

Shooting Blackwater

by Phil Rudin

When most seasoned divers talk about muck diving, exotic places like Milne Bay, Lembeh, Anilao and Mabul come to mind not Riviera Beach, Florida. But in the last fifteen years or so the intracoastal waterway between Riviera Beach and Singer Island, also known as the Blue Heron Bridge has become a mecca for muck divers and photographers from around the world. Now Palm Beach County, Florida has become a mecca for blackwater divers and photographers from around the world.

Let me warn you that blackwater diving can become very addictive, sometimes to the point of abandoning all other areas of diving. I have many friends that are making blackwater dives several times a week in Palm Beach, Florida and plan their international dive trips around blackwater diving.

During the past five years blackwater diving has become an international pursuit for many divers and underwater photographers. Fueled by an explosion of quality images that are circulating the internet on sites like Facebook, Instagram and in underwater specific photo computations. Dive resorts around the

world are adding blackwater to their list of dives and classes they offer clients.

What is blackwater diving

For the uninitiated let's review what blackwater diving is and why has it become so popular.

Blackwater dives are night dives in the open ocean or other deep water areas where the bottom may range from 50 to over 300 meters and more. Upon entering the water divers drift in the current following a large float with a weighted line that drops to around 14 meters (45ft). The weighted line is adorned with an assortment of bright lights that are used as a reference for the divers and the dive boat drifting above the divers. The lights are spaced about every three meters so that divers can judge depth.

Keep in mind that without a depth gauge you have no frame of reference for how deep you are because you will not be able to see the bottom or the horizon. The tree of lights is the only reference for depth and proximity to the dive boat which you will want to be near when the dive is over.



Adult Longfin Inshore Squid, Palm Beach, Florida. Sony A1, Sony 90mm macro, Nauticam housing, two Backscatter MF-1 flashes, ISO-500, F16, 1/400th sec. sync

In Palm Beach County, Florida Blackwater dives are conducted from around five to six miles off shore, so a long swim home if you separate from the boat. In the same waters we will drift from about one to seven miles during a normal ninety minute

dive. Most blackwater divers will limit themselves to diving near the surface to the 25 meter range only occasionally going deeper following a subject they have been photographing.

Animals like Flyingfish, jellyfish and Seahorses can be found at or near



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Winged Comb Jelly Back lit with yellow light, Palm Beach, Florida. Sony A1, Sony 90mm macro, Nauticam housing, two Backscatter MF-1 flashes, ISO-500, F16, 1/400th sec. sync.

the surface sometimes hiding in the sargassum weed along with other small fish. Avoiding boat traffic is a major concern near the surface so be aware.

Blackwater diving is not for amateurs; you need to have excellent bounce control, a familiarity and high comfort level with diving at night, well maintained dive gear and a redundancy of well charged dive lights. Also realize that your best dive buddy is the light tree you are following and not the rest of

the divers with you. Also be aware that you are in an area where large animals also roam. If you don't feel comfortable doing a solo dive at night then you probably should not be blackwater diving.

Keep in mind that this article and other articles like it are not a substitute for getting proper blackwater dive training. In Palm Beach County Pura Vida Divers offers blackwater dive training and they run blackwater trips twice or more times a week, weather permitting. Walker's Dive Charters



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Comb Jellyfish, Palm Beach, Florida. Sony A1, Sony 90mm macro, Nauticam housing, two Backscatter MF-1 flashes, ISO-500, F16, 1/400th sec. sync

also runs bi-weekly blackwater trips. Both of these operators are highly recommended in the area and should be considered if you are traveling to Palm Beach County.

I believe the reason blackwater diving has become so popular is that it opens up a new world of fascinating and unusual creatures that can only be observed and photographed by recreational divers at night and in deep water.

Why all of these unusual blackwater creatures are found near

the surface at night and not during the day is simple. At night our vast oceans host the largest vertical migration of animal life on the planet when zooplankton rise from the depths to feed in the shallower waters near the surface. The plankton then attracts both pelagic and larval stage critters which feed on the plankton, mate, spawn and continue the circle of life in the sea.

Many of the pelagic and larval stage critters found while blackwater diving are no bigger than a centimeter

or two in diameter and may be as small as only a few millimeters. Most of these small critters shy away from dive lights and flashes. They become agitated and rapidly move or move so randomly that trying to photograph them is a distinct challenge. This challenge is what draws many underwater photographers to blackwater diving. Capturing images of many of these very shy animals requires photographers to up their game or come home empty handed.

For photographers your first goal should be to learn how to move through the water and approach your subject. Excessive hand movement, fin kicks and body movement disturb the water around you much like a ship moving through the water. This disturbance will send the small subjects you would like to photograph flying in every direction.

A much better approach is to restrict movement and drift with the current allowing the subject to come near you without spinning away, folding up into a ball or just disappearing in the night. Excessive camera motion creates the same problems, so move the camera slowly and go with the flow.

Finding a subject to photograph requires one or more dive lights. How the lights are used varies greatly among photographers. Some photographers use a ring light

attached to the macro port on the housing while others hand-hold a light for locating critters. Others attach video lights to the housing or support arms while others have head mounted lights and some use all of the above. I suggest you experiment with several lighting configurations, find what works best for you and then stick to it. Using narrow beam lights verses wide beam lights is another personal preference.

All blackwater photography is done with macro lenses and I would recommend the following equipment for best results. If you are using a full frame sensor camera a macro lenses in the 60mm to 105mm range will work best, for APS-C sensor cameras 40-60mm macro lenses and for M43 cameras 30-45mm macro lenses will be best. Most photographers will be using auto focus for best results so I suggest a camera with the very best AF and tracking that you can afford.

Since most subjects will be moving within the frame adding closeup lenses is not suggested because they have such limited depth of field and require that you be very close to the subject. Many subjects will only take up a portion of the frame so be aware many images will need to be cropped dramatically so this is where a camera with a high megapixel count will come in handy.

Regarding flashes many of the



Eyed Flounder, (Bothus ocellatus) Palm Beach, Florida. Sony A1, Sony 90mm macro, Nauticam housing, two Backscatter MF-1 flashes, ISO-500, F16, 1/400th

critters you will be attempting to photograph are very translucent and require a great deal of light to expose properly. Many photographers are using two flashes and some use a third slaved flash over the top of the macro port pointing downward to help make translucent subjects pop.

The background for all blackwater photos is black to dark purple and you will encounter a ton of particles in front of your lens that will create backscatter. To reduce backscatter and keep the water color as black as possible I use low ISO

values and high F/stop values. For my Sony A1 full frame camera and 90mm macro combo I shoot at ISO-100 or 500 at F/16 to F/22 at 1/400th sec. and try to keep the background black rather than milky purple.

Some photographers also like using manual strobe power settings with lower power levels for faster recycle times which requires the high ISO settings. I have used both manual strobe power settings and TTL settings for blackwater. With Inon S-TTL I add about +1.0 to +3.0 EV of strobe compensation to properly



***Caranx* sp. Jack (15mm long) Palm Beach, Florida. Sony A1, Sony 90mm macro, Nauticam housing, two Backscatter MF-1 flashes, ISO-500, F18, 1/400th sec. sync.**

expose translucent subjects and +/-0.0 for reflective subjects using my two Inon Z-330 flashes.

I also like the manual Backscatter MF-1 flashes because of the small size, streamlined design, ample power and battery life. In manual power mode I set the flashes to around 3/4 power and use F/stop or ISO changes based on the cameras histogram.

Using Auto-ISO does not work well it will push the ISO to the highest limit because of the blackwater bias.

For small very close subjects I move the strobes close to the macro port and for larger subjects like squid I move the strobes out several inches and turn them outward to avoid backscatter. Side lighting, top lighting and backlighting are also possibilities depending on subject matter.

Once you have captured some respectable

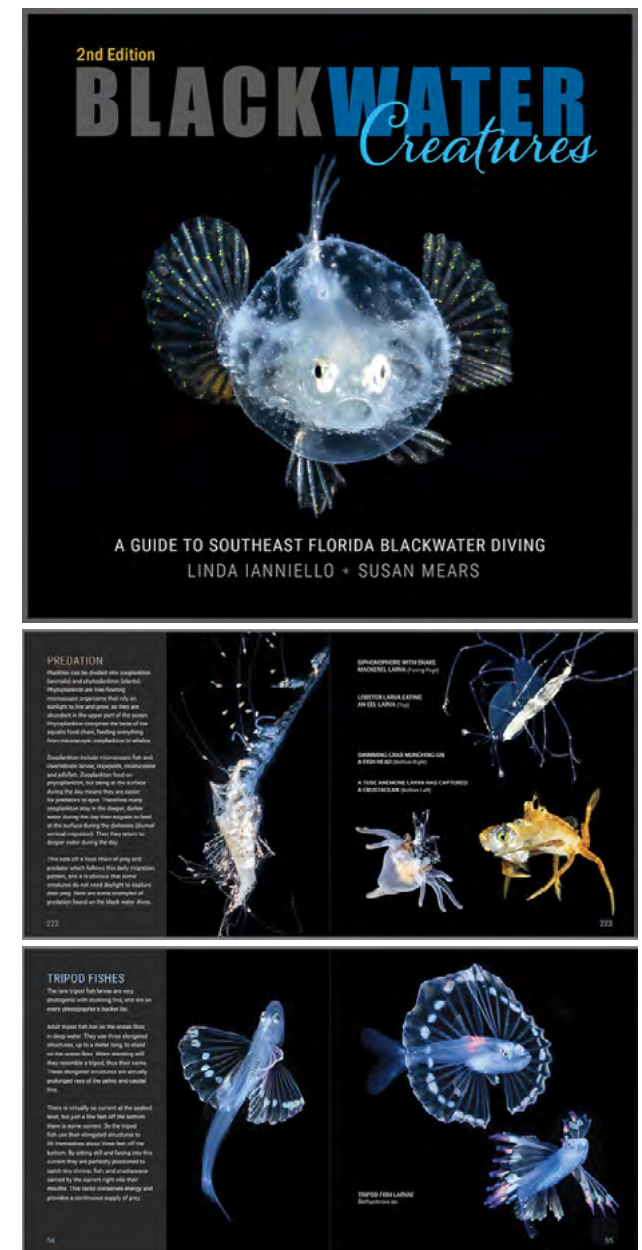


***Ctenophore*, Palm Beach, Florida. Sony A1, Sony 90mm macro, Nauticam housing, two Backscatter MF-1 flashes, ISO-500, F16, 1/400th sec. sync**

images you may want to identify what you have photographed. This may be easier said than done as resources are in limited supply and several of the creatures you may see have not yet been identified.

I highly recommend investing in the newly released "second edition" of the book *Blackwater Creatures* by Linda Ianniello and Susan Mears. It contains 240 pages with over 380 excellent images indexing fishes, crustaceans, mollusks, gelatinous zooplankton and a raft of other miscellaneous critters. It also contains interesting tidbits of information about the behavior of these creatures and several pages of reference sources.

This book is the source I used to caption all of the blackwater images for my articles. The book retails for \$45.00 US and can be shipped world wide for an additional shipping fee.



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