

## Van Arty Association and RUSI Van Members News May 19, 2020

Newsletters normally are emailed on Monday evenings. If you don't get a future newsletter on time, check the websites below to see if there is a notice about the current newsletter or to see if the current edition is posted there. If the newsletter is posted, please contact me at [bob.mugford@gmail.com](mailto:bob.mugford@gmail.com) to let me know you didn't get your copy.

**Newsletter on line.** This newsletter and previous editions are available on the Vancouver Artillery Association website at: [www.vancouvergunners.ca](http://www.vancouvergunners.ca) and the RUSI Vancouver website at: <http://www.rusivancouver.ca/newsletter.html> . Both groups are also on Facebook at: <https://www.facebook.com/search/top/?q=vancouver%20artillery%20association> and <https://www.facebook.com/search/top/?q=rusi%20vancouver>

**Wednesday Lunches - Lunches suspended until further notice. Everyone stay safe!!**

**Upcoming events – Mark your calendars** See attached posters for details.

**May 20** RUSI Vancouver virtual presentation - Canada and the Cold War

**May 27** RUSI Vancouver virtual presentation - Canada and the Cold War – if required

### World War 2 – 1945

*John Thompson Strategic analyst - quotes from his book "Spirit Over Steel"*

**May 21<sup>st</sup>:** Additional American successes at the Halfmoon, Horseshoe and Wanna Positions on the Shuri Line prompt a general withdrawal to the next belt of defences by surviving Japanese troops – many of whom are too weak to travel quickly or safely.

**May 22<sup>nd</sup>:** The ruins of Yonabaru on Okinawa are captured by the Americans. Truman tells Congress that the US has given Britain \$12.8 billion in materials since Lend Lease began (and received \$5 billion in return), and \$8.4 billion worth has also gone to the USSR.

**May 23<sup>rd</sup>:** The Labour Party decides to abandon the wartime coalition government and Churchill is forced to call an election. Himmler is captured by British troops but commits suicide before he is properly searched. The 6<sup>th</sup> Marine Division takes Naha, Okinawa's main city, and runs into stout resistance beyond it.

Last week's WW2 listings showed the entry:-

**May 15<sup>th</sup>:** The last major surface action of the war is fought off the Nicobar Islands as a Japanese supply convoy is attacked, and the cruiser Haguro is sunk by British destroyers.

Here is the story, sent to me by Former Naval Person John Blatherwick:-

Captain (later Vice-Admiral Sir) Manley Laurence Power, CBE, DSO, RN (son of Admiral Sir Laurence Power), commanded the 26<sup>th</sup> Destroyer Flotilla in the East Indies Fleet in HMS Saumarez. The destroyers HMS Venus, HMS Virago, HMS Verculam, and HMS Vigilant were formed the flotilla. From 2245 hours on 15 May 1945 until 0209 hours on 16 May 1945, these five ships stalked the Japanese Navy heavy cruiser Haguro and sank her in the Malacca Strait. The Haguro was a Nachi class heavy cruiser (Captain Kaju Sagiura) and carried Rear-Admiral Hashimoto, the 6<sup>th</sup> Cruiser Squadron Commander. She left Singapore on 14 May escorted by the destroyer Kamikaze (LCdr Kinichi Kasuga) en route to the Andamans.

HMS Venus (Captained by Commander Graham de Hair, DSC, son of Canadian Born Admiral Sir Dudley de Chair) picked up the first radar contact of the two ships due to a freak weather system at over 38 miles (normal range for the set was 16 miles) and this was confirmed by the Radar Officer, the late **Lieutenant (N) Ted Paxton, RCNVR**, a longtime member of the NOABC, who convinced his Captain and then the Flotilla Commander that it was indeed the Haguro and the Destroyer Kamikaze. Paxton was nominated for a DSC but received an **MID**.

The book ‘**Sink the Haguro**’ by John Winton was published by Pan Books of London in 1979 and 1983. See also the website: <http://www.mikekemble.com/ww2/haguro.html>

## **Canadian Military to Get New Sniper Rifles**

*David Pugliese, Ottawa Citizen, Postmedia News 12 May 2020*



*The C20 semi-automatic sniper rifle is shown undergoing testing earlier this year.*



Canadian military sniper teams will be getting new rifles with the first expected to be delivered in the fall. The Liberal government is spending \$8.5 million on purchasing the 272 rifles and spare parts. The C20 will replace the C8 as the personal defence weapon for Canadian Forces sniper teams,

confirmed Department of National Defence spokeswoman Andrée-Anne Poulin. The government will also launch a competition sometime this month to buy 229 bolt action sniper rifles. That rifle, designated as the C21, will be used for long-range shooting and will come in two different calibres. The Canadian Forces says the new C20, which will be in 7.62 calibre, will be more accurate and an improvement over the current C8 used by sniper teams.

The federal government initially awarded a \$2-million contract to Colt Canada in Kitchener on February 28 to establish the production line to produce the C20 weapon. That contract also includes an initial delivery of 10 of the C20 rifles. That early production run is to ensure Colt has the technical proficiency to deliver the new weapon, added Poulin. The federal government then awarded a \$6.5-million contract to Colt Canada on April 17 to produce 262 additional C20 rifles, associated equipment and spare parts. No announcement was made of the deal, in contrast to the announcement by defence minister Harjit Sajjan on Jan. 24 that the government was purchasing 3,600 machine guns from Colt. DND said an announcement wasn't made about the sniper rifles because the government is focused on its efforts to send out information about the novel coronavirus. Defence officials, however, privately say the deal wasn't publicized because there was concern about the political optics of such an announcement coming just before the Liberal government banned assault rifles, including those made by Colt Canada, from being owned by private citizens. Sajjan's office and the Prime Minister's Office are now carefully reviewing all communications the department sends to the news media, even on non-COVID-19 issues. DND didn't have a per-unit cost for the new C20 rifles. But officials acknowledge that taxpayers are paying a premium to have the guns manufactured in Canada under what is called the Munitions Supply Program, which sees such work directed to Colt Canada.

For instance, the machine guns that Minister Sajjan announced in January cost about double what other militaries pay for similar weapons. The Canadian Forces expects deliveries of the new C20 to begin in November. The last deliveries are expected in March 2021, Poulin noted. It was decided to forgo a competition for the new C21 rifle because an analysis under the Munitions Supply Program showed that having Colt create a new production line for just 229 rifles would be too expensive, according to DND. There are many manufacturers of such bolt action rifles throughout the world. Colt was also given another contract under the Munitions Supply Program to refurbish 75 C15 rifles at a cost of \$281,000. Those rifles are in .50 calibre. The Canadian Forces expects delivery of those refurbished rifles to be completed by March 31, 2021, according to Poulin. The Canadian Forces has a program to outfit its sniper teams with modern equipment ranging from optical sights, new body armour, night vision equipment, ballistic calculators and "concealment kits."

## **Raytheon is Developing a Ramjet Artillery Round**

For the Army's New Super Howitzers

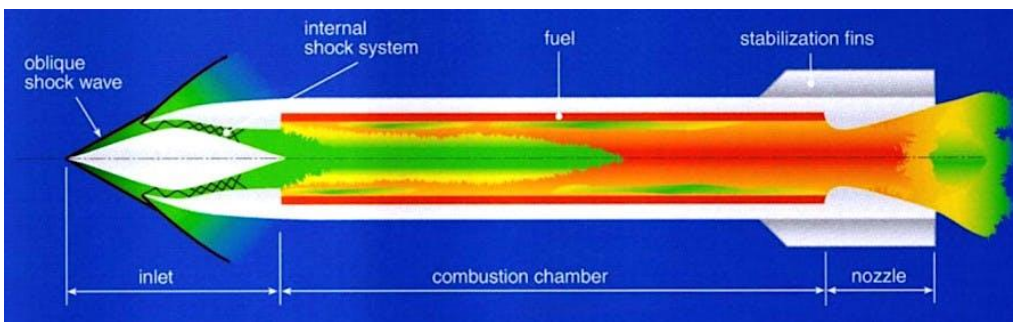
New long-range ammunition is a key component of the Army's broader plans to increase the capabilities of its howitzers and outgun opponents. Joseph Trevithick The War Zone May 12, 2020



The US Army has hired Raytheon, working in partnership with the Netherlands Organization for Applied Scientific Research, to begin developing a new 155mm ramjet-powered long-range artillery round able to hit targets more than 60 miles away. This is one of a number of novel ammunition types that the service is now exploring as companions for its future long-range



155mm howitzers. Raytheon announced it had received \$7.9 million from the Army to get started on the ramjet artillery shell, also referred to as the XM1155, on May 11, 2020. The Netherlands Organization for Applied Scientific Research, better known by the Dutch acronym TNO, will be responsible for developing the ramjet engine. Raytheon will then integrate that into the rest of the projectile, which it will design and build. "The tactical 155mm XM1155 will be able to strike moving and stationary high-value targets on land and at sea," according to Raytheon's press release. "The maneuverable, extended-range airframe will be compatible with legacy and future 155mm artillery systems." Raytheon did not offer any specific details about its design, but the ramjet will be at its core. The projectile will have to first get to an appropriate velocity for this engine to function optimally. Past ramjet artillery round designs have used rocket boosters or large conventional propelling charges to provide this initial burst of speed. The sustained supersonic flight, coupled with the fact the engine is actually pulling the projectile through the air, which helps reduce drag, are at the core of the significantly extended range capabilities.



*A diagram showing the basic components of a notional ramjet artillery round from a report that TNO employees presented a conference in 2018. TNO*

The company also said that it would leverage its past experience with the M982 Excalibur precision-guided 155mm artillery shell. The Excalibur, which the Army, as well as the US Marines, have been using for more than a decade, is only capable of hitting stationary targets using its GPS-assisted inertial navigation system (INS) guidance package. The M982 has a maximum range of 20 miles. The XM1155's ability to hit moving targets will require a more robust guidance system. The projectile will most likely feature some form of multi-mode guidance, such as using GPS-INS to get to the target area and then switching over to a combination of millimeter-wave radar or imaging infrared to find and then strike the target. This would also allow the shells to strike fixed targets using the GPS-INS guidance alone.



*A briefing slide showing the flight profile of a notional XM1155 shell*  
US ARMY

Multi-mode guidance packages, which can also include laser guidance, are becoming increasingly the default for precision-guided munitions. In addition to the ability to hit moving objects, this allows for engagement of targets in bad weather and at night and gives the weapon alternate ways to find its mark even if the enemy jams or blinds one or more of the guidance systems. The XM1155 would also increase the flexibility of the Army's 155mm howitzers just by virtue of its extreme range capabilities. A six-gun battery firing the Army's new XM1113 155mm shell, a rocket-assisted type that can hit targets up to 40 miles away, can engage targets within an approximately 1,500 square mile circle around their firing positions. A ramjet-powered projectile with a range of just over 60 miles would increase that area to 12,000 square miles. Howitzers and other ground-based artillery already have the benefit of being able to relatively rapidly shift focus from one target area to another, as well as respond to requests for fire support faster, compared to airstrikes, and don't end up grounded or their capabilities degraded by bad weather. They also offer a lower cost alternative to fixed wing aircraft and helicopters that provides more persistent coverage, too.



*A briefing slide shows the now-in-development self-propelled XM1299 howitzer and its new XM907 gun, as well as the XM1113 rocket-assisted shell and a notional depiction of the XM1155 ramjet-powered round, along with other systems in development under the Extended Range Cannon Artillery program. US ARMY*

Raytheon and TNO's ramjet-powered projectile would offer immense benefits for Army artillery units, especially in distributed operations, where they could find themselves having to rapidly

support forces across a broad area. The added range also helps keep them protected from enemy counterattacks. "The ramjet-powered artillery round will allow our nation's military to strike farther and faster than anything our adversaries have in their arsenals," Tom Laliberty, Vice President of Land Warfare and Air Defense at Raytheon's Missiles and Defense division, said in the May 11 statement. Concerns about gaps in the Army's artillery capabilities compared to potential near-peer adversaries, especially Russia, is what is driving the service to develop new longer-range ammunition, such as the XM1155, and huge new howitzers to fire those rounds. The service has also been working on similarly extending the range and capabilities of its ground-launched rocket artillery, as well as initiating programs to develop ultra-long-range "super guns" and land-based ballistic and cruise missiles. The ramjet-powered shell is set to be a key component of the overall Extended Range Cannon Artillery program, which is also developing new extra-long 155mm guns. Prototype self-propelled ERCA howitzers, known as XM1299s and




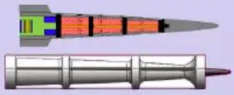

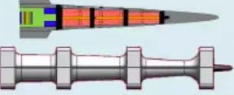

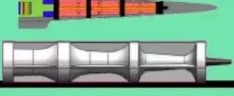

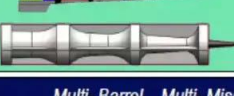


derived from the venerable M109 family, have already conducted numerous tests and there has also been work on towed versions based on the M777.

*Mock-up of the Boeing-Nammo ramjet artillery round design.  
Joseph Trevithick*



The rocket assisted XM1113 round, which General Dynamics and Norwegian defense contractor Nammo are developing, is another part of this broader artillery development effort. Boeing and Nammo have been working on a separate ramjet-powered design since 2018, which you can read about more in his previous *War Zone* story. The Army is also interested in ammunition to specifically expand the anti-armor capabilities of its howitzers. In addition, BAE Systems is looking to develop versions of its kinetic Hypervelocity Projectile, or HVP, which it originally developed for use in electromagnetic railguns, that will work with conventional guns, such as 155mm howitzers and the US Navy's five-inch guns.

 <span style="color: red; font-weight: bold; font-size: 1.2em;">Commonality Approach</span> 				
GUN SYSTEM	PROJECTILE (SABOTED & SUB-CALIBER)	MISSION & WARHEAD TYPE	TRANSITION OPPORTUNITES	GAME CHANGING CAPABILITY
 5" MK 45 MOD 2/4		NSFS - HE	113 Barrels (PEO IWS)	GUIDED 26 - 41 NM NSFS/ASCM/ASuW
 20 - 32 MJ Railgun		NSFS - HE NSFS - KE	FUTURE (PMS405/PEO IWS)	GUIDED 50 - 100 NM NSFS/ASCM/ASuW/ Future Threats
 155 mm - AGS		NSFS - HE	6 Barrels (PEO IWS)	GUIDED 40 NM NSFS/ASCM/ASuW
 155 mm		Ground Fires - HE	800 ARMY 300 MARINE ASSETS	GUIDED 17 NM Fires/CMD
<b>Multi-Barrel, Multi-Mission, &amp; Multi-Service Applications</b>				

Distribution A
Slide 16
6/3/2014

*A briefing slide showing the potential applications of the HVP beyond use in electromagnetic railguns.*

These Army artillery ammunition developments could be of interest to the Marine Corps, though that service says it is looking to scale back its howitzer units as part of a radical force restructuring plan. The Navy might also be interested in the ramjet-powered rounds as a way to finally make use of the 155mm Advanced Gun Systems on its *Zumwalt* class destroyers. The service canceled the

development of its own long-range 155mm guided shell after costs ballooned, leaving the AGS as effectively dead weight. There has already been talk about integrating the HVP with these guns. With respect to the XM1155, the small size of Raytheon's current contract indicates this particular program is still in the very early stages of development. However, the Army has made clear that it wants to modernize its artillery branch and do so quickly. Ramjet-powered artillery rounds definitely hold the exciting potential to further increase the capabilities of the service's future long-range howitzers.

## Vancouver Artillery Association Yearbook Updates

We're still looking for some more RSVPs for dinner this Saturday. Check out the details here:  
<https://www.vancouvergunners.ca/virtual-dinner.html>

Don't forget our other on-line events

**VAA Virtual Lunch every Wednesday at Noon PDT - <https://zoom.us/j/710845848>**

No computer? No smartphone? Dial in to 778 907 2071 Canada Meeting ID: 710 845 848

**RCAA Virtual Coffee every Sunday at 1600 PDT - <https://zoom.us/j/710752062>**

No computer? No smartphone? Dial in to 778 907 2071 Canada Meeting ID: 710 752 062

The Dolan Magrath collection is starting to be uploaded. Check out the ones from On Guard 90 here: <https://www.vancouvergunners.ca/milcon-1990.html> Or did I get the date wrong?

More photos from Captain Rob Wishnicki's tour in Afghanistan in 2013.

<https://www.vancouvergunners.ca/wishnicki.html>

Are you still a serving member of an Artillery unit? The Commanding Officer has already paid your dues for The Royal Canadian Artillery Association. We just need you register your membership so that you can benefit from the great member only insurance rates from the TD and also to gain entrance to the Member only forum. We're trying to get some discussion going on the new Hawkeye 105mm howitzer system.

<http://rca-arc.org/the-rca-association/membership/>

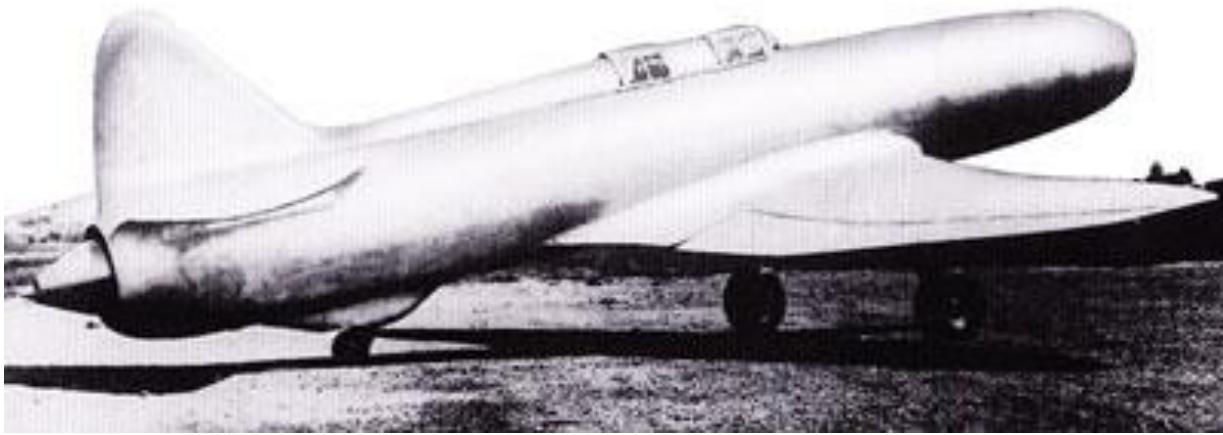
## Who (or What) Is It?

**Last Week: Battle of the Windmill National Site** marks the site of the November 1838 Battle of the Windmill, fought around a grist windmill near Prescott, ON. The Battle of the Windmill was a battle fought in November 1838 in the aftermath of the Upper Canada Rebellion. Loyalist forces of the Upper Canadian government and American troops, aided by the Royal Navy and US Navy, defeated an invasion attempt by a Hunter Patriot para-military unit based in the United States, which had the intention of using the beachhead as a launchpad for further offensives into Canada. Canadian, British, and American troops thwarted the invasion, successfully defending Canadian soil and forced the invaders to surrender. Others still in the US were captured and arrested by US officials. In 1873, the original grist windmill was converted into a lighthouse by the Canadian Department of Marine. The lighthouse became known as **Windmill Point Light**. In 1996 the Friends of Windmill Point opened the 60-foot-tall stone lighthouse tower to the public as Battle of the Windmill National Historic Site, a National Historic Site of Canada. Visitors are led on a guided tour of the tower and can climb to the top just below the lantern room for a view of the St Lawrence River. There are interpretive panels about the battle,



a video presentation, and a gift shop. The tower is open weekends in June and September, and daily in July and August, and is located on Windmill Point Road, off Highway 2, 3 km east of the town of Prescott, Ontario

**This Week:** Canada has been searching for a new fighter aircraft for a few years, and years, and years. Various quite expensive ships have been considered, and various quite squirmy excuses have been made to get out of buying anything that is more costly than a Sopwith Camel. In fact, given the likelihood of the RCAF ever engaging in combat with an enemy flying anything other than a drone, that might be a very good choice. It would certainly be cost-effective, as well as sustainable and biodegradable. A few tweaks, such as room for a parachute, should bring the machines up to current standards.



However, some may argue that rotary-engine, propeller-pulled flying machines have had their day, and, in the

realm of combat, they probably have. So, we could look for something slightly more modern, sleeker, more in keeping with what we flew in the heyday of the RCAF in Europe in the 50s and 60s. The aircraft we propose, while not exactly like the Sabres, Clunks, and Starfighters of yore, is probably more modern than a biplane. So, what is this machine? Can you help us locate a manufacturer for this graceful steed of the air? We'd then be happy to pass the information on to the relevant parliamentary committee, where it will be studied, and studied, and .....well...you get the picture. Send your ideas (and pictures) to the editor, Bob Mugford ([bob.mugford@gmail.com](mailto:bob.mugford@gmail.com)), or the author, John Redmond ([johnd.\\_redmond@telus.net](mailto:johnd._redmond@telus.net)). Per Ardua Ad Astra!

### **From the 'Punitary'**

What epitaph is written on a dentist's grave? He's filling his last cavity.

### **Murphy's Other Laws**

The important things are simple. The simple things are always very hard.

### **Quotable Quotes**

It's better to be a lion for a day than a sheep all your life. - *Elizabeth Kenny*



## Wednesday Digital Video Lunch

No need to worry about COVID-19 when you go digital. Pop into our video lunch **at noon** on Wednesdays and say hi. All you need is a laptop, tablet or smartphone. These sessions are being hosted by the Vancouver Artillery Association and are **open to all** – especially those who attended Wednesday lunches.

Join us to check up on your old lunch buddies.

<https://zoom.us/j/710845848>

For details on downloading and setting up a Zoom account, see the **RUSI Vancouver** notice below



Zoom is the leader in modern enterprise video communications, with an easy, reliable cloud platform for video and audio conferencing, chat, and webinars across mobile, desktop, and room systems. Zoom Rooms is the original software-based conference room solution used around the world in board, conference, huddle, and training rooms, as well as executive offices and classrooms. Founded in 2011, Zoom helps businesses and organizations bring their teams together in a frictionless environment to get more done. Zoom is a publicly traded company headquartered in San Jose, CA.

[Join our Cloud HD Video Meeting now](#)

Use the link above on your computer Zoom program  
or dial in on your phone 778 907 2071 Meeting ID: 710 845 848

Invite 2 friends! We have room for 100! See you on Wednesdays at noon.

Bring your own lunch and beverage of choice.



# Royal United Services Institute Vancouver Society

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Vancouver, BC V6J 2C7  
[www.rusivancouver.ca](http://www.rusivancouver.ca)

## Engaging RUSI Vancouver Members and Friends with Virtual Presentations!

Every Wednesday – Next Session on 20 May 2020

### Topic: Canada and the Cold War

By now everyone has had enough of living in the bunker and maintaining “social distancing.” RUSI had planned to present a lecture series this Spring, but that was not possible for obvious reasons.

As an alternate, and in the spirit of our RUSI mandate on education - and by using **Zoom** - we are presenting a series of online lectures every Wednesday by military historian Col. (Ret'd) Keith Maxwell, OMM, CD. The 6-part topic is ‘Canada and the Cold War’. The first three sessions took place on April 15, 22 and 29.

The presentations continue on **Wednesday, 13 May** from **1:30 to 3:00 PM**. Subsequent sessions will be held on **May 20** with a follow up on **May 27** if necessary. To participate, you need to register an account with **Zoom** – it is easy to do and it’s free. Here is the link to establish an account: <https://zoom.us/freesignup/>

Once you are registered, it is recommended that you download the application on your computer and sign on to the application. Here is the link to do that: <https://zoom.us/download>

We recommend that you download ahead of the scheduled date and time and play with the application a bit to become familiar with it. Keith Maxwell will host the sessions. He is familiar with the application and has implemented all the necessary precautions to keep the presentations safe and secure. If you wish to participate, register for the sessions by sending an email to both Cam Cathcart ([lhccathcart@gmail.com](mailto:lhccathcart@gmail.com)) and Keith Maxwell ([kdm Maxwell@gmail.com](mailto:kdm Maxwell@gmail.com)).

Once you are registered, you will receive an invitation to join the sessions by email. That email will be sent out about two hours before the sessions start. Many of you participated in the Cold War in one way or another – come learn more about what happened in the biggest war we never fought! We look forward to you joining us on Zoom on Wednesday, 20 May.

Cam Cathcart, President