



EDMONTON UNITED SERVICES INSTITUTE

## PRESIDENT'S ENEWS

OCTOBER 2020

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### President's Comment

The fall colour seems to arrive earlier than usual. The trees along 97<sup>th</sup> Street in Edmonton, just outside the former Griesbach Barracks has a beautiful colour mixture of red, yellow, and still a little bit of green. This, against the backdrop of the sunset in the evening is attracting many photographers trying to capture the beauty of the fading summer. Some will lament on the end of summer, but many will look forward to Thanksgiving and the family gathering with the turkey dinner and pumpkin pies, despite our PM told us we may not have the family gatherings for Thanks Giving, because of Covid-19. I am thinking of the Christmas Scrooge who stole Thanks Giving, is alive and living in Ottawa.

There has not been a whole lot of activities amongst military Organizations. On behalf of EUSI, I attended the 80<sup>th</sup> Anniversary of the Battle of Britain celebration on Thursday, September 17, held at the Aviation Museum at Kingsway, Edmonton. We observed all the social distance restrictions and there were about 74 people there. Great speech on pilot training and various planes used for training, many were on display at the museum along with the actual human story behind each display. Nevertheless, I missed the beer after the presentation to exchange war stories. I expected this will be the new norm for many years to come.

The Speakers program of the **Memorial Project** is still on, but speeches will be through Zoom or other virtual means. Requests for speakers from EUSI members have also not forth coming. If any member receives a request for speech at a school, college or community centre, please advise me so that I can take note for our annual report.

I have also been advised that laying of the wreath at **Remembrance Day** will also be restricted. I have not yet received the memo, but I was advised The Legion will not hold their regular commemoration but will have a virtual ceremony with the usual restrictions.

The **Edmonton Salutes Committee** suspended its operations since November, 2019, initially for reviewing its by-law and governance procedures. Then Covid 19 shut it down further. The review has been completed and



Edmonton City Council will advise the changes shortly. The Edmonton Salutes held its first meeting for 2020 on September 25 through virtual medium. Monthly meetings have resumed, albeit the format is to be determined.

**The Last Post Fund** has been quite active. For those who don't know, it is a Veteran Affairs program to assist and fund proper burials for veterans who does not have the financial means to do so. The Board of directors of the Alberta Branch of the LPF include three members of EUSI. Hans Brink is the Chapter chairman, and Ian Taylor is the Secretary and myself is Director at Large. We have very active members in Edson, Ft. McMurray, Lethbridge, Calgary and other places. During the last months, the LPF have also identified a number of veterans buried in unmarked graves and they are now properly recognized.

**Renaming of 97 Street** to Canadian Forces Trail proceeded successfully last October, but more work needs to be done. Some of the donations have only recently been received. Jon Dzydack, City Councilor for ward 3 and a naval lieutenant Reservist has been working to advance the project. More to follow.



### **The Soldiers's Prayer**

God of my fathers! guide my way  
Amidst the Battle's fierce alarms;  
Grant me to see, this dreadful day,  
The triumph of my Country's arms.  
Yet not my will, but thine be done,  
If thy high wisdom doom my fall,  
Tho' short the race of life I've run,  
I die content at Duty's call.  
Then, if thy grace my prayer accord,  
Th' expression of my parting breath,  
Grateful, I'll bless thy goodness, Lord!  
And smile amidst the pangs of Death.  
"May my transgressions of thy will  
Find mercy thro' my Saviour's name!  
May my lov'd Country, freed from ill,  
Long flourish in unbounded fame!"



Chippawa Battlefield Memorial



### **Irrelevant Information You Can Brat About Next Time You Meet Up With Your Buddies.**

\*\*\*Many years ago in Scotland , a new game was invented.. It was ruled 'Gentlemen Only Ladies Forbidden'.. .and thus, the word GOLF entered into the English language.

\*\*\*The first novel ever written on a typewriter, Tom Sawyer

\*\*\* Each king in a deck of playing cards represents a great king from history:

Spades - King David, Hearts - Charlemagne, Clubs –Alexander the Great, Diamonds – Julius Caesar

\*\*\* If a statue in the park of a person on a horse has both front legs in the air, the person died in battle. If the horse has one front leg in the air, the person died because of wounds received in battle. If the horse has all four legs on the ground, the person died of natural causes.

\*\*\* Which day are there more collect calls than any other day of the year?

A. Father's Day

\*\*\* It was the accepted practice in Babylon 4,000 years ago that for a month after the wedding, the bride's father would supply his son-in-law with all the mead he could drink. Mead is a honey wine and because their calendar was lunar based, this period was called the honey month, which we know today as the honeymoon.

**Now You owe me that drink.**



### UNITED NATIONS DAY – 24<sup>th</sup> October

In 1947, the United Nations General Assembly declared 24 October, the anniversary of the Charter of the United Nations, as which "shall be devoted to making known to the peoples of the world the aims and achievements of the United nations and to gaining their support for" its work

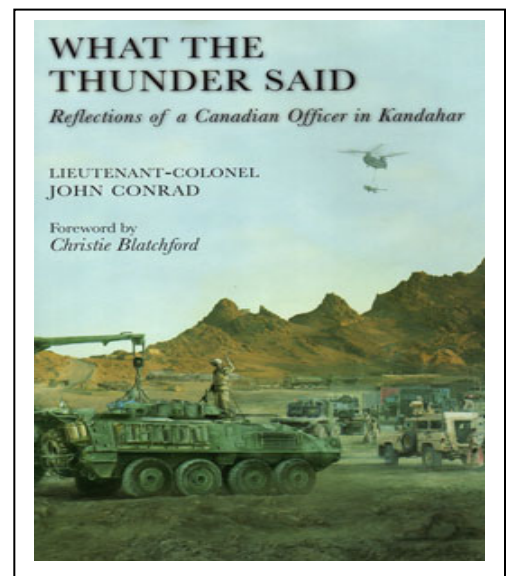


## CANADIAN MILITARY READING

### WHAT THE THUNDER SAID: REFLECTIONS OF A CANADIAN OFFICER IN KANDAHAR

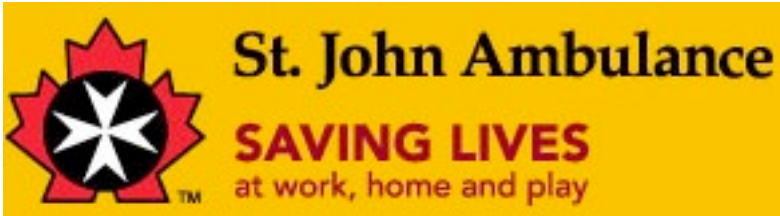
John Conrad

By February 2006, the focus of Canada's military effort in Afghanistan had traversed from the relatively stable central region of Kabul to Kandahar province as the Canadian-led Multinational Brigade conducted a "relief in place" with the US 173 Airborne Task Force Bayonet, and assumed responsibility for the volatile area known as Regional Command South (RC South). Canadian military leadership in Ottawa enthusiastically embraced the opportunity to assume



this leadership role within the NATO community, yet from their earliest meetings with their American counterparts at Kandahar Airfield (KAF), it was apparent to the leadership on the ground that this operation was different and much more dangerous than anything in Canada's recent history.

Colonel (retired) John Conrad was Commander of 41 Brigade Group, an Alberta Reserve Brigade. John was deployed to Afghanistan as Deputy Commander of the Battle Group.



Get trained!



**Is Tank Units or Calvary Units Served Their Usefulness in Modern Warfare?**

## **Tanks Have Rarely Been More Vulnerable**

Tank battles are rare these days. Crews that wish to prove themselves can turn instead to the Tank Biathlon, part of the International Army Games—a sort of Olympics with guns—organised each year by Russia. On September 5th Russian tanks raced and blasted their way to victory over teams from China, Belarus and Azerbaijan. A century after its debut at the Battle of the Somme, the tank—an armoured vehicle typically



equipped with a cannon on a turret—remains the backbone of most armies. The International Institute for Strategic Studies (IISS), a think-tank, counts over 5,000 in Europe, and 54,000 globally. Nothing else can move soldiers around, shield them and wield big guns all at once. Russia was able to slice through Ukraine's defences with its superior t-72s in 2014. Their absence can be keenly felt. The mostly tank-free offensive against Islamic State in 2016-17 was grinding and bloody, even with help from American bombing. "High-intensity combat operations between technologically comparable countries is unimaginable without the large-scale use of tanks," says Viktor Murakhovsky, a retired colonel of Russia's Tank Troops. Yet in some recent conflicts, tanks have struggled. In February Turkish drones destroyed dozens of Syrian tanks in a two-day killing spree. In the past, camouflage could hide tanks from most planes. Today, sensors can pick out things like engine heat and tracks on the ground. "It must be doubted whether existing concepts of armoured manoeuvre will remain viable," concluded Nick Reynolds and Jack Watling, both experts at the Royal United Services Institute UK, another think-tank.

Some armies are therefore cutting back. America's Marine Corps, which has more tanks than most European nations, said in March that it planned to scrap them, to focus on countering China in the Pacific. The tank, it said, had a "long and honourable history in the wars of the past" but was "operationally unsuitable for our highest-priority challenges in the future". (America's army still has plenty.) Britain, the first country to make use of the tank, is debating how far to prune its own ageing fleet, to free money for next-generation weapons. The Netherlands scrapped its heavy armour almost a decade ago, though it now leases 18 tanks from Germany. For most countries, the answer is not to junk the tank but to modernise it. One big change is the view from inside. Tankers of the 1980s saw the battlefield through a pair of periscopes, "a bit like looking through a straw". The newest ones are studded with cameras and other sensors that project a 360-degree view on panoramic displays inside. Such "see-through armour" allows the gunner to aim at one target while the commander looks for the next. Doing away with periscopes also avoids breaks in the armour. Mr Murakhovsky thinks future tanks will use drones to peer around corners and over hills.

Tanks are also beefing up their defences. "Active protection systems" are designed to neuter threats before they hit a tank's armour. "Soft-kill" methods detect and misdirect the radio, infrared or laser beams that guide anti-tank weapons to their targets. "Hard-kill" systems, such as Russia's Afghanit and the Israeli Trophy and Iron Fist, intercept and blow up missiles as they home in (the catch being that nearby infantry could be caught in the blast). Ben Barry, a former brigadier in the British Army and now at the IISS, reckons that many of NATO's anti-tank weapons would struggle to penetrate the newest Russian protection systems. But these adornments come at a price. Tanks are expensive as it is (a new Russian T-14 Armata costs \$4m, for instance). Operating the machines can cost several hundred dollars per kilometre. Piling on defences to protect soldiers—politically essential in wars of choice—adds to the bill, and the machine's weight. For that reason, only a few NATO countries are investing in hard-kill protection. And even snazzy new defences are struggling to keep up with innovations in attack. The Israeli Trophy system carries just two rounds, so firing several missiles at the same time could defeat it. "The death of the tank comes round every five years or so," says Jon Hawkes, head of land warfare for Janes, a research company. "But the tank is more vulnerable now

than it has ever been. We're reaching the apex of the armour versus gun race—and armour has lost that race." Tactics, rather than technology, can help redress the balance. Massed tank formations can dominate if they get within 2km of their target, in range of their guns. Before they get there, however, they can be pummelled with long-range artillery and missiles. That means that, in the tank battles of the future, armoured forces would probably fight more slyly, using concealment, cover, darkness and dispersal—much as Serbia did against NATO in 1999. If they can be kept safe, tanks remain uniquely potent weapons. In war games set in the Baltic states, Russian tanks with air cover—to bat away threats like the drones that picked off Syrian tanks in February—"easily punch through" lighter NATO forces, says Chris Dougherty of the Centre for a New American Security, a think-tank in Washington. In war games set in Taiwan, he says, China struggles to seize the island without heavy armour. Heavy metal still counts.



## Hot of the Press - General Atomics' Sparrowhawk Drone-Launched Drone

This low-cost unmanned demonstrator could give larger drones, such as the MQ-9 Reaper, game-changing new capabilities. *Joseph Trevithick The War Zone September 25, 2020*

General Atomics says that it has conducted captive carry tests of its Sparrowhawk, a new small drone that will be able to be launched and recovered in flight. The company says that Sparrowhawk is a demonstrator and was developed specifically to work with other larger unmanned aircraft that it builds, such as the MQ-9 Reaper and MQ-1C Gray Eagle, offering an important stepping stone to all-new capabilities on those existing designs, as well as future ones. The California-based drone's maker said the captive carry tests, in which the drone was carried aloft by an MQ-9, but was not launched, took place between Sept 16 and 17, 2020. This kind of testing is done to gather data on how a system, as well as the launch platform in many cases, handles the stress of flight.

### ***Below:***

***A picture of Sparrowhawk that General Atomics released to The War Zone shows that the drone features a large main wing that is stowed parallel with the main fuselage before launch, after which it swings 90 degrees into a deployed position. The drone also has a v-tail and there appears to be at least one air intake for the propulsion system on the right side. It's unclear what type of powerplant powers the air-launched drone***



Sparrowhawk concept art that General Atomics posted on Twitter earlier in September showed a similar configuration, but with two fans at the rear of the fuselage. The company has said that the small drone will offer a reduced acoustic signature, as well as a visual one, compared to its larger designs, such as the MQ-9. It's not clear yet how General Atomics is planning to recover Sparrowhawk in flight and whether unmanned platforms, such as the MQ-9, will be able to carry out this task. "Sparrowhawk iterates on the DARPA Gremlins Program," according to the company. Dynetics, now a subsidiary of Leidos, beat out General Atomics, among others, to build the experimental Gremlins drone, now also designed the X-61A, as well as the airborne recovery system, which is presently mounted on a C-130 Hercules transport aircraft. You can read more about Gremlins and the recovery concept, which includes the drone catching the end of a cable in flight and then being reeled in, in these past *War Zone* pieces.

The ability of a large drone to launch smaller ones, all potentially working together semi-autonomously or even as part of a fully-autonomous swarm, could open the door to all kinds of new capabilities, while reducing the risk to the launch platform. "Sparrowhawk extends and multiplies MQ-9-based sensors, reduces manpower and increases ISR [intelligence, surveillance, and reconnaissance] coverage," David Alexander, President of General Atomics Aeronautical Systems, Inc. (GA-ASI), said in a statement. Beyond providing far more flexible ISR over a larger geographical area, Sparrowhawks may also provide valuable stand-in electronic warfare jamming or even act as decoys to blind and confuse enemy integrated air defenses, which could drastically increase the survivability of the launch platform and even help clear a path for other manned and unmanned aircraft, as well as stand-off missile strikes.

Sparrowhawks could potentially carry out their own kinetic strikes if they can be equipped with traditional explosive warheads, although there is no official information yet if arming these unmanned aircraft is a possibility. If it is indeed the case, these drones might be able to act as loitering munitions, which would be able to conduct persistent surveillance of designated areas before then carrying out strikes on targets of opportunity or return for recovery and re-launch.

General Atomics says that Sparrowhawk is intended to be an attritable platform, as well, despite being designed to be recovered and reused. Attritable designs are those that are low cost enough that commanders can employ them in higher-risk environments that would be off-limits to more expensive exquisite types. "With attritableONE technology that is survivable and precise, Sparrowhawk is a true game changer," GS-ASI's President Alexander said. This program is part of the US Air Force's expansive Advanced Battle Management System (ABMS) program, which is seeking to develop a host of new highly-networked technologies that will expand the service's ability to gather information and then rapidly analyze and disseminate it, including targeting data that can then be passed to other U.S. military units in the air, on the ground, and at sea. As the name implies, attritableONE is focused on developing new attritable unmanned aircraft. In a recent major demonstration of various ABMS capabilities and associated technologies, an MQ-1C Gray Eagle launched an Area-I Air-Launched, Tube-Integrated, Unmanned System 600 (ALTIUS 600) small drone, acting as an attritableONE testbed. The ALTIUS 600 then positively identified a target that the MQ-1C's onboard sensors had first identified

The US Army has also been experimenting with the ALTIUS 600 as part of its Air Launch Effects (ALE) effort, which also envisions fleets of small drones performing various ISR, deception, and other tasks, which you can read about in more detail in this past *War Zone* piece. During the recent ABMS demonstration, a General Atomics MQ-9 also carried a Rosetta Echo Advanced Payload (REAP) communications and datalink pod, which includes technology developed under gatewayONE and meshONE, which are also part of the broader ABMS effort. "The REAP pod has been developed under contract from the Air National Guard and demonstrated a communications relay capability for both Link-16 and the Silvus meshONE network providing seamless connectivity between air and ground participants in the demonstration area," according to General Atomics. All told, the Sparrowhawk looks to be an extremely exciting development. It also comes at a time when the US Air Force, the largest operator of MQ-9s, is looking to stop buying those drones due to concerns that they are simply too vulnerable to be useful during a high-end conflict. The ability of Reapers to launch and recover smaller, attritable drones and, by extension, perform a wider array of tasks over a larger geographical area, even in contested environments, could breathe new life into that design



**Editor's Note** - There are a lot of technical details in the last two items. Both articles are meant to be read in conjunction to gain an appreciation of the rapid changes in modern warfare. This allow us to better prepare and defend ourselves.



**IT IS TOO LATE TO SHARPEN SWORDS, WHEN THE DRUMS OF WAR ARE BEATING**



**SECURITAS**

MAJOR (RET'D) ALEXANDER H. TSANG CD  
PRESIDENT, EDMONTON UNITED SERVICES INSTITUTE  
[ALEXANDERHTSANG@HOTMAIL.COM](mailto:ALEXANDERHTSANG@HOTMAIL.COM)