NEW TARANTULA SPECIES NAMED FOR RUBEN BLADES

When visiting scientist Ray Gabriel first visited the Island of Bocas del Toro in western Panama, he was told that there were no tarantulas to be found. But soon he uncovered not only a species that is already known, but also a small, pink tarantula that he didn't recognize. He sent it to tarantula expert Fernando Perez-Miles at the University of Uruguay. It turned out to be a new species! They named it *Ami bladesi*. The generic name, *Ami,* is a Tupi Indian word that means "a spider that does not spin a web," and the species name, *bladesi,* is for Ruben Blades, Panamanian musician and former Minister of Tourism.

Ami bladesi male

Panama holds living secrets that make it a natural magnet for people asking questions about life. Panama's tectonic ups and downs confront living beings with new situations. When the Isthmian land bridge formed between North and South America, suddenly animals, plants and insects that had never seen each other before came into contact—killing each other, coexisting or even helping each other out.

Fish, shrimp, tubeworms, sponges and other marine relatives in the once great seaway between the continents were forever forced to dwell either in the colder Pacific in the Bay of Panama or the warm Caribbean—where they went their separate evolutionary ways, becoming sister species that can no longer mate even if you bring them back together again. As a result, Panama is one of the most biodiverse small countries in the world.

Ami bladesi female in threat posture

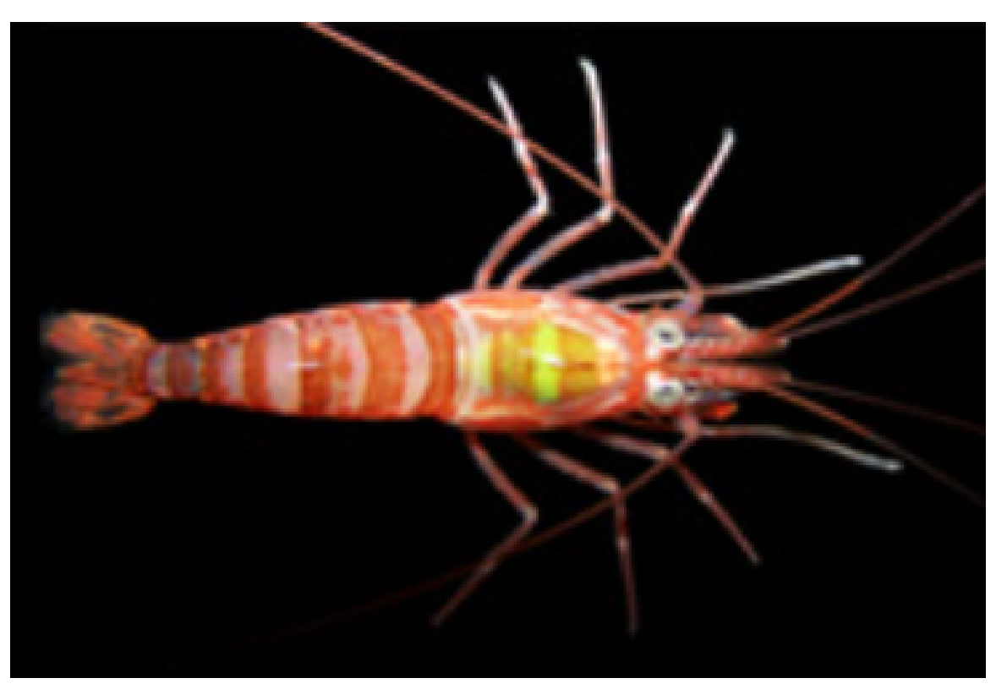
A brilliant idea

The Smithsonian Tropical Research Institute, headquartered in Panama City, inaugurated its new Bocas del Toro research station on Isla Colon in 2003. Station director Rachel Collin decided to advertise the station to her taxonomist friends. With funds from the Smithsonian Women's Committee and the U.S. National Science Foundation, the station now sponsors annual courses: the Training in Tropical Taxonomy Program, in which experts on animal and plant families that you've probably never heard of visit the station to spend several weeks with a group of students on a treasure hunt in a place where no one has looked for their favorite organisms before. Turning over rocks, they are turning up new species!

Now there are more than 6000 species in the Smithsonian's online database of species found in Bocas del Toro.

Sister shrimp and hermaphrodites

Triacanthoneus toro



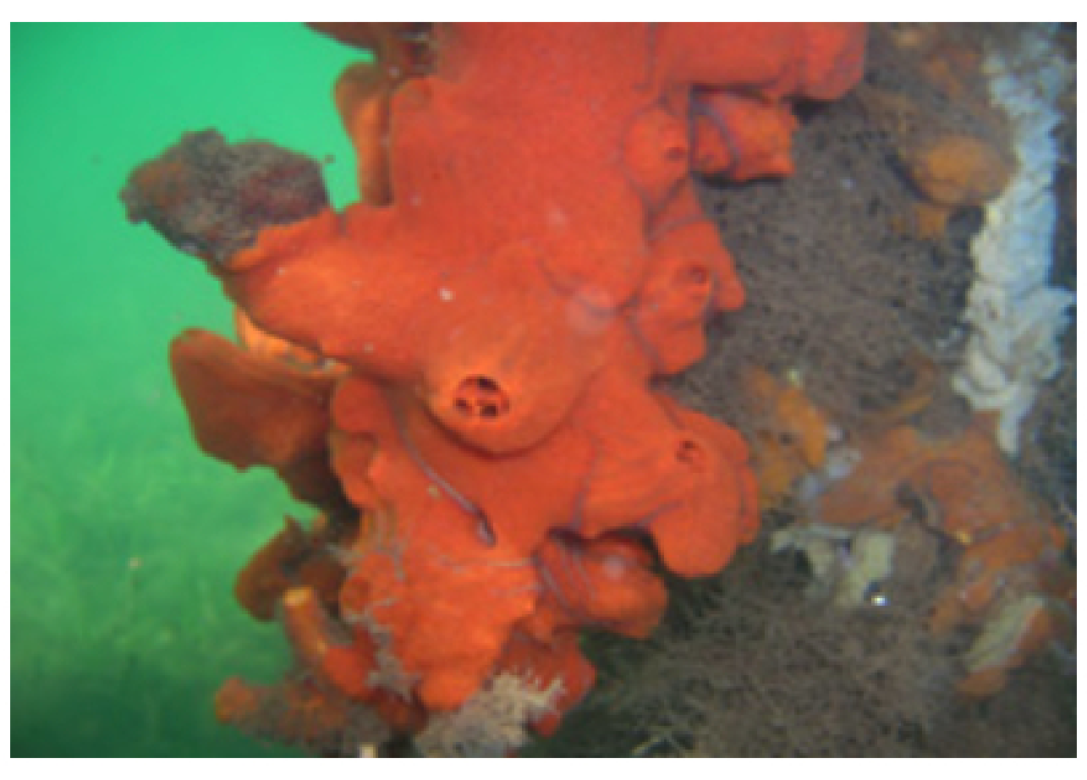
Lysmata hochi

Between 2005 and 2009, University of Florida professor Arthur Anker, and his colleagues collected shrimp that they did not recognize. They found five specimens, two in Bocas del Toro, two in the Panamanian Pacific near Playa Venado and the Colombian Pacific and one in Mexico with teeth on their outer shells. They named them *Triacanthoneus tor*, *Triacanthoneus pacificus* and *Triacanthoneus alacranes*. Triacanthus means three teeth.

They also discovered a new peppermint shrimp species, *Lysmata hoch*, which they named for the Hoch family, generous contributors to the construction of the Bocas Research Station. This shrimp species starts out its life as a male and later becomes a hermaphrodite, capable of reproducing.

A new species of fire sponge may taste bad to starfish

Working in Belize, snorkelers noticed that starfish devoured some bright orange fire sponges called *Tedania ignis*, but seemed to avoid others that were only very subtly different. In Panama the same sponge species seemed to be much more affected by a disease than *Tedania ignis*. Researchers compared DNA sequences of the two sponges and found that they were two different species. They called the new species *Tedania klausi*. The genetic differences between the two species were the same in Belize and in Panama.



Tedania ignis

What's a tunicate?

For the next several weeks, graduate students, postdoctoral researchers and experts from Panama, the U.S., Colombia and Europe will gather in Bocas, supported by the U.S. National Science Foundation and Department of Energy, to study tunicates. Tunicates are marine organisms that eat by filtering seawater through their bodies. They will study tunicate identification and molecular methods needed to ask how different tunicate species are related, how they evolved and how they interact with their environment.

Expect to hear about more new species discoveries in Bocas del Toro as new groups of curious scientists visit every year!