



UNDERCURRENTS

Newsletter of the Bluegrass Dive Club / www.bluegrassdiveclub.com

December 2014

Volume 44, Number 12

Club's Christmas Party

Date: Saturday, Dec. 13th
Time: 6:00 PM
Place: Home of Mark & Stella Kidd
991 Lakeland Drive 266-2276

President's Message

By Tracey Combs



Happy Holidays fellow divers. I hope everyone is satisfied from your Thanksgiving feast and getting ready for Christmas. Our Christmas party is always a festive event and I hope to see you there. I appreciate the hospitality of the Kidd's for hosting the event again this year. The details are available on the website.

I want to thank John Geddes for his outstanding service as the Dive Club Newsletter Editor for many years. He has been a joy to work with on the Board. Bart Bertetto will be filling the position in 2015 and we welcome him to the BGDC Board.

Please take a moment to look at our dive calendar and plan your next trip with the club! We have some amazing trips planned for the future. Contact the trip leaders, if you have questions. The Dive Committee always wants new ideas, so please let them know if you have been to a wonderful destination and want to revisit or if there is a location you have always wanted to visit.

I wish everyone Happy and Safe Holidays. 🚩

The Editor's Notes

By John Geddes



I believe this being my last issue as Editor, I hope you have enjoyed seeing the pics over the years here as I have enjoyed catching you all in the act or action on dive trips, meetings, events and whatever you were doing?

So, I'm going to finish with some pics of my favorite places, times or trips. So suck it up Charlie. 🚩

Dominica 2002 with Leigh Ann and Linda



2014 BGDC Officer's

Tracey Combs, President	621-4066
Corrine Mulberry, Vice President	913-0892
Mike Sullivan, Secretary	266-4516
Dan Miller, Treasurer	948-5133
Doug Geddes, Trip Director	224-3197
Rick Stephan, Safety Info Dir.	223-3719
Mike McCann, Webmaster	255-3937
John Geddes, Newsletter Editor	223-7926

Vice President's Report

By Corrine Mulberry



The "program" for December includes joyful laughter, delicious food, and holiday cheer at the Christmas Party on December 13th. I hope Helen Denham will be there to play the piano for us this year! I look forward to seeing you at the Christmas Party 2014!

Dale Hollow 2004 with Lainey, Ralph and Autumn



May 2015 Swap Shop: We will have an old fashioned dive gear Swap Shop for our May Program. Plan on bringing your extra gear (new or used) to barter or sell!

Dale Hollow 2006 with Autumn, Dan and Chicken



If you have diving information that you would like to present at a Club meeting (past or potential dive trip, etc.), I would love to hear from you. Please contact me so that we can put you on the calendar. 913-0892 or mulberryc1@gmail.com 🚩

Trip Director's Report

By Doug Geddes



DOMINICA 2015

We are on the final steps of closing this awesome trip out. If you had any interest in joining us, now would be the time to jump on. We have to give up our extra rooms, so I just hope we can get you one. We do have one room with one person in it needing a male roommate, so one spot will be open until we go. All monies are now due, so full payment would be required. Remember what I have said about this trip, this will be one of our best dive locations we have ever been to. Don't miss this one.

MYSTERY TRIP 2015

We will still hold off until next summer to pick a location for our fall trip. We have looked at several locations, but none have really been that great or we have been there and done that. If you hear of a location that is offering a great deal, let me know.

PHILIPPINES 2016

Yes we are still going there in January of 2016; I just haven't had time to get it on the web for you to sign up. I hope to be able to soon. All the pricing still isn't available but it will be a two trip plus travel, for around \$5000 including air. This has been one of the best dive locations we have dove as a club. So many creatures to see that aren't in too many other places. Get your monies saved up for this one. 🚩

Grand Cayman 2013 with 26 Members



From the Treasurer

By Dan Miller



2015 Membership Dues

Student (High School or College ID) ...	\$10.00
Single & Family (1 diver).....	30.00
Family (non divers)	30.00
Family (2 or more divers).....	40.00

Renewal: Please send payment to the address listed below, please make sure there is a correct indication of your mailing address, phone number and it is very important to indicate an email address.

Chuuk 2005 with 15 Members



Contact / Mail to: Bluegrass Dive Club c/o
Dan Miller
824 Gunpower Drive
Lexington, KY 40509

The Baths, BVI 2012



New Members: Visit the website to fill out an on-line form or to access a Microsoft Word printable form. [CLICK HERE](#). 🚩

From The Secretary

By Mike Sullivan



November 11, 2014
BGDC General Membership Meeting

The meeting was called to order at 7:43 PM. There were 19 members present. Tracey reminded everyone about the Club Christmas Party on December 13th at 6:00 PM. Dan reviewed the October Treasurer's Report and briefly reviewed the money on account procedure for members. Dan gave members A Trip Summary Sheet to those going to Dominica and gave members a Funds On Account Sheet. Dan also indicated that the Grand Cayman Trip is closed-out.

Corrine introduced new member Dawna Scripps and returning member Theo Scripps. John and Lynn Walters are returning members but were not present.

First BVI Trip 2004 with Noel



Doug reviewed the Dominica trip in February. There are currently 13 people signed-up but we can handle many more. If anyone is considering the trip they have until as late as February 1st to sign-up.

From The Secretary Cont.

The Philippines trip is in January 2016 and the price is approximately \$2,500 for the two weeks. As an option, members can sign-up for one week. Anyone considering the trip can go the website and review our trip there in 2012. We will be staying at the same two resorts. Doug is still looking for a Mystery Trip location but will not select any locations until after the DEMA specials are announced.

Corrine reviewed the Costa Rica trip scheduled for June 2015. We are staying at the Arenal Volcano Lodge and then at Villa Sol Resort for the diving. The prices are \$1,243 per person for divers, and \$988 per person for non-divers.

The Dale Hollow trip is scheduled for July 18-19 of 2015.

Yap 2005, what a few beers will do...?



Election of officers for 2015 were held and with no nominations from the floor the slate of officers as recommended by the board were elected as follows:

Tracey Combs – President
Corrine Mulberry – Vice-President
Mike Sullivan – Secretary
Doug Geddes – Trip Director
Dan Miller – Treasurer
Rick Stephen – Safety Information

Officer

Bart Bertetto – Newsletter Editor
Mike McCann - Webmaster

Dawna Scripps, Theo Scripps, and John Geddes won the monthly door prizes.

Mike Sullivan gave a short presentation on Partial Pressure of oxygen and NITROX.

The meeting was adjourned at 9:02 PM.

Bonaire 2007



Board Meeting
October 28, 2014

Meeting called to order at 7:36 pm

Attendees: Tracey Combs, Rick Stephens, Corrine Mulberry, Doug Geddes, John Geddes, Dan Miller, Mike Sullivan

Motion to accept Agenda: Mike Sullivan

Treasurer: Dan submitted the Treasurer's Report as of 28 October 2014 to be filed with corrections. Second payment due 1 November for the Costa Rica trip. Final payment due 15 November for the Dominica trip.

Pig Roast 2005 with Charlie



From The Secretary Cont.

Vice President: The November program will be the election of Club Officers. Corrine has compiled a list of candidates for each officer position. Mike McCann made a proposal to accept the nominee list. Corrine is working on a membership list filling-in the dates for family members who no longer live at home. Mike Sullivan will give a brief presentation on the use of NITROX and setting-up of dive computers. There are currently 10 people interested in the Costa Rica trip.

Secretary: Mike asked for an end of year roster in January for the Club Retention Status update.

Trip Director: Doug indicated there are 12 people have signed-up for the Dominica trip. Doug is currently working on a trip sheet for the 23 January-6 February 2016 Philippines trip. The Grand Cayman trip will be closed-out this week.

Safety: Rick's article will be on Lessons for Life and the diver and some emphasis on Decompression Sickness (DCS).

President: Tracey is working on new bumper stickers for the Club. A size and cost will be proposed at the next board meeting. The annual Christmas party will be held on December 13th at 6:00 PM at the home of Stella and Mark Kidd. A reminder about the Annual Budget meeting on Sunday, January 11, 2015 at 4:00 pm. The meeting was adjourned at 9:25 pm. 🚩

Indonesia 2009



Costa Rica

By Corrine Mulberry



June 6-13, 2015

The Planning Committee has put together a great, economical, land & water-based Costa Rica trip for next June (2015). This trip involves 2 resorts – 2 nights at the Arneal Volcano area and 5 nights at the pacific coast Villa Sol. Mark your calendar and complete the reservation form to secure this trip.

Volcano Lodge, Arneal Volcano Area



Standard Room - Diver \$1,243.00/Non-diver \$988.00 (double occupancy) 2 night accommodations with **2 breakfasts** at Volcano Lodge in the Arneal Volcano area.



5 night accommodations at Villa Sol –**all inclusive with breakfast, lunch, dinner, snacks, alcoholic and non-alcoholic drinks.** Three 2-tank boat dives (Additional dives to Bat

Costa Rica Cont.

Island or Catalinas or other destinations are available.) Many land-based activities ziplining, horseback riding, day pass to Hot Springs for massages, relaxation and ultimate pampering, canyoneering, hanging bridge tour, jungle boat tour, etc.



Includes 3 group transfers - from Liberia Airport to Volcano Lodge; Volcano Lodge to Villas Sol (**with lunch**) and back to Liberia Airport. 🚩

BVI 2010, Breakfast with Alan, Tracey and Will



Safety Corner

By Rick Stephan



Note: *This month's article is from alertdiver.com. It is probably the first (and likely only) article that I will ever present to you that does not apply to me. This is simply because I am cold-water averse and will not don scuba gear to get into a beautiful (but harsh and very dangerous) environment: under the ice. But somehow it seems appropriate, what with the polar vortex, etc.*

With advancements in equipment and techniques, ice diving is possible for more and more divers, but I believe it should still be just for the very advanced (and maybe a little crazy) diver.

Since this is Christmastime, I wish you and yours a very merry and blessed season. Stay warm, above and below! Hope to see you on a trip this year! And, of course,



Remember, safe diving is fun!

Ice Diving

By Michael A. Lang, D. Phil.ric Douglas

Over the last 50 years, polar diving has yielded a wealth of scientific information and proven to be an indispensable sampling and observational technique. Despite technological advances, exclusively mechanical or remote methods cannot replace divers in the water under the ice. Ice diving is both politically and scientifically interesting and has received international research funding in the fields of medicine,

Safety Corner Cont.

physiology, fisheries and ecology. Basic climate-change research focuses on polar regions because of their global importance.

Preparation

Dedicated ice-diving equipment and specialized training of divers, dive supervisors and medical personnel must feature prominently in the operational logistics of ice diving. Traditional models of dive planning do not transfer well to extreme-environment diving; the margins of error are much narrower. Treating ice-diving operations as remote-environment activities and taking extra steps to prepare for managing decompression illness increase the probability of successful diving missions. Gas-management and emergency-response planning in extreme-environment diving require special consideration — not unlike that required in cave, rebreather or wreck diving.

Diving under polar ice is an obvious example of extreme-environment diving because of the many physiological, equipment-related and training parameters that affect divers. Regulator performance and thermal protection are two principal concerns. In Polar Regions there is a chance that first- or second-stage scuba regulators will malfunction due to the accumulation of ice in or around the regulator, resulting in complete occlusion of air flow or a massive free-flow that could rapidly expend a diver's air supply. Factors that influence the likelihood of regulator freeze-up are design and configuration (determined by the manufacturer), quality control (unique to the individual regulator), depth (due to increased gas density), mass flow (a product of depth and respiratory volume), water intrusion, time and temperature. Most free-flow problems occur in second stages, which means careful pre-dive management is essential. Regulators must be kept warm and absolutely devoid of any residual fresh water. Not breathing from the second stage prior to immersion prevents moisture from a diver's breath from crystallizing on the low-pressure seat, which is a trigger for further ice accumulation and free-flow.

Minimum ice-diving qualification criteria that have proven effective in scientific diving include at least a year as a certified diver, 50 logged open-water dives, 15 logged drysuit dives and 10 logged drysuit dives in the preceding six months. Unpacking a new drysuit for the first time on a liveaboard vessel is not considered good preparation; ice divers must become proficient with the gear and techniques that will be used prior to their deployment on ice-diving expeditions.



Equipment

Divers should be equipped with two fully independent regulators attached to an adequate gas supply whenever they dive under a ceiling. Proper use and pre- and post-dive care substantially improve the reliability of regulators. A large volume of air exhausted rapidly through a regulator will almost certainly cause a free-flow. Drysuit inflator hoses are also subject to free-flows and are attached to backup regulators in case the air supply to the primary regulator must be turned off to stem the loss of air. When inflating a drysuit or a BCD, use frequent short bursts of air. The primary cause of regulator free-flow is entry of water into the mechanism and the water freezing once the regulator is used. Fresh water in a regulator from rinsing or melting snow may freeze as soon as the regulator is submerged in seawater or when it is exposed to extremely cold air temperatures. If multiple dives are planned, postpone freshwater rinsing of the regulator until all the day's dives are completed.

Drysuit fabric (vulcanized rubber, crushed neoprene or trilaminate) depends on the diver's

Safety Corner Cont.

preference, the requirements for range and ease of motion and the available options. The choice of drysuit underwear is perhaps more important than the choice of drysuit material because it is the underwear that provides most of the thermal protection. Many divers wear an under layer of expedition-weight polypropylene and an outer layer of 400g Thinsulate®.

Drygloves or mitts with inner liners (rather than wetgloves) are most commonly used with drysuits. Diving Unlimited International (DUI) zipseal drygloves see widespread use since they effectively permit the warm air that surrounds the rest of the body to also reach the hands at depth. Two disadvantages of dryglove systems are the complete lack of thermal protection if the gloves flood or are punctured and the related risk of flooding the entire drysuit.

Roatan 2006 with 44 BGDC Members



Because a drysuit must be inflated to prevent suit squeeze with increasing pressure, it is most efficient to regulate buoyancy at depth by controlling the amount of air in the drysuit, which must be equipped with a hands-free exhaust valve. BCDs are considered emergency equipment to be used only in the event of catastrophic drysuit failure. This procedure eliminates the need to vent two air sources during ascent, reduces the chance of BCD-inflator free flow and simplifies the maintenance of neutral buoyancy during the dive. The main purpose of air in a drysuit, of course, is to provide thermal insulation.

Divers must wear sufficient weight to allow for maintenance of neutral buoyancy with a certain

amount of air in the drysuit. Runaway negative buoyancy is as great a safety problem as an out-of-control ascent. Because of the amount of weight commonly worn (30 to 40 pounds) and the serious consequences of accidental release, weight harnesses are favored over weight belts.

Bali 2009 with Jim, Sherry and Mike



Hazards and emergencies

Extreme underwater visibility may make objects appear closer than they are; this illusion could entice divers to travel farther from the access hole than is prudent. The greatest hazard associated with fast-ice diving is the potential loss of the dive hole. Access holes, leads and cracks in the ice are often highly visible from below because daylight streams through them. However, dive holes may be difficult to see due to low light or from the holes being covered with portable shelters. Therefore, a well-marked down line is required for fast-ice dives. Divers should maintain positive visual contact with the down line during the dive and take frequent note of their position relative to the access hole or lead. Problems requiring an emergency ascent are serious, since a vertical ascent to the surface is impossible except when a diver is directly under the dive hole or lead.

Pack ice is inherently unstable and its conditions can change rapidly, primarily from surface wind conditions. An offshore wind may blow pack ice away from the shoreline and loosen the pack, whereas an onshore wind may move significant quantities of pack ice against shorelines or fast-ice edges, obstructing what may have been clear access areas when divers entered the water.

As with diving in general, the best approach to

Safety Corner Cont.

ice-diving emergencies is prevention. Divers must halt operations any time they become unduly stressed because of cold, fatigue, unease or any other physiological reason. Similarly, terminate the dive in the event of equipment difficulties such as free-flowing regulators, tether-system entanglements, leaking drysuits or buoyancy problems.

To clearly mark access holes, divers deploy well-marked down lines, establish recognizable landmarks (such as specific ice formations) under the hole at the outset of dives, leave a strobe light, flag or other highly visible object on the bottom just below the hole or shovel surface snow off the ice in a radiating spoke pattern that points the way to the dive hole.



Physiological considerations

Cold is the overriding limiting factor for dive operations, especially with regard to the thermal protection and dexterity of hands. Dives should be terminated before a diver's hands become too cold to effectively operate gear or grasp a down line. This loss of dexterity can occur quickly (within 5 to 10 minutes if hands are not adequately protected). Holding onto a camera will increase the rate at which a hand becomes cold. Switching the housing from hand to hand or attaching it to the down line may allow hands to rewarm. DUI dryglove systems have greatly improved thermal protection of divers' hands.

Heat loss occurs through inadequate insulation, exposed areas (such as the head in an insufficient hood arrangement) and from breathing cold air. Scuba-cylinder air is initially at ambient temperature and chills from expansion as it passes through the regulator. Air consumption increases as the diver cools, resulting in additional cooling with increased ventilation. Significant chilling also occurs during safety stops when diver's movement is reduced. Polar diving requires significant insulation, which results in decreased mobility and increased potential for buoyancy problems — two challenges ice divers must address.

Besides the dehydrating effect of breathing dry air on a dive, Antarctica and the Arctic are extremely low-humidity environments (polar deserts) in which dehydration can be rapid and insidious. Continuous attention to hydration is required; urine should be clear and copious.

BGDC Christmas Party 2009



Diving at the Earth's polar regions does not necessarily mean diving directly beneath the poles. At the South Pole you would find that after drilling down through more than a mile and a half of vertical ice, you would hit bedrock and still be hundreds of horizontal miles away from open ocean. If you delayed your North Pole trip for a few years, drilling through sea ice might not be required at all in the summer, given the observed reduction of up to 75 percent of Arctic sea-ice volume over the last 30 years. And it would be a long distance to travel for an open-water dive with a bottom depth of nearly 14,000 feet 🚩

Bluegrass Dive Club 2014-15 Calendar

December

13, Saturday Club Christmas Party

January 2015

13, Tuesday Dive Club Meeting

27, Tuesday Board Meeting

February

7-14, Dominica Dive Trip

10, Tuesday Dive Club Meeting

24, Tuesday Board Meeting

BVI 2008



March

10, Tuesday Dive Club Meeting

24, Tuesday Board Meeting

BVI Soggy \$ 2010, Charlie, Autumn and Emily



April

14, Tuesday Dive Club Meeting

28, Tuesday Board Meeting

May

2, Saturday Club's Derby Party

12, Tuesday Dive Club Meeting

26, Tuesday Board Meeting

Bonaire 2011 with Lainey, Autumn and Leigh Ann



June

6-13, Costa Rica Dive Trip

9, Tuesday Dive Club Meeting

30, Tuesday Board Meeting

July

14, Tuesday Dive Club Meeting

18-19, Saturday Dale Hollow

28, Tuesday Board Meeting

August

11, Tuesday Dive Club Meeting

25, Tuesday Board Meeting

September

8, Tuesday Dive Club Meeting

29, Tuesday Board Meeting

Dive Committee Members

Doug Geddes – Chairman	885-2215
Tracey Combs	621-4066
Ralph Covington	621-3862
Mike Sullivan	266-4516
Gordon Green	C@Meeting
Ed Sullivan	C@Meeting
John Geddes	223-7926
Corrine Mulberry	913-0892