

2003

# Bottomtime

The Newsletter of the Nova Scotia Underwater Council

## Vanishing Dive Sites

Are we losing dive site in Nova Scotia? More appropriately, are we losing access to dive site in Nova Scotia? Most of us are not fortunate to own a boat or the money to charter a dive boat every weekend and have left to drag our gear down to the beach or shoreline and swim to the point of interest. As most of you know, there are many excellent shore dives to be experienced around Nova Scotia but one of the big determining factors for a good shore dive is accessibility. Even the most fit diver doesn't look forward to carrying their gear over rough terrain for more than a few hundred feet. The most popular shore dives tend to be ones that are only a minute or less walk from the vehicle to the water.

The problem is, who owns the small bit of land you pass over to get to the water. The majority of Nova Scotia is privately owned, with approximately 75% owned by individuals or corporations. For many years this ownership regime has caused minor disputes between divers and landowners but it is likely that these conflicts will only increase as these privately owned lands are developed into residential lots. One of the more recent developments will likely result in the traditional access trail to the Bear Cove site near Halifax (see article on page 5). With the increase in new housing developments in recent years and the demand for waterfront property, divers can expect to lose more traditional access points.

To be clear there are laws governing property access and divers should be aware of what is legal access and what constitutes trespass. Under the *Protection of Property Act*, every person who, without legal justification or without the permission of the occupier enters on premises that is developed or is enclosed with the intention to keep persons off the premises is guilty of an offence and can be fined up to five hundred dollars.

For land that is not clearly private property, the land owner is required to post signage indicating that it is private property or otherwise notify the person on the property they are not permitted to trespass. Every person who, without legal justification, remains on premises after being directed to leave by the owner is guilty of an offence and can also be fined up to \$500. But no person may be prosecuted for contravening any notice prohibiting entry or prohibiting activity on forest land if that person is engaged in recreational activity. "Forest land" means a wooded area, forest stand, tract covered by underbrush, barren ground, marsh or bog but does not include Christmas tree lots, special forestry areas, areas of active logging activity, or used for berry cultivation. This being said, I am not aware of a case of trespassing for the purpose of accessing water for recreational diving as been contested in court, so it is best to use your own judgement or the opinion of a lawyer.

Outside the legal requirements, we as divers, can work to ensure a good relationship with landowners to ensure continued access. If you need to cross a property to gain shoreline access and there's a house on or near the property, it's in your best interest to ask permission.

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you put that dive gear on, you are representing all of us. So making a mess will give the public a negative image of all divers. You can even go a step further and cart out some garbage that may have been left by others (non-divers typically). Also keep the noise to a minimum. People often live by the ocean to enjoy the peace and quiet and disturbing that will likely result in the landowner throwing out the "Divers Welcome" mat.

So be aware of where you are walking, what your rights are and respect the property and rights of others and it will go a long way to maintaining that tradition dive site access.

(Continued from page 1)

Outside the legal requirements, we as divers, can work towards a good relationship with landowners to ensure continued access. If you need to cross a property to gain shoreline access and there's a house on or near the property, it's in your best interest to ask permission. Given the typical Nova Scotia hospitality, most landowner will allow access given that you are respectful. Be respectful. Landowners are not ask likely to let the next divers have access if you trample their prize flower garden. The same goes for garbage. Regardless of the dive site, no garbage should be left behind. Like it or not, as soon as

## NSUC Members get a FREE year of Diver Magazine

Well another Boat Show under our belt. Although not as well attended as in previous years we were glad to see some old faces drop by and some new divers ask about the NSUC.

As we did last year, we offered a free one year subscription to Diver Magazine with each new membership. Don't discourage if you didn't sign up as a new member at the Boat Show because we are extending this offer to any members who register in the next few months. If you sign up for a one year NSUC Membership (\$10), in addition to our regular services such as this newsletter, you will receive a one year

subscription to Diver, Canada's premier diving magazine (valued at more than \$20). Another great way we've discovered to reach out to divers is through our new website. In addition to having updates on NSUC activities is also has information on dive sites, marine life and updates on issues of interest to divers. There is information on diving clubs around the province and we will soon be adding a club information page with updates of events happening in your area of the province. We think the site looks great but we are still building on it, so if you have any ideas please let us know.

## NSUC Membership 2003

Name: \_\_\_\_\_

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## Tunicates

By Lawrence Taylor

and two siphons. One siphon (buccal siphon) allows water into the first sac (pharyngeal chamber). Sifts in this sac are lined with cilia that sweep water from the first sac into a second (atrium) that surrounds the first. Water then leaves the second sac via the atrial siphon. Plankton in the water entering the first sac is trapped in mucus on the sac's surface. The mucus and food then are moved towards the animal's stomach for digestion and pseudofeces are eliminated via the atrium and atrial siphon. There are two general groups of tunicates, singletons and colonials. The latter group together under one tunic and share the same atrium and atrial siphon and form an encrusting colony over rocky surfaces. Tunicates that stand alone may have a long stalk like the sea potato.

Last September I was in PEI to film mussel lines with clubbed tunicates for CBC's LAND & SEA. Producer Peter Hall was looking at the impact clubbed tunicates have had on the mussel aquaculture business, which is worth \$40 million a year in PEI - The episode aired February 9th, 2003. As I swam and filmed the mussel lines, I couldn't believe the number of tunicates. They covered the socks and gear from top to bottom. So unusual from the tunicates I normally see in Nova Scotia. I can tell the depth of water I'm diving in by the types of tunicates I'm looking at. In deeper water, fifty plus feet, stalked sea potatoes are common. Slight shallower on the under surface of large rocks or on rock faces, sea peaches are common. In ten to twenty feet of water, colonial Golden star are common. To see tunicates in such numbers in such shallow water and out in the open is not a common site. The first harbours discovered to have clubbed tunicates were quarantined and spraying vinegar onto the tunicates has shown some success in killing them off without killing the mussels. The problem with this methodology is that it is very expensive because of the extra handling required to constantly clean mussels and gear of the tunicates. Now that the clubbed tunicate has settled in and is being found in other PEI harbours, its unlikely that it will ever be eradicated. The future for mussel culturists does not look good.

Tunicates get their common names from the "tunic", their leathery body cover, hence the name sea peach and sea potato. They are able to contract their bodies, which they do when they are pulled out of the water and squirt you in the eye. These animals are fascinating to study because they straddle the invertebrate/vertebrate world of boneless/boned animals. In order to be part of the vertebrate world, the phylum Chordata, an animal needs to possess a notochord (backbone for us), a hollow dorsal nerve chord (spinal cord for us) and pharyngeal clefts (gills for fish) at some point of its life cycle. Tunicates qualify as Urochordates because their larval stage has a notochord and nerve chord. The adult form looks like little alien blobs with two siphon "ears", and there are almost a dozen species of tunicates in Nova Scotia.

About 4 to 5 years ago, a new species of tunicate showed up in a few eastern PEI harbours. The species, *Styela clava*, or the "clubbed" tunicate, is a western Pacific species that was likely brought to PEI in ballast water. The major problem with this "introduction" is that they will cover aquaculture mussels socks to a point that the mussels are no longer visible. Mussels make their living filtering plankton from the water as do tunicates. As a result of the proliferation of clubbed tunicates, they have essentially created a biological filter around the mussels. An example of tunicate filtering: the species *Phallusia* can process 45 gallons of water in a 24 hour period. *Phallusia* is only several centimetres long, versus the larger 7 to 8 cm body of the clubbed tunicate.

There is a general plan to tunicates that involves a mobile tadpole larval stage and a sedentary adult. The tadpole-like stage has a tail that contains the notochord for support and a dorsal nerve chord. This stage is designed to seek out a hard surface like mussel shells and aquaculture gear. The tadpole has 3 adhesive organs on its "snout" that it uses to attach to its future real estate. When attached, the tail is resorbed and two non-functional siphons migrate from the "head" and "back" region to the tail area.

Once the larva has settled and metamorphosed into its adult form, it is essentially a globose tunic containing two sacs

# Nova Scotia Underwater Council

Since 1971

## OBJECTIVES

- To be a representative body for the SCUBA diving community, so as to preserve, support and promote diving and diver safety in the province.
- To make available to all divers information concerning safety, medical, technical and research data concerning the sport of SCUBA diving and SCUBA diving equipment.
- To cooperate and participate with the government on projects and policies that lead to the recognition of sport diving as a significant recreation activity.
- To foster and promote marine awareness.

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## NSUC at the 2003 International Boat Show in Halifax



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## Bear Cove Diver Access

Some of you may be aware that divers will likely soon lose a traditional access to a popular dive site just outside of Halifax. Bear Cove, just off the Herring Cove Road between Herring Cove and Chebucto Head, is a shore dive that offers good marine life and the remains of the shipwreck of American steamer, the Humboldt, sunk on the 5th of December, 1853 on route from France and England to the United States.

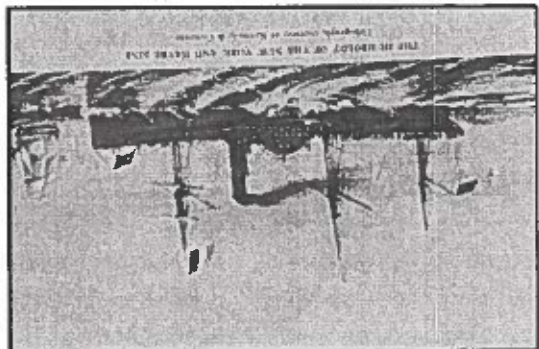
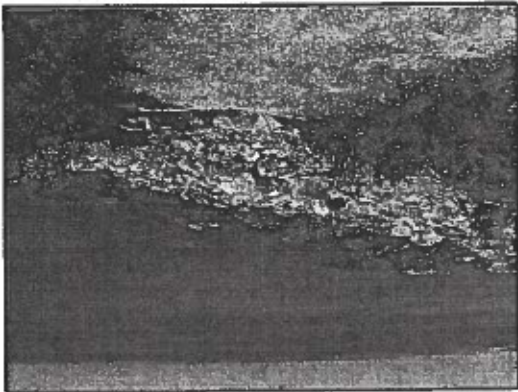


Photo scanned from an unidentified engineering book by Thierry Papiou

A local developer has purchased the privately owned stretch of shoreline along Bear Cove and has subdivided it into individual housing lots. The lots are currently being sold including the lot which has the access trail to Bear Cove. If this lot is sold and developed for a shore front property, diver may not be allowed access to the traditional trail. Knowing that there was a possible dive site access in the area of the development, the Halifax Regional Municipality (HRM) Planning & Development Services contact the NSUC in the spring of 2002 looking for input.

NSUC members visited the site with the developer with the hopes of maintaining the traditional access. Under Halifax County Municipality's Planned Unit Development by-law, ten percent (10%) of the land area covered by the development plan must be set aside for public use, which could have included the property containing the trail. Unfortunately, due to land restrictions and issues surrounding parking access (Nova Scotia Department of Transportation and Public Works would not permit a public parking area due to lines of sight from the roadway) the traditional site could not be incorporated into the developer's plans.

Accepting that the traditional site could not be set aside for public access, the NSUC began to work with the developer and HRM to provide alternative access. The new access point, although further from the Humboldt, would provide safer parking, a maintained trail and other amenities as the project progresses. There has been discussion of interpretative signage at the site as well as possible equipment to aid divers in and out of the water.



New site access at Bear Cove

The NSUC agrees that it would have been best to save and maintain the original access point but given the restrictions we were pleased to be able to work with the developer and HRM to maintain diver access to the area. We also look at this as a learning case and plan to re-examine the process and outcomes once all the work is finished. We also want to know of any other diver access points that have been lost or are at risk of being lost to residential or commercial development. If we want to maintain these sites we have to become more active early in the process so that the needs of divers can be incorporated into development plans. Let us know what you think.

## Club Promotion Program

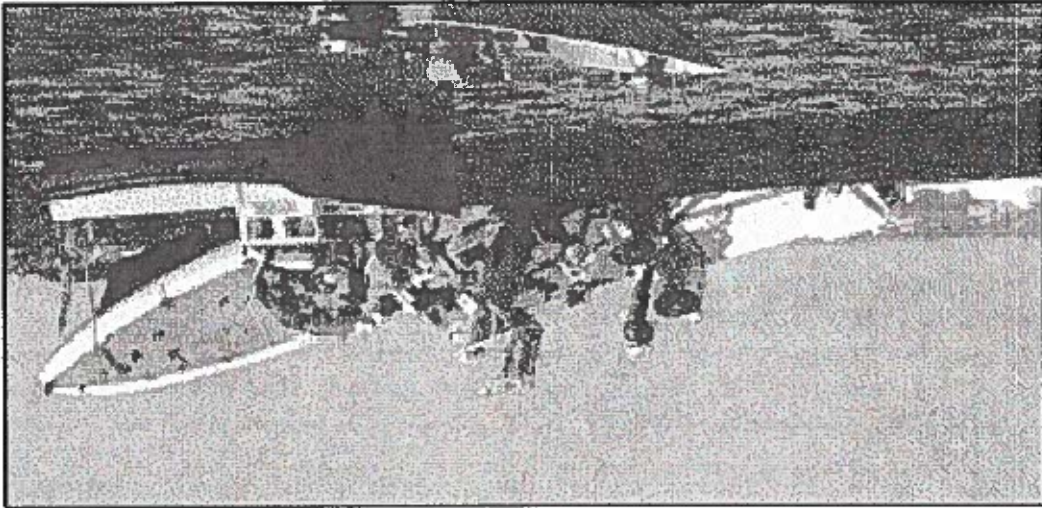
The NSUC is hoping to see more clubs come forward to take advantage of these funds. To apply for support, clubs need to contact their NSUC Regional Director and provide a brief written description of their activity. The Board will consider the application and quickly return its decision. For more information, contact your NSUC Regional Director. Contact information may be found on page 4 of this newsletter or on the webpage: [www.nsuc.net](http://www.nsuc.net).

The NSUC begin the Club Promotion Program last year, offer as much as \$200 for Dive Club for materials, education, events, etc. Last year the NSUC provided funds the Nervous Wrecks Dive Club in Cape Breton for their annual Go For Gold event which raises money for the Children's Wish Foundation. This very successful and fun event raise \$\$ for the charity in addition to the thousands more raised over the XX years of the event.

## New Artificial Reef Planned

The details of the third reef are still being developed but the fishing vessel The Zarp is scheduled to be sunk somewhere in Mahone Bay in 2003. The rusting hull may not look too impressive now but it only takes a dive on either the Saugunay or the Mathew to see the potential these vessels have for creating a flourishing ocean garden. As the details of this project develop we will keep you updated on the NSUC webpage ([www.nsuc.net](http://www.nsuc.net)).

There may be a new artificial reef in Nova Scotia this summer. The Nova Scotia Artificial Reef Society (ARS), who have now sunk two vessels for reefs, has a third planned for this summer. The Saugunay in Lunenburg was the first vessel for the local ARS. The decommissioned Canadian St. Laurent Class Destroyer Escort was sunk in 1994 and has provided an incredible diving experience for the thousands of visitors who have explored her since. The second reef is a fishing trawler, the Mathew Atlantic, which was sunk in Port Mouton in 1998. Both vessels have provided habitat in an otherwise barren area for a wide diversity of marine life.



The Sinking of the Saugunay in 1994