Blanket Octopus

by Mike Bartick

The Blanket octopus is perhaps one of the most mysterious sea creatures of all times. They are a pelagic octopus that live their entire lifecycle in open ocean which not only make's them hard to find, but even harder to study in their natural habitat. Much of what is known is speculation and the information presented here is gleaned from books, the internet, and further formed by personal observations from having multiple personal encounters. What I have learned is that the Blanket octopus is a complex animal with intriguing behaviors from the way they mate and reproduce to hunting strategies and defense. One thing is for sure, nothing can truly prepare you for the moment you encounter one.

Diving in the open ocean at night will allow the interested to witness and encounter the night sea, first hand and in person, there is just no substitute for it. Blackwater diving as we like to call it is conducted over deep water while using a lit downline to attract planktons. I enjoy doing these kinds of dives all over the world but conduct most of them, right here in my own backyard, the Balayan bay, Anilao, Philippines.

My first sighting of a Blanket Octopus (Tremoctopus gracilis) was nearing the end of a dive. I was finning back to the downline when I saw a huge shadow cross our lights. At first, I thought it was a massive jellyfish passing by, then as I got a bit closer I thought it was a fat ray of some kind. Continuing to kick closer I could begin to make out the coloration and body details, It was at that instant that I knew exactly what I was seeing. It was indeed a 1+ meter Blanket Octopus, perhaps a bit larger. Its head was as big around as a basketball, it's arms were pulled in and made up the rest of the shape that I mistook as a ray. I was at approximately 15 meters of depth or 45 feet and finning hard to keep up and trying to get out in front of it. As I did, its massive purple- green blanket, began to unfurl and open.

In this situation shooting with a 60mm lens, you try everything you can to get a shot. I began finning backwards to give myself some space but the Occy kept coming straight towards me. I did

The male blanket octopus are very small in relation to the female of the species. If you look closely, you can see the jellyfish tentacles being held by the octopuses lateral arms. It is unclear to me if the arms of the jellyfish can continue to grow along with the octopus.
Nikon D850, Sea & Sea housing, 60mm Nikkor, YS D2 strobe. 1/200th @ F20 ISO400

(Above) Small female with jellyfish tentacles, clearly visible. Im not sure at what point they give up the tentacles but the larger females don't appear to hold to them.
Nikon D850, Sea & Sea housing, 60mm Nikkor, YS D2 strobe. 1/320th @ F20 ISO400

(Left) A small female was perhaps one of the first ones I found. It was near the bottom of my downline at the very end of the dive! why does that always happen? I was able to quickly fire a few photos catching it in what appears as a protective posture. The jellyfish tentacles are there but harder to see as they are being held by the arms and suckers.
Nikon D500, Sea & Sea housing, 60mm Nikkor, YS D2 strobe. 1/200th @ F18 ISO400

everything I could to get a shot, any shot. No one would believe me if I only came back with a story. I shined my powerful hand torch back towards the downline hoping one of my friends would also see me and come down to join. The octopus was casual and orbited our downline effortlessly moving about and seemed as curious about me, as I was of it. Looking up I saw my buddy arriving to join me and the two of us had our first experience of a lifetime together.

After downloading the images, I realized that our "blanky" was obviously a female as she was also carrying eggs. WOW! I yelled, Oh my god, this is *#*# insane!. It was 3:00am and I'm sure I woke up my neighbors

The Blanket Octopus Contains 4 known species:

1 T. gelatus-a gelatinous deep

This is by far the largest female blanket octopus I have ever seen. She was easily more then 1 meter or 3 feet in length, never extending her blanket. The male by contrast is the size of a pea or 2cm. The proper term for this is size difference is "sexual dimorphism". The female is more robust then the male as part of natures design for reproduction and is the most extreme example of dimorphism in any animal that is non microscopic.
Nikon D500, Sea & Sea housing, 60mm Nikkor, YS D2 strobe. 1/200th @ F18 ISO640

Male Blankets might be small, but they are mighty. They have a complicated relationship with the female apparently. Its also reported that she might not even know when she mated as the sperm loaded arm from the male, snaps off after making contact with the female then finds its own way to the holy grail. If you think about this a little, it makes sense. The female, being so large can glide through the water making contact with multiple males while she is fertile, increasing the odds of a higher rate of fertilized eggs. Nikon D850, Sea & Sea housing, 60mm Nikkor, YS D2 strobe. 1/200th @ F16 ISO400

water Tremoctopus, cosmopolitan and found in tropical and temperate waters

2 T. robsoni-Known from the waters off of New Zealand

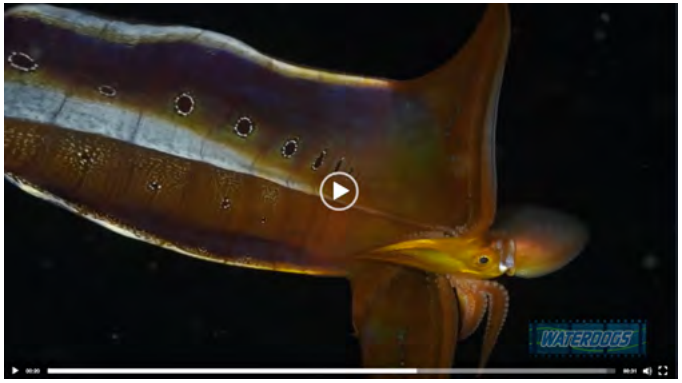
3 T. gracilis-Palmate octopus-Found in the Indo-Pacific Region

4 T. violaceus, violet colored-Lives in the Atlantic

The four different octopus can be found in almost all of the planets oceans but each inhabit a different region, sans the polar regions. Their lifecycle can last up to 5 years and have been observed hunting in the same area for an extended period of time. Being a pelagic animal means they don't make a burrow in the sand or create a home like other octopus do. These Octopus mate, hunt, feed and thrive in the open water and can roam from the depths of the dark zone to the surface, truly master's of their open ocean domain.

Over the last year or so, I've been lucky enough to have multiple encounters with the Male's and Females and have also been lucky enough to come away with a few decent photos. To have these kinds of encounters requires a willingness to stay out all night on the sea along with a huge scoop of luck.

Unique in appearance and unique in behavior the Tremoctopus are immune to the deadly nematocysts of many cnidarians including the



A quick video to show the action of a Blanket Octopus captured by my guest, Mike Dunn. Many times the Blanket octopus will swim to us, nearly colliding with us at times. Watch as she elegantly opens her blanket and moves through the water.
© Mike Dunn

Fly over. The female can be very fast and when she opens her blanket, she often flips around in a 180 degree direction. This makes them tough to photograph and hard to follow, an excellent escape and evade strategy. Nikon D500, Sea & Sea housing, 60mm Nikkor, YS D2 strobe. 1/200th @ F18 ISO400

Man O'war jellyfish. It is reported that juvenile Tremoctpus rip the stinging tentacles from the jellyfish then holds them with their lateral arms, whipping them about to sting their prey and perhaps to protect themselves. Many photos show the trailing tentacles and clearly illustrate that this is indeed a common behavior.

Oddly enough, we don't have a population of Man O'war jellyfish in our bay which leads me to assume that they aren't selective and will use the tentacles of any venomous jellyfish.

The sexual behavior is also quite interesting. The male of the species exhibits the highest degree of dimorphism then any other animal yet to be discovered. The female can measure up to 2 meters in length while the males only reach a size 2 centimeters, size and weight ratios differ as much as 10,000 times. Male Tremoctopus use a specialized arm called the hectocotylus like other male octopus which contains its sperm pack. The male only needs to touch the female with this specialized arm as it instantly sticks to her then snaps off, perhaps without her even knowing. The arm then creeps down or somehow finds its way into the ovum of the female where she crushes it, releasing the sperm and fertilizing her eggs hen the time is right. Hatching is intermittent.

The male, like other octopus having completed his life's work, now dies. However the female still has a long life ahead, brooding and caring for her eggs until she finally dies from starvation much like other Octopus.

Research says the eggs are kept in a "sausage shaped calcareous secretion" but I couldn't make that out from my photos.

The Tremoctopus gets is common name from the blanket that it can quickly unfurl and retract. When fully extended they resemble "Rocky, the flying squirrel" and fly through the water in much

Blanket opening and heading for the surface. Another escape strategy is to head up to the surface where they will skim along just below the water line. I saw this one at 25+ meters when it opened its blanket and turned a 180 and came towards me at full speed. I swam along with it trying to fit it into the frame.
Nikon D850, Sea & Sea housing, 60mm Nikkor, YS D2 strobe. 1/200th @ F25 ISO400

the same manner. The texture of the blanket looks like an exaggerated version of the webbing that a common octopus has and uses to web over their prey when hunting. However, these guys deploy the blanket to make themselves look bigger and perhaps to hunt and catch crustaceans or other cephalopods like the paper nautilus. The thin membrane is colorful and ocellated much like the feathers of a peacock with a pink, purple-green hue.

They can also detach their webbing to ensnare a would be predator or to evade as well as ink.

The web is attached to the 3rd and 6th arms of the female, palmated by the 4th and 5th arm.

They will snap their arms outward repeatedly, tightening the blanket as it moves through the water.

Like I said above, there is nothing quite like encountering one of these majestic animals in the wild. This season has brought us multiple encounters as did the last and im looking forward to learning more about these incredible sea going octopus.

Now get out there and have an adventure!

Mike Bartick
www.saltwaterphoto.com