

EXPLORE THE DEPTH

ROYAL CANADIAN NAVY  MARINE ROYALE CANADIENNE

» OF CANADA'S

SUBMARINE FORCE



A SUBMARINE AND CREW

Out of the water... but still very busy!



Submarines are part of the unseen force of the nation, stealthy, lethal and persistent, making them ideal for surveillance and intelligence gathering in peacetime and wartime. Most importantly, the crew is critical for ensuring that submarines operate at peak performance while deployed on various exercises and operations. No crew, and the submarine doesn't go anywhere.

But, what does the crew of a submarine do when the submarine is in dry-dock or alongside?

Her Majesty's Canadian Submarine *Chicoutimi*, one of Canada's four Victoria-class submarines, has been in several international training exercises and operations throughout the Pacific in recent years, contributing greatly to the over 2,300 days at sea amassed by the class since their service began.

HMCS Chicoutimi also completed a record 197-day deployment in 2017-18 in support of Op PROJECTION, where the submarine operated in the Asia-Pacific region and was actively involved in joint exercises conducted by the Japanese Maritime Self Defense Force and the United States Navy.

Currently, *HMCS Chicoutimi* is in the midst of a Transitional Docking Work Period that will upgrade the submarine, update the maintenance and allow the platform to adopt a new maintenance cycle, improving the overall availability and capability of the submarine. Although not unlike maintenance conducted on your car, these checks must ensure the "vehicle" is ready in all respects in order to operate while submerged in more than 200 metres of salt water and under tremendous pressure.

These maintenance periods also allow the crew a chance to have time ashore.

A submariner differs somewhat from the surface sailor, and even more from the aver-

age citizen. When they go to sea, they lack regular communication with the outside world. The internet does not exist under the ocean... nor does fresh air, privacy, or laundry machines. A nice refreshing shower is also not a regular commodity on board a submarine. Thank goodness for baby wipes and laundry buckets. And yet, most submariners thrive in that environment and demand more. As such, it is truly an elite group within the Royal Canadian Navy which all can become a member, given the right training, work ethic and attitude.

Even though not at sea, submariners remain busy when the boat comes alongside or goes into dry dock.

Every submariner is required to maintain a standard of physical fitness, and they must also stay current in submarine damage control procedures, focusing on firefighting, escape procedures, hydraulic bursts, high pressure air bursts and various electrical failures which are serious incidents for a submerged submarine. Submariners maintain up-to-date first aid training while ensuring they themselves remain healthy and ready to deploy. Time ashore provides crew members an opportunity to seek out further training to enable them to take on advanced roles.

Beyond striving to maintain personal qualifications as required by each submariner's individual trade, the crew of a submarine actively trains future submarine candidates while concurrently overseeing the work on their submarine. They train to be ready and proficient in new systems and any upgrades that are usually the result of a work period, while taking care of the routine administration of daily life.

Seemingly standard life tasks become more difficult for a

submariner at sea. While being at sea for weeks on end with limited to no communication is the norm, a submariner must proactively plan out things like when and how to pay the mortgage, how long to store personal goods, or who will take care of the pets. And back-up plans must be created in case things change, or the submarine needs to remain on patrol longer.

As submarines lack many of the amenities that surface warships have, submariners make the most of their time ashore. For instance, when in alongside outside of their home port, submarine crews stay in hotels so that they have access to regular showers and laundry facilities, and can just enjoy much-needed personal space after living in the cramped confines of a submarine for weeks on end.

Submariner Lieutenant(Navy) Nathan Haylett notes that in these situations, each submariner is given the key to their hotel room, normally shared with another crew member, as well as subsistence allowance and incidentals to pay for food and other amenities.

"We are expected to be ready to stand duty watch and work as required," he said. "but we certainly have more freedom to explore various attractions... and eat amazing food!"

The submarine community also tries to host monthly mess events as a crew, COVID-19 permitted. These events include harbour cruises, local axe throwing events, tastings, sporting days and competitive games days. These activities help bond a small crew into a family.

HMCS Chicoutimi looks forward to returning to operational service in 2023. Until then, the crew is busy supporting other submarines and preparing to undertake any other tasks, while spending quality time with family and friends. ■

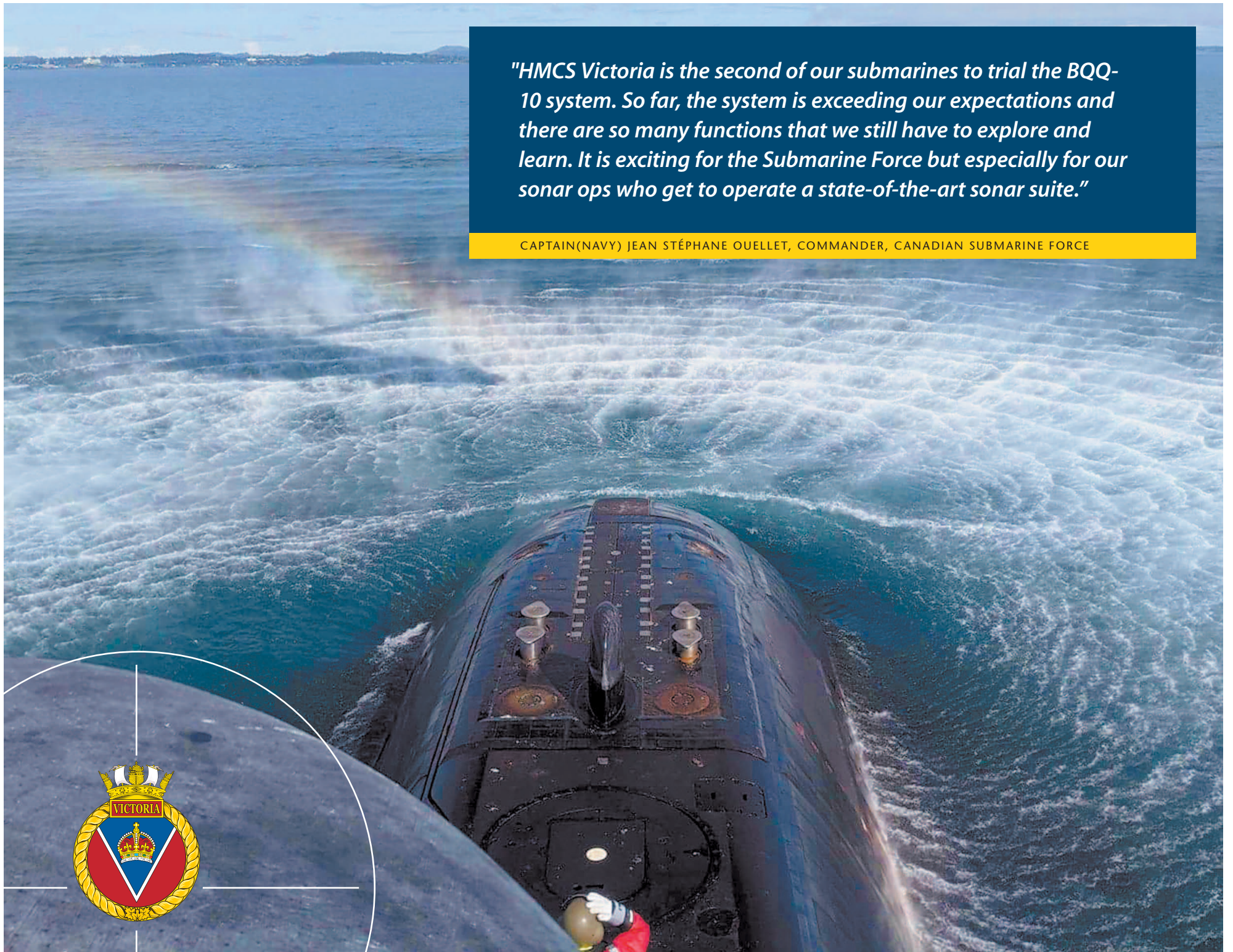


"We are expected to be ready to stand duty watch and work as required, but we certainly have more freedom to explore various attractions... and eat amazing food!"

LIEUTENANT(NAVY) NATHAN HAYLETT

"HMCS Victoria is the second of our submarines to trial the BQQ-10 system. So far, the system is exceeding our expectations and there are so many functions that we still have to explore and learn. It is exciting for the Submarine Force but especially for our sonar ops who get to operate a state-of-the-art sonar suite."

CAPTAIN(NAVY) JEAN STÉPHANE OUELLET, COMMANDER, CANADIAN SUBMARINE FORCE



Submarine upgrades

INCREASE UNDERWATER AWARENESS

► BY CAPT JENN JACKSON, MARPAC PUBLIC AFFAIRS

Her Majesty's Canadian Submarine Victoria is back at sea and its sonar operators (sonar op) are more equipped than ever before.

That is because *HMCS Victoria* received an upgrade during the submarine's last docking work period to its BQQ-10 sonar suite, which not only aligns capabilities with that of our Allies, but also effectively changes the game for the Royal Canadian Navy's Victoria-class submarines.

Recently, *HMCS Victoria's* crew successfully conducted trials of the new sonar suite aimed at proving the system, fine tuning and verifying its integration with other onboard systems. For *Victoria's* Senior Sonar Operator (UC1), Petty Officer 2nd Class (PO2) Naomi Mihalcheon, the difference brings a new level of excitement to her job.

"The BQQ-10 is far more advanced than the former sonar suite when it comes to

processing and options for analysing contacts," says PO2 Mihalcheon. "With the BQQ-10, we have a much more sophisticated system to work with now."

The differences between the BQQ-10 and the previous 2040 sonar suite range from a significant increase in the amount of post-processing that occurs when data is received from *Victoria's* sonar systems to how that information is displayed in the submarine's control room for its Sonar Ops.

"The upgraded screens make a significant difference," adds PO2 Mihalcheon. "In some ways, it is like we advanced from working with Atari-level graphics and information to full-on HDMI."

Prior to the trials at sea, the change for the Sonar Ops began ashore with conversion training to familiarize the operators with the new equipment and data present

tion, which is assisted by the fact that the fundamentals of the Sonar Op's job remain the same.

"Building a "sonar ear" is equally as important now as it was with the 2040 system. It is still possible to classify a contact simply by what it sounds like before the BQQ-10 processing and evaluations happens," says PO2 Mihalcheon.

Even with conversion training ashore, the main challenge faced by Sonar Ops at sea is determining how to optimize the system and what works best to provide the most relevant data to the command team. As *Victoria* continues with its regular patrol schedule, its Sonar Ops will continue to tweak their use of the system, which in turn will benefit the Canadian Submarine Force overall.

"*HMCS Victoria* is the second of our submarines to trial the BQQ-10 system. So far,

the system is exceeding our expectations and there are so many functions that we still have to explore and learn. It is exciting for the Submarine Force but especially for our sonar ops who get to operate a state-of-the-art sonar suite," says Capt(N) Jean Stéphane Ouellet, Commander, Canadian Submarine Force.

"All operational Victoria-class submarines are upgraded with this system, with *Corner Brook* being the third submarine to be upgraded upon completion of the Extended Docking Work Period in late-2021. This leads to an overall increased awareness of the underwater environment. Not only does this system significantly improve our surveillance capabilities in the defence of Canada, it also contributes to keeping the Canadian Submarine Force relevant for operations today and in the future," he adds. ■

Letters

LETTER #1 – 18 APR, 2021

Dear Reader,

My name is Captain Jenn Jackson and I am a Public Affairs Officer posted to Maritime Forces Pacific. For the last year and a half I have been supporting the Commander of the Canadian Submarine Force's Public Affairs program and that means I have been interacting regularly with submariners and learning about subs even though I have never sailed in one.

All of that is about to change, as I have been provided an opportunity to sail in *Her Majesty's Canadian Submarine Victoria* for approximately 36-hours to experience first-hand what it is like living and sailing in one of Canada's Victoria-class submarines. I admit to being a little nervous-excited – nervous because I have never sailed in a sub before (although I have sailed a lot in the surface ships), and excited because it's a new experience and adventure and I am always up for an adventure.

I am just completing the end of my pre-sail protocol which is a period of isolation in a hotel and a number of COVID-19 tests, all of which minimize the risk of COVID-19 when I join the sub – which is currently sailing and conducting trials for its new SONAR.

The plan is for me to drive up and embark in the sub via a boat transfer. To prepare for this, I already pre-positioned some kit on board with the help of the Coxswain, so that I don't have to worry about transferring a lot of bags from the small boat to the sub. To embark, I will need to climb up a rope ladder from the boat to the sub to meet the crew.

Once I am aboard, the plan is to continue the SONAR trials, so we will be diving shortly after I arrive – no turning back then. Thankfully, I am not claustrophobic, especially since I will be sleeping in a torpedo rack!

Thanks for coming on this adventure with me, and the next time I write, I will be already in the sub and under the sea!

Yours aye,

Captain Jenn Jackson
Public Affairs Officer

Soon to be embarked in *HMCS Victoria*

LETTER #2 – 19 APR, 2021

Dear Reader,

Well, here I am in *HMCS Victoria* and we have been submerged most of the day doing trials on the new Sonar system.

It was a bit of an adventure to get here and rapid fire in some ways with a steep learning curve. I managed to get onto the sub from the small boat without tossing myself or any of my belongings in the water (really grateful the sea was almost a flat calm in the bay).

One of the first things I noticed is how much the crew works together like a well-oiled machine. *Victoria* only returned to sea after its last docking work period last fall, but the crew is incredibly gelled in how they work. They got me and my gear on the sub efficiently while also disembarking another submariner going ashore for career training.

As soon as I was in the sub, I moved to the Weapons Stowage Compartment (WSC) where my bunk (which is on top of a torpedo rack) is located to set up and wait for the Coxswain to receive a safety brief as well as some general tips for life in a sub (not going to lie – the most important part was learning how to use the heads – which is more complicated than on land).

After my brief, we got underway and two sailors who also bunk in the WSC showed me and assisted me in making my bunk.

FROM
BENEATH
THE SEA



This was the first major difference I experienced – the bedding is similar to 3 sleeping bags. The first is a sheet which wraps around the mattress for sleeping on. The second is a light blanket which also goes around the mattress, and the final is almost exactly like a sleeping bag that goes on top. To make the rack, it was necessary to hold the mattress off the ground while pulling the bedding around it. That was a workout!

I met with the Executive Officer in the Wardroom to go over some details and shortly after I headed up to the Control Room to observe as the crew prepared to dive. I was designated an empty chair to sit on and stay out of the way. I quickly learned how much proper space management is essential in the cramped spaces.

Diving itself was quite an interesting experience. The first surprise was to have my ears "pop" as they shut the hatches – sort of like an airplane cabin. The second was how much the sub angled down during the dive – it really was similar to an aircraft descending steeply and reminded me of my experience onboard a C-177 Globemaster aircraft doing Short Take Off and Landings.

What was really interesting was the visual from the attack periscope (there are actually two periscopes!) was duplicated on a monitor behind me so I was able to watch as the sub slipped below the surface. The ride was so smooth, if I hadn't seen that, I don't think I would have known when we were submerged! We first went to periscope depth, then we dove deeper for the trials that had to be conducted. There was an experienced SONAR Operator sitting next to me and he explained some of what was happening.

I'm going to stop there for now, and save some of my experiences today for another letter. I can't believe it's been less than 24-hours and so much has already taken place!

Yours Aye,

Captain Jenn Jackson
Public Affairs Officer
Embarked in *HMCS Victoria*

LETTER #3 – 19 APR, 2021

Dear Reader,

Thanks for continuing along on my journey with me! In this letter, I am going to provide some more information on the trials we were doing, and life in the sub in general.

First, I would like to point out that the sonars we were using during the trials are passive sonars – meaning that we are collecting information from the environment around us, we aren't sending any sonar transmissions (also called "pings") out in the water.

After the first phase of the trials fully submerged (I can't say how deep for security reasons), we came up to periscope depth to continue the trials. In between I had lunch with members of the crew in the Wardroom, which was served in shifts due to the limited seating. Another change from other vessels – the meals are served by the Steward to the other officers so that there aren't line ups in the cramped flats. The Coxswain

and Marine Systems Coordinator serve the other senior non-commissioned officers, and the junior ranks are served through a pass-through window. It's an interesting tradition!

I also wanted to note that meals on a submarine are served approximately 8 hours apart with snacks available in between. That means that breakfast is at 3 a.m., and supper is at 7 p.m. As most of the crew, including the XO, stand watch 12 hours a day, this syncs with the overall watch schedule.

Returning back to the trials, after lunch I returned to the Control Room to watch the Sonar Operators work. I can't say I understood what they were looking at, but it was interesting to watch the information being passed back and forth between the Sonar Operators and the Fire Control System Operators (which are comprised of a variety of trades from both the Combat Systems Engineering and Operations departments). In addition, both periscopes were in operation with regular updates being provided.

I was provided an opportunity to observe and report on the contacts from the attack periscope for a while. My job entailed looking through the periscope at a ship on the surface and providing the range and bearing to the trials staff to verify accuracy of the new system. In between reports I was able to circle the periscope around and see the huge range the periscope can look at, including up as high as the sky, and down to the sea.

My time at the periscope ended as I took an opportunity to capture some photos of a simulated casualty exercise organized by the Coxswain for some crew training. Seeing how difficult it is to work with a casualty in the cramped spaces was certainly eye opening!

I also spent a lot of time talking with the submariners about their own experiences, challenges and achievements. Some of the most interesting conversation was about some of the changes they have seen during their careers.

Well, dinner is coming up quick, so I am going to end here for now. I'll write again tomorrow to fill you in on what it's like to sleep on a submarine for the first time before we come alongside.

Yours aye,

Captain Jenn Jackson
Public Affairs Officer
Embarked in *HMCS Victoria*

LETTER #4 – 20 APRIL, 2021

Dear reader,

Well, this will be my last letter from *HMCS Victoria*. It's certainly been a whirlwind trip, but I have been able to see so much in my 36-hours at sea.

It was an interesting night and morning. It took me a while to get to sleep, but my first challenge was actually getting into my rack without hitting my head. Because of the low clearance space in the rack (there isn't enough room to sit up) and that I was on an upper rack meant that to get into bed I had to do a bit of an inchworm shimmy from the foot to the head.

Once I was in bed, it took some shifting to

get into my sleeping bag, which I soon found to be a little too warm for me. Thankfully, I had brought my own blanket – like most sailors, I have one thing I never sail without, and it's a weighted blanket – so that was good enough to keep me warm. The next challenge was finding a comfortable position without feeling like I might fall out of my rack. Since the rack is about half the width of a normal single bed, rolling over was not really an option. In the end, I placed my backpack as a bit of a brace and just having something to lean against did the trick. It was close to midnight before I managed to figure all of this out!

Because a submarine at sea operates 24/7, there were always people coming and going in the bunk space (almost all bunk spaces are in the flats, or in my case the Weapons Stowage Compartment). Submariners are moving about at all hours, some getting ready for watches or coming off, some actually on watch. The one thing I immediately picked up on (and was grateful for last night!) was how much care everyone takes to respect their fellow sleeping submariners. Voices are kept low, privacy is respected, and white light is limited (in fact red light is used from sunset until almost lunch to assist the irregular sleeping patterns needed for the watch schedule).

Overall, the environment and interaction I observed between the submariners is truly one of the most respectful I have experienced throughout my 24 years in the military and working in all three environments – Army, Air Force, and Navy. Treating others how you would like to be treated really is a way of life in a submarine.

So, despite my initial challenges, once I did get to sleep I slept well. That left my final challenge to be waking up, shimmying out of my rack and heading to the heads, (which are down a ladder from the WSC) and getting myself ready for the morning.

The sub transited back towards Esquimalt overnight so we could be positioned to be alongside. We did so surfaced. On the surface, the bridge, which is at the top of the submarine fin, is crewed by the Officer of the Watch and a lookout.

We are preparing to come alongside now, and soon we will disembark. For me, I will be able to return to home and work, but for the rest of the crew – they will be going into isolation to maintain their COVID-19 free status and prepare for their next sail.

Throughout the pandemic, members from all of our vessels – surface and submarines have had to spend extended periods of time alone and away from family to ensure that they are sailing with minimal risk of COVID-19, and that the mission of the Royal Canadian Navy continues. I have had to do it three times now, and each time it becomes a little harder, and the days seem longer. I want to give a shout-out to all of our sailors and their families who have been doing this regularly to maintain a naval presence on the west coast of Canada.

In closing, I would like to take a moment to thank the Commanding Officer and crew of *HMCS Victoria* for welcoming and allowing me this short glimpse into life in a submarine. My respect and understanding of submariners as a whole has certainly increased as a result of this experience, and I hope my letters accurately reflect this small portion of your story. Thank you for being willing to serve Canada as a submariner.

Yours Aye,

Captain Jenn Jackson
Public Affairs Officer
Embarked in *HMCS Victoria*

Submariner Profiles

» MEET MASTER SAILOR JIMMY CHOU

Master Sailor (MS) Jimmy Chou, a Naval Combat Information Operator, joined the Royal Canadian Navy in 2012. He became a submariner in 2017.

"I knew that becoming a submariner was going to be a challenging journey, so I decided to get out of my comfort zone and try something new," he says, noting that his favourite thing about submarines is the people.

When at sea, the one thing that MS Chou

can't do without is his MacBook so he can produce music while away from his home studio.

For anyone considering a life under the waves, MS Chou advises to do some research.

"Understand exactly what your trade will be like on the submarine versus in the surface fleet," he says. "On the subs, we all have to learn a bit about each other's trades, so that was one aspect I liked -- to appreciate everyone's role on the submarine." ■



» MEET SAILOR FIRST CLASS JERRET SAGE

Sailor First Class (S1) Jerret Sage, a Marine Technician, joined the Royal Canadian Navy in 2018, becoming a submariner in 2021.

"I was thinking that being on a surface vessel would be too boring," he said of his decision to become a submariner. "Smaller crew size and a more relaxed atmosphere or work environment are some pros."

S1 Sage says he never sails without his personal pillow from home, complete with pillow case. His favourite part of the job is working with his co-workers.

For those considering a career in submarines, he has some advice.

"Be patient for sail time. When it comes, be prepared to do the business and have fun." ■



» MEET PETTY OFFICER SECOND CLASS NAOMI MIHALCHEON

Petty Officer Second Class (PO2) Naomi Mihalcheon, a Sonar Operator, joined the Canadian Armed Forces in 2001 as an Army Reservist. In 2006, she joined the Royal Canadian Navy (Regular Force) and began training to become a submariner in 2009, becoming fully qualified in 2010.

For PO2 Mihalcheon, becoming a submariner meant an opportunity to become a subject matter expert within the Sonar Operator trade.

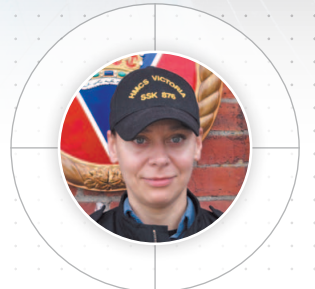
Her favourite aspects about being a submariner are the "community, achievement and trade knowledge," she says.

She also notes that she never sails without her

trusty flashlight.

MS Mihalcheon encourages those service personnel considering a switch to submarines to go for it.

"If you've already considered it, it might be a good fit for you, so why not give it a try?" she says. ■



» MEET SAILOR FIRST CLASS JAIME JOSE SANTISTEBAN BAZAN

Sailor First Class (S1) Jaime Jose Santisteban Bazan, a Sonar Operator, joined the Royal Canadian Navy in 2016. In 2021, he was awarded his Dolphins, signalling to all that he is a qualified submariner.

S1 Santisteban Bazan made his decision to switch from the surface fleet to submarines while sailing onboard *HMCS Vancouver*.

"A colleague of mine, a former submariner, offered to take me to *HMCS Victoria* and to give me a tour," he says. "I am glad I took his offer, as what I saw onboard was reminiscent of the old classic submarine movies."

That day onboard *Victoria*, one of Canada's four submarines, was permanently etched in his memory.

"What left a lasting impact were the three members of the crew I met that day," he remembers. "Confident yet humble, proud yet friendly, the submariners (all of vastly different ranks) I met that day were having an animated conversation on the merits of one TV show over another. I joined the conversation, and it did not

take long for me to realize that their apparent aloofness was anything but, when their panel blinked a warning. One of them walked over to the screen, and read out the warning. Without skipping a step, the conversation turned into an in-depth mechanical analysis of what that flashing light was communicating to them which, to me, sounded like pure nonsense."

"After deciding the light was not a threat to the submarine and waving it away, the submariners resumed their conversation, this time arguing the better way to approach a deer during a hunt. To my eyes, that relaxed environment, backed by the experience of a well-trained crew, was leagues ahead of what one could find in the surface fleet. I just knew then and there that I had to try to become a submariner myself."

For S1 Santisteban Bazan, the best thing about being a submariner is the direct correlation between one's authority and the competency they display.

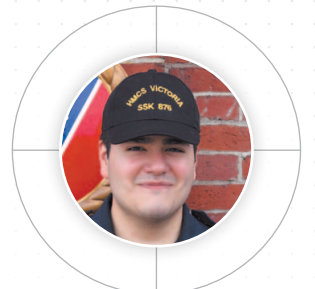
"At sea, if you're a junior rate who's motivated

and diligent, you'll soon find yourself in charge of an essential submarine system," he says. "Alongside, depending on your trade, there will never be a dull moment for, generally speaking, as long as you have proven yourself reliable and your work gets done, you'll be expected to act autonomously."

One thing that S1 Santisteban Bazan never leaves home without is a well-hidden bag of candy.

For those considering a career in subs, S1 Santisteban Bazan advises them to trust their gut instincts.

"Do not trust the picture sailors from the surface fleet will paint of the submarine program. Do not trust the picture submariners will paint of the submarine program," he says. "Ask to visit *HMCS Victoria*, and watch us in our natural environment. Whatever trade you are, ask to shadow a submariner in your preferred trade. That'll be the truest picture of what you can expect if you decide to apply to become a submariner." ■



» MEET SUB-LIEUTENANT ABHI SAXENA

Sub-Lieutenant (SLt) Abhi Saxena, a Naval Warfare Officer, joined the Royal Canadian Navy in 2017, becoming a submariner in 2021.

"I chose to become a submariner because, for me, it was the chance to prove myself, it was something that spoke of greater acumen, accuracy and caliber," he says. "I was captivated by the technology, by their whole approach to combat, by the stealth and everything else."

"I chose to become a submariner after speaking to and observing other submariners, their mannerism and knowledge. I found them being set apart from others. I wanted to prove myself as capable and trustworthy to an elite group of people that treasured competence,

duty, selflessness, and courage above anything else."

For SLt Saxena, the best part of the submarine community is the people.

"I know it's almost a cliché when someone says their crew is the best in the business, which statistically can't all be true," he says. "However, in my case, the stats favour me. My co-workers are my favourite part of being a submariner. I'm thankful to all my equals, my betters for making my job so much more enjoyable."

SLt Saxena compares being in the Submarine Force to the space program, as submarines are the closest thing to a long-duration space flight.

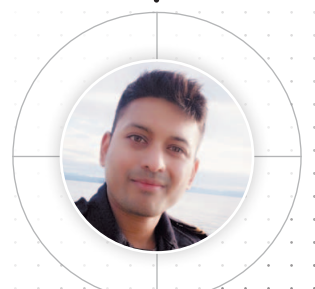
"To me, my job is one of the coolest profes-

sions out there."

When at sea, SLt Saxena never leaves home without his music and books, as they provide him the ability to switch off and unwind -- to leave the job behind for a while during down time.

For those considering becoming a submariner, SLt Saxena says that the will to keep going and being determined will take you much higher in this profession than just skills alone.

"From what I've seen of submariners, they would rather take a disciplined, hardworking member with little experience on their team rather than a skilled but overconfident superstar." ■




HMCS WINDSOR

Prepares for upcoming Exercise CUTLASS FURY

► BY SLT JOSH EHNISZ, MARPAC HEADQUARTERS

What distinguishes a submarine deployment from a surface ship deployment?

For Lieutenant Commander (LCdr) William Matheson, the Commanding Officer of *Her Majesty's Canadian Submarine Windsor*, the answer is clear.

"That's simple, the submarine."

While this is evident, he is only partly kidding. Everything onboard the submarine comes with its own interpretation. Showering, using the wash-room (called the "heads" in Navy-speak), sleeping, watch rotations, meals, communications, or how you interact with the outside world -- it's all similar to the rest of the Navy but...different.

"There really is a simple joy in having a hurricane pass over top of the submarine to gently rock you to sleep 150 meters below the surface," noted LCdr Matheson.

HMCS Windsor is Canada's sole submarine based out of Halifax and is the primary Canadian submarine patrolling

Atlantic waters. It has been deployed throughout the Atlantic, visiting countries in Europe and various ports throughout the United States, as well as operating in the Mediterranean. Currently, *HMCS Windsor* is working towards taking part in Exercise CUTLASS FURY 21. This is a Canadian-led multinational exercise taking place this fall off the East Coast of Canada.

In preparation for the exercise, *HMCS Windsor* has spent some time in the Fred Sherwood trainer, the Victoria-class submarine team trainer, to be ready for the more complex tactical scenarios which will be presented throughout the exercise.

"Being employed on a submarine is an opportunity of a lifetime, and being a commanding officer is an experience that is truly icing on that cake," adds LCdr Matheson. "Being able to lead my crew through train-



ing and participation in exercises like CUTLASS FURY is an unparalleled opportunity. The crew is able to do the job they love and these exercises give newer submariners a first chance to gain real operational experience working together with surface ships for collective training."

CUTLASS FURY will enable the submarine and surface ships to train with, and against, each other in a simulated environment. They will face realistic tactical scenarios to test their respective defences against both surface and sub-surface threats. This requires the crew to work together to overcome these challenges, but this teamwork is one of the many factors that contributes to the camaraderie found among submariners.


"Ensuring the smooth operational employment of a submarine during exercises is a massive team effort. Beyond the training we are currently doing

to prepare, it gives my crew the chance to consolidate and apply what they have learned in a truly dynamic environment," says LCdr Matheson.

Although Exercise CUTLASS FURY will not take place until this fall, team training has been a priority for *Windsor* since the submarine finished its Transitional Docking Period this past February.

"Our training ensures that *Windsor's* crew are positioned to effectively and efficiently do what subs do best," concludes LCdr Matheson. "We'll use stealth to observe, evade and hunt surface and sub-surface threats -- while also providing training for the surface ships that surpasses any simulation."

Following the exercise, *HMCS Windsor* will move into a scheduled maintenance period which will include a battery change. Upon completion, the crew will shift their focus to testing the newly fitted Mark 48 7AT torpedo and completing first-of-class firings in 2022. ■




























"Being able to lead my crew through training and participation in exercises like CUTLASS FURY is an unparalleled opportunity. The crew is able to do the job they love and these exercises give newer submariners a first chance to gain real operational experience working together with surface ships for collective training."

LIEUTENANT COMMANDER (LCDR) WILLIAM MATHESON

25 things I learned

ABOUT LIFE IN A SUBMARINE AFTER 36-HOURS AT SEA



-  Not all submariners wear coveralls all the time. Some prefer naval combat dress depending on the temperature onboard.
-  The atmosphere onboard the submarine is not pressurized regardless of depth at which the submarine operates; it remains at 1ATM which is the approximate pressure at mean sea-level.
-  Breakfast is at 3 am, and supper is at 7 pm, with 8 hours between all meals to accommodate the watch schedule. Snacks are available between meals.
-  Submarining is very much like camping underwater.
-  Empty torpedo racks in the weapon stowage compartment also double as a space to put a mattress for riders to sleep on.
-  Other than bucket washing, there are no laundry machines on board.
-  There are three heads and one dedicated shower on board. One of the heads also doubles as a shower. The sink in that space flips up to drain and make more room.
-  The standard bed is only 5 feet 9 inches long.
-  There are a lot of submariners, especially officers, who are more than 6 ft tall. Some of them confess to sleeping with their feet in the cubbyhole (storage locker) at the end of the bed.
-  When you are in a submerged submarine, it is easy to forget you are in a moving vessel. It is very quiet and smooth. If you are sea sick, a dived submarine is a good place to be.
-  When the submarine is diving, it is a similar feeling as descending in altitude in an aircraft. The submarine will also bank in the turns at high speed like an aircraft.
-  Climbing the vertical ladders between decks all day really works your triceps!
-  The flat portion of the submarine where submariners stand when coming in and out of harbours is called the casing and is not part of the pressure hull.
-  It is much easier to climb a rope ladder up the side of a submarine than a surface vessel because the casing is rounded rather than vertical. You still have to be careful though!
-  There are two periscopes on board, the Search and the Attack periscope, and they are raised to different heights depending on the operator's height and task. The lower the periscope, the harder it is to spot on the water. In addition, periscopes can look up high enough to see aircrafts fly over the submarine.
-  To avoid line ups in the narrow flats, meals are served through an opening between the galley and junior ranks mess, and served by the Coxswain & Marine Systems Coordinator to senior non-commissioned members.
-  The smooth spots that look like windows on the side of the casing of a submarine are part of the overall SONAR system. In a way, they are like windows because SONAR is how a sub "sees" what is around while submerged.
-  Unlike in the movies, subs don't make "pinging" sounds automatically while submerged. For the majority of the time the submarine uses passive SONAR systems which maintains their stealth, and why the submarine service is referred to as the "Silent Service".
-  The bridge is actually outside the submarine pressure hull and only used while surfaced (obviously). The main hub of a submarine is called the control room and it is best described as a combination of the bridge and operations room found on surface vessels.
-  Submarines make their own water which is pretty handy for long patrols.
-  The majority of a submarine's crew, including the Executive Officer, stand watch 12 hours a day divided into two separate watches (8hrs and 4hrs) to allow for sleeping, and off watch activities such as physical training and personal time. Most use the time to rest.
-  A SONAR Operator's job in a submarine is more complex and busier with more time spent actively on watch at the SONAR consoles. This is because their work is essential for the safe operation of a submerged submarine.
-  It's amazing how good the food is considering it is prepared in a very small space with limited equipment.
-  Having 59 people in close quarters on a submarine contributes to one of the most respectful environments I have ever observed during my 24 years in the CAF. Treating others how you would like to be treated is a way of life in submarine.
-  Despite being members of the "Silent Service", most submariners are some of the most passionately vocal people I know. Because in Canada it is a volunteer service, submariners are there by choice and their enthusiasm to share their stories and experience is absolutely incredible. I look forward to sharing more of their stories with the public.

UNCLASSIFIED

SUBMARINERS, A CREW, A COMMUNITY

Is this a life for you?

▶ SLT JOSHUA EHNISZ, MARPAC HEADQUARTERS

The submarine community is amongst one of the most closely knit groups throughout the Canadian Armed Forces. Submariners are the only sailing professionals that conduct operations while being under the water in a steel tube for weeks at a time.

After contacting a few submariners, a number of interesting points came to light.

The air is not always exactly fresh, laundry is hand washed, the beds are small and the work is demanding yet rewarding. There are no windows to look out, save two periscopes, and submariners regularly work over 16 hours per day when at sea, but at the end of the day there are 58 other crewmates that are there for you.

When asked about the submarine community, Lieutenant(Navy) (Lt(N)) Nathan Haylett, Navigating Officer aboard *HMCS Victoria*, said, "I joined the Submarine Force because I wanted to be part of the scariest thing in the ocean. I stay in the Submarine Force because of the people."

A submariner needs to train to be capable of doing not just his or her job, but also be aware of their crewmates' jobs and be able to do common tasks on board. They look out for each other. These tasks are not as simple as learning how to

use the printer. You need to learn everything about the submarine to ensure it continues to operate as intended, and you need to be able to apply this knowledge during high-pressure, emergency situations while remaining cool, calm and collected.

The benefit is a submarine crew truly becomes a family. You develop bonds that are unlike any other, and, as a submariner you are granted more privilege and a few more perks than those received by surface counter parts.

"Because our contact with home can be limited, things like the Military Family Resource Center are very important," said Lt(N) Haylett. "These services ensure our families have a support network when we are gone."

Submariners are recruited typically from the existing surface fleet. Sailors who

have already developed skills at sea are the best candidates for successfully becoming submariners.

Becoming a submariner is no easy task. To become a full-fledged submariner, candidates will undergo a rigorous training package that requires multiple signatures from experienced submariners. Upon completion of this training, a submariner earns their Dolphins, an insignia and symbol a submariner will proudly wear throughout their career. It clearly identifies that the submariner has succeeded in completing one of the most challenging and unique programs the Canadian Armed Forces has to offer.

When asked about Dolphins, the following quote was mentioned to describe their meaning:

"These Dolphins, once you pin them on your chest, leave deep marks, right over your heart, long after the uni-

forms have been put away." - Bud F. Turner, U.S.S. Stonewall Jackson

Lieutenant Commander Dave Hendry, the current officer commanding *HMCS Corner Brook* left me with important advice for anyone considering a career in submarines, "Work hard and study hard. Becoming a submariner is a rewarding, but incredibly challenging, career path within the Navy. You will have more responsibility, but also a lot more freedom than your counterparts in the surface fleet."

HMCS Corner Brook is currently in dry dock and is expected to rejoin the Royal Canadian Navy Fleet in early 2022. It has been fitted with a variety of new equipment including the Mark 48 Mod 7AT heavy-weight torpedo, Universal Modular Mast and a new sonar suite, the BQQ-10 sonar. These additions bring *HMCS Corner Brook* to the cutting edge in torpedo technology and in line with a number of our Allied submarine forces.

Historically, *Corner Brook* has been part of exercises and operations at sea including Operation NANOOK and Exercise NOBLE WARRIOR. It has contributed to the more than 2,350 days at sea amassed by Victoria-class submarines and is scheduled to conduct contractor sea trials in late 2021. ■



"These Dolphins, once you pin them on your chest, leave deep marks, right over your heart, long after the uniforms have been put away."

BUD F. TURNER, U.S.S. STONEWALL JACKSON



If the submarine community has peaked your interest and it could be something for you reach out by e-mail to ESQ.SubRecruiting@intern.mil.ca or call 250-363-2690.