



UNDERCURRENTS

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

June 2011

Volume 41, Number 6

June's Club Meeting

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

President's Message

By Tracey Combs



Hey everybody. I am ready to get in the water with all of these hot temperatures coming our way. I am looking forward to our future trips! Remember if you have any trip ideas or suggestions to please contact someone on the dive trip committee. We are also finishing our Diver Directory for all of our members. The directory will allow current paid members access to other members, which will make dive trip organization easier. This directory will be available only to members and we will be posting your phone number and email address that we have on file with BGDC. If you do not wish to have your personal information published, please email me at traceysdc@hotmail.com. Thank you for your assistance.

Thanks again to Mike and Sherri McCann for hosting the Derby Party last month, much fun was had by all. And thanks to John and Lynn Thomson for organizing the wager boards.

Safe travels and wonderful diving. 🚩

The Editor's Notes

By John Geddes



The pics for this month are from the Derby Party and I'm sure we will have some from Bonaire for next month. 🚩



2011 BGDC Officer's

Tracey Combs, President	621-4066
Corrine Mulberry, Vice President	913-0892
Kris Harn, Secretary	278-4246
George Fleischmann, Treasurer	873-9539
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



At our May BGDC meeting we welcomed one visitor -- Judy Sullivan from Lexington. She is Advanced Open Water certified and likes to travel and dive. Welcome, Judy, and we hope to see you again soon.

Also, a big hello and welcome to Tamara Williams who attended her first meeting in May. Judy is a Divemaster with hundreds of dives worldwide. She and her husband, Steve, recently became BGDC members. I have BGDC license plates for you that you can pick up at any of our monthly meetings.

During May, we had two new BGDC members join. Dirk Franzen resides in Lexington and has his Open Water certification. We look forward to meeting and diving with you Dirk. Also, new to BGDC is Paul Hobbs. He resides in Louisville and is Advanced, Nitrox and Rescue certified and has spent quite a bit of time diving in the North Atlantic with the North Shore Frogman Tech divers. Welcome to the BGDC! We look forward to seeing you at our meetings, social events and, especially, on our dive trips. I have BGDC license plates for you both that you can pick up at any of our monthly meetings.

To continue to get the word out about the BGDC, we will start advertising our Club meetings (free of charge of course!) on LexGo (<http://www.kentucky.com/entertainment/>) and in the Lexington Herald Leader newspaper. We will also distribute business cards with the BGDC website to members at our regular meetings so that you can have a handy reference to provide to people when you find other SCUBA divers during your day-to-day routines. It always helps to have something with our website on it to hand to people.

I look forward to seeing you all at our June meeting. Cheers. 🍷

Trip Director's Report

By Doug Geddes



HISTORY LESSON ABOUT THE CLUB

The club is now **40** years old as of June 1. We were started by a small group of divers that Billy Forbes got together in 1971. One of these days, we will get Billy to come to a meeting to talk with us about the beginnings of this great club. So, Happy Birthday to us.

ELEUTHERA 2011

It seems this trip just keeps on growing. We still have space for more persons, but time is running out to sign up. We have around 14 persons or so with deposits that are counting the days to go to this fabulous marina. Remember these are over a million dollar condo's that we will be staying in that rent for over \$2500 for the week without any benefits and we are getting three meals a day and dives included for just over \$1300 for a diver in a quad situation. Non-divers are less than that, so why not make this your end of the summer vacation, since all the summer travelers will be back in school or working. Check out the website and see if this is for you. Great group of people are going, so sign up now before it is too late. Air fare is around \$800 or so, depending on the day you check, but that is all the way there and back. Check with me before you buy your air.



Trip Director's Report Cont

PHILIPPINES 2012

We now have 18 persons that have signed up for this great dive destination. We have booked 20 spots, so if you are thinking about going, now would be the time to sign up and put down your deposit. The prices we were able to secure are unmatched anywhere. You will never be able to dive in the Philippines with great friends for prices that we have now. For some reason, if the number goes over 20 we may be able to add more, but I would not count on that. Plus the first 18 get the choice of rooms, base on their sign up dates. Don't wait to be last then have to sleep in the kitchen with the cook.



OTHER TRIPS 2012 AND BEYOND

We are still in the process of choosing several locations for the next couple of years. Truk Lagoon is one that is being tossed about for 2013 along with several other great locations. So many, that it is hard to decide. Keep your eyes open for announcements that might come out about future trips. 🚩



From the Treasurer

By George Fleischmann



2011 Membership Dues

Student (High School or College ID) ..\$10.00
Single & Family (1 diver)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
% George Fleischmann
9048 Clifton Road
Versailles, KY 40383

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 Kris Harn



May 10, 2011
Regular Meeting

28 people in attendance. Tracey opened meeting at 7:37pm. George gave Treasurer's report. 2 visitors in attendance. Corrine talked about membership directory. Doug reviewed upcoming trips. Corrine reviewed trip to Dale Hollow. Meeting ended at 8:16pm. Video by Noel on Grenada.



May 31, 2011
Board Meeting

Corrine, Doug, Rick, John, & Kris were present. Corrine started meeting at 7:40pm. Corrine presented Treasurer's report. Report was filed. Corrine went over contacting new visitors and ad in Wednesday's newspaper. Kris to get paid membership list from George. Doug reviewed trips. Bonaire T-shirts are in. Gilboa trip approved. Motion made by Doug and second by John. Meeting ended at 8:46pm. 🚩

Dale Hollow Lake

By Corrine Mulberry



**** LOCAL DIVING ****
Dale Hollow Lake
July 30th-31st, 2011

Summer is here....well, almost! Our fabulous Dale Hollow Lake trip is the weekend of July 30th – 31st. This is a great trip for divers and non-divers alike. We have pontoon boats reserved for Saturday and Sunday to transport us on the lake for fun, sun and diving.

We will enjoy a weekend of lake diving, swimming, relaxing and a pot-luck dinner on Saturday evening. Thanks to financial assistance from the Bluegrass Dive Club, the cost for participants is only \$20.00 per person per day for pontoon boat users. For members that bring their own boats, there is no fee; however, registration and waiver forms must be completed for each person.



Overnight accommodations are up to you----pitch a tent and camp, reserve a rustic cabin or stay at the State Park Lodge. Our pot-luck dinner will be held in the State Park Campground at the picnic tables at cabin site C006. Campers are encouraged to utilize campsites near cabin site C006 such as K008, K007, K006 and L001 and L003. (I've got campsite L002 reserved for me and my little tent).

First come, first served – get your reservations and payments in as soon as

Dale Hollow Lake Cont

possible to secure your spot! We have a bunch of reservations in, but still have room for more. Don't miss out --- this will be a lot of fun. Visit the BGDC Website to sign-up for the Dale Hollow Lake Trip.

**** LOCAL DIVING ****
September 3rd – 5th, 2011

We have a brand new local dive trip planned for 2011. Gilboa Quarry in Findlay Ohio for Labor Day weekend. www.divegilboa.com Gilboa Quarry is a 4 - 4.5 hour drive from Lexington; perfect for a 3 day weekend!

This trip has just been approved by the Board and the webpage is under development. The plan is to travel (carpool) to Findlay Saturday morning and dive Saturday afternoon and perhaps a night dive as well. We will stay at the Drury Inn and travel back to the Quarry for more diving on all day Sunday (with an option night dive as well). We'll stay overnight at the Drury Inn, enjoy a hearty breakfast and travel back home on Monday. For a double occupancy room for two nights and two days of diving the cost will only be \$125.00!! Here's what you get for your money:

- Two nights accommodations (double occupancy) at the Drury Inn (Sat & Sun)
- Two hot breakfasts (Sun & Mon)
- Three happy hour drinks each evening (yup, even the alcoholic kind)
- Hot appetizers and snacks each evening
- Quarry Entry Fees for two days (Sat & Sun)
- And more – coffee, wi-fi, exercise room, indoor/outdoor pool.

Air refill costs are not included; nor are any rental fees (tanks, etc.). I will coordinate with our webmaster to get his webpage up and running as soon as possible. We will have a video of Gilboa Quarry that we will show at our July meeting so that you can see of the features available at the Quarry. 🚩

Safety Corner

By Rick Stephan



Note: This month's article – from scubatechdivers.com - is an overview of one of the most frequent health issues affecting divers – dehydration. While a clueless diver can become dehydrated on any trip, it becomes even more a factor as we get into the warm months of summer. Out on the water, a cooling breeze can make you feel it isn't so hot, and you may not think you **NEED** a drink, but just the opposite is true. The evaporation of your perspiration will make you lose water even more quickly. Breathing that good dry air in your tank will make you feel more dry in the mouth, but you don't want to wait until you're thirsty before getting hydrated.

Dehydration can make you a candidate for really serious problems. Think ahead and bring water with you on every trip, whether it is boat dive out of Bonaire or on the pontoon at Dale Hollow. (Don't forget to bring water with you for those shore based dives in Bonaire, too!) A small plastic bottle filled from the tap in your room works just fine – you don't have to buy a fancy water bottle. You should reuse the bottle through the week, don't buy bottled water (unless the tap water is unsafe to drink – as illness is not a good idea either, as stated below). Recycle the bottle at the end of the week – keep our environment clean.



Remember, safe diving is fun!

Safety Corner Cont.

Dehydration:

The Loss of Water and Salts essential for normal Body Function

By Shelley Patient

As I am sure most of you know, our bodies are made up of 70% water but did you know that even a 2% loss of water in the body can result in up to a 10% reduction in physical performance due to dehydration. The muscles do not work well, which can leave you vulnerable to a variety of injuries.

This is an especially important consideration for Scuba Divers, as dehydration can affect the body's ability to off-gas, provoking DCS (Decompression Sickness), increased fatigue and, in extreme cases, Hypovolemic Shock, which is also known as Physical Collapse.

Staying hydrated is a balancing act between the body fluids and the essential salts in the cells and blood plasma that play an important role in the proper functioning of the human body. When the body loses more fluids than it takes in, dehydration occurs. There are a number of factors which can contribute to this phenomenon, such as illness, hot dry climates, prolonged exposure to heat or sun and insufficient fluid intake or the use of diuretics.

As Divers, there are 4 main ways that we lose fluids. We discuss these now.

Sweat

When Divers go Diving, we exert our bodies. There is heavy equipment to lift and putting on a wetsuit has never been the easiest activity in the world. Once kitted up, a diver then has to reach the entry/exit point and the route is often demanding; over rocks, down hills etc. Even on the coldest day, this exertion can cause a diver to sweat and as a result lose moisture.

An important part of sweating is the loss of ionized salts (mainly Sodium (Na+), Chlorine (Cl-) and Potassium (K+)) called electrolytes in the body. These electrolytes control the amount of water in various parts of the body and maintain the electrical gradients across the cell

membranes, by which, nerves conduct signals through the body. These signals are what make the glands work or tell a muscle to contract (including the Heart Muscle).

When Divers sweat, we lose electrolytes. One liter of sweat can contain up to 1.5g of Sodium and in extreme cases, a Diver can lose up to 3 liters of sweat in an hour. This loss is one of the body's mechanisms for regulating salt levels- if we did not sweat electrolytes, just water, the concentration of electrolytes in the blood would quickly rise and could result in death. The concentration of the electrolytes in the sweat is less than that of the blood and so, if we are sweating over a period of time, the blood does become 'thicker' and this is the reason that we need to drink water when we are sweating (to thin it).

Drinking is not the only factor in maintaining a Diver's Hydration. If a Diver is sweating and drinking water but not eating, this can deplete the reserves of electrolytes and result in a sodium deficiency, which is also known as Hyponatremia. This condition can be fatal but it is an extreme case scenario and is almost never a concern for recreational divers.

Breathing

Have you ever breathed on a mirror?

If you have, you will have noticed that the mirror fogs up under your breath and there is a residue of moisture left on the face of the glass. This is a result of moisture being drawn from high concentrations (the body) to areas of low concentration (the mirror) in much the same way as heat is drawn from warmer areas (Diver's body) to cooler areas (the water column) and Nitrogen dissolves into our bodies under pressure.

When we go Diving, we have our tanks filled by a reputable source where the air pumped into the tanks by the compressor is filtered to remove anything that isn't supposed to be there. If your local filling station also mixes Nitrox through Partial Pressure Blending, you may find that the air is double or triple filtered due to the added risks of working with pure Oxygen. Although this filtration system is necessary, it causes the air in our cylinders to be very dry.

Safety Corner Cont.

Breathing dry air from your cylinder will contribute to a Diver's Dehydration. As the Diver breathes the air into the lungs, moisture moves from the body into the air to saturate it (sound familiar? Think about decompression theory) and the dry air from a Scuba Tank requires nearly twice as much moisture from the body to saturate it than breathing uncompressed air from the atmosphere. It is usually found that this has more impact in cold water as the body has to relinquish more moisture for the lungs to warm the cold air.

In 2003, BSAC (the British Sub Aqua Club) released an Incidents Report that listed Dehydration as a contributory factor in Decompression Sickness Incidents particularly among Drysuit Divers in the UK, showing that Dehydration in Divers is not simply something that affects Divers in Tropical regions.



Urinating

The Human Body is designed for the environment in which we live. You will often hear non-divers say, if we were meant to be in the water, we would have been born with gills.

As a passionate Diver myself, I find that I cannot agree with that statement completely. Scuba Diving makes me weightless and free. I can forget any worries from the surface. They just don't seem to matter so much while I am interacting with the sea life and visiting this world that so few people get to visit. Surely, this is how life is supposed to be. However, I cannot argue with the fact that my time is limited because I am reliant on Diving technology and limited air. Also, from the

second I entered the water, my bladder has been screaming at me that I need to go.

It is not just your mind playing tricks on you. Our bodies were in fact designed for an environment with gravity so when we move to a weightless environment like underwater (or outer space), our regulatory systems become confused. On Land, blood pools in the extremities, slowed by gravity. Underwater, the blood is allowed to return to the Diver's center, tricking the body into believing that the blood volume is too high. The Diver's body actively works against them to reduce the blood volume. The Heart responds by triggering a response in the kidneys to remove fluid. This means the Diver needs to pee more and more often. This effect is called *Immersion Diuresis* or in simple terms *The Spaceman Effect*.

This Spaceman effect can become more pronounced as a result of the water temperature. Unless the water is at the same temperature as the Diver's body temperature, *Vaso constriction* (narrowing of the blood vessels) occurs. This reduces blood flow to the extremities and works to increase the blood volume at the body's core thereby compounding the problem.

Add to the equation the alcohol that was consumed the night before, the coffee drank this morning in a bid to wake yourself up and the several cups of tea you have had since (just to stay warm). These things are all known as *Diuretics* and the list even includes Chocolate. Unfortunately, if you want to avoid Dehydration on your Dive, you will have to avoid these things too.

Often, Divers complain of headaches upon surfacing after a Dive. Insufficient fluids in the blood vessels of the neck and head can cause headaches and so this is usually a symptom of Dehydration. When blood flow is compromised in a Diver, it can have serious consequences from a decompression point of view. Off-gassing is dependent on the flow of blood and gas exchange to remove the Nitrogen dissolved in the blood stream. Dehydration can cause the restriction of blood flow to the muscles and this, in turn, restricts the body's ability to remove the dissolved Nitrogen putting the Diver at increased risk of a 'bend'.

Safety Corner Cont.

Illness

I am sure most of us have been on a Diving Trip or holiday and reach the second or third day to be struck by the dreaded tummy bug. Scuba Diving when you are not feeling well is never wise but if you are suffering from vomiting and diarrhea you could be risking serious Dehydration.

How do I stay Hydrated?

Dehydration is a significant factor for Divers and all Divers are usually suffering from some degree of Dehydration when they finish a Dive. Just getting into sea water alone has a Dehydrating effect, as a result of Osmosis.

The concentration of salt in the sea is so much greater than that of our bodies that the moment we enter the sea it begins to draw moisture out of our body to try and achieve saturation, thereby dehydrating the Diver.



This same principle applies to drinking sea water. Even though it contains so much water, the high concentration of salts in the sea means that if a Diver were to drink it, the body would have to work to regulate the increased levels of salt in the body. This triggers the kidneys to eliminate the excess sodium with the Urine but the water required to eliminate the salt in this way exceeds the amount that was in the sea water in the first place. As a result, the Diver would dehydrate.

As a point of interest, there are some sea birds that can drink sea water (such as penguins) but these birds have special

excretory glands in their heads that eliminate the excess salt.

To remain hydrated, a diver must ensure a slow gradual intake of fluids for up to 2 days before a Dive and this should include at least 2 liters of water per day. Generally, a person finds they are more Dehydrated in the mornings and so on the day of Diving, should aim to drink half a liter in the morning, then 250ml before the Dive and at least a liter after the Dive or between Dives to replace the fluids lost.



Do not wait until you feel thirsty before having a drink. At this point you are already mildly dehydrated. It is best to drink small amounts often throughout the day even if you do not feel thirsty and to drink more than you think you need.

Equally, it is important to avoid over drinking. When too much water is drunk over a short period of time, it can have the effect of diluting the concentration of electrolytes (salts) in the body and the body in turn, makes you urinate more with extra water and turns off the thirst sensation to try and restore the balance. This usually means you stop drinking and risk Dehydrating.

To avoid this 'flushing' effect, it is advisable to drink a solution containing electrolytes and there are numerous sports drinks on the market today which offer this. Electrolyte levels in sports drinks are similar to the concentrations released in sweat, which means that you do not have to dilute them and they will not cause dehydration. The primary advantage of a sports drink is that the electrolytes will reduce urine production during the Dive and minimize the Diver's need to go. Often, drinking 750ml of warm water with 6

teaspoons of sugar and half a teaspoon of salt dissolved in it will have the same effect as the sports drink, although the taste may leave something to be desired.

To prevent Dehydration when Diving

- Drink plenty of non-diuretic fluids
- Avoid Alcohol and Caffeine
- Eat mineral rich foods such as Bananas, watercress and mushrooms
- Breathe in a slow and relaxed manner
- Avoid exertion
- Conserve body heat
- Stay out of the Sun and seek shade on hot dry days
- Take precautions to avoid sea sickness and tummy bugs (if this means taking a week's supply of pot noodles, so be it)
- If doing long dives, take some in-water rehydration such as SCUDA (self contained underwater drinking apparatus) or foil drink packs to sip on decompression/safety stop
- If you are a technical dry-suit diver invest in a pee valve or towels for those long dives when you really have to go.
- Consider diving with a Rebreather, which circulates warm moist air, reducing the dehydrating effect
- Check your urine. The color should be pale, it should be plentiful and odor free. If the color gets dark or it gets smelly you could be dehydrated.
- Use Common Sense 🚩



Bluegrass Dive Club 2011 Calendar

June

- 11, Bonaire Dive Trip
- 14, Tuesday Dive Club Meeting
- 28, Tuesday Board Meeting

July

- 12, Tuesday Dive Club Meeting
- 26, Tuesday Board Meeting
- 30-31, Dale Hollow Diving

August

- 9, Tuesday Dive Club Meeting
- 20, Saturday Club Pig Roast
- 30, Tuesday Board Meeting

September

- 13, Tuesday Dive Club Meeting
- 27, Tuesday Board Meeting

October

- Eleuthra Dive Trip
- 11, Tuesday Dive Club Meeting
- 25, Tuesday Board Meeting

November

- 8, Tuesday Dive Club Meeting (Elections)
- 29, Tuesday Board Meeting

