



## ***DISARMING ARCTIC SECURITY***

*An occasional column by Ernie Regehr, O.C., Senior Fellow in Arctic Security*

May 14, 2013

### **Fighter aircraft and Arctic sovereignty**

***It is a staple of Canadian politics to invoke temporary northern visions to curry temporary southern favor, a tradition fully honored in the current plan to spend as much as a billion dollars per year – for some 40 years – to acquire and operate a new fleet of fighter aircraft.***

To be sure, the primary arguments in support of Canada maintaining a fleet of sophisticated fighter aircraft focus on post-9/11 internal air defence requirements, on frontier air defence and interdiction capabilities on the east and west coasts, and, particularly, on expeditionary missions with international coalitions of the willing. But politicians and generals alike find the appeal to Arctic sovereignty hard to resist – raising the insufficiently debated question of whether the particular characteristics and capabilities of fighter aircraft give them any real utility in reinforcing Arctic sovereignty or security in the context of today's and anticipated threat environments.

#### **CF-18s on Arctic "Sovereignty Patrol"**

Part of the answer to that question can be inferred from the Defence Department's description of an April 2006 flight of two CF-18 fighter aircraft dispatched on what the Air Force called their "first ever aerial sovereignty patrol in Canada's North for Canada Command."<sup>1</sup> Canada Command was at the time a new configuration for national and continental defence operations (since replaced by the Canadian Joint Operations Command<sup>2</sup>), so the flights were a first under that arrangement. But these would have been unusual flights at any time, inasmuch as northern sovereignty patrols to demonstrate "presence" have never been a prominent or routine mission for Canadian fighter aircraft in the Canadian North.

On this occasion the two CF-18s, already in Inuvik for NORAD air defence training, a more familiar role, were sent to the Cambridge Bay area to show the flag and demonstrate an Air Force presence in the Arctic. By the Air Force's own reckoning, it was a "complex mission" and a "huge effort." Inuvik to Cambridge Bay is a straight distance of about 1,200 kms each way, but in the interests of being seen by as many northerners as possible, the aircraft were flown over as many settlements as possible. A CF-18's maximum range is about 2300 kms, so extending the route meant they required the services of a CC-130 tanker for in-flight refueling. In fact, two CC-130 Hercules transport planes were involved in the operation, having earlier ferried the needed supplies and personnel to the CF-18 Forward Operating Location in Inuvik.

In all, this one sovereignty patrol by two CF-18s travelling from Inuvik to Cambridge Bay and back involved some 80 personnel, to provide ground maintenance and transport services, and the support of two Hercules aircraft – suggesting, in other words, that having fighter aircraft stream above the Arctic seas and tundra may not be the most efficient means of demonstrating Canadian presence and sovereignty in the Arctic.

That has not prevented Arctic sovereignty from being routinely invoked as a key reason for Canada acquiring the proposed new fleet of state-of-the-art fighter aircraft. The Government's July 2010 announcement that it intended to buy the F-35, lauded it as "an extremely effective deterrent against challenges to Canadian sovereignty" and praised its capacity for "operating across Canada's vast geography under harsh and varying weather conditions."<sup>3</sup> In 2009 hyperbole soared when CF-18s were scrambled to rendezvous with Russian bombers in international air space. The Prime Minister warned of "increasingly aggressive" Russian flights and promised that Canada would fulfill its "obligations to defend our continental airspace." He went on to insist that "we will defend our sovereignty and we will respond every time the Russians make any kind of intrusion on the sovereignty in Canada's Arctic."<sup>4</sup>

Of course, Russian bombers, on their routine training patrols over the three oceans that border Canada, have never been known to enter Canadian airspace. The Russians have never made "any kind of intrusion on the sovereignty in Canada's Arctic." Instead, in the 2009 incident the Russians were doing what they have done for decades, except for a break they took after the Cold War, and that is to fly in international airspace adjacent to Canadian and American airspace to train their pilots and test North American reactions; and the Air Forces of Canada and the US, grateful for the opportunity to test NORAD reaction times and routines, dutifully "scrambled" their fighter aircraft and went out to greet the Russians.

#### **Fighter aircraft and sovereignty challenges in the Arctic**

That is not to deny that Canada faces sovereignty challenges in the Arctic. But they do not come in the form of Russian bombers or contested claims to Canadian ownership over its Arctic territory,<sup>5</sup> or, it seems, in any form that demands a fighter aircraft response. Instead, sovereignty challenges are the challenges of meeting the responsibilities of sovereignty in a vast area with little infrastructure – the responsibility to ensure the safety and well-being of the people of the Arctic and to help them meet their basic needs (the same responsibilities that Canada has toward all its people).

It is true that meeting some basic needs in the Arctic, including law enforcement and emergency responses, necessarily includes a military component. The sheer size of the sparsely populated territory and its challenging environment mean that civilian agencies cannot, on their own, deliver essential services – from search and rescue, to fisheries management and control, to monitoring environmental compliance and air traffic management. The Department of National Defence is the *de facto* first responder in the Arctic, often through the northern Rangers, even though other civilian departments and agencies may have the lead responsibility, and thus a military presence remains essential. The primary military function in the north is to aid the civilian authorities.

#### **Sovereignty and Situation Awareness**

Exercising responsible sovereignty over the northern regions of Canada, an area larger than all of Europe west of the former Soviet Union, requires ongoing awareness of what is actually going on within those vast stretches of air, land, and sea. It requires a capacity to monitor activity within Canadian territory, to monitor the approaches to Canadian territory, to confirm that there are no unauthorized incursions into Canadian territory, and to confirm compliance with laws and regulations.

Surveillance is thus a primary imperative in the Canadian Arctic, but fighter aircraft play no part in meeting that obligation. In Canada, routine, though not necessarily frequent, Arctic air patrols are conducted by CP-140 maritime patrol aircraft. They are capable of flying up to 17 hours without refuelling, over a distance of 10,000 kms. They fly along all three ocean coasts and can monitor for illegal

fishing and immigration and pollution violations. They fly low and slow enough and have the kind of monitoring equipment that enables them to assist in surveillance for drug traffickers and in search and rescue operations. They are equipped, for example, with survival kits that can be dropped to those stranded.<sup>6</sup> And, of course, they continue what was initially their primary role, that is, anti-submarine warfare surveillance.

Canada's satellite radar system, RADARSAT 2, is becoming the primary means of near continuous surveillance of the Arctic land and sea. It can acquire images day and night and in all weather conditions. These satellites can monitor shipping, as well as changing environmental and ice conditions.<sup>7</sup> In addition, the use of uninhabited aerial vehicles for specific or more targeted surveillance tasks has already begun, with possibilities for significant expansion.<sup>8</sup>

But none of these, not the CP-140 or RADARSAT or UAVs, is capable of carrying out continuous air surveillance – notably, none is capable of monitoring the air approaches to Canada's northern borders to identify unauthorized flights about to enter into Canadian territory. For that you need coastal radars of the kind that watch the Pacific and Atlantic Coasts. In the Arctic, radar surveillance is provided by the North Warning System (NWS – the former DEW line or Distant Early Warning line). The NWS is a line of ground-based radars that runs along the Arctic Ocean coast from Alaska to Labrador, well within Canadian territory. The line is a coastal screen but not a border screen – any aircraft that are picked by the Canadian portion of the NWS are already deep into Canadian territory (except in the west at the Beaufort Sea and in the East in Labrador). As a result, there is no air surveillance of the Canadian frontier around the Arctic Archipelago, a distance of several thousand kms, nor is there an urgent need for it – and Canadian sovereignty is not jeopardized by that surveillance gap.

Coastal or boundary radars keep watch on the skies for unidentified and unauthorized aircraft, but final identification cannot be done by radar – for that you need aircraft able to track, identify, and ultimately intercept unauthorized intruders. That is now the primary role of fighter aircraft based in Canada, and the aircraft they intercept are predominantly small civilian aircraft that are either off course, have failed to file a flight plan, or are bent on bringing contraband into southern Canada. As NORAD explains it: "In conjunction with its aerospace control mission, NORAD assists in the detection and monitoring of aircraft suspected of illegal drug trafficking. This information is passed to civilian law enforcement agencies to help combat the flow of illegal drugs into North America."<sup>9</sup> But the drug threat is a southern problem, so this particular aid to civilian law enforcement is a southern, not a northern, service.

### **Sovereignty and enforcement**

Fighter aircraft, at least, high-speed aircraft with the range to cover a lot of territory, are currently the way to get from air surveillance to enforcement on the Pacific and Atlantic coasts. Of course, air surveillance is partly an end in itself – confirming that Canadian sovereignty is not being violated by unauthorized intrusions and that laws and regulations are being followed, for example in international transits through Canadian air space and water. Nevertheless, surveillance must ultimately be accompanied by a credible enforcement capacity; but that requirement comes with a major qualification. The level of enforcement capacity must logically be driven by the level of the threat.

The threat of unauthorized aircraft entering Canadian territory requires a capacity to intercept them and force them to identify themselves or land, or to prevent them from entering Canadian territory. In the Arctic, such capacity is not available and is in fact largely irrelevant. Air defence in the Arctic is assured

largely by geography and climate. Inasmuch as the primary threat of unauthorized incursions into Canadian airspace comes from small aircraft carrying contraband – again, it is a southern threat. Such aircraft do not have the range to enter Canadian territory from the north. The threat from small aircraft is really confined to the Pacific and Atlantic coasts where coastal radars are installed.

But what about those Russian bombers? Since the level of active defence should be commensurate with the level of threat, it is especially significant that there is now a broad Canadian consensus that there is in the Arctic no military threat to Canada. Notwithstanding the Prime Minister's energetic promise to stand up to Russian bombers, in 2010 the House of Commons Standing Committee on National Defence could not have put it more plainly in its report on Canada's Arctic Sovereignty: "There is no immediate military threat to Canadian territories either in or 'through' the Arctic."<sup>10</sup> In 2011 the Senate Defence Committee came to the same conclusion: "The question remains, is there a military threat to Canada in the Arctic? The consensus of witnesses was that there is not, in the sense of an imminent or even foreseeable peril." The head of Joint Task Force (North) told the Committee: "There is no conventional threat and therefore we are not arming ourselves in preparation for an attack from any country. The likelihood of an attack in the High Arctic is as likely as an attack in downtown Toronto."<sup>11</sup>

In his *Defence Watch* blog with the Ottawa Citizen, David Pugliese reported in August 2012 on the Department of National Defence insistence that "Defence issues do not drive Arctic affairs," and that "Canada does not see a military threat in the Arctic, including from Russia."<sup>12</sup> Current and future Russian long-range bombers are still identified by some as an ongoing concern for North America,<sup>13</sup> but those concerns, despite occasional political bluster, have not altered the view from the most senior defence officials and the Prime Minister that "Canada does not anticipate any military challenges in the Arctic," and that "there is no likelihood of Arctic states going to war."<sup>14</sup>

The absence of military threat, no less than its presence, should have consequences. Lack of a military threat does not obviate the need for credible surveillance and a reliable monitoring capacity, but it does mean that enforcement capacity can be much more limited and primarily directed, as it is now, toward assistance to civilian authorities. In other words, air defence in Canada's north is "police" work related to law enforcement<sup>15</sup> – and it is a minimal level requirement at that, since few if any small civilian aircraft are capable of approaching Canada from the north.

It is not surprising, therefore, that there is little evidence of any Canadian fighter scrambles in the Arctic besides those linked to *pro forma* Russian bomber training patrols – and those too are rare in the Arctic, given that the infrequent encounters with Russian bombers occur mostly in international airspace off the Atlantic and Pacific Coasts, not in the Arctic.

There is little currently public documentation of actual air defence incidents – that is, of events in which Canadian fighter aircraft are scrambled in response to an air borne threat at any of Canada's frontiers. As for the Arctic, a 2006 Library of Parliament paper, for example, describes northern military operations without any reference to fighter aircraft activity. The paper describes the annual activities of the then Canadian Forces North Area (CFNA) as including: two "Sovereignty Operations by the Army," two "Northern Patrols" consisting of flights of Aurora patrol aircraft, and 10-30 "Sovereignty Patrols" by the CFNA, which it does not explain but which would include the Rangers and perhaps Air Force Twin Otter multi-purpose aircraft, and one, also unexplained, "Enhanced Sovereignty Patrol."<sup>16</sup>

David Pugliese reports on a 2010 NORAD study that challenges “claims that the US and Canadian militaries were facing off against 12 to 18 Russian flights a year.” He says NORAD statistics show that “the majority of the Russian patrols don’t involve Canadian territory or interceptions by Canadian aircraft.”<sup>17</sup> The implication, again, is that Canadian fighter aircraft are not involved in intercepts in the Arctic region.

An interesting academic study from 2010 recounts the 2009 incident referred to above in which Canadian fighters intercepted Russian Tupolev Tu-95 “Bear” bombers in international airspace near Canada. Canadian officials are reported as saying this was the 20<sup>th</sup> such incident in the previous two years.<sup>18</sup> A June 2012 report out of the US Elmendorf-Richardson joint air force and army base in Alaska confirms roughly that frequency of incidents. It shows that from 2006, when Russian patrol flights resumed after a long post-Cold War absence, to the end of 2011, there was an average of 9 NORAD intercepts annually of Russian military aircraft, all in international airspace<sup>19</sup> (but with no indication of how many involved Canadian aircraft).

An example from Norway is instructive. It shares a land border with Russia and lies along the only route, over the Barents Sea around Norway’s North Cape, by which Russian military aircraft from its western bases can get to either the North Atlantic or the Eastern Arctic. In 2009 Norwegian jets, under NATO command, were scrambled 38 times to identify Russian military aircraft on that route, mainly strategic bombers, on routine training flights – and all in international airspace.<sup>20</sup> In other words, three times a month Norwegian jets confirmed Russian aircraft flying in international airspace. For Canada, the frequency of such fighter scrambles in the Arctic is, at most, likely to be only a small fraction of the Norwegian encounters inasmuch as many of those flights will never have reached any international zone that Canada monitors on behalf of NORAD.

And, of course, the real point in all this is that Russian aircraft are no longer enemy aircraft.

A US briefing document, a slide show, indicates that under Operation Noble Eagle (code name for the post-9/11 NORAD air defence operation) there have been “over 2,000 diversions or scrambles since 9/11” (roughly 200 per year, but without any geographic distribution available).<sup>21</sup> These will have been overwhelmingly in the south, as suggested by an earlier study at the end of the Cold War, and well before 9/11. In the four years from 1989-1992, US NORAD fighters were scrambled 1,518 times. More than 90 percent of the scrambles were in the southern US states, many near the Mexican border and the Gulf of Mexico coast. In four years there were 111 scrambles in Alaska.<sup>22</sup> The report states only that none of the Arctic scrambles was drug related. Other responses to civilian flights involved the inspection of unidentified aircraft and assisting aircraft in distress.

Canada has in effect confirmed the absence of the northern air threat by not basing any fighter aircraft in the north – only forward operating bases for emergency deployments and for training in Arctic exercises.

A secondary air defence requirement is the capacity to respond to air threats that might emerge within Canadian territory – notably, the risk of the occurrence in Canada of a 9/11 style hijacking of a commercial aircraft and turning it into an attack on Canadians. That is a threat that requires a response, but, again, it is not a threat with much relevance to the Arctic (it relates especially to the major population centres of southern Canada).

## Fighter aircraft and sovereignty

The public debate spawned by the F-35 affair begins with the assumption that the current fleet of CF-18 jet fighters must be replaced with as many new and technically more advanced fighter aircraft as we can afford. A careful, dispassionate, and transparent assessment of Canada's interceptor and combat air defence needs has yet to be undertaken by the Government. The assumption that security and sovereignty in the Canadian Arctic require a next generation fighter aircraft is a common enough policy assertion, but not one confirmed by the current and prospective northern security environment. The available evidence indicates that the air defence role in Canada is essentially an air policing role carried out on the Pacific and Atlantic coasts. James Fergusson, a prominent academic defence analyst generally supportive of increased Canadian military capacity, agrees that "in the absence of a global struggle such as the Cold War," Canada "faces few, if any, direct military threats." Thus, he says, the Canadian Forces at home face primarily a policing challenge, including in the Arctic. "There are few, if any, threats that necessitate an advanced multi-role fighter, even with the resumption of Russian bomber flights over the Arctic in the past several years."<sup>23</sup>

In other words, it can be said with some confidence that any Canadian plan to continue to operate a significant fleet of sophisticated fighter aircraft is not justified by an appeal to Arctic security or Arctic sovereignty.

[eregehr@uwaterloo.ca](mailto:eregehr@uwaterloo.ca)

## Notes

---

<sup>1</sup>Major Andy Coxhead, Sr PAO, 1 Cdn Air Div and Colonel W.F Veenhof, Director Operations, 1 Cdn Air Div, "CF-18s Conduct 1st Northern Sovereignty patrol for Canada Command," Apr. 21, 2006. Air Force Articles. <http://www.rcaf-arc.forces.gc.ca/v2/nr-sp/index-eng.asp?id=1534>

<sup>2</sup> <http://www.cjoc-coic.forces.gc.ca/index-eng.asp>

<sup>3</sup> "Canada's Next Generation Fighter Capability – The Joint Strike Fighter F-35 Lightning II," National Defence, BG-10.018, 16 July 2010. <http://news.gc.ca/web/article-eng.do?m=/index&nid=548059>

<sup>4</sup> "Russia Denies Bomber Approached Canadian Airspace," CBC News, 27 February 2009. <http://www.cbc.ca/canada/story/2009/02/27/arctic-russia.html?ref=rss>.

<sup>5</sup> Canada's dispute with the US over the boundary in the Beaufort Sea, and with Denmark over the ownership of Hans Island, will be settled with the aid of international law and some negotiations (as Arctic Ocean states promised in the 2008 Ilulissat Declaration). In the Northwest Passage, given that its waters are all well within Canada's 200-mile exclusive economic zone, Canada already has, not only the right, but the responsibility for managing its marine resources and applying appropriate shipping and environmental regulations.

<sup>6</sup> <http://www.rcaf-arc.forces.gc.ca/v2/equip/cp140/index-eng.asp>

<sup>7</sup> Canadian Space Agency. <http://www.asc-csa.gc.ca/eng/satellites/radarsat2/>

<sup>8</sup> "The Canadian Forces in the North," National Defence. <http://www.cfna.forces.ca/nr-sp/09-002a-eng.asp> (Last updated 26 October 2012).

---

<sup>9</sup> About NORAD. <http://www.norad.mil/about/index.html>

<sup>10</sup> June 2010, 40<sup>th</sup> Parliament, 3<sup>rd</sup> Session  
<http://www.parl.gc.ca/HousePublications/Publication.aspx?Language=E&Mode=1&Parl=40&Ses=3&DocId=4486644&File=21>

<sup>11</sup> Standing Senate Committee on National Security and Defence, "Sovereignty and Security in Canada's Arctic: Interim Report," The Honourable Pamela Wallin, Chair; The Honourable Romeo Dallaire, Deputy Chair, March 2011. <http://www.parl.gc.ca/Content/SEN/Committee/403/defe/rep/rep07mar11-e.pdf>

<sup>12</sup> David Pugliese, "Canadian Government Does not see a Military Threat in the Arctic, says DND," *Defence Watch*, 16 August 2012. <http://blogs.ottawacitizen.com/2012/08/16/canadian-government-does-not-see-a-military-threat-in-the-arctic-says-dnd/>

<sup>13</sup> Rob Huebert, "The future of Canadian airpower and the F-35," *Canadian Foreign Policy Journal*, 17:3, 228-238.

<sup>14</sup> The chief of Defence Staff and the Prime Minister respectively, both commenting in 2010. Quoted in: Michael Byers and Stewart Webb, "Canada's F-35 purchase is a costly mistake," *Canadian Foreign Policy Journal*, 17:3, 217-227.

<sup>15</sup> James Fergusson, "The right debate: airpower, the future of war, Canadian strategic interests, and the JSF decision," *Canadian Foreign Policy Journal*, 17:3, 204-216.

<sup>16</sup> Matthew Carnaghan and Allison Goody, "Canadian Arctic Sovereignty," Library of Parliament, 26 January 2006. <http://www.parl.gc.ca/Content/LOP/researchpublications/prb0561-e.htm>

<sup>17</sup> David Pugliese, "Selling Canada on the need for fighters," *Ottawa Citizen*, 12 December 2010. <http://www2.canada.com/ottawacitizen/news/story.html?id=581f5e63-5feb-4983-9d70-f2d8cd0cc4fa&p=2>

<sup>18</sup> Nancy Teeple, "A Brief History of Intrusions Into the Canadian Arctic," *Canadian Army Journal*, Vol. 12.3 (Winter 2010), pp. 45-68.

<sup>19</sup> The report, made available through an access to information request, is not clear on where these intercepts occurred or who carried them out.

<sup>20</sup> Thomas Nilsen, "NATO fighters scrambled 38 times in 2009," *Barents Observer*, 25 January 2010. <http://barentsobserver.com/en/sections/articles/nato-fighters-scrambled-38-times-2009>

<sup>21</sup> A NORAD/NorthCom briefing to the US European Command, 15 February 2011. <http://www.slideshare.net/gdkochjr/useucom-i3t>

<sup>22</sup> "Continental Air Defense: A Dedicated Force is No Longer Needed," US General Accounting Office, Letter Report 05/03/94, GAO/NISIAD-94-76). <http://www.fas.org/man/gao/gao9476.htm>

<sup>23</sup> James Fergusson, "The right debate: airpower, the future of war, Canadian strategic interests, and the JSF decision," *Canadian Foreign Policy Journal*, 17:3, 204-216.