

Win a 3-Day Dive Trip To Newfoundland at Subsea Horizons 1991

This year's Subsea Horizons will be held at the Dartmouth Sportsplex, 110 Wyse Road, across from the Holiday Inn at the Dartmouth entrance to the Mac Donald Bridge, on **May 4**. It all gets underway at 10 AM, and there is something to interest everyone, diver and non diver alike.

Exhibits - The exhibit hall will have something for everyone. The newest products of all major equipment manufacturers will be displayed by the local dive shops. If you want a specialty dive course, inquire at the dive shop booths. If dive travel is your main interest visit the Travel Cuts or Air Nova / Air Canada booths. If you need a good dive boat, browse through the many displayed by Bayside Supplies Limited. If you can't afford a boat, but like boat diving, talk to the representatives at one of the charter service booths. Government representatives will also be on hand to discuss their interaction with the diving community. Some exhibitors will be holding contests and "show specials". **CHECK THEM OUT!**

Seminars - The schedule for seminars begins at 10 AM. The schedule and ticket order form can be found later in this issue of **BOTTOMTIME**. There are nine different seminar topics, something to interest the "novice" and the "old salt". The topics are UNDERWATER ARCHAEOLOGY, UNDERWATER PHOTOGRAPHY, MARINE BIOLOGY, DIVING IN THE SEVENTIES, DIVING ACCIDENTS, SHIPWRECKS AND OTHER DEBRIS ON THE HALIFAX HARBOR BOTTOM, EQUIPMENT MAINTENANCE, DCIEM DIVE TABLES, PARAPLEGIC DIVING, and DIVER SAFETY. Watch for more seminars to be

Ice Diving

by D. Gallant, Hampton, N. B.

Ice diving can be a rewarding experience but requires preparation and special equipment. Divers planning an ice dive should have advanced training or conduct their dive under the direction of a club or group equipped to plan and supervise the dive.

Why Bother ?

Because the ice prevents rain, wind, boat traffic etc. from disturbing the bottom, visibility is improved in the winter. The marine life is sluggish and easy to approach because of the cold. Air from your regulator collects at the surface under the ice. The bubbles look like pools of water quivering and shaking and if touched will scramble along the ice. A friend of mine can walk upside down on the ice by inflating his B.C. I haven't fully mastered that one yet, but I keep trying.

Safety Line and Harness

When diving, a line attached to a harness worn by the diver **must** be used. The other end is maintained by a tender at the surface. **Remember** that you have entered the water through a small hole in the ice. The **only** exit available to you is that same opening in the ice. **THIS LINE IS THE ONLY WAY TO GET BACK.**

The line is usually a bright color for maximum visibility and is made of braided polypropylene which does not absorb water and won't freeze when soaked.

Line Pull Signals

Line pull signals should be pre-arranged before hand between the diver and the tender and be kept simple.

The Hole

The hole is usually cut in a triangle shape. The sharp angle at the corners provides a

(continued on page 7)

(continued on page 10)

BOTTOMTIME

EDITORIAL

Unfortunately, the newsletter budget is almost gone for the fiscal year 1990-1991. At the Truro Board Meeting on February 9th, it was decided that Lynn Gallant and myself would produce this issue of BOTTOMTIME on a personal computer and use the services of Sport Nova Scotia to reproduce the necessary number of copies.

So, here we go folks, a third format for our newsletter in the past two years.

April 1 is fast approaching, ending the membership year 1990. Upcoming events are UNDERWATER CANADA, SUBSEA HORIZONS and the A.G.M. in June. Now is the time to consider becoming a Board Member and representing the divers of your Area.

NSUC EXECUTIVE

President - Vacant
Vice-President - Leslie Blair Mercer
463-7365
Secretary - Colin Frazer - Whitelock
864-1157
Treasurer - Dave Rodwell
765-6771
Past President - Vacant

AREA DIRECTORS

Danielle Gough
Central Area - 864-3046
Sylvain Roy
Valley Area - 765-3786
John Pothier
South Shore - 762-2241
Gary Mattinson
Fundy/Highland - 895-3905
Ted Tracz
Cape Breton - 539-2556
Joe Christie
Commercial - 875-3732

BOTTOMTIME

Bottomtime is published six times per year by the Nova Scotia Underwater Council. It is delivered to all members free of charge. Membership fees for 1991-92 are \$16.00 for individuals.

Submissions to Bottomtime are published at the discretion of the Editorial Board. Any opinions expressed are those of the author and not necessarily those of the Council. Articles may be reproduced with written permission of the Editor.

The Publishing Schedule is:

April 1
June 1
August 1
October 1
December 1

All submissions should be received two weeks prior to the publishing deadline. Send all Bottomtime correspondence to The Editor, Nova Scotia Underwater Council, PO Box 34, Armdale PO, Halifax, NS B3L 4J7.

Publishing Bottomtime is made possible partially by The Nova Scotia Sport and Recreation Commission.

This is the final
BOTTOMTIME for this
membership year. Submit
1991 dues in order to
receive the next issue of
BOTTOMTIME.



... Moving ??

To insure that you keep getting "Bottomtime" please send your old and new address to the Membership Registrar 6 weeks in advance.

SECRETARY'S REPORT

At this present time the NSUC is going through traumatic times, with the resignation of the President and the Past President. A matter I don't wish to discuss in this report. Bigger organizations go through these periods and come out better for it in the end. **THIS DEPENDS ON THE SUPPORT OF ITS MEMBERS.** There has been a lot of changes over the past eighteen months or so most of them for the good of the members and the NSUC as a whole. The membership has been rising all be it slowly. With the sticky track record of the NSUC in the past this is hardly surprising, it takes many positive things it seems to mask on a negative incident.

Well it is time that the members decide whether they want a council or not. If you are, you must be willing to give the board better support. If you think that the organization is worth fighting for call me at 864-1157 or write to me at 26 Sapphire Crescent, Lower Sackville, NS B4C 2T9.

Colin Frazee-Whitelock

PRESIDENT'S RESIGNATION

February 12, 1991

Mr. Secretary,

After a lot of thought I have decided to tender my resignation as President of the Nova Scotia Underwater Council, effective immediately. I no longer feel that I have the support of the Board of Directors in my efforts to bring the Council to financial security.

The Budget meeting on February 9, 1991 made me realize that my goals for the organization are far different from those of the majority of the other Directors.

I remain committed to the aims and objectives of the Council and sincerely hope that the Council continues to thrive in the future.

Yours truly,
M. Lynn Gallant

Past President's Resignation

12Feb91

Colin Frazee-Whitelock
Secretary, NSUC

Dear Colin

It is with regret that I hereby tender my resignation from the Executive position of Past President of the Nova Scotia Underwater Council, effective February 15, 1991.

I cannot conscientiously support the Board of Director's decision to produce **BOTTOMTIME** at the expense of Leadership Development Projects and Ongoing Programs that benefit the Council Membership. In these economic times, **CONSTRAINT** is the word of the day in government and in industry but essential service programs must be made more efficient, not eliminated needlessly.

I will, however, continue working with the SUBSEA HORIZONS Committee until this year's event is successfully completed. I will also carry on as Membership Registrar until another volunteer is found with the computer equipment needed to run the necessary software.

I sincerely hope the Council, the Board of Directors and Executive are able to overcome current problems and continue to grow in spite of the current recession.

Respectfully submitted,
John Webber

Snippets

Canadian and Indian Oceanographers report that rapid growth of phytoplankton (microscopic sea plants) in the Arabian Sea can increase the seas near surface temperature by 1 to 4 degrees Celsius. Ocean temperatures are linked to the strength of the monsoon rains upon which agriculture on the Indian sub-continent is dependant (Warmer water can produce bigger tropical storms.)

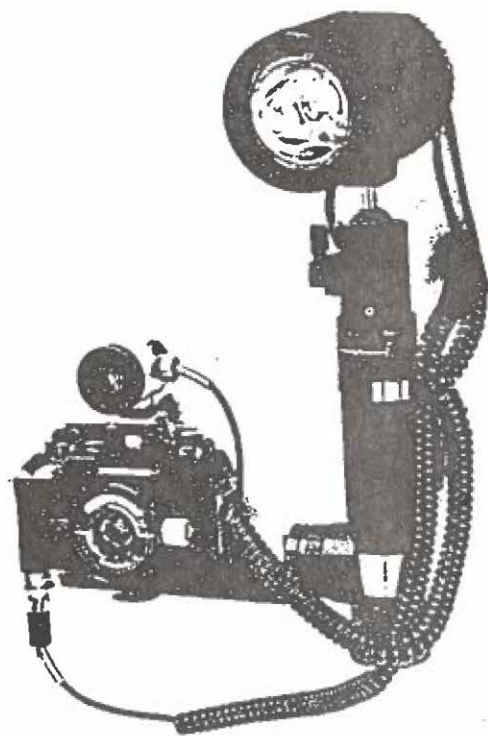
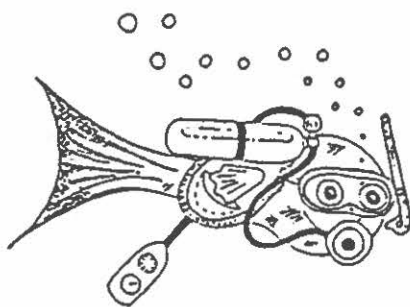
UNDER WATER PHOTO CONTEST



BRIO

BODYWEAR

TRAVEL CUTS
Going Your Way!



PRO-DIVE SHOP LTD.

At SUBSEA HORIZONS, Saturday May 4, 1991
Dartmouth SPORTSPLEX, 110 Wyse Road, Dartmouth
CATEGORIES

- 1) Wide angle or standard lense underwater photograph.
- 2) Macro underwater photograph
- 3) Above water photograph - (MUST HAVE A DIVER IN PHOTO)

RULES

- 1) Only one entry per person
- 2) Photos are to be maximum 8 x 10 inches
- 3) Photos may be matted but not framed, titled but not signed.
- 4) Photos will be returned.
- 5) Judging is by 'peoples choice'
- 6) ALL PHOTOS MUST BE TAKEN IN ATLANTIC CANADIAN WATERS
- 7) In the event of a tie, the decision of the committee is final
- 8) At least 5 entries must be received in a category for that category to be displayed.
- 9) All entries MUST be received by April 30
- 10) Send entries to P.O. Box 33048, Quinpool P.O. Halifax, N.S. B3L 4T6
marked ENTRY FOR PHOTO CONTEST

Underwater Photographic Techniques

No. 6

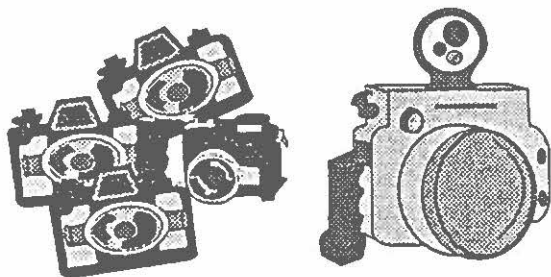
What Camera Should I Buy?

Nikonos vs Housings

- Bob Semple



As usual, there isn't an easy, straight forward answer to the question. It depends on each individual situation as to which might be the most appropriate. Let's look at some of the pros and cons of both systems so you can decide which may be best for you.



Viewing Factor

The major difference between the Nikonos and the Housed system is the method of viewing. The Nikonos is a viewfinder type which means one does not actually see exactly what one is filming. This causes a **parallax problem** when objects are close to the lens; the photographer must physically correct or the object will be incorrectly framed. Focusing distance must also be determined. The SLR (Through the lens viewing) allows the photographer to see exactly what is being filmed and can make sure it is in focus. Low light conditions create a viewing problem in that it is hard to see if the object is focused. One should choose a camera which has an interchangeable sport or action finder (i.e. Canon F-1, Pentax LX, and Nikon F series) to allow a large viewing area to aid in focusing. Ikelite makes an accessory called Super-eye to help magnify the finder but its still not ideal.

Note: Focusing can also be a problem in fast action sequences such as large fast moving fish (i.e. school of mackerel, tuna or dolphins). The Nikonos photographer can quickly take a number of photographs while the housing photographer is still trying to focus for the first picture and missing the action all around! Experience is also a factor though!

Weight Factor

The Nikonos system is much lighter and more compact as it is complete in itself with its own O-rings to keep it dry. The land camera has to be put into a bulky housing to protect it from getting wet. This means that it will take up lots of room when travelling to a dive site. The weight restrictions for air travel will also have to be a consideration.

Housed cameras can also be harder to use in areas of strong current or when the photographer has to follow (I didn't say chase!!) a fast moving fish.

Note: Because the Nikonos is small, compact and waterproof, it can be easily used above water in adverse conditions (i.e. snow, rain, and around oceans spray or even deserts). The 35 mm lens can take very high quality photographs above water. The 28 and 15 mm Nikonos lens are only designed for underwater use. Nikon now has a 28 mm lens which is water proof (not for diving) for use in outdoor photography.

Cost Factor

A Nikonos and Housed system with wide angle capabilities (15-20 mm) would both cost about the same amount. If a person already has a complete photographic land system including wide angle lens and macro lenses then it would seem unnecessary to have to purchase another system for underwater. One can easily purchase a housing to fit almost any size or shape of camera. There are lots of types of plastic or metal housings on the market. Plastic housings are strong, cheaper and enable one to see if there are any leaks. Metal housings (Aluminum) are more rugged, expensive and require more maintenance because of electrolysis than the plastic housings. Although metal housings are preferable for the serious photographer, plastic housings are about 10 times as popular.

Fish Factor

The Nikonos system is not able to film small to medium sized fish very well. Fish about 2 to 4 feet from the camera lens are difficult to film. Nikonos has an excellent close-up system with extension tubes for 1:1 to 1:3 and also close-up lens for 1:3 to 1:6 work. This enables the photographer to take excellent pictures fast and efficiently if the framer doesn't disturb fish behavior. The housed camera excels in the medium photographic area. A 55 or 105 mm macro lens can 'zoom' into a small fish and capture natural behavior without scaring the fish. Another plus is that the macro lens can change from focusing on the 3 inch long nudibranch to a 3 foot long wolfish who swims over to watch you.

Note: The Nikonos extension tubes cannot be removed underwater to replace the lens! The Nikonos photographer will just have to sit and watch the diver with the housing capture the rare encounter with the dolphin pod on film! Carrying more than one camera on the dive will sometimes overcome this difficulty!. Both systems will give you excellent results. Choose the one which will be most appropriate for the task and be aware of the limitations of the system. Recognize that you will rarely have the right camera with you at the right time! Happy Shooting!!

The Healthy Diver

By Heather Robinson, BSc., Nutrition

In this issue of BOTTOMTIME I was going to provide a discussion on fats, however I seemed to be explaining terms rather than discussing them. To help you understand buzz words from the media, I have included a small dictionary of topics relating to the fats in our diets.

* **lipid** - a general term referring to compounds made up of carbon, hydrogen, and a small amount of oxygen (mainly fats and oils). All lipids provide 9 Kcal/g of energy, it is the most concentrated form of energy from food. One pound of body fat is equal to 3500 Kcal of stored energy.

* **visible fats** - these are easily recognized since they can be seen on/in food products. i.e., butter, oils, fat surrounding meat.

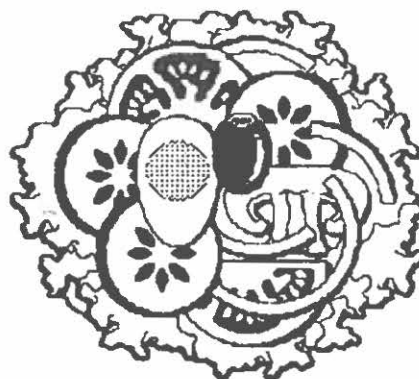
* **invisible fats** - these are mixed into the foods we eat and cannot be seen. They are responsible for 60% of our total fat intake i.e., marbling in meats, chocolate, dairy products, nuts

* **saturated fat** - is a class of fats that has the maximum number of hydrogens in its molecule. It is most commonly found in animal products. This fat builds up in the arteries as plaque which can then contribute to heart disease. If you want to reduce the amount of fat in your diet start with this one, the "bad" fat.

* **unsaturated fats** - this has two classes: monounsaturated fats are missing one hydrogen from its molecular structure and polyunsaturated fats are missing more than one hydrogen. The fat from plants is usually unsaturated (except for tropical oils, i.e. coconut and palm). This type of fat does not contribute to heart disease, but still provides 9 Kcal of energy.

* **cholesterol** - is part of the lipid molecule. It is produced by animals in the liver, therefore it is only found in the fat of animals. This also helps to form plaque in the arteries and contributes to heart disease.

So, what does this have to do with SCUBA diving? Well, the easiest way to stay healthy is to maintain a healthy diet and exercise.



So, reduce the amount of fat in your diet (particularly saturated fat and cholesterol) and increase the amount of carbohydrates (sugars and starch). If you want to lose weight, the best place to start is with fat intakes because it is the highest energy source.

Which is better, butter or margarine? They are both lipid, so they both provide 9 Kcal/g of energy. Butter is an animal product so it also has cholesterol. A good quality margarine should have twice as much unsaturated fat than saturated (it should have a P:S ratio of 2:1).

Diver's Market

NSUC Clothing for Sale

Embroidered with "Nova Scotia Underwater Council"

1 White golf shirt (med) - Gold letters	\$22
1 White golf shirt (med) - Navy letters	22
1 Blue sweatshirt (sm) - White letters	22
1 Navy V-neck sweater (lg) - Gold letters	30

NSUC Tacky T-shirts

various sizes & colours	6.50
NSUC Decals	75
Hyperbaric Emergency Decals	50

Contact Danielle Gough 864-3046

Swap Shop

White's Near Dry Wetsuit - blue in color with black boots and seals. Fits lady 5'9", 145 lbs. Farmer Jane has attached boots, size 9 1/2-10, and attached hood. Slip through jacket. Gloves included. Worn for snorkeling less than a dozen times - great for cold water. Cost \$500 - make an offer. Call Charlotte after 5 p.m. at 463-3796

Win at Subsea (from page 1)

advertised during the show. **PLEASE USE THE REGISTRATION FORM FOUND IN THIS ISSUE OF BOTTOMTIME AS SEMINARS MAY BE CANCELLED IF NOT ENOUGH INTEREST IS SHOWN. WHERE SPACE IS LIMITED, PRIORITY WILL BE GIVEN TO THOSE WHO PRE-REGISTER ON A FIRST COME FIRST SERVE BASIS.**

ATTRACTIONS - The attractions are intended not only for divers, but non divers as well. There will be a display of **COMMERCIAL DIVING EQUIPMENT** and salvaged items by **DOMINION DIVING LIMITED**, a well known East Coast diving firm. There will be a Remote Operated Vehicle (ROV), band masks, underwater communications and other commercial gear. Jim Ritchie also promises to show off some of the "finds" he has made in over two decades of diving. There will be a **FASHION SHOW** featuring swimwear by **BRIO BODYWEAR**

INC. plus the latest in wet and dry suits and accessories. There will be **SCUBA EXPERIENCE** in the pool. There is no charge for this hassle free way to try scuba. **BRING YOUR BATHING SUIT**, and show up at the shallow pool and let our qualified instructor take you under. In the deep pool, certified divers will have the opportunity to try new equipment during our **EQUIPMENT TRYOUTS AGAIN, BRING A BATHING SUIT AND YOUR C- CARD !!** The

UNDERWATER PHOTO CONTEST highlights the work of local divers and has a category for shots of divers on the surface. Rules and information on how to enter will be found elsewhere in this issue of **BOTTOMTIME**.

The **FILM SHOW** will premiere Gilbert Van Ryckevorsel's Video Montages of Diving in Atlantic Coastal and Inland Waters.

This video will include impressions of Nova Scotia's most Spectacular wreck, the **Arrow**, which sank in Chedabucto Bay in 1970. The **FILM SHOW** will also be the Nova Scotia premier for Kim

Genereaux's **Cayman's Kaleidoscopic Coral Community.** Last but not least is the **Dance and Mini-Casino.** There is more, but you will have to discover it for yourself at 1991's Subsea Horizons !

More Snippets

On Sunday March 3rd, approximately 60 barrels of marine diesel fuel leaked from the

tanker Lucien Pequin during refuelling operations. Despite containment booms placed around the vessel, and in strategic places in the harbor, the oil hit the beach at Ferguson Cove. The Canadian Coast Guard has assured residents that cleanup operations will be done to C. C. G. standards. The shoreline from Purcell's Cove to Sambro will be monitored to determine if the oil washes ashore elsewhere.

Central Area Report

Well from what I hear, there has been some good diving lately. The Aqualantics were out with Ed Kiley, on the Sonja Maersk. I didn't get out this Sunday with them but apparently the dive was incredible with seventy foot visibility.

I was on that wreck twice last year and I could barely keep track of my buddy. They also dived the Neuva Andalucia and found several trinkets.

I was sorry to see Lynn and John resign and hope everything goes smoothly without them. I would like to give a special thank you to Jo for all the help he has given me.

Subsea Horizons is progressing well and should be a great success. Help is needed in lots of areas, so if you can spare a little time please call Roland at 463-3796. Also I need help with the fashion show, so if you have an interest in modeling please give me a shout at 864-3046.

Recently I took advantage of the subsidized safety course offered by the NSUC and acquired my Rescue Diver certification.

Blair Mercer and myself were invited up to the Scuba do Club meeting held on Feb. 12. We were asked to give an introduction to the NSUC. After the meeting we chatted and learned a bit more about the members and their club. I was very surprised to see how self sufficient they are. The club is well organized and with approximately 40 members they are growing quickly. I was delighted with the invitation and would not hesitate to join the club as a member. They brought up many intriguing issues and kept Blair and myself on our toes asking questions.

- Danielle

Disorders of the Deep

by Laurie Nadworny, M.D.

Help me, I'm shrinking! This is what comes to some folks' minds when they think of diving misadventures. They imagine surfacing from a long deep dive and slowly flexing and curling into a fetal position thus becoming "BENT". They may feel that if this didn't occur then they could not possibly be suffering from a dive related malady. I would like to clear up this and other misconceptions as well as offer some general information regarding dive related injuries.

In addition to the bumps and strains of any sport and the mishaps with sea creatures there are injuries that are unique to scuba diving. These can be divided into two separate categories, 1) **Barotrauma** and 2) **Decompression sickness (DCS)**.

Barotrauma injuries are those directly related to the pressure changes encountered when diving. Without trying to bore you readers with physics I will remind you of Boyle's Law. You remember from your introductory SCUBA course $P_1V_1 = P_2V_2$. If one understands this law, one understands the process behind all barotrauma. That is as the pressure in a closed environment increases the volume of gas within it decreases (descent) and of course as the pressure decreases the volume expands (ascent). It is this process and the fact that our internal spaces are often at a different pressure than our sea environment that cause barotrauma. Injuries occur when the difference between the pressures are too great and disrupts the structures separating the two, these structures of course differ depending on which body cavity is involved. Examples of these are 1) those injuries which occur during descent - middle ear squeeze, sinus squeeze, mask squeeze, ear drum rupture and round window rupture and 2) those which occur during ascent - "burst lung" (pneumothorax/pneumomediastinum) and most seriously air embolism.

Because of the mechanism of their occurrence, as discussed, barotrauma injuries can occur without having done a long or deep dive and may occur in less than five feet of water. They often happen to inexperienced or panicked divers who do not take adequate precautions while ascending and ascend too quickly or while breath holding. Symptoms -

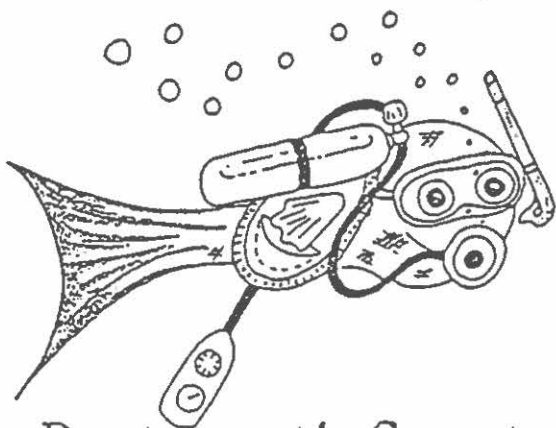
which depend on the structures involved and vary from minor to life threatening - are either present upon surfacing or begin within 10 minutes of surfacing.

On the other hand **DCS** has a different mechanism completely. As you know it is related to the amount of nitrogen (N_2) absorbed into our bodies at depth and the rate at which it escapes during ascent which determines whether bubble formation occurs. Contrary to what many believe, DCS can occur when diving within the no-decompression limits of most diving tables and not just when these limits have been exceeded. However, it usually occurs after long or deep dives when limits have been exceeded.

Symptoms can be very vague or subtle and depend on the area of the body involved. Examples are joint pain in limb "bends", numbness, weakness or tingling in an extremity in spinal cord DCS as well as fatigue, dizziness or skin lesions. Symptoms are usually not present upon surfacing but most will begin within 30 minutes to 6 hours but can occur up to 24 hours after a dive. They can be subtle and if not specifically thought of may easily be passed off as incidental, therefore, any peculiar symptoms occurring within 24 hours of a dive should be thought of as dive related and brought to the attention of a physician knowledgeable in diving medicine. (There is always one available through the emergency department of the Victoria General Hospital.)

Although the symptoms experienced may seem minor they are a warning that more serious insults may be occurring in our bodies that are not immediately noticeable.

Minor barotrauma does not need to be treated in a recompression chamber but air embolism and all DCS need recompression. These two entities - barotrauma and DCS are not always mutually exclusive and especially in the serious diving accident both problems may co-exist. Recognizing barotrauma versus DCS is not always clear, therefore, do not hesitate to contact the Emergency physician at the YGH if you suspect someone is suffering from a dive related injury that may be in need of recompression.



1991 SUBSEA HORIZONS

Saturday May 4,
Dartmouth Sportsplex, 110 Wyse Rd.

A program of events, including seminars, scuba experience, product demonstrations. Try out new equipment in the pool. EXHIBIT HALL with booths to interest divers and non - divers. BRIO and local dive stores present an AQUATIC FASHION SHOW featuring the latest SWIMWEAR and DIVE APPAREL. Photo Contest. A FILM SHOW and DANCE will be held in the evening.

Day Admission \$ 3.00 for NSUC Members
4.00 for Non-Members of NSUC

Evening Admission:

Dance \$12 / Couple - Film Show \$5 / Couple
Advance pre-paid tickets for NSUC members \$15
(For both Film Show and Dance)

For information contact Roland Morrison at 463-3796
or Mike Chambers at 454-4296 or write to
SUBSEA, Box 33048, Quinpool, Halifax B3L 4T6



BRIO
BODYWEAR

PRO-DIVE SHOP LTD.



Ice Diving (from page 1)

resting place for the diver by placing one arm on each side of the hole. A hole should never be made unless the ice is at least five (5) inches thick. Any less and the ice probably will not support the weight of the divers and their equipment.

A good idea is to cut ridges in the surface of the ice leading away from the hole. These ridges are visible underwater and can be used as a guide back to the hole if the diver becomes disorientated.

Editor's Note -

- 1) The line from the diver to the surface should be firmly attached to the ice to prevent the rope from being dropped through the ice if the tender loses his grip on the rope.
- 2) The buddies must be connected harness to harness with a buddy line that each buddy also hold in their hand. Notice that the buddy with the surface line must hold a line in each hand and answer the tender's periodic query 'OK' with the affirmative response 'OK'.
- 3) There should always be fully suited standby divers with an independent line and tender ready to assist the buddy team under the ice in an emergency.

Diving New Brunswick's Atlas Park

An abandoned quarry in northeastern New Brunswick offers divers a dive with a difference. Opening in August 1990, Atlas Park, Pointe-Verte, N. B. is a 6.4 acre diving complex. The spring fed quarry, with clear blue waters offers divers depths ranging from 0 to 30 meters. The site is unique because it is continually replenished by an underground spring. Natural features of the quarry include a number of sides with cliff faces which provide for a very protected dive site. Underwater these cliffs offer irregular wall faces to explore. As one side of the quarry is at water level a small stream carries all debris and sediment away thus keeping the quarry naturally clean.

Divers can enjoy great support facilities which include a three floor chalet with direct

access to the wharves, a submerged platform, showers, compressor service, classroom facilities, a licensed restaurant, terraces and an observation tower on the third floor.

Atlas Park also offers a well stocked lake and boat rentals for those after dive hours. There is an amusement park, picnic tables, observation sites on the lake and hiking paths making this the ideal place for a family trip.

During the winter you can ice dive, ice fish, snow-shoe, cross country ski and ski-doo.

If this unique dive site intrigues you, more information can be obtained from Atlas Park, C. P. 89, Pointe-Verte, New Brunswick E0B 2H0. Phone (506) 783-7973.

Call for Nominations

Nominations will be accepted for the following positions:

- President
- Secretary
- Central Area Director
- South Shore Area Director
- Valley Area Director
- Commercial Director

All positions are for a two year term except the position of Commercial Director which is a one year term. Area Directors are elected through a mail-in ballot by members in their area. The Commercial Director is elected by the Commercial members from within the Commercial membership. Executive positions are elected by the members at the Annual General Meeting in June.

Deadline for nominations : April 1

Roger Aggett Award

Nominations for the Aggett Award will be accepted up to **April 1**. The award will be presented at Subsea Horizons. Criteria for this award is as follows:

"An active volunteer Council member who has made a significant contribution to the safety or enjoyment, image, or growth of sport diving in Nova Scotia."

SNORKEL WITH US!

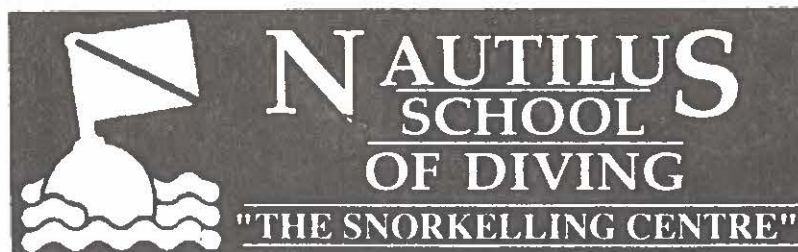
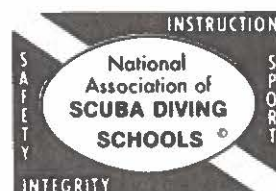


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HERE IS AN OPPORTUNITY FOR
A NOVEL VACATION....

**EDUCATION-VACATION
DIVING PACKAGE :
MARINE BIOLOGY FOR SCUBA DIVERS
AUGUST 04 - 10, 1991**

This field course in the Bay of Fundy will expose you to a spectacular underwater scenery and a tremendous variety of marine life.

\$900 per person for 6 days, includes dormitory accommodation, meals, tuition, lab space, air, boat and shore dives.

LIMITED SPACE - RESERVE NOW!

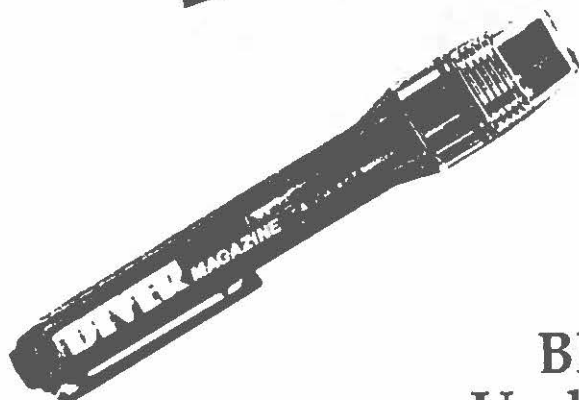
For more information, please contact:

Marine Biology for Scuba Divers
Huntsman Marine Science Centre
St. Andrews, New Brunswick
Canada E0G 2X0

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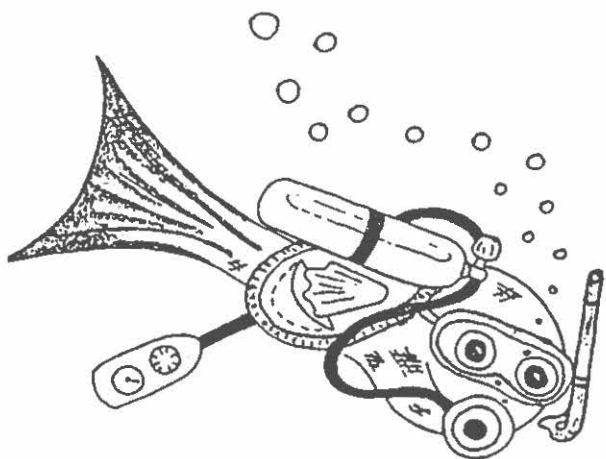
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CORRECTION . . .

In the previous issue of Bottomtime some facts were printed incorrectly relating to The Free Press. The circulation was printed as over 12,000, when in fact it is over 15,000. To Dave, and The Free Press our apologies for any inconvenience this matter may have caused.

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HELP URGENTLY NEEDED

NEWSLETTER EDITOR

This position requires a person with a love for the written word and the will to meet deadlines. The Bottomtime Editor is responsible to solicit and gather articles, type and prepare the newsletter to go to the Publisher. The Editor also delivers the newsletter to Sport Nova Scotia for mailing. "Bottomtime" is published six times per year. An honorarium of \$100.00 goes with the position.

MEMBERSHIP REGISTRAR

This position requires a person with a computer who is willing to maintain our membership lists, non-member mailing list and produce address labels for Bottomtime. This position can be done on your own schedule as long as the lists are kept up to date. The busiest time of the year is the Spring when renewals come in.

SEA HUNT COORDINATOR

This is a year long job starting with the solicitation for a major corporate sponsor, finding committee members, gathering of prizes, organization of the event, advertising and the mailing out of thank-you letters to sponsors. This job should be started now and has usually carried an honorarium of \$50.00. The organization of this event has been well established so there is a framework set up to work within.

Anyone interested in any of these positions please contact Colin Frazee-Whitecock at 364-1157.

This newsletter has been produced by John Webber and Lynn Gallant. Equipment used includes: Epson Equity I computer, Roland's Epson 510 - 24 pin printer, fingers, brains, patience and the seemingly unending tolerance and consideration of Rose, Roger, Andrew, 3 cats and 1 dog during the 24 hours necessary to start with little and produce a lot.



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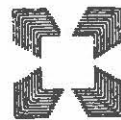
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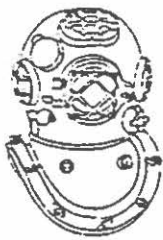
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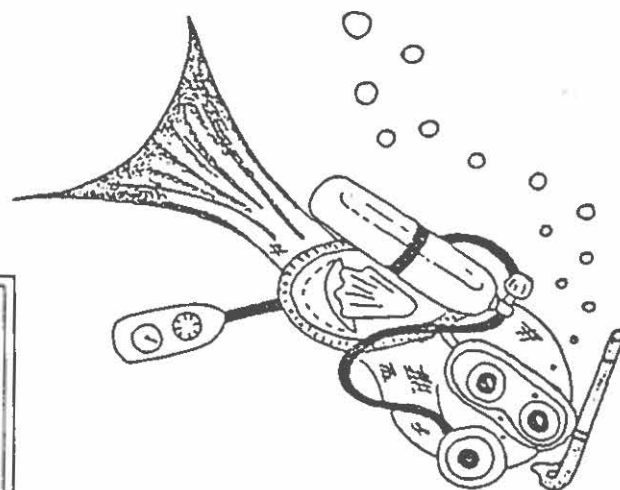
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