

Anthropologist offers view of snakes as predatory, prey, and competitor

December 13 2011, by Bob Yirka



Burmese python (*Python molurus bivittatus*) Image: Wikipedia.

(PhysOrg.com) -- Because we humans are able to write down our greatest fears, we've managed to amass quite a library of frightful things over the past several hundred years. One particular fear that seems to crop up with some regularity is ophidiophobia, the fear of snakes. Most people don't even need to see a snake to feel that bit of fear, just the mere mention of the word "snake" can cause the hair on the back of the neck to stand up and that bit of panic to gnarl in the gut. Now, anthropologists Thomas Headland and Harry Greene offer some clues as to why that may be. In their paper published in the *Proceedings of the National Academy of Sciences*, they suggest that primates, and humans in particular, may have a longer, more intricate relationship with snakes

than has been previously thought.

It all started back in 1976 with Headland, when he and his new wife picked up and moved to the Philippines to live amongst a native people called the Agta Negritos; a hunter-gatherer culture that lived in the mountainous region of the island of Luzon (largest in the Philippines and scene of an epic battle in World War II). It was while living there that Headland became fascinated by the intertwining relationship between the Agta and pythons that lived in the same area. He found that not only did the occasional [python](#) attack and sometimes kill and eat the occasional Agta, but sometimes the tables were turned and the Agta killed and ate the occasional python. Thus the people and the [snakes](#) were both predator and prey; and as if that weren't enough, they were also competitors for many of the same food sources, i.e. animals that lived in the area, such as pigs, deer and monkey's.

So intrigued was Headland by this relationship that he began to interview the Agta with the aim of separating fact from folk lore. He discovered that during the period between the late 1940's to the 1970's, twenty six percent of the men had been attacked at least once by a python (but only one woman) and that there had been six fatal attacks including one where a python slipped into a hut and killed and ate two children. Per Headland's calculations, that came to an attack every two or three years, which would seem like just enough to instill a very healthy fear in the people that lived there.

But it wasn't all one-sided, during the same time period, Headland either wasn't able, or chose to not calculate the number of pythons killed by the Agta, but makes it very clear that the numbers of the snakes killed by people were far higher than the number of people killed by snakes. And by most accounts, each time, the snakes were eaten.

Because of what he'd found in the Philippines, Headland contacted

Harry Greene at Cornell University to see if he had any evidence of other such relationships in the historical record. After searching, Greene found many accounts describing much the same thing in other cultures living in the same habitat as other large constrictors.

The two then assembled what they'd found and wrote up their paper, and in it suggest that humans and snakes have a very long and antagonistic history with most of it existing as mortal enemies. They suggest that prior to the invention of iron weapons, which gave humans the upper hand, the relationship between people and snakes could have led to the fear that humans now feel at the very sight of virtually any snake, and possibly vice versa.

More information: Hunter - gatherers and other primates as prey, predators, and competitors of snakes, *PNAS*, Published online before print December 12, 2011, [doi: 10.1073/pnas.1115116108](https://doi.org/10.1073/pnas.1115116108)

Abstract

Relationships between primates and snakes are of widespread interest from anthropological, psychological, and evolutionary perspectives, but surprisingly, little is known about the dangers that serpents have posed to people with prehistoric lifestyles and nonhuman primates. Here, we report ethnographic observations of 120 Philippine Agta Negritos when they were still preliterate hunter - gatherers, among whom 26% of adult males had survived predation attempts by reticulated pythons. Six fatal attacks occurred between 1934 and 1973. Agta ate pythons as well as deer, wild pigs, and monkeys, which are also eaten by pythons, and therefore, the two species were reciprocally prey, predators, and potential competitors. Natural history data document snake predation on tree shrews and 26 species of nonhuman primates as well as many species of primates approaching, mobbing, killing, and sometimes eating snakes. These findings, interpreted within the context of snake and primate phylogenies, corroborate the hypothesis that complex ecological

interactions have long characterized our shared evolutionary history.

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Citation: Anthropologist offers view of snakes as predatory, prey, and competitor (2011, December 13) retrieved 23 March 2023 from <https://phys.org/news/2011-12-anthropologist-view-snakes-predatory-prey.html>

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