



December, January, February

December became January, January became February and now we will soon say goodbye to March. Things have been relatively quiet on the executive – it's been an odd few months where everyone's personal commitments seem to never end. We do hope to get things moving again soon, though. In the meantime, why not take a load off and catch up on the news. In this edition we have the latest from DAN, a local diver's story about a fall trip to the chamber and parking updates for Birchy Head (although many are likely aware of this now!).

Events and Stuff

Clean up dives: The fall clean up dive was cancelled due to poor weather conditions. Although we could not reschedule another for the fall, we plan to host a cleanup once things warm up in the spring.

Halifax Public Library Presentation: On Saturday Feb 15 we hosted "Intro to Scuba Diving" at the Halifax Central Library. The first half of the presentation covered required training, gear and the types of diving in Nova Scotia while the last half focused on what we see underwater. About 15 people attended and they asked a lot of questions about training, gear and local marine life. The library was very pleased with the event and have extended an invitation to host another event in the fall, so keep an eye out for a call for presentation volunteers.



Wayne Joy explains why we dive. Photo: Heather Andrews

Tuesday Night Talk Series: The Maritime Museum of the Atlantic will host the NSUC On April 22 as part of their Tuesday Night Talk Series. We hoped to participate in their winter session but it is a very popular event and the winter session schedule filled up very quickly. However, we were able to work with the museum to secure an evening in the spring. More details will be available as we put the presentation together.

Website: It's old news now, but we still wanted to mention it! Our web whiz, Denis, had some ideas for improving our site so we gave him the ok and off he went. The site has a completely different layout and the newsletter section is improved quite a bit. Denis incorporated a bit of AI into this section so rather than spending hours writing newsletter highlights, he put his nano pens to work and within a few minutes he had summaries for each newsletter! Check it out [here](#).

Chamber Diving

Stephen Dugas

I first learned to dive in 1999 and since then I progressed from an open water diver to Master Scuba instructor, logging thousands of dives without incident. However, last fall all that changed when I logged a dive of a very different sort:

<u>Depth:</u>	60 feet
<u>Dive Time:</u>	7 hrs, 45 min
<u>Mix:</u>	100% Oxygen



Site: Victoria General Hospital

It was that time of year again. Kids are back in school, sports schedules known, and I could once again fit in some long overdue diving. The Halifax Harbour was calling, and so our little group, the Zodiac Divers as we call ourselves, requested and received permission from the Halifax Port Authority (HPA) to dive in The Narrows at slack tide the morning of Monday, November 4.

The Dive

Five of us met at Seaview Park, assembled our gear and launched the boats. After a radio check with the HPA on VHF CH12 we started for the Narrows to hunt for vintage bottles from a forgotten era. When the first set of three divers were ready, we informed the HPA that diving was about to commence. After receiving acknowledgement and hearing the broadcast to harbour traffic that diving operations were starting the guys rolled off the boats and started for the bottom of the harbour. As we do for all of our zodiac diving, a team remained topside tending the boats and providing surface support. After the first three completed their dives and exited the water the roles were reversed and the last two rolled in. Eventually their dives ended and once back on board we notified the HPA that diving was complete and made way for the Seaview Park boat ramp. My dive was like any other dive: 55 minutes to a maximum depth of 80 feet (not the entire dive!) on 32 EANx. Back at the boat ramp I felt great and as we ribbed each other and shared tall tales of past bottle discoveries we vowed to make a weekly commitment to get out and dive.

Post Dive

That evening I felt more tired than usual but chalked it up to not having dove in several months. Eventually I drifted off to sleep dreaming of the elusive torpedo bottles and other treasures waiting to be found this winter.

Waking earlier than usual, I noticed my left thumb and three fingers on my right hand were discoloured. A quick self-assessment further revealed numb toes, a stiff left shoulder, tingling on the left side of my face, and no feeling in my left thumb. I promptly grabbed my dive computer, and made my way to the QE2 Emergency department. In retrospect, I should have called an ambulance, but hindsight is 20/20.

Pre-Chamber Treatment

During triage while providing my dive details and a list of symptoms I noticed I was mixing up words and had some brain fog. Once triaged, it was only a minimal wait to be whisked away to a bed. The on-call doctor at the Hyperbaric Unit was called, and initial treatment plan was put in place. However, the chamber was currently in use - it is also used for treating cancer patients, carbon monoxide poisoning and other issues. In the meantime, I was prescribed an initial treatment of IV for fluids, chest Xray, EKG, and 100 percent oxygen.



Receiving initial treatment. Photo of and by Stephen Dugas.

After several hours my symptoms had not improved but the chamber became available. It was a short drive away at the Victoria



General Hospital which meant I was now going for an ambulance ride. At the Hyperbaric Unit my treatment was managed by Dr. Pastel. She explained the procedure and conducted some neurological testing. After realizing I had not eaten anything yet today, she soon had a slice of pizza, an apple, and two cookies for me. I must say it was all delicious!

Chamber Diving

In preparation for the “dive”, I was fitted with a neck seal attached to a ring, like a replaceable neck seal ring in a drysuit. Once seated in the chamber the neck seal is connected to an inlet and exhaust hoses. DIVE, DIVE, DIVE! Down we went. Air was pumped into the chamber and as it quickly compressed, I started to equalize until we reached an equivalent depth of 60 feet. Once at depth a large semi rigid clear bag was placed over my head and attached to the neck ring. 100% oxygen started to flow into the bubble. Although one can’t discern oxygen from air, there is a constant loud sound similar to static on a radio.



Chamber at the VG. Photo by Stephen Dugas

The chamber can run many different profiles, but there are two basic profiles for treating decompression sickness. The first is four and a half hours, while the second runs almost eight hours. I hit the jackpot with the eight-hour adventure, accompanied by a member of the hospital staff. The eight-hour treatment consisted of the following dive profile:

1. Dive to 60 feet
2. Head bubble on, breathe 100% O₂ for 20 min
3. Bubble off, breathe 5 min air at depth
 - Repeat cycle several times.
4. Ascend to 30 feet over the course of one hour with two 30 min cycles of 100% O₂.
 - Equivalent to an ascent rate of 2 minutes per foot
5. At 30 feet: bubble on and off breathing 100% oxygen for 20 min with 5 min breaks
 - Done 9 times.
6. Ascend to the surface at 1 minute per foot for 30 min breathing 100% O₂.
 - The last five feet feels like forever!

Addicted to your phone? Sorry, no electronics allowed. Hungry? Too bad, no UBER eats in here, either. Bio break? There is a jug in the corner (leave your dignity at the door!). They do provide some magazines and word search puzzles to pass the time, though.

Upon completion of treatment, the tingling and stiffness cleared up, my brain fog lifted and I demonstrated much better performance on the post neurological testing.

While there is never a guarantee you will not get Decompression Sickness, you can reduce the risk through exercise, maintaining good diving health, be well rested, and dive conservatively. Divers properly trained for NITROX can add an additional safety factor diving nitrox on air tables. And a final



word to fellow divers: trust your body, follow your gut, and always check on your dive buddies. If there is any doubt seek medical attention.

Finally, I would like to extend a sincere thank you to all the staff at both hospitals, including Dr. Pastel and my 'dive buddy' Deryck.

Road Shoulder Changes at Birchy Head

Sometime around November of last year the ditch at Birchy Head was dug up and expanded. While it likely improves drainage for local residents, the significantly reduced width of the shoulder means divers cannot fully park off the roadway such that the driver's side tires are likely to be on the pavement white line.

From a safety standpoint the change creates potential traffic hazards that could contribute to an accident. Additionally, people understandably park as close to the edge of the ditch as they can. The unfortunate side effect of this is the less stable edges of the shoulder are gradually collapsing, effectively making the shoulder smaller and the problem worse. In winter, when snow clearing creates the illusion of a larger shoulder, it is plausible divers who perhaps don't frequent the area will presume the shoulder width has not changed and then find their vehicle stuck in the ditch or rolled over.

From a traffic law perspective, parked cars may be in contravention of the Motor Vehicle Act (MVA) under section 138. The full Act can be viewed on the [Nova Scotia Legislature](#) website, but the main take away is:

1. All efforts should be made to park off the paved, improved or main travelled portion of roadway (Actual act phrasing: "No person shall park or leave standing a vehicle.....");
2. A width of not less than 4.5 metres of the main travelled roadway opposite the vehicle is left free for traffic flow; and
3. There is a clear view of the vehicles from 60 metres in each direction of the parked vehicle.

Whenever a peace officer finds a vehicle in violation, the officer may move the vehicle or require the person in charge of the vehicle to move it to a position permitted under Section 138. Each violation can result in a Summary Offence Ticket being issued, or the vehicle can be lawfully towed at the owner's expense. Fines can be ~ \$86.00, \$136.00, and \$236.00 for first, second, and third offences progressively.

The more pressing issues for divers, though, are the potential safety hazards, and potential inconvenience to residents that could jeopardize future access to the site. As seen at Paddy's Head, once residents had enough of divers parking on the roadway they petitioned for and were successful in preventing parking off the roadway. It is reasonable to think the same could happen at Birchy because parked cars could now actually affect traffic. Divers are encouraged to exercise caution when parking in the area. Options can include carpooling to reduce the number of vehicles at the site, or meet at an area with ample parking and 'shuttle' to the site using as few vehicles as possible.

This development will be on the agenda of our next general meeting for discussion with the membership.



As this was intended for the end of year issue, our friends at DAN thought it would be a good time to re-set and provide a reminder regarding dive planning and preparedness.

Prepared and Aware

As we enter a New Year, it's a great opportunity to reset and prioritize planning and preparedness to ensure a safe year of diving.

Expect the Expected ... and the Unexpected

The more you know about your upcoming dives, the better off you'll be. Look at recent reports and forecasts about the site's weather and sea state, and ask yourself: Are your current skills and fitness up to the task?

Currents, temperature and visibility change daily, so it's important to know what you should be prepared for. A change in one or more of these variables could have a significant impact on your experience of the dive.

Limit Distractions

While multitasking can be an easy way to get tasks done quickly, it can come at the expense of doing things well. It's also important to limit distractions and prioritize tasks based on their importance. A great example would be avoiding assembling gear during a dive briefing.

Make a List

While they may sound like a nuisance, checklists not only ensure tasks are completed but also serve as a form of accountability. When completed before dives, checklists have been shown to reduce errors and accidents, improve performance, and enhance safety — for both divers and dive operators.

Standard pre-dive procedures include review of equipment, the dive plan and responses to emergency events:

- BWRAF: BCD, weights, releases, air and final OK
- SEABAG: Site survey (entry, exit, hazards, etc.), emergency (preparation, equipment, etc.), activity (planned dive), buoyancy, air and gear and go

Drill Your Skills

Are you ready to take action in the event of an emergency? As a diver, you understand the risks that exist, but knowing is just part of the battle. From implementing the right first aid skills to simply keeping calm, how you respond in an emergency is imperative.

EAPs

Emergency action plans (EAPs) are essential risk mitigation tools used by dive operators and professionals — but they are useful for recreational divers, too. While there is no one-size-fits-all format for an EAP, a personal EAP should consist of details about how to handle both medical and non-medical events. Actions taken may vary depending on the event, the location, and the individual — some situations may warrant calling for help first, while others may involve immediate provision of first aid.

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The EAP should include emergency equipment such as first aid kits, oxygen units, means of communication (and along with them, information such as phone numbers of local hospitals). An EAP should be realistic enough that you can follow it, and it should be able to be adapted based on your location and circumstances.

Use Your Voice

Your voice is a powerful tool in keeping you, your dive buddy and everyone in your group safe throughout the dive. If at any point you feel uncomfortable with or underprepared for the dive, call it off. Beyond the dive, if you see something concerning about your dive operator, the conditions, how your buddy assembles gear, or anything else, say something.

Keep Learning

Knowledge is power, and it's important to stay proficient and skilled, whether you're interested in pursuing an advanced certification or just want to keep the rust at bay.

Worth the Work

All these precautions and protocols may sound cumbersome, but it's amazing how quickly they can become second nature.

A reminder that DAN offers the diving community an extensive range of free diving health & safety materials, guides, courses and webinars, so take some time to explore World.DAN.org.

What's Happening Out There?

Are there any events or activities taking place in the upcoming months you think might be of interest to the underwater community? If you would like get the news out there let us know and we can post it in our newsletter. Just send your idea to any of the email addresses below and we'll get in touch.

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