

The Great White Footed Shrimp Expedition

By **Everett M. Turner Jr**

Our great white-footed shrimp expedition was a quest to identify a small-unknown shrimp. My wife, Essi Evans and I have been avid fish and critter watchers (and photographers) since we started diving in 1987. One of our favorite dive destinations is Grand Cayman. That is where this story begins.

In February of 2009 we were diving Sea Fan Reef, the house reef at Cobalt Coast Dive Resort on Grand Cayman's North Wall. It is a great shore dive with plenty of fish and lots of creatures, common and uncommon; enough to keep a photographer busy for a 2-hour shore dive. While poking around near the top of the mini-wall we noticed a brown sponge with a number of little -excruciatingly small, actually- white-footed shrimp sitting in the out pour openings. I took a few photos and later that evening we began our quest to identify these critters.

Having no luck, the next day I described them to any one who would listen. No one had ever seen or heard of them until I mentioned them to our friend Cindy (Cynthia Abgarian). She had seen and photographed them in the past but had also had no luck in

identifying them. She was very keen to know what they were. We soon moved on to other subjects and other finds and then we were back in Canada and back to work, the shrimp mostly forgotten.

In June of 2009 we were once again diving in Cayman and again we found the shrimp in the same brown sponge. The shrimp were not too shy but appeared to dislike the bright light. They were more active and more out of the outpour opening when there was cloud cover or later in the afternoon. What you cannot tell from the photo is how small these shrimp really are. They are about the size of carpenter ants. They also seem to be constantly associated with even smaller white sponge worms. More pictures were taken but still no identification was made.

Upon return to Ontario, I decided to send my shrimp photos to Les Wilk of ReefNet, publisher of the DVD Reef Fish Identification Florida, Caribbean Bahamas. Les has often identified other fish and critters for me. Les reported back that he had seen other photos of this shrimp but that he did not know the identification/classification. He forwarded the photos on to Dr. Sammy



(Above) Expedition members, Dora (left), Essi (center) and Cindy (right) enjoying a coke at Cobalt Coast Resort after a successful collection. Canon EOS Digital Rebel XSi, EF-S 18-55mm, auto exposure f/3.5-5.6 f/4.5, 1/200, ISO 100 30mm.

(Right) White-Footed Shrimp (Periclimenes harringtoni) in sponge outpour opening. Canon EOS Digital Rebel XSi, Sea Tool housing, EF-S 60mm macro lens, Inon Z-240 strobe, manual exposure f/11, 1/200, ISO 200.





Cindy took This White Foot (Periclimenes harringtoni) She managed to capture it fully out, a rare occurrence. Note the sponge worms. Olympus E-520 Olympus housing, Dual Inon Z-240 strobes, 50mm Zuiko macro lens with EC 1.4 teleconverter, manual exposure f/10,1/125, ISO100.



This photo was re-cropped to show the sponge worms associated with the shrimp. Canon EOS Digital Rebel XSi, Sea Tool housing, EF-S 60mm macro lens, Inon Z-240, manual exposure strobe f/8,1/200, ISO 100.

De Grave of the Oxford University Museum of Natural History, Oxford, U.K.

Sammy wrote back: "It is either an undescribed or non-colour recorded species of Periclimenes/Cuapetes. People have promised me specimens before, but none have materialised. Without an actual specimen I cannot really be sure which, as about 4-5 species in that genus in the Carib still have no colour documentation." This was now getting exciting, the possibility of an undescribed species and perhaps a chance to name it!

I contacted our friend and diving buddy, Dora Valdez, manager at Cobalt Coast Resort and asked her about the possibility of collecting specimens. Having previously shown Dora the white-footed

shrimp, she was very keen to help. She contacted Nancy Easterbrook, owner of Divetech dive operation at Cobalt Coast Resort with whom we have been diving for the last 9 years, to ask for her assistance in contacting the Department of the Environment (DOE) on Grand Cayman.

In short order we had a contact, Mr. Timothy Austin of the DOE. Sammy agreed to contact him and provide the necessary information and credentials to obtain a permit to collect specimens of our little white-footed shrimp.

While waiting for the permit, Dora- also an avid photographer, set out to get some more pictures of the shrimp. She enlisted Simon Dixon, friend, fellow photographer, dive instructor at Divetech

and marine biologist in her quest. They found more sites with the white-footed shrimp. In addition to Sea Fan Reef, they found them at Lighthouse Reef, Sand Hole, School House Reef, and a number of other sites with shore and boat access. The shrimp appeared to be always in the same type of sponge, likely the Touch-Me-Not Sponge.

The Permit arrived very quickly, with very specific details in regards to who was allowed to collect, how many shrimp could be collected and when and where they could be collected. And thus began our expedition. The members were Essi, Cindy, Dora, Simon and I. The permit was valid for September 1 to November 1. We were allowed 6 specimens and they had to be collected outside of marine zones. Collection took place in October.

Sammy sent us detailed instructions on collecting, handling, processing and mailing the specimens. Dora and Simon did some preliminary scouting prior to Cindy, Essi and me arriving on island. As we met to discuss our little shrimp hunt expedition, we soon realized that Sammy's directions for collecting the shrimp (shoeing them into a collection bottle) were not going to work, as the shrimp seemed to stay within the sponges' outpour openings. Cindy provided the capture means, straws from Panera Bread and a 20cc syringe.

Simon and Cindy were the collectors. Our first attempt was successful and convinced us all, but especially Simon, that the sponge was indeed the Touch-Me-Not Sponge. Simon had decided to forgo the syringe and just sucked up the shrimp through the straw, not an easy task at 25 feet of seawater. This worked well and we got a nice specimen; however, Simon ended up with quite a burning sensation in his mouth and on his lips and tongue.

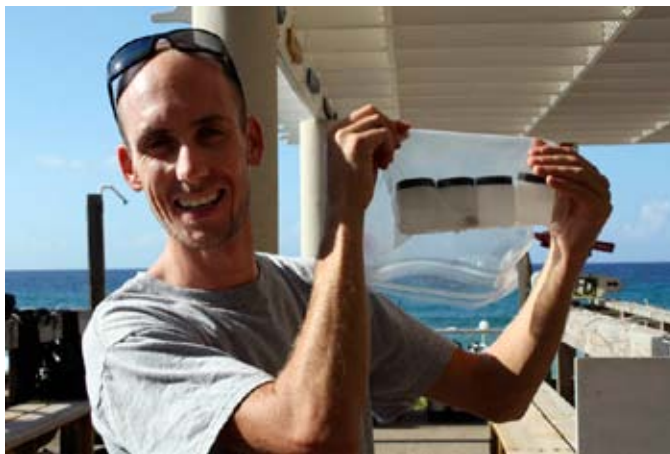
The rest of the collections were uneventful with the syringe and straw.

We processed the specimens according to instructions and Dora sent them on their way to Oxford. We talked of our success in collecting the white-footed shrimp and discussed what we might name it if it were a new specimen as we all anxiously waited for word from Sammy.

We were all back home when word arrived. Sammy wrote: “Unfortunately for me, white foot is not a new species. Sadly it is one of those species for which the colour pattern has not been documented fully. They are *Periclimenes harringtoni* Lebour 1949 (Pontoninae), still quite an exciting find though. The species is only known from two locations in the scientific literature: Bermuda (type locality, single specimen, reported by Lebour 1949) and Tortugas (4 specimens, reported by Holthuis, 1951). Interestingly it seems to have taken another 50+ years before found again (your find). As far as I know no colour photos of this beast [sic] have ever been published, Holthuis (1951) does give a short colour description, which sort of matches, but omits the white hands on the chelae. Anyway, it is that species for certain, the morphology matches the descriptions perfectly.”

“There may well be specimens in museums, which have not been reported upon, but the Smithsonian does not appear to have any.” And so our little expedition to find and identify a hopefully new species of shrimp ended, or so we thought.

It turns out that along with the white-footed shrimp we had collected a few of the sponge worms. Sammy sent these along with the photos of the worms we had taken (actually shrimp photos inadvertently showing the worms) to Leslie H.



Simon with the specimens just about ready to send. Canon EOS Digital Rebel XSi, auto exposure EF-S 18-55mm f/3.5-5.6 f/13, 1/250, ISO 200, 36mm.

Harris, Collection Manager, LACM-Allan Hancock Foundation Polychaete Collection, Natural History Museum of Los Angeles County, and Los Angeles California. She is of the opinion that the worms are an undescribed species and confirmation of this is pending. So check your photos carefully, you never know what might be lurking there that you didn't see!

All our expedition members have dived Cayman frequently. We have our favorite sites and are fans of the northwest point area, from West Bay dock to Barker's. We like to explore the shallow areas that are seldom dived and have been rewarded many times with unusual finds. A friend and sometimes dive buddy of our expedition team, Jonathan Dietz, described these areas in a recent article in UWP. As our shrimp hunt only occupied a few days of our time we spent a considerable time exploring these areas.

Two of my favorite sites are Lighthouse Reef and Sea Fan Reef. There is an abundance of critters



Dora's mantis shrimp, probably a Dark Mantis (Neogonodactylus curacaoensis). Canon EOS Digital Rebel XSi, Patima housing, Canon 100mm lens, dual Sea & Sea YS-110 strobes f/13.0, 1/125 ISO 100.



Cindy took this pretty Blue Streak nudibranch (Dondoeice occidentalis) on a night dive. Olympus E-520 Olympus housing, Dual Inon Z-240 strobes, 50mm Zuiko macro lens with EC 1.4 teleconverter, manual exposure f/10, 1/80, ISO 100.



Gaudy Clown Crab (Platypodiella spectabilis). We found 4-5 of these on a night dive at Sea Fan Reef. They were very active. Canon EOS Digital Rebel XSi, Sea Tool housing, EF-S 60mm macro lens, Inon Z-240 and Inon D-2000 strobes, manual exposure f/16, 1/200, ISO 200.

there for the photographer, macro or wide angle. Essi and I have found pipe horses, several types of pipefish, gaudy clown crabs, and scarlet cleaner shrimp along with all the other common cleaner shrimp, nudibranchs of various kinds, miniature mellos, stippled cling fish, spotted and fingerprint cyphomas, Caribbean reef spiders, neck crabs, decorator crabs, dusky and yellow head jaw fish, green

banded gobies, lancer dragonets, sail fin blennies, triple fin blennies, bumble bee shrimp, purple crowned sea goddess, striated sea hares and of course the white-footed shrimp to name but a few. The week of the shrimp hunt Cindy found a Long Horn Blenny at Lighthouse Reef, something not reported in Cayman as far as we know. Dora found a very photogenic sea horse.

All in all the “Great White-Footed Shrimp Expedition” was a great success for us.

Sammy De Grave would like to know the range of the white-footed shrimp in the Caribbean. We know we were not the first to spot or photograph it but no one has done the follow up that we did. If you have seen it and have photo documented it contact him, sammy.degrave@oum.ox.ac.uk or me, everett@dollyjebenterprises.com

Everett M. Turner Jr



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These three photos are all taken of the same wreck in the Red Sea. The left hand image was taken on slide film, which rendered the scene completely blue. The middle image is taken with a digital SLR without a filter, using manual white balance. The white balance has brought out some of the colour of the wreck, but it has also sucked all the blue out of the water behind the wreck, making it almost grey. The right hand image is taken with the same digital camera and lens, but this time using an original Magic Filter. The filter attenuates blue light meaning that the colours of the wreck are brought out and it stands out from the background water, which is recorded as an accurate blue.

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