



of which is suspected of being onboard when the vessel slipped below the surface, sinking to a watery grave.

Operations commenced in the fall of 2013 to remove the bunker oil from the wreck. This action, according to Reid, involved over 100 salvage and spill response personnel, 70 days of remote operation and a total cost of over \$20 million.

When the operation was completed, 43,000 litres of intermediate fuel oil was salvaged along with 338,000 litres of oily water according to Reid's presentation.

The bunker recovery exercise is completed and bustling barge activity has ended, but concerns still linger that not all of the bunker oil was removed from the Zalinski.

Other highlights of the event include an insightful talk by archaeologist Rob Field on the Empress of Ireland tragedy and a passionate theatrical presentation by Parks Canada interpreter Silva Johansson on the Valencia.

As with most events that include food, the dinner was well attended and received. The Woodward Lecture that followed the buffet-style dinner, titled Guns, Provisions and the Governor, was presented by Dr. Piotr Bojakowski and Dr. Kate Custer, of the Atlantic World Marine Archaeology Research Institute.

**More photos on page 8.**

## Shipwrecks in review

*by: Matt Bossons*

Through the large windows of the Pacific Fleet Club, at the Canadian Forces Base in Esquimalt, the Olympic Peninsula was barely visible. Low lying clouds and persistent fog obscured the distant Washington shoreline and a dull, flat light filled the Junior Ranks Mess, where the annual Underwater Archaeology Society of British Columbia's Shipwrecks Conference was taking place.

The theme for this years conference was Maritime Tragedies of the 20th Century.

The first speaker of the day was the Canadian Coast Guard's environmental response supervisor, Daniel Reid, who was lecturing about the recent salvage operation on the General Zalinski.

The Zalinski has rested on the bottom of Grenville Channel since September of 1946, where it has posed an ongoing risk of environmental catastrophe. When the ship left port for Whittier, Alaska, it was loaded with an estimated 700 metric tons of bunker oil, much

# Presidents message

*by: Eric C. Young*

I don't know anybody who doesn't like Spring. I sure do. It's not that I dislike Winter, it's just that everything is so much easier in Spring. All the things that one wants to do are available in Spring.

UASBC started off with a great Shipwrecks Conference. We had a full slate of fantastic speakers who enlightened us about the true maritime tragedies of the Twentieth Century. Overwhelmingly the message was that what seemed like proper decisions at the time, weren't. There were always clues during the events that pointed out where the correct decisions should have been.

This was evident in all the collisions and sinkings. It was even true about cleaning up the oil from the General Zalinski; it should have happened before the fuel tanks rotted out. And even the marvelous high-tech dive into the Marianas Trench; it ran into timeline crunches because the technology took too long to bring together.

Where can one take a course in recognizing the signs that are there? Are humans really capable of hindsight? How much do we really learn from our mistakes? I suppose that after the Empress of Ireland and Titanic we did ensure that there were enough lifeboats for all on board.

Later in March we held another NAS Intro course in Victoria. The eight students passed with flying colours. Half of them were so keen that they wanted to put in their deposits should we hold a NAS 1 course this Fall. We definitely are planning to hold one but the timing needs to be fit around a busy schedule. See below, and stay tuned.

The Explorations schedule is in full swing. After two years of getting washed out due to weather conditions, eight divers made the short trip to Brochie ledge and dove on the San Pedro. There was still a nice three knot current whistling over the wreck, but the dive was enjoyable and successful. [While Jacques hardly noticed, there were two very large octopuses that use the old hull for shelter.]

The Spring trip to Barkley Sound will be coming next month. The summer trip to Quatsino has had to be postponed until September because Jacques will be unavailable. Parks Canada is continuing its research into the maritime aspects of the Guai Haanas Park. They have invited Jacques to accompany them in the underwater explorations. It is great that the UASBC will have such a good representative.

The down side of Spring is, of course, pasty, white skin. We all want to hop on our bikes, but the sun hasn't seen our legs for five or six months. That will all have changed by the time we chat again in Summer.

# Hartlock dive report

by: Paul Spencer

The Vancouver Island chapter of the UASBC conducted a monitoring dive on the site of the remains of the Hartlock. The Hartlock was a wooden Ferris hulled freighter built in 1919 at Tacoma Washington. Ferris ships were 268 feet long and powered by a triple expansion steam engine. The decommissioned Hartlock was sunk as a breakwater at the Red Gap Mill, located at Nanoose Bay, in 1934.

Sunday morning was very foggy all the way up to Nanoose Bay. The dive site is located beside the highway and is easily accessible from shore. Locating the wreck is easy because some there are pilings still in place beside where the breakwater was located. At low tide some of the ribs of the ship still stick out of the water. Diving is best at high tide to provide enough water to dive in and to help with the visibility.

As the group including Jacques Marc, Jiri Kotler, Eric and Bronwen Young, Rob Field, Kim Berg and Paul Spencer arrived, the fog cleared and we were greeted by a crisp, clear, sunny morning. We split in to three buddy teams and entered the water as each group was ready.

While the air and water temperature were very low, the visibility was positively tropical, probably in the range of 20-25m. The site ranges in depth from about 5-8m. Jacques took advantage of the excellent visibility and available light to get some pictures.

The visibility allowed us to have a good look at the site and get a sense of scale for such a large wooden ship. While there was very little equipment on the site there were a lot of heavy timbers and long rows of drift pins. The shallow depth allowed for a long dive and a chance to cover the whole site easily.

All in all the Hartlock provided a very enjoyable dive for the group.



## Brochie Ledge - The Wreck of the San Pedro

by: Eric C. Young

It often seems to be the case that one doesn't visit those attractions that are quite close to home. This was true for the San Pedro, but it wasn't for lack of trying. Monitoring explorations were scheduled in 2012 and 2013 but each time the weather was fierce and pushed in big waves. So this April we tried again.

Explorations Director, Jacques Marc, organized a group of his 'usual suspects' for the dive: Rob Field, Holger Heitland, Jiri Kotler, Bob Simpson, Paul Spencer, Bronwen Young, and Eric Young. We chartered our trusted craft, the Juan de Fuca Warrior, skipped by Ogden Point Dive Centre's owner Erin Bradley. Everything was arranged for the morning of Saturday, April 12th.

It only takes a short association with Jacques to know that he is a very organized person. It only takes a little longer to understand his concept of timing. We were told to arrive at Ogden Point by 9h00 to load the Warrior so that we could leave by 10h00 and be ready to dive the slack which should be at approximately 10h30. We all dutifully arrived at 8h30 to start the process.

Really it was too easy. The Warrior was on her trailer in the parking lot. The dry land pack was easy. Oh, I forgot to mention the weather. It was a beautiful sunny morning with only a slight breeze from the west-south-west. We had a lovely view of the Olympic Mountains as we packed, launched and motored the five minutes out to Brochie Ledge.

Of course Nature always has its own devices. As we arrived we could see the water swirling around the light beacon. We laid off the light a way and chatted happily for thirty minutes to wait for the slack. The current seemed to slow down some and we decided there was never going to be a better time.

The wreck is literally a stones throw north from the light and is quite shallow, 15 feet gradually dropping to about 25 feet. Once Jacques and Paul secured a float the rest of the crew dropped in by the light and made their way over to the wreck. The three knot current meant that the old hand-over-hand crawl across the bottom came in quite useful. Each pair actually managed to stay together and explored the entire site.

It is quite notable how sites reach a series of equilibriums over time. Many places on the coast, where the sea can bring its full force to bear, will exhibit a continual pulverization of iron, steel, and everything else. Brochie Ledge, perhaps due to its shallowness, seems to have the sea's fury pass over the wreck, as if it is part of the rock. The steel of the ship's sole,

which has been there for about 120 years, still shows its frames and plates.

We were able to locate all the large pieces that weren't salvaged: partial engine block and drive shaft bearings, etc. We also found some small things that were left behind: many bits of coal, some concreted buttons, etc. The wreck has also become a great spot for all sorts of marine life. Jacques pretended not to care, but five of us had a nice few minutes observing a pair of giant Pacific octopuses. One was under the steel plate and would not budge; while the other was directly above, on top of the plate, apparently protecting the first one.

Live pick up was easy as the still rushing current carried us all into deeper water where the Warrior was circling. A few minutes motor took us over to Trial Island. We tucked in on the east side, out of the current, and enjoyed the sunshine and a bite to eat. This was also where the tug Storm King had wrecked. The hardest part of the second dive was keeping deep enough to keep the dive computer turned on. A number of us snorkelled over the site which was between five and fifteen feet. There is little left, but the engine block is still proudly sitting in the bay.

We returned to Ogden Point feeling that the elements had left us the opening we needed to complete our plans. The local attractions are there and are worth having a look.

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# NAS course held in Victoria

by: Bronwen Young

The NAS Introductory course (Introduction to Foreshore and Underwater Archaeology) was held on Mar. 22 in Victoria. It was taught by head tutor, Jacques Marc and by Eric Young. Bronwen Young and Jiri Kotler were also there to help.

Eight people attended the course, which was held at the Crystal Pool.

The curriculum puts an emphasis on the measuring and plotting of artifacts during a practical session in the pool. This is followed by some time in the classroom, plotting up the results. Also included are lectures designed to familiarize students with the concept of marine archaeology such as 'sites from around the world', and an overview of law as it pertains to wrecks.

It was a full day from start to finish and everyone did very well with the plotting of their measurements. Congratulations to the following people who completed the course: Dorothy Bright, Pete Craig, Gary Lambeth, Peter Norris, Dan St Laurent, Anji Smith, David Welch, and Lindsay Wright.



## Explorations for September

September 11 to 15

Expedition to Winter Harbour at the entrance to Quatsino Sound on the West Coast of Vancouver Island. The focus of this trip will be to search for and explore three different wreck sites at the entrance to Quatsino Sound. The list includes Fibreboard, Dunsyre and Eagle. Thursday and Monday will be travel days to Winter Harbour and return. We will stay in 6-person apartment/lodge at Winter Harbour and will make day trips to the various wreck sites aboard a dive charter boat. Cost \$700-750 per person. Limit six divers. You must have a NAS Introduction Certificate to participate. Contact Jacques (250) 474-5797 or email: [jmarc@shaw.ca](mailto:jmarc@shaw.ca).

# **An interesting, although distant, NAS opportunity**

*by: Bronwen Young*

Recently I received a letter and poster from Northwestern Michigan College (located in Traverse City, Michigan). They are hosting the NAS International Field School again this year. While geographically this may be out of reach for most of us, it does demonstrate the truly international status that the NAS program enjoys.

The field school will be held July 12 - 27 at the college's waterfront Great Lakes Campus. On offer are: NAS Intro and level 1 as well as a Level 2 field project. There will also be Level 3 classes including topics such as Artifact drawing, Ship and Boat Construction, Using sonar in Archaeology, and Surveying using Total Station. The complete list is very tempting! There are many class options including package deals and al-la-cart pricing. Students may attend just a day long class or the entire two week long event. Apparently there is very reasonably priced accommodation on campus as well.

The instructors are all fully certified in their area of expertise and come with many years of experience. Credits are transferable to most major universities as anthropology or social science credits.

So if you are looking for an educational holiday or just happen to be in the Eastern States at this time, perhaps this Field School is for you!

For more information or to contact please visit: < [www.nasnmc.com](http://www.nasnmc.com) > Look under the 2014 NAS Summer Field School tab at the top of the main page.

# Shipwreck Conference Photos



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