Burmese pythons pose little risk to people in Everglades

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Credit: United States Geological Survey

The estimated tens of thousands of Burmese pythons now populating the Everglades present a low risk to people in the park, according to a new assessment by U.S. Geological Survey and National Park Service scientists.

The human risk assessment looked at five incidents that involved humans and Burmese pythons over a 10-year period in Everglades

National Park. All five incidents involved pythons striking at biologists who were conducting research in flooded wetlands.

"Visitor and staff safety is always our highest priority at Everglades National Park," said Superintendent Dan Kimball. "Everglades, as many other national parks, draws many thousands of visitors for the opportunity to view the wildlife that live here in a natural setting. Our guidance to visitors with respect to Burmese pythons is the same as for our native wildlife—please maintain a safe distance and don't harass the wildlife. With respect to controlling Burmese pythons, we are working diligently with our state, federal, tribal, and local partners to manage this invasive species and educate the public on the importance of not letting invasive species loose in the wild."

Although there have been numerous bites to people provoking Burmese pythons by attempting to capture or kill the snakes, this study examined only unprovoked strikes directed at people.

"The strikes did not appear to be defensive, but were more likely were associated with aborted feeding behavior," said USGS wildlife biologist and herpetologist Bob Reed, the lead author of the study. "Pythons usually direct defensive strikes at the front of a person, not from the side or rear, as all of these strikes were. Additionally, Burmese pythons rely on being secretive and evading detection as their primary means of avoiding interactions with people, and typically don't strike until provoked."

The biologists did not detect any of the snakes before the strikes occurred, making it even more likely that the attacks were related to feeding and not defense, Reed noted. Two of the attacks resulted in very minor injuries from the pythons' teeth and none involved constriction.

Reed and his co-author, retired Everglades National Park scientist Skip

Snow, consider the attacks as cases of mistaken identity. In four of five cases the python was small compared to the size of the person, which resulted in the snake likely aborting the attack upon realizing the large size of its prey. Aborting strikes before actual bites with the possible prey indicates that pythons may be able to assess the size of the prey mid-strike and adjust accordingly, the study said.

Although the pythons' threat to people is low, previous studies have shown that this invasive snake species is having a negative effect on many of the native mammals in the South Florida Everglades. One study suggests the population of raccoons, opossums, and bobcats have declined significantly in the regions of Everglades National Park where pythons have been established the longest.

More than one million people visit Everglades National Park every year, often traveling along hiking and canoeing trails where Burmese pythons have been spotted or captured. Despite this close interaction, the study noted that none of the reported incidents involved a park visitor. All of the incidents were directed at biologists moving through remote and flooded areas of the park

"As people wade through shallow water, they produce ripples that move ahead of them, and these pressure waves may be detectable to a motionless snake in ambush posture," said Reed. "We speculate that detecting these changes in water pressure may alert a python that an animal is approaching, perhaps priming it to strike immediately when a potential prey item is detected."

Burmese pythons became established in Florida several decades ago as a result of the international pet trade. The largest snakes removed from the Everglades have exceeded 18 feet and 150 pounds. Snakes of this size are capable of ingesting large prey like deer and alligators.

This human risk assessment concluded that although the risk of an unprovoked attack by a Burmese python in Everglades National Park is low, it is not non-existent. Available evidence from captive snakes suggests that even those strikes that result from cases of mistaken identity or defensive behavior may still result in constriction, which can prove fatal to people when a large python or a small human is involved.

The study focused only on the risk associated with Burmese pythons, but did not address other invasive constrictor species, such as the Northern African python, which is also known as the African Rock python, which are also known to be established and breeding in South Florida outside of Everglades National Park. USGS scientists continue to work with partners to better understand the impacts on invasive reptiles in the Everglades, help reduce their spread into new areas and help prevent new species from becoming established.

Provided by United States Geological Survey