

## **Collier Soil and Water Conservation District**

## Gazetteer

March 2012

## Huge medium-size mammal loss in the Everglades!

The Everglades is infested with Burmese pythons!

Wintering pythons in the U.S. sounds like science fiction now, but every day we are learning that various aspects of science fiction are quickly becoming science facts-of-life.

To keep them from spreading, the U.S. Fish & Wildlife Service is making it illegal to import Burmese pythons and a few other snakes into the U.S. or transport the snakes across state lines.

A study, published in "Proceedings of the National Academy of Sciences"-http://tinyurl.com/7pz2m2w found that sightings of medium-size mammals are down dramatically--as much as 99 percent, in some cases--in areas where pythons and other large, non-native constrictor snakes are known to be lurking.

"The effects of declining mammal populations on the overall Everglades ecosystem, which extends well beyond the national park boundaries, are likely profound," said John Wilson, a research scientist at Virginia Tech University and co-author of the study.

## Halt the Burmese Python



A commonly held sentiment is that cold winters prevent established non-native constrictors like the Burmese python in southern Florida from extending north. However, a recent report--http://tinyurl.com/6rfcu8a--from the U.S. Fish and Wildlife Service (FWS) suggests that adaptability may eventually punch a hole in this notion.



Burmese Python Suitability Range (2010) Photo credit: USGS

The FWS report studied the impacts of the January 2010 winter on the Burmese python and found that, while the severe cold temperatures caused a decline in populations, the non-native python species also exhibited signs of adaptability. The report also highlights a study that observed ten radiotracked pythons. Nine of the ten snakes died, but the study authors also observed non-radio-tracked snakes using underground burrows, deep water in canals, or similar microhabitat features of the landscape to sustain themselves.

The FWS report also references another study-http://tinyurl.com/6rnlz58-conducted by the U.S. Geological Survey (USGS) in collaboration with Florida scientists that focused on the 2010 winter. The study was quick to note that that particular winter was unusually cold and severe, leading scientists to conclude a number of factors may have been at play. The National Park Service has counted 1,825 Burmese pythons that have been caught in and around Everglades National Park since 2000.

Among the largest so far was a 156-pound, 16.4-foot one captured in January 2012.

The researchers found staggering declines in animal sightings: a drop of 99.3 percent among raccoons, 98.9 percent for opossums, 94.1 percent for white-tailed deer and 87.5 percent for bobcats. Along roads where python populations are believed to be smaller, declines were lower but still notable.

Rabbits and foxes, which were commonly spotted in 1996 and 1997, were not seen at all in the later counts.

Researchers noted slight increases in coyotes, Florida panthers, rodents and other mammals, but discounted that finding because so few were spotted overall.

Although scientists cannot definitively say the pythons are killing off the mammals, the snakes are the prime suspect.

The increase in pythons coincides with the mammals' decrease, and the decline appears to grow in magnitude with the size of the snakes' population in an area.

A single disease appears unlikely to be the cause since several species were affected.

Contact Us: Collier Soil and Water Conservation District 14700 Immokalee RD Naples FL 34120-1468 Phone: (239) 455-4100 FAX: (239) 455-2693 www.collierswcd.org "It is unclear whether python mortality was exacerbated by the duration of the cold event, the extremely cold temperatures at the end of the period, the sequence of events including a long persistent rain prior to plunging temperatures, or some combination of these factors."

It is worth noting that in the mountainous portion of their native range in Southeast Asia, Burmese pythons do experience cold winters and have been known to hibernate. It has been speculated--http://tinyurl.com/2aaru9n--that only certain northern populations of Burmese pythons are cold-adapted and that these have not yet found their way into the pet trade.

The FWS report concludes: "Given the climate flexibility exhibited by the Burmese python in its native range (as analyzed through the U.S. Geological Survey's climate-matching predictions in the United States), new generations within the leading edge of the population's nonnative range could become increasingly adaptable and able to expand to colder climates."



Burmese Python Suitability Projected Range (2100) Photo credit: USGS

While scenarios of pythons spreading as far north as South Carolina currently appears far-fetched, scientists would note that a wild animal's natural adaptability mechanisms over time should not be underestimated.

Consistently warmer winters brought on by climate change would also greatly aid in the establishment of the Burmese python and other non-native constrictors.

Are Pet Pythons Destroying the Florida Everglades Ecosystem?



In the wild, Burmese pythons eat a variety of foods, including rodents, fowl, pigs, antelope, etc.

A burgeoning population of huge pythons appears to be wiping out large numbers of raccoons, opossums, bobcats and other mammals in the Everglades, a recent study says.

When you ask, what do I

feed my snake, and the pet store attendant says: "Burmese pythons will eat fuzzy or hopper mice. They should grow quickly and the size of their food will progress equally rapidly, from mice to rats to rabbits. At some point they will be eating very large rabbits, full grown chickens or piglets. Live food may make Burmese Pythons more aggressive. Live prey may fight back and injure the snake. Pre-killed food is better and more humane for both prey and snake. Also freezing to 0-degrees Fahrenheit will kill many internal parasites that might be passed from prey to snake. Most "burms" will readily take frozen/thawed food."

Isn't that when you say, "Nah, I just don't think I'm cut out for a snake?"