Unlikely Friends: Toads & Tarantulas

By Coley Turner

When most people think of spiders, the word 'friend' may be one of the last ones to come to mind. However, if you were a Western Narrow-mouthed Toad (*Gastrophryne olivacea*), it would be one of the first! These toads and spiders were first recorded to be observed cohabitating nearly 100 years ago. Since then, they have been observed exhibiting this behavior numerous times, both in the wild and in captivity.

These toads are small little fellows, around an inch long. They have an oval-shaped olive-colored body with a lighter underside. Their small, triangular heads have a fold of skin around their neck that gives the appearance of wearing a turtleneck (frogneck?). The surprisingly loud call they produce is somewhere between the bleating of a lamb and the buzz of a bee. Glands found in their skin secrete a mild toxin, not harmful to humans. And, they are found right here in the Texas Gulf Coast!

The most common tarantula for this area is the Texas Brown Tarantula (*Aphonopelma hentzi*). They are a docile species that is not aggressive. One female was recorded to live to be 40 years old, and it is possible they can live even longer. In the extremely unlikely case a human was bitten by one, it would cause no lasting harm as their venom is not dangerous to humans. This would only really happen if someone were to be handling a tarantula roughly. They would much prefer not to bite, really - when antagonized their more likely course of action would to be flick special hairs on their bodies at you that would cause mild skin irritation.

The toads and tarantulas work together to survive. The Western Narrow-mouthed Toad is perfectly adapted to eat one thing- ants. And, coincidentally, ants are actually the number one enemy of tarantulas, as they love to eat tarantula eggs. The tarantula benefits when the toads eat the ants, and the toads benefit from the delicious meal.

Then, there are the toads, who like to live in burrows, but can't dig very well due to their short and stubby legs. When they work together, the toad gets a nice place to stay, and the tarantula gets protection for her eggs. It's a win-win situation for them both!

While this relationship between a spider and a toad may seem crazy, it actually makes perfect sense. In biology, animal relationships can be categorized into three basic types of symbiosis. Symbiosis is the term for two different organisms living in close contact. The three types of symbiosis are commensalism, mutualism, and parasitism.

Commensalism is when one species is benefited by the relationship, and one is unaffected. An example of this that you can find here is the Western Cattle-egrets and, well, cattle! Those big white birds in the fields are eating the bugs that are stirred up by the grazing of the cows, and the cows don't really mind this and are not affected by it.

Parasitism is when one organism benefits and one is harmed. An example of this you hopefully haven't observed is fleas on your pets. The fleas get a warm place to stay and unlimited food, and your pet gets itchy.

Lastly, mutualism is when both species are benefitted. This is what is happening with the tarantulas and toads. By working together, these two species can mutually benefit.

A Western Narrow-mouthed Toad (*Gastrophryne olivacea*). Photo by INaturalist user reiver on May 19th, 2024 in Garland, Texas. https://www.inaturalist.org/observations/216959269

The Texas Brown Tarantula (*Aphonopelma hentzi*) and the Western-narrow mouthed Toad (*Gastrophryne olivacea*) have a mutualistic relationship. Photo by Kenneth Bader on May 12, 2013 in Austin, Texas. https://www.inaturalist.org/observations/266251

Two unlikely friends observed by Inaturalist user p_tardie on April 24, 2024 outside of Austin, Texas. https://www.inaturalist.org/observations/209144699