



UNDERCURRENTS

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

April 2015

Volume 45, Number 4

April's Club Meeting

Date: Tuesday, April 14th
Time: 7:30-PM (business)
Social at 7
Location: The Racquet Club
3900 Crosby Rd.
Program:

President's Message

By Tracey Combs



Spring has finally arrived! Hopefully we are one step closer to warmer weather and more diving. We have just welcomed a group back from a great trip to Dominica. I can't wait to see the pictures and videos and hear all of the tales. We have a few trips on the schedule, so be sure to check out the Upcoming Trips page on the website.

We will be having our annual Derby Party again this year at Mike & Sherry McCann's home. Make sure you check out the web site for all of the details and directions to their house. As always bring a dish to share and some extra cash for those bets.

Our next meeting is Tuesday, April 14th. I hope to see you there! All are welcome. 🚩

The Editor's Notes

By Bart Bertetto



Hi Everyone. Ditto on spring's arrival. Time to get out there and soak up some sun. Pull that dive gear out and start thinking underwater! Are you in dive shape? How's the gear look, especially your reg/hoses and BC? Jump in a pool with fins and mask or better yet full gear and tune up. Additional photos and captions this issue courtesy of Noel Hall who just returned from the Solomon Islands. At the end of the newsletter he includes some notes on his camera rig. From the look of those photos it must have been an awesome trip! 🚩



2015 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
Bart Bertetto, Newsletter Editor	502-299-3656

Vice President's Report

By Corrine Mulberry



Programs:

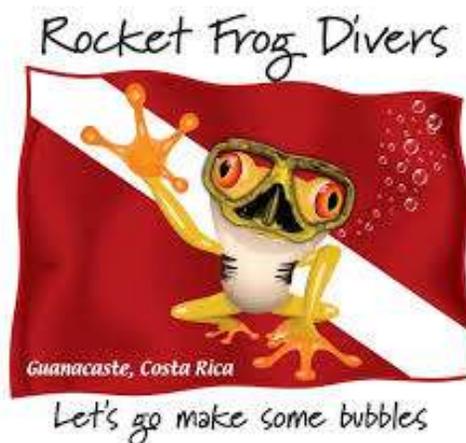
April 2015 Program: Mike & Judy Sullivan have put together a program on the recent Dominica 2015 Dive Trip. I'm looking forward to seeing the pics! I hear there is a fabulous eel shot -- Go Judy!

May 2015 Swap Shop: We will have an old fashioned dive gear Swap Shop for our May program. Please go through your dive gear and set aside stuff you aren't using or don't need (new or used) and bring it to the May meeting to barter or sell. I also hope to have someone from Jamie Clark Diving (Danville/rural Mercer County) come to the meeting to tell us more about their services and what they have to offer.



New Members: We have 4 new members to welcome to the Bluegrass Dive Club. **Melissa Hamilton** is the diver in her family; she and husband, **Jackson Hamilton**, and son, **Chris Wolf**, are going to Costa Rica with us in June! Yay! They live in Richmond KY, so we may not see them at every meeting, but I hope to entice them to the Derby Party! We also issue a hearty welcome to new member **Emily Reed** who is joining in the fun on the Roatan, Honduras trip in October. Woo Hoo! Emily lives in Lexington and is Advanced Open Water Certified. Hope to see you at one of our meetings soon (and the Derby Party of course) Emily. Welcome everyone!

Costa Rica - June 6- 13, 2015



We've got a great group of 10 folks going on this trip. If you missed the deadline and want to go to a new location at a great price, give me a holler and we'll see if our vendor can squeeze you in! Contact Trip Leader, Corrine Mulberry, at mulberryc1@gmail.com.



Dale Hollow - July 18th & 19th, 2015

The Dale Hollow Lake Dive/Eat/Relax/Play trip is "ON" for 2015! We have 3 members signed up so far. Reservation form and trip details are on our webpage. Go ahead and make your reservations now --- overnight accommodations at the campground, cabin or state park lodge are currently available, but if you wait another month, the lodge will probably be full! \$20.00 per person per day gets you on the Pontoon boat. If you are not familiar with this trip, give me a shout and I'll be glad to fill you in! mulberryc1@gmail.com



Trip Director's Report

By Doug Geddes



Roatan 2015

This trip popped out of nowhere and now has 18 persons and counting that have committed to it. I sent out a bulk email to the club members offering it as a quick hit deal, two for one at Anthony's Key Resort in Roatan, Honduras. The whole resort is filling up fast for all year, so we had to jump on this one. It started as 4 people wanting to go and then we opened it up to the club and now 18. It still may not be too late, but you will need to contact me before buying any airline tickets. The dates are Oct.3 - 10th. There is no webpage at the moment and it might be awhile before one gets up, but you can google AKR and check out the place. It is an all-inclusive (no alcohol) resort with 3 meals a day, 3 boat dives for 6 days and 2 boat night dives. They also have several other things that are included. If you have an interest contact me.

Philippines 2016

We are slow in getting people to sign up for this trip, but it really isn't that far off. If you are planning on going, please contact me and let me know for sure. I am looking into group air, but it is hard to commit with only a few people signed up. All the info is on our website. If it is a money issue for the deposit, at least fill out the reservation form, so I can have an idea of how many are going. This was one of my best dive trips ever 3 years ago and I am going back. You might never see any of the creatures that we saw there last time. Just ask anyone that went and they will tell you what a great trip it was, other than the travel part. But it seems like the hardest to get to are the best??

Mystery Trip 2015

Not sure we will end up having a mystery trip for 2015 due to the overwhelming response to the Roatan trip. If you are not going on that trip and have ideas for another trip, please let one of us know. If we see another trip pop out at us, then we will see what we can do. To me 2 – 4 people make up a trip, so you don't have to worry about large numbers. Sometimes, smaller is better. 🚩



The school (group) of mobula rays was a special picture. I think there are perhaps 21 rays in the picture, and maybe another few not caught in this shot. It was taken at about 100 feet, late in the dive. I was attempting to catch a picture of a turtle that was not cooperative. The turtle swam off into the deep, and as I watched I saw a group of white dots about 60 feet below me. Although it was late in the dive and my air supply was well below 1,000 psi, I dropped down to investigate. As I got closer I was able to identify the white dots as a group of mobula rays. I dropped further down hoping they would cooperate with a picture, which they did. With no time to waste, I took several shots and retreated toward the surface with just enough air to make a full safety stop before surfacing. -Noel

From the Treasurer

By Dan Miller



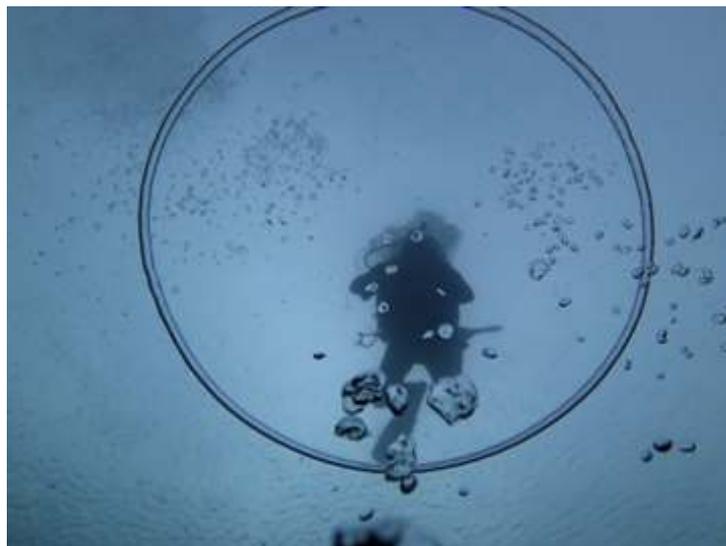
2015 Membership Dues

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.

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

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



I've had some marginal success blowing bubble rings while passing time at the end of a dive. Every once in a while I have an actual ring of air that gently rises to the surface. In this picture I had just blown such a ring and Phil (another diver) was outlined above. -Noel

Safety Corner

By Rick Stephan



Note: *This month's article is a continuation from DAN's website and talks again about decompression illness in diving. This time, we'll discover how to treat it.*

Since we are all different – size, health status, intensity of diving, etc., we will each be affected by DCI differently. Treatment of the situation will vary as well. You may get a violent and immediate hit, or you might experience a very slight episode some time after surfacing. The treatment of each is similar, and in this case, overtreatment will not be a big negative, physically anyway.

*BGDC trips are normally to sites where a lot of diving (and therefore dive medicine) occurs. But you may be somewhere that is unaware of treatment, and you may need to educate someone on what to do for your buddy (or even YOU!). So, it is smart to be prepared by understanding what is required. Also, make sure you and your buddy are insured – medical flights and chamber time are really expensive! **(NOTE: since this article is from DAN's website, they always mention calling DAN. If you are insured through DiveAssure or another carrier, replace that name and their phone number.)***

Decompression Illness: What Is It and What Is The Treatment? (continued)

By Dr. E.D. Thalmann, DAN Assistant Medical Director

With reports by Renée Duncan, editor, and Joel Dovenbarger, vice president, DAN Medical Services

Treatment - Call DAN!

The treatment for DCI is recompression. However, the early management of air

embolism and decompression sickness is the same. Although a diver with severe DCS or an air embolism requires urgent recompression for definitive treatment, it is essential that he be stabilized at the nearest medical facility before transportation to a chamber.

Early oxygen first aid is important and may reduce symptoms substantially, but this should not change the treatment plan. Symptoms of air embolism and serious decompression sickness often clear after initial oxygen breathing, but they may reappear later. Because of this, always contact DAN or a dive physician in cases of suspected DCI - even if the symptoms and signs appear to have resolved.

Treatment involves compression to a treatment depth, usually 60 feet, and breathing high oxygen fraction gases at an oxygen partial pressure of between 2.8 ata (atmospheres) and 3.0 ata. Delays in seeking treatment have a higher risk of residual symptoms; over time, the initially reversible damage may become permanent. After a delay of 24 hours or more, treatment may become ineffective and symptoms may not respond to treatment. Even if there has been a delay, however, consult a diving medical specialist before drawing any conclusions about possible treatment effectiveness.

In some cases, there may be residual symptoms after a treatment. Soreness in and around a joint that was affected by DCS is common and usually resolves in a few hours. If the DCI was severe, significant residual neurological dysfunction may be present, even after the most aggressive treatment. In these cases, there may be follow-up treatments, along with physical therapy. The good news is that the usual outcome is eventual complete relief from all symptoms, provided treatment was begun promptly.

Care Of The Diver With Decompression Illness

I. Determine the Urgency of the Injury

Make an initial evaluation at the dive site. Suspect decompression illness if any of the signs or symptoms previously described occur within 24 hours of surfacing from a dive. The

initial state of the affected diver will determine the order and urgency of the actions taken. Based on a classification used by the U.S. Navy, the diver can be placed in one of three case categories:

- emergency
- urgent
- timely

Category A - Emergency Cases Of DCI

Symptoms are severe and appear rapidly, within an hour or so of surfacing. Unconsciousness may occur. Symptoms may be progressing, and the diver is obviously ill. The diver may be profoundly dizzy, have trouble breathing or have major abnormalities in consciousness. Obvious neurological injury is seen in altered consciousness, abnormal gait or weakness.

These divers are obviously very sick, and a true medical emergency exists. If necessary (e.g., if the diver is unconscious), begin CPR and take immediate action to have the diver evacuated. Check for foreign bodies in the airway. If ventilatory or cardiac resuscitation is required, the injured diver must be supine (lying on the back). Vomiting in this position, however, is extremely dangerous; if it occurs, quickly turn the diver to the side until the airway is cleared and resuscitation can resume in the supine position.

If available, use supplemental oxygen while administering breaths to increase the percentage of oxygen received by the injured diver. Even if CPR is successful and the diver regains consciousness, 100 percent oxygen should be provided and continued until the diver arrives at a medical facility.

If Trained Healthcare Personnel Are Available . . .

... then an intravenous (IV) infusion using isotonic fluids without dextrose should be started. An initial rapid infusion of 1 liter over 30 minutes should begin to correct any dehydration and reduce hemoconcentration. Once this is accomplished, then the rate of

administration should be reduced to a 100-175 cc / hour maintenance rate.

Additional 1-liter boluses may be required to further correct dehydration and maintain blood pressure but should only be given by trained healthcare personnel capable of weighing the need for further fluid with possible complications. These would include fluid overload problems and discomfort from urinary retention in divers with abnormal bladder function due to spinal cord decompression sickness. If trained personnel are available, a urinary catheter should be placed in all unconscious divers and in those who cannot urinate.

Call DAN

After stabilization and arrangements for evacuation, contact DAN for advice on the nearest chamber location. DAN medical experts can get in touch with the receiving facility to assist in diagnosis and, if necessary, treatment. Do this even if the diver appears to be improving on oxygen. While awaiting evacuation, take as detailed a history as possible and try to evaluate and record the diver's neurological status. These facts are useful to the receiving medical facility. If air evacuation is used, cabin pressure should be maintained near sea level and not exceed 800 feet / 244 meters unless aircraft safety is compromised.

Place the diver in the lateral recumbent position, also known as the recovery position. This puts the person on one side (usually left) with head supported at a low angle and the upper leg bent at the knee. If vomiting occurs in this position, gravity will assist in keeping the airway clear.

Category B - Urgent Cases Of DCI

Here, the only obvious symptom is severe pain that is unchanging or has progressed slowly during the past few hours. The diver does not appear to be in distress except for the pain, and the neurological signs and symptoms are not obvious without a careful history and examination.

Immediately place the injured diver on 100 percent oxygen and give fluids by mouth. Do

not attempt to treat the pain with analgesics until advised to do so by medical personnel. Continue providing oxygen until arrival at the medical treatment facility.

Contact DAN or the nearest medical facility for advice on what sort of transport is necessary and where the diver should be evacuated to, even if symptoms improve or are relieved with oxygen. Emergency air transport may not be necessary in all cases.

While awaiting evacuation, take as detailed a history as possible and try to evaluate and record the diver's neurological status. This information will be useful to those at the receiving medical facility. If air evacuation is used, cabin pressure should be maintained near sea level and not exceed 800 feet unless aircraft safety is compromised.

Category C - Timely Cases Of DCI

Symptoms are either not obvious or have progressed slowly for several days. Usually the main signs or symptoms are vague complaints of pain or an abnormality of sensation; the diagnosis of DCI may be in question. Obtain as complete a diving history as possible and do a neurological evaluation. Then call DAN or the nearest medical facility for advice or go to the nearest medical facility, if nearby, for evaluation.

II. Get the Dive History If possible, obtain and document the following information for all suspected cases of DCI:

- For 48 hours preceding the injury, get a description of all dives: depths / times, ascent rates, intervals between dives, breathing gases, problems or symptoms at any time before, during or after the dive;
- Ask for symptom onset times and progression after the diver has surfaced from last dive;
- Get a description of all first aid measures taken (including times and method of 100 percent oxygen delivery) and their effect on symptoms since the injury;
- Record the results of the on-site neurological examination (described below);

- Make a description of all joint or other musculoskeletal pain including: location, intensity and changes with movement or weight-bearing maneuvers;

- Get a description and distribution of any rashes; and

- Provide a description of any traumatic injuries before, during or after the dive.

III. Conduct an On-Site Neurological Examination

Information regarding the injured diver's neurological status will be useful to medical personnel in not only deciding the initial course of treatment but also in the effectiveness of treatment. Examination of an injured diver's central nervous system soon after an accident may provide valuable information to the physician responsible for treatment.

The On-Site Neuro Exam is easy to learn and can be done by individuals with no medical experience. Perform as much of the examination as possible, but do not let it interfere with evacuation to a medical treatment facility. The examination is given on the DAN website and is also in the *DAN Dive and Travel Medical Guide*.

IV. Get the Injured Diver to the Nearest Medical Facility and Call DAN

Call for local EMS first; then call DAN. Depending on the severity of the injury (see above), take immediate care for the diver's airway, breathing and circulation and contact local EMS. After making contact with EMS, then call DAN.

Call the DAN Emergency Hotline

Call +1-919-684-9111 to talk to an expert in diving medicine. You may call collect. DAN medical staff is on call 24 hours a day to handle diving emergencies.

When You Call the DAN Emergency Hotline:

1. Tell the operator you have a diving emergency. The operator will either connect

you directly with DAN or have someone call you back at the earliest possible moment.

2. The DAN staff member may make an immediate recommendation or call you back after making arrangements with a local physician or the DAN Regional Coordinator. DAN Regional Coordinators are familiar with chamber facilities in their area, and because they're qualified in diving medicine, they make recommendations about treatment.

3. The DAN staff member or Regional Coordinator may ask you to wait by the phone while he / she makes arrangements. These plans may take 30 minutes or longer, as several phone calls may be required.

This delay should not place the diver in any greater danger. However, if the situation is life-threatening, arrange to transport the diver immediately to the nearest local medical facility for immediate stabilization and assessment of his or her condition. Call the DAN Emergency Hotline (+1-919-684-9111) if you need evacuation assistance through DAN *TravelAssist*.

A Perspective The above tries to paint an accurate picture of DCI and its consequences; you should not conclude, however, that recreational diving is likely to cause injury. In fact, DCI is rare: researchers estimate between three and four cases of dive injuries reported for every 10,000 dives - approximately 1,000 cases per year. In addition the vast majority of the DCI cases are minor and treatment results in complete resolution with no impact on future diving activity.

Like any sport, scuba diving does have injuries, and knowing how to recognize DCI will ensure that in the unlikely event it does occur, the outcome will almost always be favorable. DAN is available 24/7 to assist in getting treatment for any dive injury and has access to world-class experts in the diagnosis and treatment of DCI. Not many other sports can boast of that kind of immediate support.

DAN is not resting on its laurels, though. We're continuing to look for ways to reduce the number of diving accidents even further. Project Dive Exploration (PDE) is a study

designed to do just this. This study trains observers to recognize DCI, and they then collect dive profile data and compile information on behavioral and health aspects. The principal goal of PDE is to establish a recreational dive database that will serve as resource research in dive safety. To learn more about PDE, see www.DiversAlertNetwork.org/medical/research/pde/

Returning to Diving after DCI

The U.S. Navy has set down rules for returning to diving after treatment. For pain-only DCI where there are no neurological symptoms, divers may begin diving two to seven days after treatment, depending on the treatment table used.

If there are neurological symptoms, the diver may resume diving two to four weeks after treatment, depending on symptom severity. For very severe symptoms, the diver must be reevaluated three months after treatment and cleared by a Diving Medical Officer.

The Navy's guidelines are for professionals, where time off must be minimized so operations are not compromised.

Guides For Sport Divers

For recreational divers, where diving is not a livelihood, a more conservative approach is called for to further minimize the chance that a diving injury will recur.

- After pain-only DCI where there are no neurological symptoms, a minimum of two weeks without diving is recommended.
- If there are minor neurological symptoms, six weeks without diving is recommended.
- If there are severe neurological symptoms or any residual symptoms, no further diving is recommended.

Even if symptoms were not severe and they resolved completely, a diver who has had multiple bouts of DCI must take special

considerations. If DCI is occurring where other divers on the same profile are DCI-free, the diver may have an increased susceptibility to DCI. In these cases, a Diving Medical Specialist must be consulted to determine if diving can be resumed safely.

Remember, your good health needs to last as long as you do. 🚩

Remember, safe diving is fun!



The camera is a Canon G16, Fantasea housing, and Light & Motion 2000 lumen video light. When my old Sanyo camera with Epoque housing finally "gave up the ghost" after years of good service, I was looking for a replacement of reasonable size and performance. I preferred to avoid a large SLR outfit, just too cumbersome for my tastes. After doing some research for recommendations, the Canon "G" series kept showing up, of which the "16" is the current model. Fantasea seemed to be the primary underwater housing for this camera and the two are usually sold as a package. Light & Motion makes some great lights, although expensive. They are small powerful LEDs, hold a long charge, and recharges in a reasonable length of time. I also purchased a wide-angle lens which is also manufactured by Fantasea, and does the trick, but requires good light and visibility to be effective. I am still learning to use the camera and its numerous settings, although would not be reluctant to recommend the outfit to anyone looking for an underwater camera and housing. -Noel

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

Bluegrass Dive Club 2015 Calendar

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

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

October

13, Tuesday Dive Club Meeting
27, Tuesday Board Meeting

November

10, Tuesday Dive Club Meeting
24, Tuesday Board Meeting

December

12, Saturday Club Christmas Party