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UASBC
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Iroquois Photogrammetry Project

By: Jacques Marc

On January 9 & 10 a small group of divers dropped in on the wreck of the SS Iroquois. The goal was to complete photography on the wreck that would result in the generation of a 3D photogrammetry model for the site.

The Iroquois was a small shelter deck steamer that serviced the Gulf Island from Sidney.
On 10 April 1911 the Iroquois left Sidney for Nanaimo via the Gulf Islands carrying 32 passengers and crew and a cargo of general freight. The freight included ten tons of fertilizer in sacks stowed forward; a large quantity of rice in sacks stowed near the Chief Engineer's quarters, 20 cases of pigs feed, and 15 tons of mixed freight. Twenty bales of hay and a ton of bar iron were piled high on the passenger deck forward. Nothing was secured.

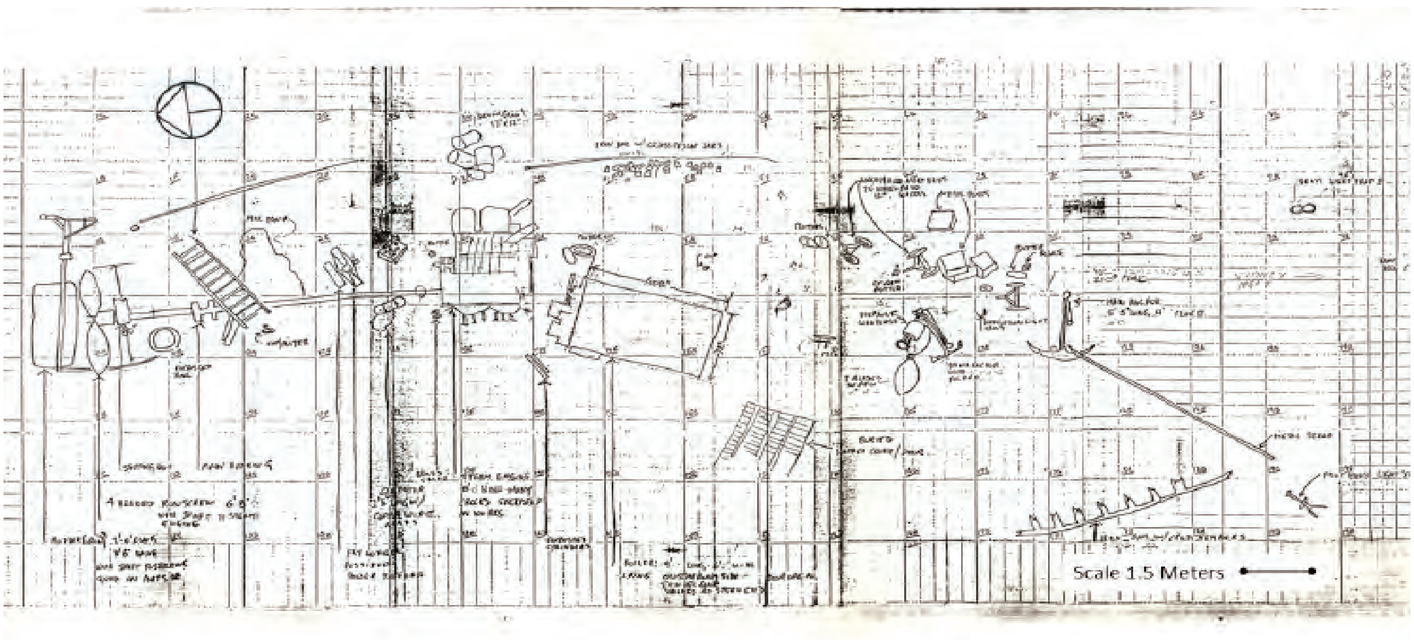
The SS Iroquois in the Gulf Islands.

Photo from UASBC Archives

Continued on page 2

After leaving the Sidney dock, Iroquois headed for Canoe Pass. Opposite Roberts Point the Iroquois made a course correction. During the course correction a gust of wind struck the ship on her starboard side and together with the following seas the Iroquois developed a list. Simultaneously the unsecured cargo on the passenger deck shifted to the lee side and the vessel did not righten and ultimately foundered with the loss of 21 passengers and crew.

The wreck was discovered in 1977 by the UASBC. At the time a rough site plan was prepared showing the distribution artefacts on the site. Many smaller artefacts were recovered in 1978, and the propeller was cut off by the navy in 1980 and resides in Iroquois park.



1978 UASBC Site Plan completed by Larry MacFarland

Fast forward to 2024. Guy Shockey organized a technical diving week in the Gulf Islands in October 2024. One of the sites they were going to visit was Handley-Page Hampden P5433. I put in a request to get some photogrammetry done from the landing gear to the compass, as we planned to recover the compass for the BC Aviation Museum in November. Roger Lacasse who was out from Montreal on the trip, took on the challenge and voila! I had my model with everything labelled.

I mentioned to Roger that I had a few wreck sites that would benefit from his skill set. In late November he dropped me a note saying he would be out to take some technical training from Guy Shockey in January and could tack on a day or two if I had some thing for him to do.

The project I had in mind was on the West Coast of Vancouver Island. January was not a good time to do anything out there. It occurred to me that we really needed a good quality survey of the Iroquois.

I sent photos and some history of the Iroquois to Roger. He was keen. The next thing I needed was a boat to get him to the site. Guy said I could borrow his RHIB but he was occupied with a class so wasn't available to drive it. He touched base with Jim Dixon who said he could be the boat operator. The plan had come together.

As the day of the dive approached, I watched the weather forecast and checked and double checked the current prediction. January 9, arrived. Jim and Roger boated down from Cowichan Bay. They picked up Lee Critchley, Paul Spencer and I at Sidney. We got out to the site about 1 hour before predicted slack and found conditions were almost slack. We dropped a shot line. Paul and I were first in to made sure that the shot line was on the wreck so that Roger would not lose bottom time.

After 45-minutes Roger and Lee surfaced and Roger said he had covered most of the stern of the wreck.

Continued on page 3

That night he sent the first preliminary views of the wreck. They were great. We returned to the site again on January 10th to complete the photography on the bow area. Things went off without a hitch.

That night Roger generated a composite model of the site. It was spectacular. A few days later after he had returned to Montreal I got a high-resolution model of the site. Every conceivable detail was visible.

But wait, it did not stop there! About a week after our diving Roger sent a printable model that anyone with a 3D printer could print.

Photogrammetry Model of Iroquois.

Courtesy of Roger Lacasse

Almost 50 years have passed since the preliminary survey was completed on the Iroquois site and it stands as a record of what was on site shortly after the wreck was discovered. The photogrammetry completed in January provides us with an accurate model depicting the site as it looks today and which we can take accurate measurements from.

Thanks to Roger Lacasse for doing the Photogrammetry. Thanks to Jim for driving the boat and thanks to Lee for hovering above Roger while he worked in the cold dark water.

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

SHIPWRECKS 2025

UASBC
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MARITIME ARCHAEOLOGY OF THE NORTHWEST PASSAGE

STORIES AND IMAGES OF NORTHWEST PASSAGE ARCHAEOLOGY, CULTURE, AND HISTORY

SATURDAY APRIL 26

Rob Rondeau | *Roald Amundsen and the Northwest Passage*

Kenn Harper| *Give me Winter; Give me Dogs: Knud Rasmussen and the 5th Thule Expedition*

Matthew Ayre | *Nova Zembla: From Archives to Arctic*

Bruce MacDonald | *Sisters of the Ice: the St Roch and North Star of Herschel Island*

Heather Pringle | *Did Viking Hunters Perish in a Shipwreck in Canada's Eastern Arctic?*

Martin Gregus | *Arctic Wildlife: Images*

Ashley Smith | *Sacred to the Memory: Relicization and the Cataloging of Franklin Objects*

David Woodman | *Recent updates to the Franklin expedition - Archeological Evidence*

Erika Behrisch | *Writing Lady Franklin: Biography, Fiction, and the Lost Franklin Expedition*

The Woodward Lecture:
Marc-Andre Bernier
Shipwrecks of the Northwest Passage

BILLY BISHOP LEGION
1407 LABURNUM ST, VANCOUVER

$40/$60 | STUDENT/REGULAR DAY SESSION | 9:00 AM
$80 | WOODWARD LECTURE & DINNER | 6:30 PM
UASBC.COM

FREE BONUS EVENT! Join us 7-9:30 pm Friday April 25 for a pre-conference mingle & speaker at the Vancouver Maritime Museum, 1905 Ogden Avenue

BRUCE MACDONALD | *Don't Say Pig; The Book of Sailors' Superstitions*

UASBC Presidents' March 2025 message

By: Keith Bossons

Hello Everyone,

It is feeling a bit like spring outside and 2025 is shaping up to be a big year for the UASBC.

Long time board member John Middleton is stepping down as the Vancouver Island Director after 22 years of service. John has been a large part of the society, organizing monthly Vancouver Island Chapter meetings and helping to organize the Shipwrecks conference. In recognition of John's years of dedication to the UASBC, he is the first recipient of the newly created UASBC Exemplary Service Award. This award was announced at the recent Wine and Cheese social event in Victoria. Please join me in thanking John for all that he has done for the UASBC.

The annual Wine and Cheese social was held on February 22 at the Maritime Museum of BC and was attended by 19 members and guests.

We recently completed a contract with the BC Heritage Branch to provide reports and recommendations regarding three underwater heritage sites. The funds earned from this project will go to fund future exploration activities.

Our 2025 Annual General Meeting is scheduled for March 26 and will be held on Zoom. Email notification with the agenda and Zoom log-in has been emailed to all members.

Our Annual Shipwrecks conference will be held in Vancouver this year on April 26. The theme of this year's conference is "Maritime Archaeology of the North West Passage". The key note speaker for the Woodward lecture will be Marc-Andre Bernier. Tickets are available for purchase on our website.

The UASBC will be celebrating its 50th Anniversary this year. This is a huge accomplishment and we are planning an event to celebrate this milestone later this year. We are in the early planning stages but the details will be communicated within the next couple of months.

I hope to see you all at the Shipwrecks Conference next month.

All the best
Keith Bossons
UASBC President

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

City of Ainsworth wreck update. Kootenay Lake

By: Brian Nadwidny

The story of the loss of City of Ainsworth sternwheeler is familiar to members of the UASBC. In November 1898 it was swamped and rolled in a storm with 9 men losing their lives. It was then, and still is, the incident with the largest loss of life in BC Inland waters. It sank to the bottom of the lake 3 days later near Pilot Bay during a salvage attempt.

It lay undiscovered until 1990 at a depth of 110 m (360') when a multi agency team found it using sidescan sonar and ROVs. It was subsequently dove by members of the Cambrian foundation in September of 1997 and then lay again undisturbed until the UASBC put together 3 ROV explorations (2010, 2011, 2013) to the area that achieved limited successes imaging the wreck. In 2011 a few minutes of footage of ROV footage was obtained of the unusual stagger-paddled sternwheel and the unique maple leaves carved into the wheel cover before the ROV had an irrecoverable malfunction which ended the project. In 2019 a privately funded ROV expedition confirmed the location of the wreck, and more footage was obtained but the visibility was poor at depth and a full survey wasn't possible. The VexNow dive group dove it in September 2023 and managed 3 dives to the wreck. (Foghorn December 2023)

Another VexNow trip was organized for this past September and resulted in 4 more dives and more detailed video and still footage. Once again, the team was based at the house of team member Brian Nadwidny in Woodbury Village, near Ainsworth BC. The boat was docked at Jones Boys Boats which is a 45-minute run south to the dive site. The weather cooperated again with only one dive day lost to strong southerly winds and rain. That blowout day was spent exploring a nearby flooded mine adit which turned out to be just a shallow, silty pool that didn't go anywhere.

The shot line was set on Day 1 and on Day 2, Dive Team Left Coast (Alan Drake, Vancouver and Glenn Farquhar, Langley) made the first dive of the year and found the shot was lying only 10 feet off the wreck, starboard midships, which was a pleasant surprise. Dive Team Irish (Johnny Ryan, Airdrie and Brian Nadwidny, Cranbrook) went the next day with teams alternating dive days. Surface support was supplied by John McCuaig (Edmonton) and support diver was Terina Hancock (Edmonton). Home shore support was Cathie McCuaig.

Descent to the wreck took around 8 minutes which left just 11-12 minutes on the wreck before it came time to start back up. Run times varied between 2.5 and 3 hours. Despite the very limited time on the wreck some new details were spotted including the port side navigation light and some artifacts inside the engine room area. Another object near the bridge was found which hasn't been positively identified. It is partially buried in the collapsed superstructure and as we aren't allowed to disturb anything on the wreck, it was left in situ. Best guess right now is that it is a "magic lantern" style of light that was used to magnify a light source like a candle or oil lamp into a type of pre-electric spotlight (City of Ainsworth had no electricity). Object found by Johnny Ryan near the bridge.

Continued on page 7

Object found by Johnny Ryan near the bridge.

Example of a magic lantern.

Rough silt measurements were taken which revealed that the silt layer isn't the same throughout the wreck. Silt inside the visible work bench midships inside appears to be around 25cm. Silt at the sternwheel is around 8cm and near the bow it is 15 cm. There is evidence on the bottom of water movement as there are waves in the silt and not a flat featureless bottom. After the final dive of the week, we were privileged to have a visit on the boat from local author, Susan Hulland from Crawford Bay. She wrote the definitive history of the ship (The story of the S.S. City of Ainsworth: Shipwreck on Kootenay Lake) that the team referred to many times and was instrumental in our planning and understanding the history of the site.

Another trip is planned for next fall with more attention paid to objects on the ground outside the wreck and more detailed measurements of silt levels. Right now the wreck seems fairly stable however the wood is very spongy and weak so any further collapse of the intact port wall would not be a surprise.

Continued on page 8

Figure 1Diver Johnny Ryan on the starboard side

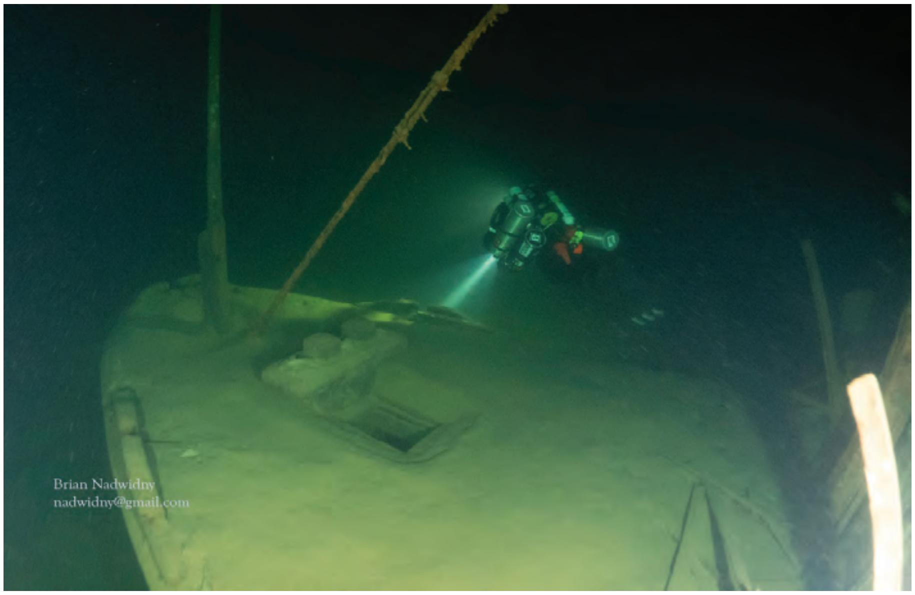


Figure 2 Bow with flagpole, bollard and hatch

Figure 3 Looking aft from the flagpole

Figure 4 Maple leaf on the wheel cover

Figure 5 Port side navigation light

Figure 6 Johnny Ryan above the collapsed roof of the wheelhouse.

Smyth Head Multibeam Survey

By: Jacques Marc

The UASBC has completed several dives at Smyth Head, a First Nations Reef Netting site located in Beecher Bay on Southern Vancouver Island. The UASBC's surveys at Smyth Head were inspired to a degree by a project led by Nick Claxton. His PhD Thesis examined the history and revitalization of traditional reef-net fishing in WSANEC traditional territory at Wallace Point on South Pender Island. The UASBC was asked by Nick and the UVic Legacy Art Gallery to do an underwater survey and record some video at Wallace Point. We completed this work on September 15, 2019, and the video was used in the UVic Legacy Art Gallery exhibit.

Completing the work at Wallace Point reminded us of earlier Reef Netting work completed at Smyth Head. Norm Easton completed a survey at Smyth Head for his 1985 UVic master's Thesis and Charles Moore (Golder Associates) completed a side scan project to try detecting and mapping Reef Net locations in 2010. Both projects identified Smyth Head as potential Reef Netting area that warranted examination.

On October 20, 2019, we visited Smyth Head to see if we could find evidence of the early reef net sites described by Norm and Charles.

We dropped into the water in a channel between Smyth Head proper and an offshore reef marked with Bull kelp. Upon landing on the bottom, we observed that the sea floor is covered in thousands of stones of different shapes and sizes, but didn't really identify any patterns that traditional knowledge and academic research predicted. We did find a very large anchor stone, and Ewan captured it on his GoPro and was able to make a 3D model of it. We were pretty exited about this, and Gordon Planes invited us to do a presentation at a band meeting at T'sou-ke in December 2019.

Photo of canoe anchor.

Photo by J. Marc

Model of canoe anchor

Photo by Ewan Anderson

Continued on page 12

We have subsequently made additional dives at Smyth Head and have found additional canoe anchors. However, we found the bottom terrain very confusing. There are multiple underwater hills and gully's and while we were finding canoe anchors, no pattern was apparent.

After thinking about this, I approached the Canadian Hydrographic Service to learn if they had any multibeam data for the area. My reasoning was that it would show us the bottom terrain. Unfortunately, they did not have any data for Beecher Bay. As if by divine intervention, in walks Rory MacKenzie.

Rory is a UASBC member and is also a professional hydrographer. He volunteered to approach his boss to see if he could get permission to use the company multibeam equipment. He was given the nod of approval.

The next step was to choose a date and secure a boat to do the work. We also wanted to make contact with the Beecher Bay (SC'IAEW) First Nation about our proposal. We chose February 8th to do the survey, and we chartered Lyle Berzins boat Miss Emily. Ewan and I met with the SC'IAEW Ocean Resources Group on January 21st to discuss our plans. Michael Campbell, the Group lead, was quite excited about the project. We provided him with all the information we had about the site and offered them a spot on the survey boat.

February 8th arrived. It was cold and there was snow on the ground but that didn't deter us. Rory had set up the mounting brackets on Friday, so we loaded the multibeam equipment and a generator on to the boat and headed for Beecher Bay.

When we reached Smyth Head Rory mounted the multibeam sensor and set up the GPS antenna. After doing a test, to check the speed of sound in the water column we were ready to go. We made multiple passes back and forth in front of Smyth Head and the bottom revealed itself.

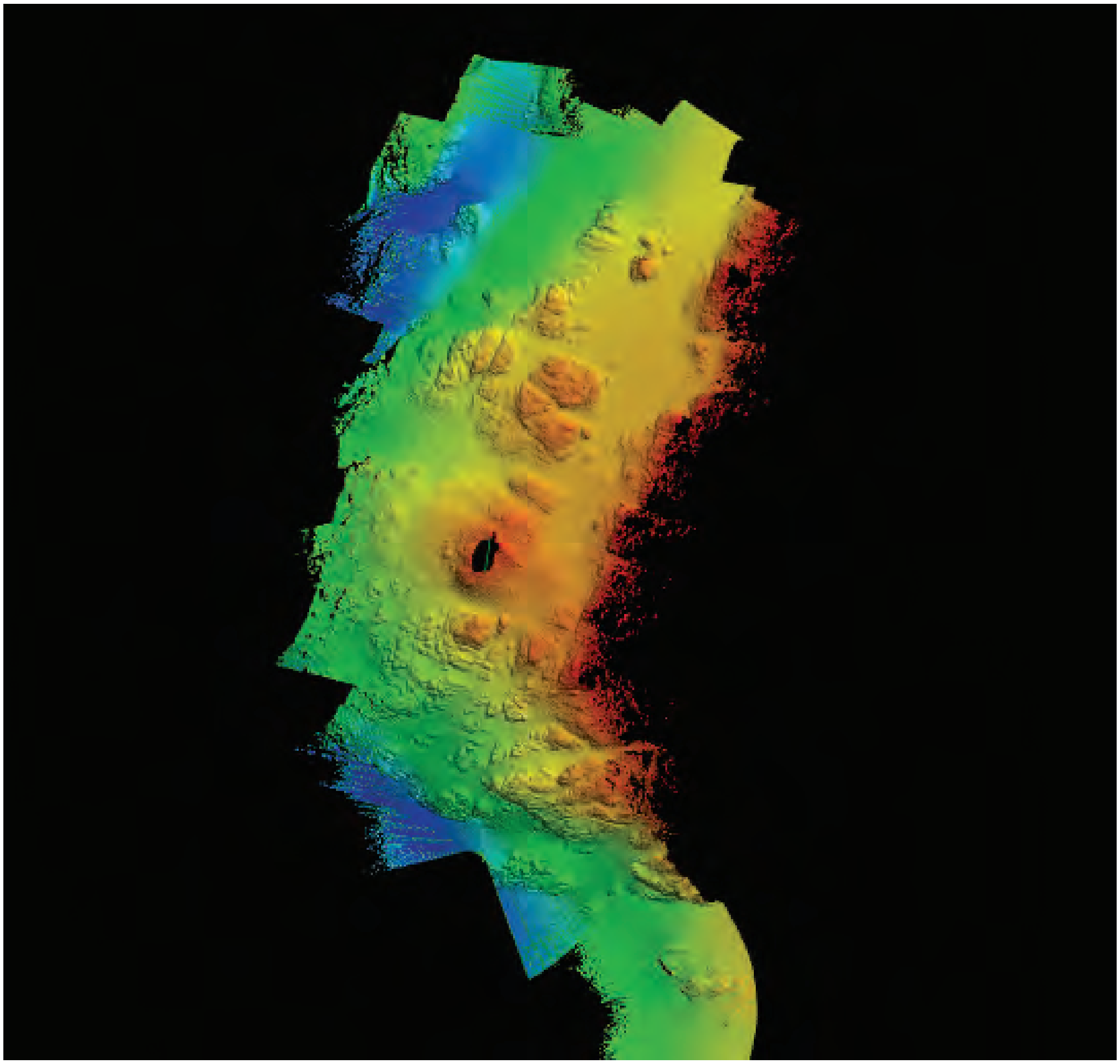
Multibeam survey underway.

Rory monitoring the progress of multibeam survey.

Photos by J. Marc

Continued on page 13

There are multiple small reefs and lots of rocks, some natural and some not.



Completed Multibeam Map of bottom at Smyth Head.

(Credit Rory MacKenzie)

When we finished our work at Smyth head we motored over to Large Bedford Island. It is another potential site. The bottom did not look as promising here as there are multiple underwater reefs and no clear gully in which to set up a Reef Net.

We pulled the multibeam on board and travelled over to Pilot Bay where we then scanned the wreck of the Barnard Castle. The idea being we could compare the multibeam to Ewan's photogrammetry model.

We were back at the Pedder Bay dock by 2:00 PM after a very successful days work.

Thank You Rory!!!

Editor Anji Smith

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UASBC Executive

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Editorial Material