

The SS Admiral Knight – Discovery and Documentation

By Jason Cook

At the end of August 2022, nearly three years of planning and excitement came to fruition. After setbacks including a pandemic, lack of boat charters, personnel schedules, and sea conditions, the stars had finally aligned to put divers on what might be the wreck of the SS Admiral Knight, a twin-screw steamer that sunk after a fire in July 1919.

In 2019, Craig Lessels of the Canadian Hydrographic Survey (CHS) reported to the UASBC that he had come across a multibeam sonar target which could potentially be the Admiral Knight. Just over a kilometre offshore in Cable Bay and sitting in 57m of water was a debris field that measured 44m in length, about the size of the vessel. It quickly became clear that the most efficient method of identifying this site would be “in person”.

Due to the depth and time needed to effectively document this site it was decided that technical divers using equipment like closed circuit rebreathers (CCRs) and diver propulsion vehicles (DPVs) would be needed. Two days were allocated to allow for ample time to carry-out the documentation, and to take in the very human experience of seeing this piece of history firsthand.

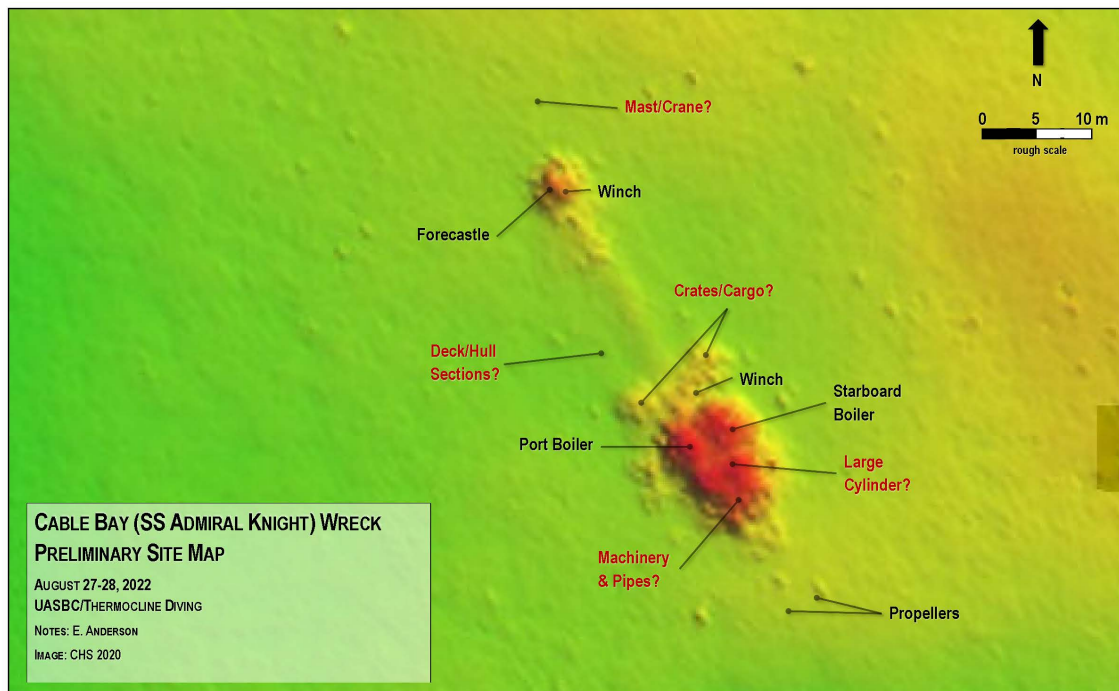
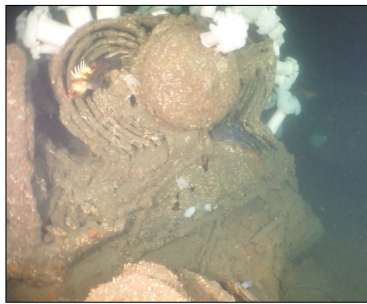


Photo 1. Sketch map of the Admiral Knight wreck site (Ewan Anderson)

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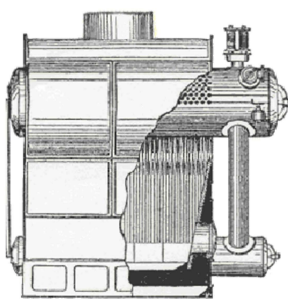
Forward end of Port Boiler



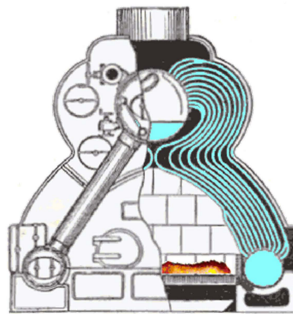
Forward end of Starboard Boiler



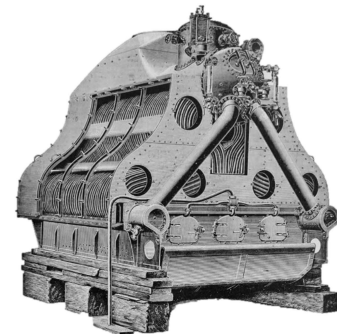
Starboard side of Starboard Boiler



Three-drum Thornycroft Water-tube Boiler



Three-drum Thornycroft Water-tube Boiler



Reed Water-tube Boiler

Comparison of water-tub boilers from the Admiral Knight (above) with drawings of boilers from the late 1800s / early 1900s

Ewan Anderson/Lars Josefsson

On August 27th, the dive boat Thermocline sailed from its berth in Maple Bay Marina to the target site on the north-east side of Galiano Island. After multiple passes over the target to ensure we picked it up on the echosounder, a shot line was dropped. The first team in the water was me and UASBC Director of Communications Ewan Anderson. Upon reaching the bottom of the shot line several plumose anemones could be seen in the distance about 10m away, indicating the possible presence of reef structure. I tied off a reel to the shot line and we proceeded towards the anemones.

Quickly, parts of a wreck came into view! At this point we sent an untethered surface marker buoy (SMB) to the surface to signal the second dive team waiting on the boat that we had found something worth exploring. The goal of this first dive was to take in the scope of the wreck site and make note of key features. To accomplish this, Ewan and I circled the site with large video lights and DPV-mounted camera. This allowed for the capture of video for later review. At the same time, dive team two (comprised of UASBC member Lee Critchley and Seattle GUE divers Conor Collins & Colin Miller) reached the bottom and took photos of the area around the two large water-tube boilers.

After about 40 minutes of bottom time and one hour of decompression, both teams surfaced to much excitement about the long-awaited find. Most of the three-hour trip back to Maple Bay was spent discussing what was seen, and what we hoped to accomplish the following day.

On August 28th the team set out again, this time on the MV Ocean Quest. The goal for the day was to gather photogrammetry data of the pair of water-tube boilers and surrounding machinery which comprise the largest part of the wreck. Ewan and I undertook this work while dive team two, comprised of UASBC Director-at-Large Guy Shockey and Jim Dixon, took more survey of the surrounding debris field.

Features including the two steel propellers, water-tube boilers, and forecastle with winch are compelling evidence of the wreck's identity. It seems safe to say that after over 100 years, the SS Admiral Knight has finally been found. At the time



Lee Critchley and Colin Miller examining one of the boilers

Photo by Conor Collins

of writing, planning is underway to return to the site and conduct more survey using photogrammetry and other techniques. Much more remains to be discovered and many questions of about the Admiral Knight's de-mise are still unanswered. Is there evidence of the rumoured explosion that finally caused her to sink? What cargo was she carrying?

The success of this project is a testament to the excellent research work of the UASBC and other parties like the CHS and Parks Canada. For the divers involved, this was a gratifying experience and an opportunity for which we are grateful. The project also serves as a "proof of concept" for future explorations beyond recreational diving limits and represents an exciting future for the UASBC.



Colin Miller and Lee Critchley exploring the boilers and engines area

Photo by Conor Collins

UASBC Diver Explorations Spring Schedule 2023

Saturday February 18th. HMCS Mackenzie and SS Fearless

The HMCS Mackenzie was sunk as an artificial reef in 1996. We will visit the Mackenzie and check it out. Dive 2 will occur on the tug Fearless and maybe SS Trebla. Both vessels were steam tugs, and both burned and sank in Saanichton Bay. The goal will be to collect a few measurements on the Fearless Site. We may experience a bit of current on the Mackenzie, but both dives are suitable for all open water divers. We will depart from Sidney for this trip. Charter est. \$100 per person based on 8 divers. If we get more the price may drop. Limit 12 divers.

Call Jacques (250) 474-5797 or email: jmarc@shaw.ca

Sunday March 5th SS Del Norte & Mary Hare

This day trip will be to continue our survey work in the Gulf Islands. We have Chartered the MV Ocean Quest and MV Thermocline for the day to visit the SS Del Norte and conduct another search for the Mary Hare off Reid Island. These are moderately easy dives, so everyone is welcome. This trip will depart from Maple Bay. Estimated costs are \$120 per person. Limit 12 divers.

Contact Jacques (250) 474-5797 or email: jmarc@shaw.ca

Saturday & Sunday October 8 & 9 – Underwater Archaeology for Divers Course

Underwater Archaeology for Divers (UAD) is a 20-hour and consists of 8 modules online, a pool session and an open water dive. Graduates receive a Certificate of Achievement for successfully completing the course.

To register contact Jacques Marc (250) 474-5797 or email jmarc@shaw.ca

March 25 & 26 - Okanagan Landing

Join us for some exploration diving at the north end of Okanagan Lake.

For details contact Bill Meekel : billmeekel@gmail.com

April 1 & 2 Barkley Sound Wreck Trek

Weather permitting, we hope to visit several sites around Barkley

Sound namely, the Vanlene (1972) Theipval (1930), Tuscan Prince (1923) and Orpheus (1885)

We will stay at a house on Grappler Inlet and dive with Ocean Emerald Charters.

We will travel to Bamfield on Friday afternoon March 31st.

Charter and accommodation estimate is \$450, air and meals will be on top of that.

Maximum 10 divers. Some surge conditions can be expected on these dives so bring gravel.

Call Jacques (250) 474-5797 or email: jmarc@shaw.ca

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UASBC Diver Explorations Spring Schedule 2023

April 22 & 23 – Upper Arrow Lake

The UASBC will be diving on some side scan sonar targets identified in Beaton Arm and will do some exploration in the Nakusp & Pingston areas on Upper Arrow Lake.

For details contact Bill Meekel : billmeekel@gmail.com

May TBA - Swordfish Wreck & Smyth Head

We will try another attempt to dive on the iron bark Swordfish, wrecked on South Bedford Island in 1877 We hope to relocate and GPS several large artifacts on the Swordfish site. Our second dive will be on the Smyth Head Reef Net site where we hope to search for and document more reef net anchors. There may be some current during the first dive, but we will be using a live boat for pickup. We will depart from Pedder Bay. Cost: \$100 per person. Limit 7 divers

Contact Jacques (250) 474-5797 or email: jmarc@shaw.ca

Captain Nemo Club 2022

The Captain Nemo Club recognizes cash donations received by the UASBC during a year. The categories are assigned dependent upon the amount of the contribution.

To thank our donors the UASBC publishes their names in the Foghorn at year end in recognition of their support above and beyond the volunteer hours contributed”.

You too can see your name in print. Just send along a little something extra when you renew your membership.

All contributions over the membership amount will be eligible for a tax receipt should you want one.

We thank the following contributors who donated during 2022.

40,000 Leaguers	\$500 +	Date
Glen and Marjorie Olds	\$14,000	01/11/2022
20,000 Leaguers	\$100-499	
Ian Pope & Carole Valkenier	\$350	30/04/2022
Brian Nadwidny	\$100	15/11/2021
Mike Brissette	\$100	20/01/2022
Bruce Watson	\$100	25/03/2022
Murray and Ann Maffey	\$100	13/04/2022
Robyn Woodward	\$100	16/03/2022
15,000 Leaguers	\$51-99	
10,000 Leaguers	\$26-50	
Sophie Sanfacon	\$20	
Grant Keddie	\$50	10/03/2022
Alexa Dagan	\$10	12/12/2021
Gabe Hill	\$20	25/03/2022

Congratulations UAD Graduates

The UASBC ran an Underwater Archeology for Divers course on October 8 & 9 in Victoria.

Initially, eight students were registered for the class. By the day of the course, we were down to six students. The participants came from Seattle, Fort St James, and Gabriola Island. In the week preceding the course, each student spent 5-6 hours completing eight online course modules covering a variety of maritime heritage and underwater archaeology topics.

On the Saturday October 8th, the survey techniques module was reviewed, and the survey approaches practiced on dryland. In the late morning the students moved to the pool and spent 2 hours in the pool collecting measurements using baseline offset, trilateration and drawing frame techniques. The results of the pool survey were plotted in the afternoon and the students learned some of the pitfalls of taking and plotting survey measurements.

On Sunday October 9th, everyone travelled to Deep Cove near Swartz Bay to do a survey dive on the PGE #2 a rail barge that sank in the 1970s. Each buddy team was assigned a section to survey. Once everyone completed the dive, we travelled back to the Crystal Pool to plot the survey results. The day concluded with the students learning about conservation and drawing an artefact. Each student was awarded a Certificate of Achievement for completing the course.



UAD Class on board Esquimalt Eco Tour RHIB preparing to dive.



Graduates of October 8 & 9 UAD Course

Photos by J Marc

Congratulations go to the following participants for completing the course: Jill Wentworth, Tony Fegan, Victoria Mekus, Tara Strachan, Lenny Fairclough & Dara McClary.

Thanks to Jiri Kotler and Ewan Anderson for helping with the pool session and Jiri for assisting with the open water session.

The next UAD course will be offered in March 25 & 26, 2023 at the Crystal Pool in Victoria.

**Please refer to
WWW.UASBC.COM for latest Updates!**



UASBC Apparel for Gifts



UASBC Ball Cap – Blue or Green \$19.99

Low profile ball-cap. Navy blue or green in colour with white UASBC logo on front and embroidered



"Archeological Society of British Columbia" lettering on the back. One size fits all.



UASBC Vest-Navy Blue - \$18.00

Only available in small.



UASBC Toque – Blue \$17.99

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UASBC T-Shirt \$19.99

Navy blue in colour with white UASBC logo on left side of chest. Sizes available: XL, L, M & S.



Publications – Prices Vary

To order apparel visit the UASBC shop <https://www.uasbc.com/catalog/apparel>
or contact Bronwen Young bronny05@telus.net

Northeast Arm Upper Arrow Lake

By: J. Pollack, B. Nadwidny, K. McGuinness and P. Jeakins



Side scanning with the deep cable at Beaton

Photo by Kathleen McGuinness

This September, a small scanning and dive team comprised largely of UASBC members established a boat camp on the Northeast Arm of Upper Arrow Lake. Brian Nadwidny, Kathleen McGuinness, Paul Jeakins and John Pollack investigated a number of targets located during past magnetometer and side scan searches conducted by Harry Bohm, Pollack and McGuinness at Beaton and Comaplix. Beaton was of particular interest given it is where the 1903 steam tug Yale was lost in the spring of 1929 while under tow. Yale was constructed at the Nakusp Shipyard for the Yale Columbia Lumber Company, had a hull



Tech diver and NAS graduate Brian Nadwidny and First Mate Angie at Beaton.



The Upper Arrow Navy. Scanning was conducted out of the Pollack's Blind Fish (center) and diving off Nadwidny's tritoon Kootenay Maru (right).

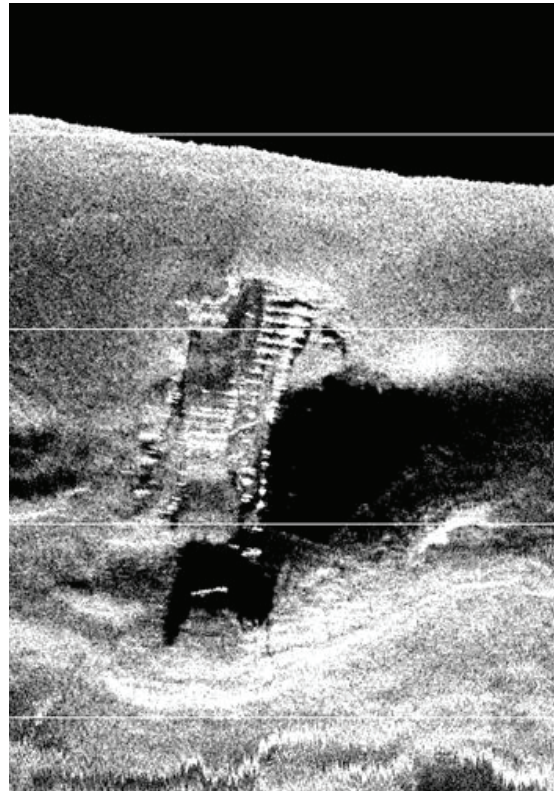
Photos by Kathleen McGuinness

length of 75' and a displacement of 36.3 gross tons. The wreck has been sought, without success, for three decades by numerous UASBC teams. It is a notoriously difficult site at the outfall of the muddy Incomappleux River, with fickle visibility, ice, and variable water levels. An April trip this summer was abruptly turned around when the eastern 3 km of the Arm turned out to be frozen solid.

Of the three magnetometer hits obtained by Bohm at Beaton, one proved to be a new wreck. In poor visibility, the dive team found a small vessel 54' in length and 21' in beam to the east of the Old Beaton wharf. The hull contained neither machinery nor a boiler but displayed a large center-line keelson assembly as well as iron-sheeting on the side and bottom. At least some of the frames were doubled. We interpret this vessel as a small ice-breaking barge, designed to be pushed in front of a sternwheeler during the winter. These special purpose barges have been previously found at Nakusp and Nelson.

Two days were spent CHIRP (Compressed High-Intensity Radiated Pulse) side-scanning the deeper water off Beaton in search of Yale. A new and longer side scan tow cable allowed for imaging in water up to 250' deep, and our main search area was half a kilometer square and gridded thoroughly – twice – without result. Either the wreck lies outside the search area, or else the nearby Incomappleux River has buried it under several meters of sediment deposited over the last 90 years.

The final day was spent investigating three sites at the Comaplix townsite on the northern side of the Arm. Extreme



The new Beaton wreck – a SonarTRX processed side scan image.

Photo by John Pollack

low water can occasionally reveal the locomotive boiler and various fittings from the 1902 swift-water stern wheel steamboat Revelstoke. A substantial wharf and a series of rock-filled log cribs were investigated, but no new wrecks were located.

Overall, it was an excellent trip with one small new wreck, the weather cooperated during the boat trips, and camp was a short distance away from a sockeye spawning run with bald and golden eagles feasting on the stragglers. Our thanks go to Harry Bohm for his earlier magnetometer work, and to Brian Nadwidny for providing the large wall tent that served as our base.



The Starfish CHIRP side scan, 50 m cable, drop camera and Toughbook computer - a compact remote sensing ensemble weighing less than 20 pounds.

Photo by John Pollack



Comaplix base camp at dusk.

Photo by Kathleen McGuinness

San Pedro Photogrammetry Project

By: Jacques Marc

In October the explorations team did back-to-back dives on the San Pedro and S.F. Tolmie wrecks to first cut kelp and then returned a day later to do photography with hopes of generating a photogrammetric model of the San Pedro.

On Saturday October 15th, six of us gathered at West Bay Marina for day one. The group consisted of Jacques Marc, Paul Spencer, Jiri Kotler, George Silvestrini, Tim Butts, and Warren Bush.



Exploration Team Approaching Brochie Ledge Marker.

Photo by J Marc

Daniel Bouchard of Esquimalt Eco Tours was already at the dock when we arrived at 08:30. We boarded his RHIB and headed out to Brochie Ledge to complete our first dive. Slack was predicted to be about 09:30. Predicting slack isn't an exact science, it's a case of extrapolating between Race Rocks and Baynes Channel. It hadn't quite gone slack at 09:30, when we jumped in to begin our task of cutting kelp off the wreck. However, the dwindling current was an asset, because as we cut the kelp the current carried it away. With three teams working, we cleared off the main part of the wreck in about 30 minutes. Jacques used the remaining time to do a couple of GoPro video runs up and down the wreck. When we surfaced, Daniel commented that true slack occurred almost 20 minutes later than predicted.



Paul Spencer looks through stern pillow block that supported propellor shaft.wreck

Photo by J Marc

Once everyone was on board, we motored over to the S.F. Tolmie site. After a 1-hour surface interval we again rolled into the water to cut and the Laminaria kelp which covers the wreck site. Even after 40 minutes of cutting, pulling and pushing, some kelp remained. Near the end of the dive Jacques ran a baseline down the length of the wreck in preparation for doing some surveying and photogrammetry on Sunday. Back at the dock everyone bolted to get to the nearest dive shop to get air for our Sunday dives.

On Sunday we were able to start at 09:30 as the slack was not scheduled to occur until 10:30. Given what we learned Saturday we knew slack would be a bit later yet. On Sunday we added Ewan Anderson and Katherine Livins to the group, but lost Warren who had to return to Vancouver. After boarding the RHIB we motored out to Brochie Ledge for day two on site. We arrived on site at about 10:15 and the current was still flooding quite strongly. When slack arrived, Ewan went to work with the help of Katherine taking hundreds of photos on the San Pedro. George, Jiri and Tim swam off into the hinterland to try relocating two anchors discovered in the 1990's. Jacques and Paul searched for the steering quadrant reputed to be in the stern area and shot video of various artefacts. Interestingly as slack water occurred the underwater viz went from 8-10 meters to about 4-5 meters. Ewan remarked that the change in viz was so significant that it might influence the photogrammetry results as it changed both the illumination and viewing distance on the wreck. By noon everyone was back on board the RHIB. Jiri reported that no anchors were found.

Following our San Pedro dive we travelled over to the S.F. Tolmie site. Ewan and Katherine went in first, to try photograph what they could with the remaining space on the camera's memory card. The rest of us gave him a 30-minute head start. Two teams of divers were put to work doing a baseline off-set survey to determine overall length and breadth of the wreck site. Jacques spent time at the bow surveying the hawse pipes and photographing what appears to be a small East-hope engine amidst the wreckage.

We were back at the dock by 3:00 PM and everyone went their separate ways. All that remains, is to see if the fruits of our labour have been rewarded. Ewan reports that the model did not fall into place on the first attempt, so will require additional work.

Here is hoping.

Shipwreck Stories

Shipwreck Stories of Ross Bay Cemetery

By: John Middleton

It was a warm, late summer evening as members of the Victoria Chapter of the UASBC were guided on a walking tour of Ross Bay Cemetery by UASBC Explorations Director Jacques Marc. We were about to be surprised with how many victims of maritime misfortune and shipwreck disaster found their final resting place in this Victorian era burial park.

The Ross Bay Cemetery occupies 27.5 acres of land close to downtown Victoria overlooking the scenic waters of Ross Bay. By the early 1870s, the rapidly growing city of Victoria needed a new cemetery and in 1872, Isabella Ross, a Métis woman and the first female registered landowner in BC, made land available at her Ross Bay farm. With over 27,000 plots, it became the last stop for many locals, including famous and influential people connected with Victoria and BC's history. Grave markers range from impressive monuments for the likes of Sir James Douglas, Sir Matthew Baillie Begbie, Amor De Cosmos and the Dunsmuir family, to a headstone for artist Emily Carr and a simple rock for Billy Barker of Barkerville fame.

Many victims of nautical disasters and notable figures in BC's maritime industry are also to be found within the bounds of this beautifully landscaped burial park. With Jacques leading a circuitous path amongst the headstones and monuments, we heard many fascinating and often tragic stories. Many of these shipwrecks have been dived on by members of the UASBC, such as the Valencia sunk in 1906, the Princess Sophia (1918), the Iroquois (1911) and the Empress of Ireland (1914). The Lusitania was sunk by enemy action in 1915 and took with it 21-year-old Lieut. James Dunsmuir Jr heir to the Dunsmuir fortune. A granite monument to the HMCS Galiano records its loss somewhere off northern Vancouver Island, when this terse, desperate message was received out of the gale at 3 am, October 30, 1918: "Holds



Headstone for Captain James Troup Head of BC Coast Steamship Service

full of water send help." Its crew of 39 sailors and one female passenger were never seen or heard from again.

While the rich and famous are well represented in the cemetery, there are also many ordinary citizens and it is interesting to note that even today, a limited number of plots are still available and allocated through a lottery.

After the tour everyone retired to the appropriately named Ross Bay Pub for drinks and a catch up after the summer hiatus.

New Archeological Discoveries - Wreck of the Swordfish and Smyth Head Reef Net Site

By: George Silverstrini

It was a cloudy day on September 17, 2022, but the wind was light and the sea smooth for our day of diving. We met at Pedder Bay and loaded all of our gear on Esquimalt Ecotours' RHIB with Jeff as our skipper for the day. Our first dive was in the very scenic waters at South Bedford Island. Our small group included Jacques Marc, Paul Spenser, Jiri Kotler, Gabriel Hill, and George Silverstrini.



Dive group in front of South Bedford Island

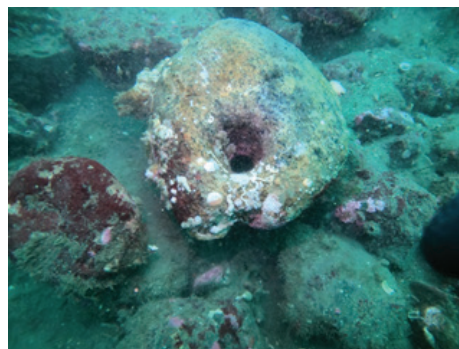
Photo by Daniel Bouchard

After a short wait for the current to subside we entered the water landing right on the wreck of the Swordfish. This was a 177 foot long (54m) British iron sailing ship that was launched in 1864 and sank here in 1877. We found the cannon, anchor and mast in the shallows and down deeper we found and measured the hatch combing. Sadly I dropped a nice fishing lure and flasher I found while swimming back to the boat in the strong current. I was pleasantly surprised to see Gabriel recover it and bring it to the boat.

After a short break and two of our divers tapping out, we moved to Smyth Head and located the reef net anchor using GPS and sent Paul, Jiri, and George down to inspect the anchor and to look for any other artifacts in the area. Specifically the rock spool used to wind rope on.

Reef anchors were used by the Coast Salish people to anchor their fishing nets held between two canoes to trap migrating fish. A 0.5 m wide anchor stone was identified on a previous UASBC outing and modelled using 3D photogrammetry. You can view the 3D model here: [reef-net-anchor-stone](#).

On this trip, a second reef anchor was found nearby. Later before returning to the boat Paul found a third reef net anchor. We were unable to mark the anchors with floats so we could use GPS to record the positions; the anchors will be re-located and GPS'd on a future trip.



New Reef Net Anchor Discovery

Photo by Paul Spenser

After the dives we returned to Pedder Bay, unloaded our gear and enjoyed a cool Shipwrecks IPA, the unofficial beer of our diving group.



UASBC Presidents' message

by: Keith Bossons

Hi Everyone,

The trees are finally turning to their fall colours after some very pleasant early fall weather. A lot has happened in the past few months.

After a three-year hiatus, we hosted the annual Wine and Cheese Recognition Evening at the Maritime Museum of British Columbia in Victoria on October 22. It was wonderful evening and nice to see people in person. We did a bit of catch up with the Volunteer of the Year Award and recognized three members for their contributions to the Society.



Congratulations to the three winners:

- **Anji Smith** received the 2022 Volunteer of the Year Award for her years of tireless effort doing the Foghorn layout. She took on this task In February 2015.
- **Ewan Anderson** received the 2021 Volunteer of the Year Award for his photogrammetry work.
- **Warren Bush** received the 2020 Volunteer of the Year Award for co-authoring the Historic Shipwrecks of the Southern Gulf Islands of BC report.

The fall dive schedule is pretty much wrapped up and a number of successful trips were run. Some recent successes are the discover of additional reef net anchor stones at Smyth Head and the completion of technical dives on the Admiral Knight and a yet to be identified wreck near Gambier Island.

The new Underwater Archaeology for Divers Course is proving to be a great success with a well attended session held during October.

I am very excited about the plans for the 2023 Shipwrecks Conference. Tom Beasley, Warren Bush and Rob Rondeau are working hard on putting together what I believe will be an outstanding event. The topic for the 2023 conference is Indigenous Maritime Archaeology which will be held at the Chief Joe Mathias Centre in North Vancouver on April 15, 2023. Pencil this date in on your calendar, more details will be coming in the early new year.

Stay safe and have a happy holiday season.

Keith Bossons

UASBC President

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