



Going, going, gone...

British Columbia's Reefs of Steel

New Life for Canadian Military Ships

Text and photos by Barb Roy

I could hear a low rumble as detonated explosives echoed down long empty corridors and through multiple decks of steel. Three hundred and sixty-six feet of ship began to groan and creak while water rushed in to claim its above water existence. Watching from a safe distance, former crewmembers and excited divers marveled at enormous geysers of escaping air mixed with water while the *HMCS Saskatchewan* began its final objective—to become Nanaimo's next artificial reef of steel. As with previous retired Canadian military ships, the *Saskatchewan* gracefully accepted its place in Canadian history as the fifth Destroyer Escort to be transformed from a once powerful tool of war into British Columbia's newest dive site.

Twelve years have passed since the *Saskatchewan* was scuttled next to Snake Island, on the mid-eastern side of Vancouver Island in British Columbia, Canada. The *Saskatchewan* is one of two Nanaimo wrecks purposely put in place by the Artificial Reef Society of British Columbia (ARSBC).

It is the winter of 2009, and I have joined a few friends to make my annual inspection and photo documentation of the ship's wondrous conversion into a thriving living reef. My husband and fellow wreck explorer, Wayne Grant, and technical dive instructor trainer, Ron Akeson, have joined me. Ron has brought several of his technical diving students along to practice skills and check out their new deep diving gear.

"I would much rather have my students learn how to deal with any gear or performance problems on one of these ships, in a somewhat similar wreck environment, than on a natural, possibly more fragile wreck," states Akeson. "If a technique isn't right, we have the time and depth to practice the skill until it becomes second nature without worry of currents, entanglement or damaging a potentially historic wreck."

During the short journey to the site (about 15 minutes from

Departure Bay), retired Nanaimo dive instructor and charter operator, Ian Hall, told us how the *Saskatchewan* and the other two scuttled wrecks has helped Nanaimo's dive industry:

"Since *Saskatchewan* was scuttled in 1997, we were busy almost every weekend with dive charters for over ten years. From 1997 to 2004 we did over 8,916 logged dives on the *Saskatchewan* alone! People came from all over the world because we had something new and unique. Back then, and now, about 64 percent of our clientele wanted to dive on the *Saskatchewan* or the *Cape Breton*, a 400-foot (122 meter) ship similar to the Liberty-class Ships in the US Military."

Ian went on to tell us that over 50 percent of his customers were divers using double tanks or rebreathers. Technical divers however, seem to prefer the *Cape Breton* because of its depth (140 feet/42.5 meters) and the fact it has a vertical shaft from the main deck leading to the engine room.

Both underwater photographers and naturalist also enjoy the two ships because of the abundance of life attracted to them.

Before sinking both vessels were thoroughly cleaned of all wires and furnishings. Huge 4x6-foot (1.2 - 1.6

Spectators enjoyed a show of pyrotechnics during the sinking of the *HMCS Cape Breton* next to Snake Island near Nanaimo, BC



meter) holes were cut throughout all decks and hull to ease entry and exits.

Diving the *Saskatchewan*

Once everyone was in the water we descend down the mid-ship line on the *Saskatchewan* (one of three lines). We were blessed with over 80 feet (23m) of visibility! At 30 feet (10m) a gray outline came into view. At 50 feet (15m), I paused to adjust my strobes just below the radar platform, catching a glimpse of a huge lingcod resting at the far end.

On my way to capture the shot, Wayne zoomed

by on his scooter, determined to see how it would handle inside the wreck. Two of the technical students began laying out their practice lines at 90 feet (27 meters). I could hardly wait to see what new critters

had decided to call the *Saskatchewan* home.

It was unbelievable how the rails, ladders and wheelhouse windows (once void of life) were now completely covered with barnacles, encrusting invertebrates, anemones, swimming

scallops and golden colored feather stars. A rainbow of tiny delicate hydroids and tunicates decorated the outer parts of the ship to gather nourishment in slight currents, which



Powell Lake wooden boats (top left); *Saskatchewan* covered with life since sinking in 1997 (above and left inset)



737 Boeing jet plane in Chemainus (above); Diver Wayne Grant exploring *Saskatchewan* (right)

can occasionally be felt by divers during extreme tides.

At this rate of growth it won't be long before the entire wreck is completely covered with life. Schools of juvenile rockfish and silvery clouds of tiny baitfish elegantly weaved across the upper deck, through the Captain's cabin and towards the forward twin 3-inch 70-caliber gun barrels. I found it hard to imagine these long slender devices supporting so many critters, were once used to fend off aerial attacks.

On the main deck, at the bow, cabezon and lingcod vigilantly guarded their personal territories between white and orange plumose anemones in hopes a passing female would consider their domain a suit-

able nesting site. Smaller sculpins, decorator crabs and shrimp had made their homes in the open spaces in-between the main deck plates, where access holes had been cut.

Every now and then Wayne would pop up through a hatch to check on me. He was like a kid with a new toy zipping in and out of the ship, followed by another diver with a scooter. On a prolific wreck such as this, it doesn't take long for me to burn through a 2GB memory card using video and stills!

After surfacing, everyone was beaming with enthusiasm. Wayne was pleased to find the scooter successfully pulled him through multiple rooms and down Burma Road (a corridor traversing the length of the ship)

without kicking up a trail of silt, as fins usually do. I had plenty of images to add to my documentation records and have noted seeing a new grunt sculpin, about the size of my hand. The students finished their skills in full Trimix gear with all potential problems alleviated or resolved.

"I really like these wrecks for keeping my techniques sharp," exclaimed Rob Wilson, visiting rebreather diver from the Marysville, Washington. "Winter weather conditions always yield excellent visibility and its good practice for when we dive on real wrecks. I can't stress it enough how important it is to stay up on safety procedures and to first do a dive to check out all new equipment. We want no surprises at 250 feet!"





Artificial Reefs

Artificial reef projects

Wreck projects of this nature, often called "Artificial Reefs," have always played an essential economic role in British Columbia's dive-tourism market. Positive environmental effects gained from providing additional marine habitat include increased fish populations, additional substrate which attracts algae and kelp—providing protection from predators.

To gain a better perspective, the City of Nanaimo's Economic Development Group did a local study in 2003, concluding dive tourism annually brought in an estimated three million dollars in tourism revenue.

The ARSBC actually began when a group of ambitious Canadian divers who loved to dive on shipwrecks, got together in 1990 over a beer in a local pub. Hence, the society was formed and the craft of sinking ships began in Canada to enhance existing destinations around BC.

They wanted to create safe diving sites for divers to explore within the 100-140 foot (30-43m) depth range. One thing led to another, and the *GB Church*, a 175-

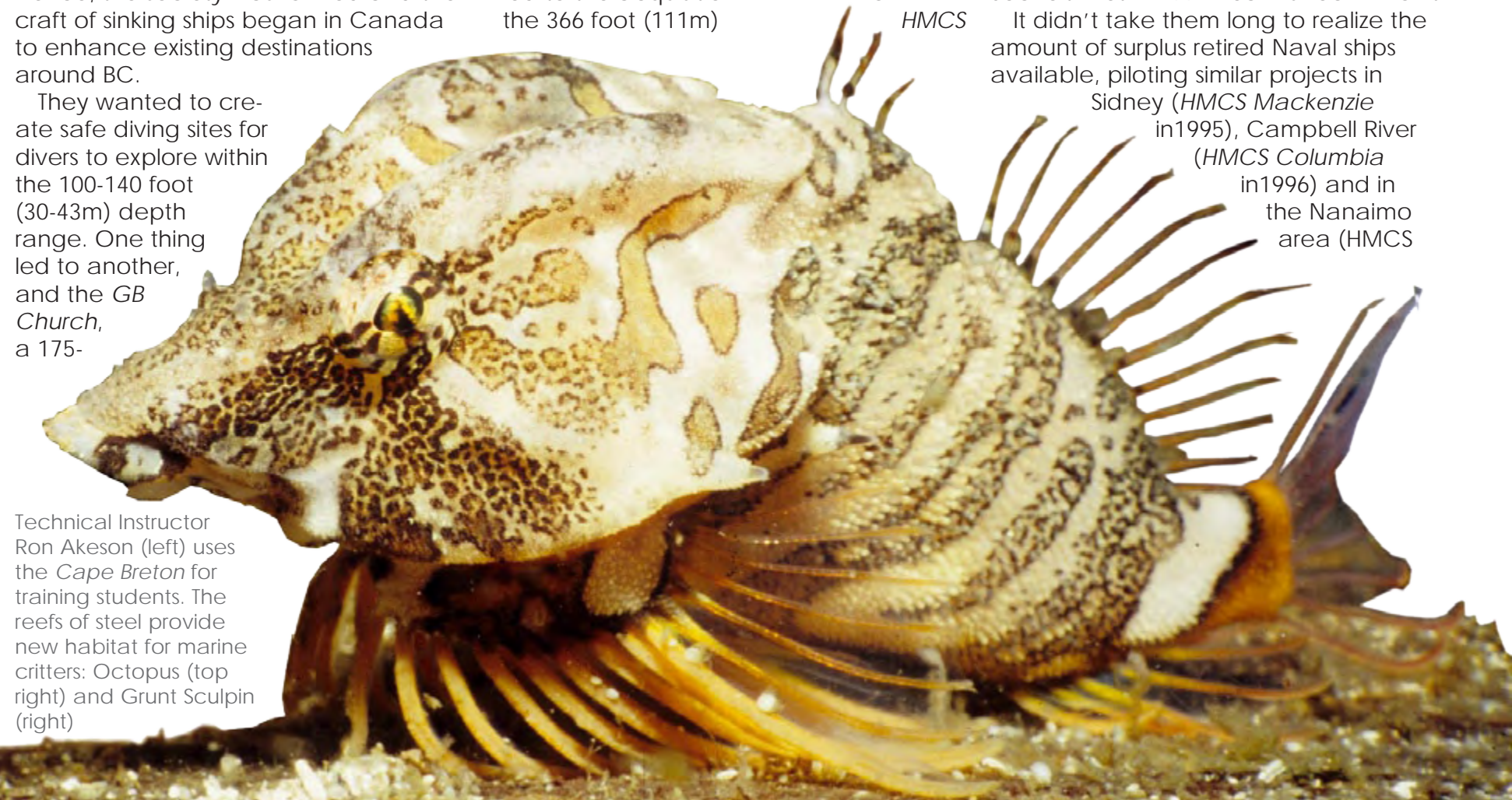


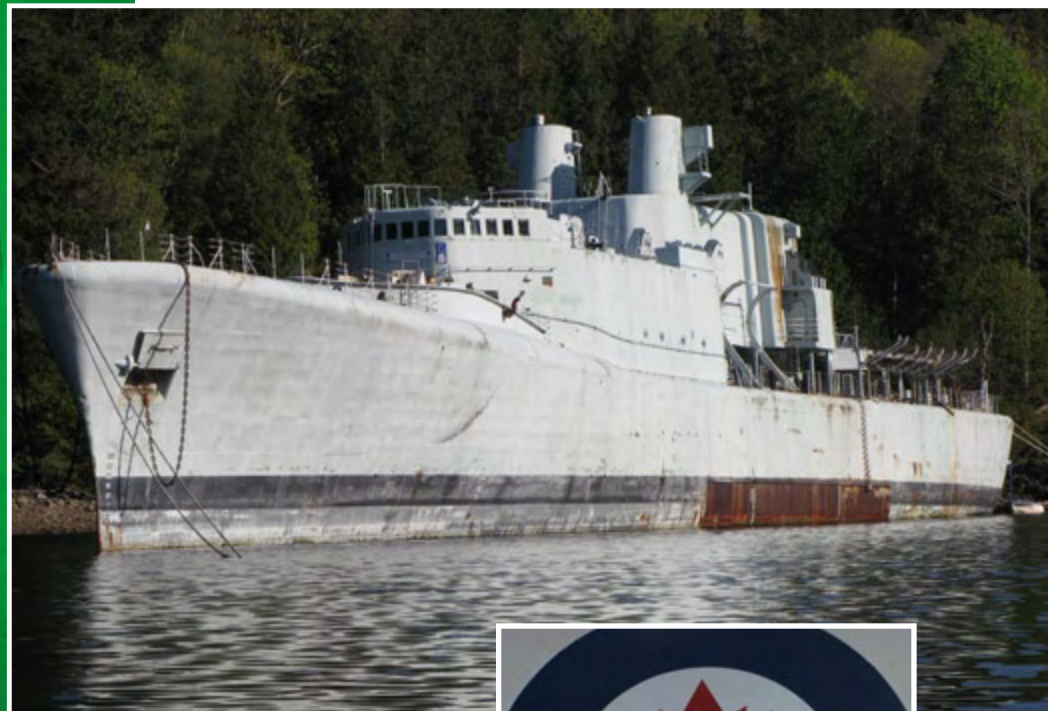
foot (53m) freighter was scuttled near Sidney, BC in 1991. This in turn led to the acquisition of the 366 foot (111m) *HMCS*

Chaudiere—another retired Canadian Navy vessel, which was scuttled in Sechart Inlet in 1992 near Kunechin Point.

It didn't take them long to realize the amount of surplus retired Naval ships available, piloting similar projects in Sidney (*HMCS Mackenzie* in 1995), Campbell River (*HMCS Columbia* in 1996) and in the Nanaimo area (*HMCS*

Technical Instructor Ron Akeson (left) uses the *Cape Breton* for training students. The reefs of steel provide new habitat for marine critters: Octopus (top right) and Grunt Sculpin (right)





Saskatchewan in 1997, *HMCS Cape Breton* in 2001). California State and Mexico even collaborated with the ARSBC to acquire a few of these excess Canadian ships, with ARSBC representatives on hand to consult for cleaning and sinking procedures.

In 1992 eastern Canada followed suit starting the Nova Scotia Artificial Reef Society, scuttling the retired *HMCS Saguenay* in 1994 and the 122-foot (37m) trawler, *Matthew Atlantic* in 1998. The society also acquired the retired St Laurent Class *HMCS Fraser* in 1997, docking it on the LaHave River in Bridgeport and turning it into a museum.

"Originally we wanted to sink the *Fraser*," states Rick Welsford, a key member in obtaining the Nova Scotia vessels. "But later we decided to send in a proposal to the Canadian Navy to preserve the *Fraser* by turning it into a Naval Museum. Divers also have an opportunity to see how the ship is laid out before diving on its sister ship, the *Saguenay*."

Artificial Reefs

In 2000, the Historic Sites and Monuments Board of Canada acknowledged the former *HMCS Fraser* as being historically significant to Canadians.

Whether the reason is to provide substrate to attract marine life, provide a training platform, or for economic

reasons, dive communities around the globe are now or have already pursued having a ship of their own to attract divers. Many even have plans for a series of ships, to be scuttled. In the United States: California, Texas, Florida, and many other coastal states have

similar artificial reef programs in place or are establishing them.

"I think that a lot of people forget about the environmental value of these artificial reefs," points out Mike Lever, owner and operator of the ocean-going live-aboard dive vessel *Nautilus Explorer*. "If it weren't for the protection these ships provide, all of those tiny critters now living on the wrecks might otherwise be fish bait. And the invertebrate life simply wouldn't be on a mud bottom. With the fish stocks under such enormous pressure in Georgia Strait, the wrecks provide some relief for natural reefs to recover and every bit of sanctuary helps."

Consulting

In an effort to expand and help other countries around the world to start similar artificial reef projects, three members from the Canadian ARSBC branched off, forming a formal consulting company independent of the ARSBC. Canadian Artificial Reef Consulting (CARC) was established in



Rear guns on *Columbia* in Campbell River (above); The *HMCS Annapolis* is the next ship to be put down in Howe Sound, (inset); A fish-eating Rose Anemone (right)



A female wolf eel finds a home on the *Saskatchewan*

ing from the Canadian Navy are pre-cleaned of all hazardous material and dangerous substances. In the United States, however, restrictions from the Environmental Protection Agency (EPA) have proven in the past to be a hurdle of red tape. With new funding available from the Federal Government, cleaning to EPA standards should become more feasible.

"It's very important to us," comments Wes Roots, member of the CARC team and owner of WR Marine (company hired to clean and prepare several ships for the ARSBC), "That these ships are made as 'diver' and 'environmentally' safe as possible. We have a proven track record and a system that works from years of experience."

Currently Wes Roots and CARC are working with the ARSBC to prepare another Destroyer Escort—the 371-foot

2003 to offer expertise in financial matters, preparation and cleaning recommendations and also demolition.

"We have teamed up with groups

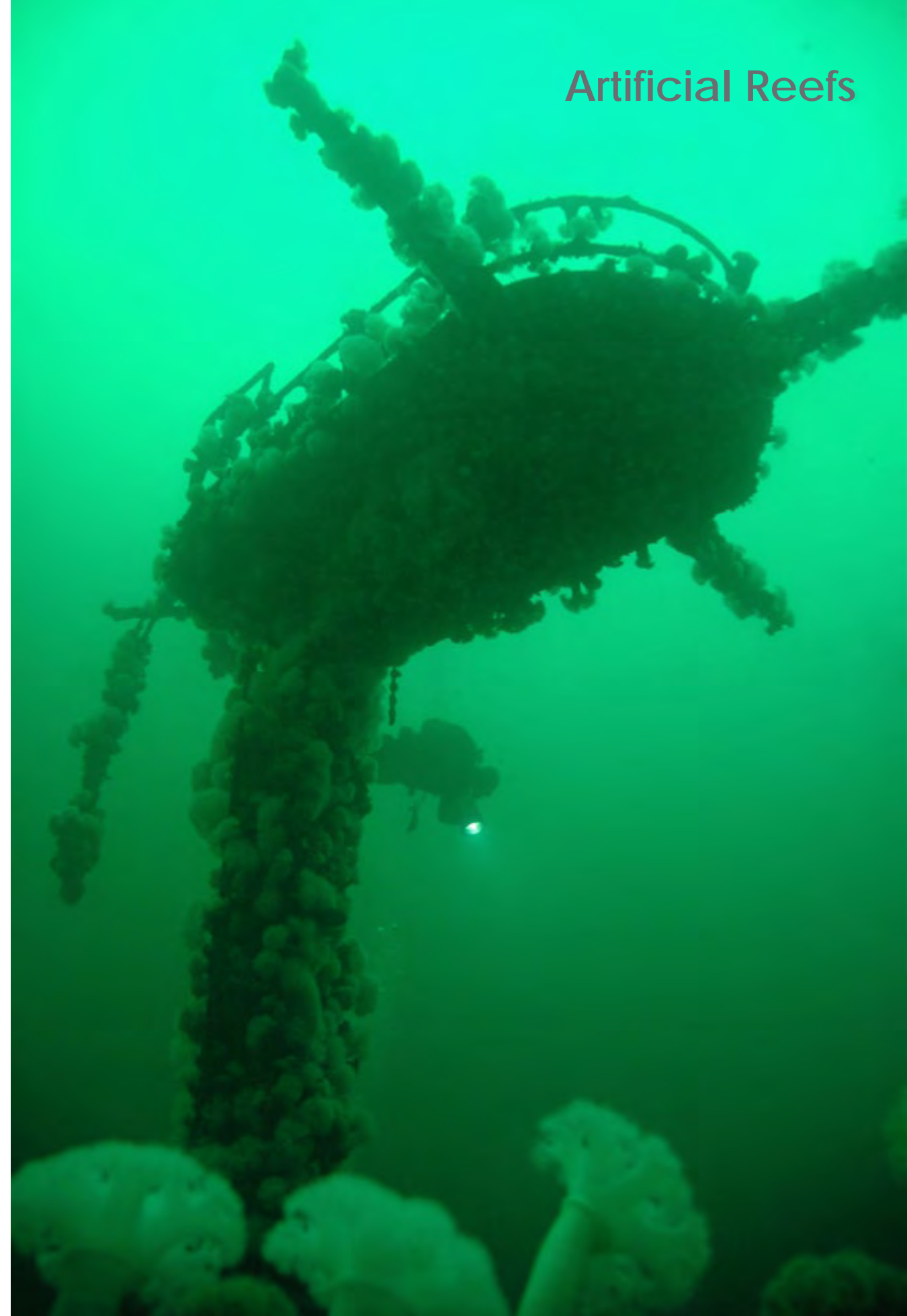
from around the world, helping them establish their own reef making programs," explains Jay Straith, former President of the ARSBC and current President of CARC. "We now have people capable of looking at long term ship stability issues, and issues relating to salvage, ship yards, diver risk mitigation and placement."

To date, team members of the CARC have assisted with projects in Quebec, the Caribbean, Australia, New Zealand, and the United Kingdom. Future projects include the United States and other parts of Europe.

Preparation

The whole preparation process for a ship

takes anywhere from six to 12 months depending upon the extent of readiness required by the community receiving the ship. In BC, most of the ships com-



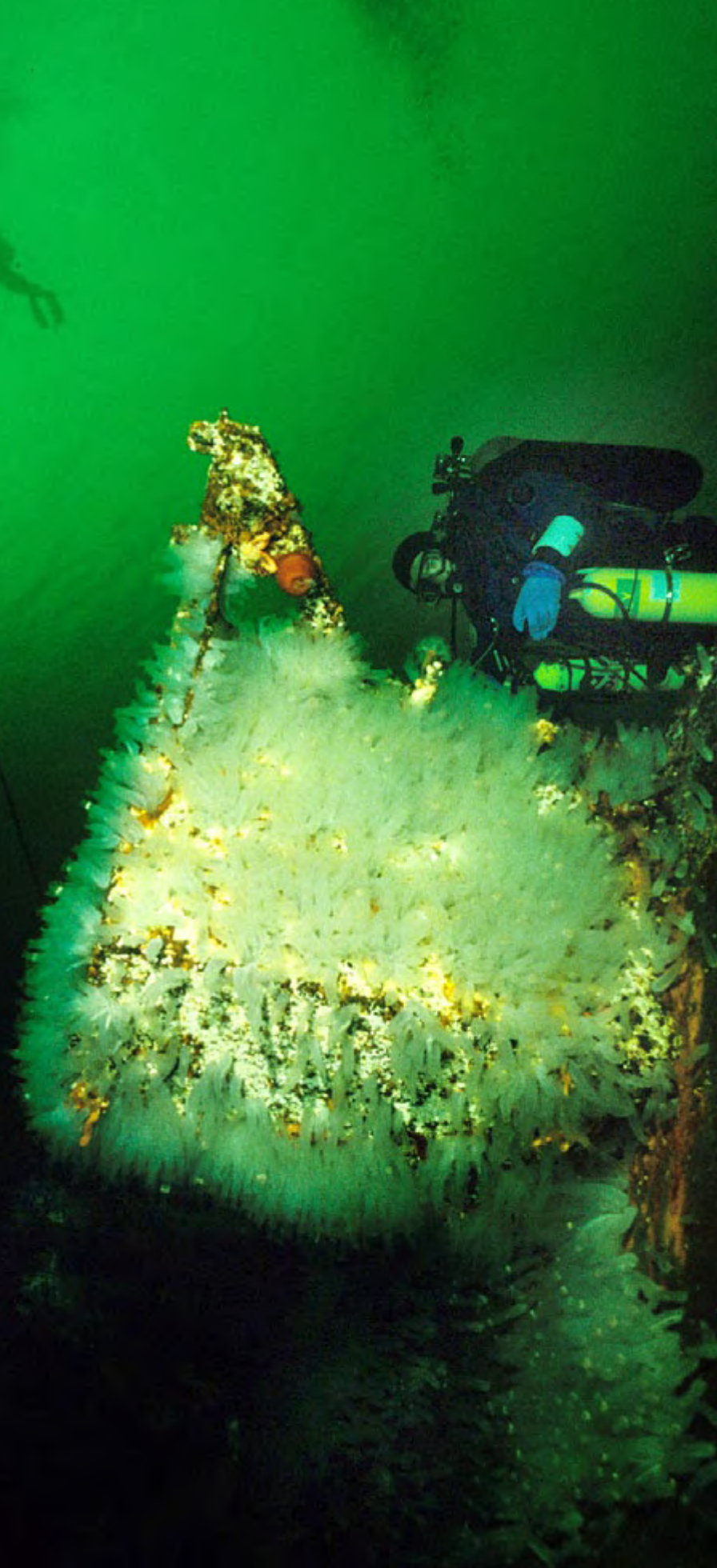
Artificial Reefs

Anemones soften the texture of the radar tower on the *Cape Breton* (above) Diver Wayne Grant (left) coming up through a hatch on the *Saskatchewan*





Divers descend on the *Chaudiere* in Sechart Inlet; Statue of a bronze mermaid in Powel River (inset); Divers (top right) peer into the skylight shaft of the *Cape Breton*



Artificial Reefs



(113m) *HMCS Annapolis*, for sinking in Howe Sound. The ship was acquired in 2008 and brought to a cove on Gambier Island for preparation, from the Esquimalt Naval Base on Vancouver Island.

Although volunteers were used in preparation of previous ships, the *Annapolis* has used volunteer help almost exclusively. Since October of 2008, groups of 6-20 volunteers have gathered on weekends from supporting dive stores and clubs in British Columbia and Washington State to be transported by local dive charter operators on their boats to the ship. They bring tools, gloves, dust masks and coveralls to disassemble things,

carry items and sweep floors for the day.

Deirdre McCracken, Director of Public Relations for the ARSBC and co-owner of Ocean Quest Dive Centre in Burnaby explains more on volunteer ship preparations:

"The plan over the previous months was to mine as much metals as possible to sell as salvage, concentrating on just about every part of the ship. The only areas not mined as intensely is the engine room, boiler room and steering room, but that is yet to come. The accumulation of months of work to clean, clear, stack and strip all manner of materials literally began to choke productivity. Rooms were

stacked with sorted items such as light fixtures, gear boxes, fiber glass, aluminum racks, sinks, bed bunks, ventilation ducts, drawers and the list goes on.

"Getting this volume of work neatly organized and staged is due entirely to the volunteers who love to be a part of each step. We have some serious 'repeat offenders' some of whom have been aboard more than ten times and others are getting as close. When we reach this accumulation level, like in May, a barge is rented to support a 52-foot trailer and two container bins. The trailer is used for debris only, like the estimated removal of 600 bags of fiberglass insulation we



Mosshead warbonnet peeks out from the safety of its barnacle home on the Mackenzie ship; Diver checking out a wooden boat in Powell Lake (top right)



hailed out hand over hand from various parts the ship. The other bins are for metals, mostly aluminum parts."

Deirdre also explained that the *Annapolis* was the only ship acquired by the ARSBC with all of the wire removed, saving additional work. "We had an amazing support from our dive community," continues Deirdre. "With representation from every dive centre in the Lower Mainland, including store owners, managers, customers, various clubs, our American diving friends, as well as our local charter operators, working shoulder to shoulder to make this a truly collaborative effort from the dive community. This is a reflection of the passion, support and driving force behind this unique project, and is what has kept it going though all phases thus far."

"We still need volunteers every weekend up until sinking," adds Howard Robins, President of the

ARSBC. "Most of the permits are in place and after Environmental Canada gives their final approval, we will talk sink dates. If not in 2009, for sure in 2010. Halkett Bay Provincial Marine Park is the location we are currently looking at."

Protected areas

The ARSBC also hopes to eventually establish protected areas around the all of their projects in British Columbia, falling under BC Parks jurisdiction and protection.

"ONLY THE FIT SURVIVE" is the motto proudly used to represent the former *HMCS Yukon* (now a reef in California) adapted from a Robert Service poem. One can easily find truth in these words when looking at the long-term survival of our oceans.

By placing these reefs of steel beneath the waters of our world today, perhaps natural reefs will have time to replenish. I can't think of a better way or a more suitable

final mission to honor the massive ships that once protected our loved ones during times of world turmoil, when the alternate choice for their use is to the scrap yard. As divers it's our job as oceanic ambassadors in the long run to work together to preserve this environment and ensure its continued existence for future generations.

Reference Sites

- Artificial Reef Society of British Columbia: www.artificialreef.bc.ca
- Canadian Artificial Reef Consulting: www.artificialreefs.net
- Something fun and educational for kids at National Geographic: www.nationalgeographic.com/xpeditions/lessons/08/g912/artificialreefs.html
- The Dive Industry Association of British Columbia: www.diveindustrybc.com
- Tourism British Columbia: www.hellobc.com ■