franklin Roosevelt declared that without victory in the Battle of the Atlantic there could not have been a victory in Europe.

There were 269 *Flower*-class corvettes built during the war, 123 of them at shipyards in Canada. They were *Flower*-class, because the Brits had some quaint idea about naming ships after flowers – HMS *Tulip* anyone? Canadians, sensibly, chose to name their corvettes after Canadian towns (like Sackville, New Brunswick). *Sackville* is the only *Flower*-class corvette left in the world.

For many people, *Sackville* is the World War II equivalent of Vimy Ridge. The beautiful monument in northern France stands for the heroic sacrifice Canadian soldiers made in World War I and the moment when Canada became a sovereign state through war. "For me, *Sackville* represents Canada's coming of age as a full and equal partner on the world stage," says Vice-Admiral Duncan Miller (Ret'd), the chair of the Canadian Naval Memorial Trust. "Canadians played a huge part in the Battle of the Atlantic and ships like HMCS *Sackville* made it possible."

Sadly most Canadians have never heard of the Battle of the Atlantic, let alone HMCS *Sackville*. They don't realize she is the last corvette or that the federal government declared her to be Canada's National Naval Memorial in 1985. Those who do visit her at her summer berth on the Halifax waterfront are amazed to find out that up to 90 men were crammed into living quarters designed for 30.

Actors aboard *Sackville* try to give visitors an idea of what it's like to sleep in hammocks in three-hour shifts, while messmates are eating, singing, washing dishes, playing cards and writing letters. And then there's the call for action stations! As all hands scramble onto the deck, visitors catch just a glimpse of what it must have been like to be an 18 year old boy, far from home, on the north Atlantic, hacking ice from the ship and waiting for a torpedo to explode.

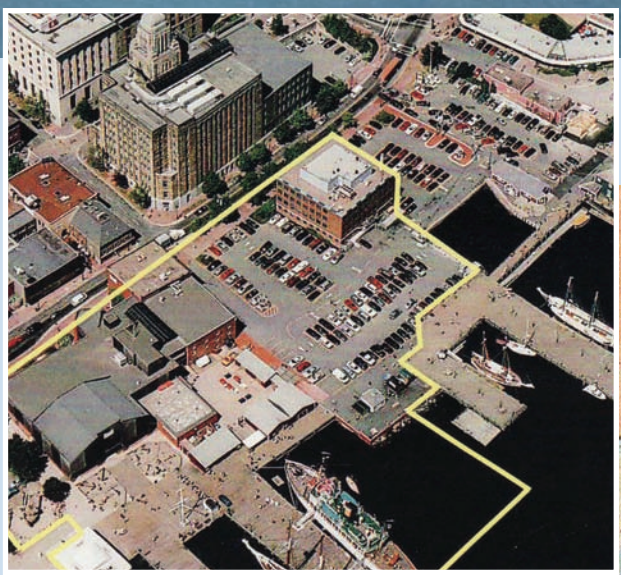
There's a common misconception that the *Sackville* belongs to the navy. She doesn't. She was saved by a group known as The Canadian Naval Corvette Trust (now the Canadian Naval Memorial Trust). Many of the trustees are navy and ex-navy, but many are also the sons, daughters and grandchildren of those who fought in World War II. There are others who simply admire what the *Sackville* stands for. They raise the money to keep the ship afloat and open to the public. And now, they are going to try and raise the money to move the ship to a permanent home ashore.

The Canadian Navy helps support the work of the Trust based on a memorandum of understanding. HMC Dockyard in Halifax harbours the *Sackville* during the winter months, moves her to her summer berth on the Halifax waterfront and puts Naval Reserve personnel aboard during the summer months.

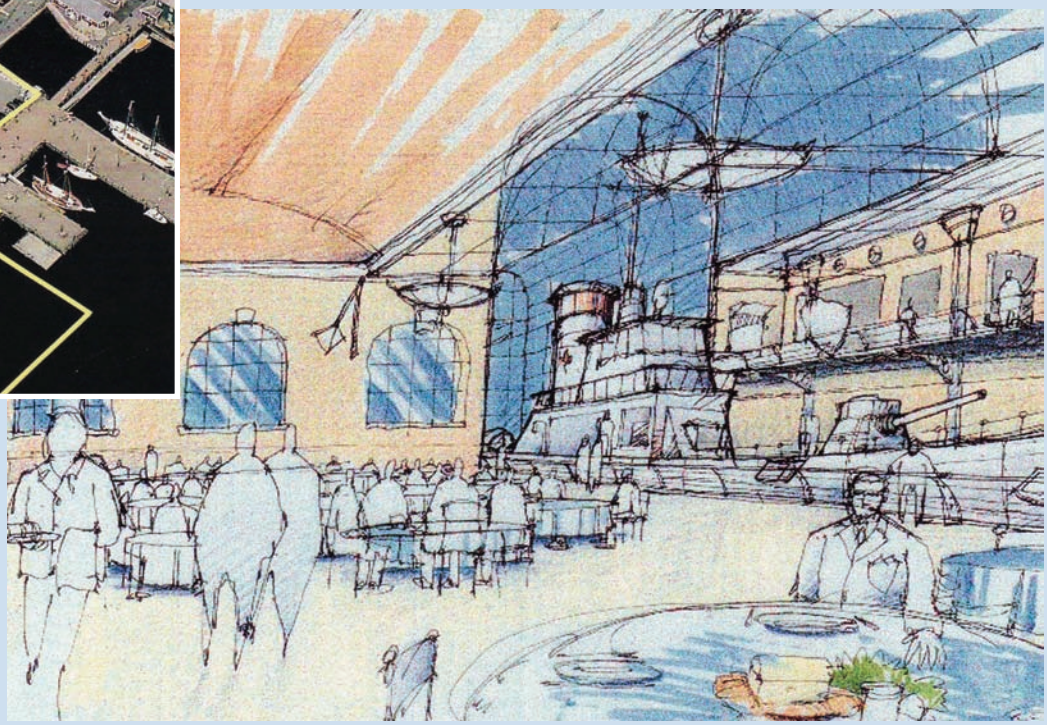
The trustees want to make sure that the story of the *Sackville* keeps being told. *Sackville*'s hull is thinning badly – it would cost about $10 million dollars to replace it. Better then to make her the centrepiece of the planned Queen's Landing maritime heritage complex on the Halifax waterfront. This ambitious series of buildings would include the current Maritime Museum of the Atlantic as well as large sections about naval heritage, marine archeology, the age of sail and sea creatures. But at the heart of it would be HMCS *Sackville*, home at last, safe and sound.

Plans call for *Sackville* to be enclosed in a Battle of the Atlantic Hall with dramatic re-enactments of the sights and sounds of a night attack on a U-boat. "This will cost a lot of money," Admiral Miller admits," but it's money invested in our history, our heritage and our future. If we believe in our naval veterans and those whose courage, determination and sacrifices won the Battle of the Atlantic, we have to find it."

Artist's impression of the Queen's Landing project.



Overview of the present site showing extent of new development.



Artist's impression of the Battle of the Atlantic Hall.

1 *HMCS **Toronto** in the Arabian Sea in June 2004. Photo MCpl Colin Kelly, Formation Imaging Halifax*

2 *HMCS **Athabaskan** and NRP **Vasco da Gama** alongside in Carthagène, Spain, in May 2006 during the visit of the NATO SNMG1. Photo MCpl Charles Barber, SNMG1 Staff Photographer*

3 *Petty Officer First Class John Cyrus, a ship's diver aboard HMCS **Athabaskan**, in Oslo, Norway, during the ship's visit in April 2006. Photo MCpl Charles Barber, SNMG1 Staff Photographer*

4 *Crew members of HMCS **Montreal** during Exercise Narwhal (2004) off the coast of Ellesmere Island. Photo Formation Imaging Halifax*

5 *HMCS **Fredericton**'s ensign, Halifax summer 2006. Photo credit Formation Imaging Halifax*

6 *HMCS **Iroquois**' boarding party (October 2006). Photo credit MCpl Charles Barber, SNMG1 Staff Photographer*