

## **The Burmese Python: Invading the Everglades**

### **Introduction**

Invasive species are species of animal, plant, or microbial origin which are not native to a specific ecosystem. These invasive organisms cause or may cause ecological harm and negative economic effects. (William C 2007) According to a 1999 Cornell University study, in the United States alone, one hundred thirty-seven billion dollars per year are spent on costs of trying to control or soften the damage done by invasive species. The ecological outlook is equally grim. Second only to habitat loss, invasive species are a leading cause of species endangerment and extinction both in the United States and worldwide. Almost half of the United States' endangered species are listed as wholly or partly threatened because of introduced species. Steven A. Williams, director of the U.S. Fish and Wildlife Service, calls invasive species the number one environmental threat to the United States. (Lovgren 2004)

Main causes of the introduction and spreading of invasive species to new locations are the result of human actions – may they be intentional or not. In the Everglades, within the past two decades, many alien species have been introduced either by wildlife managers as a biological control or unwanted exotic pets by pet owners (Ake, 2006). The most successful invasive species is the Burmese Python (*Python molurus bivittatus*).

The Burmese Python is a foreign species to the United States and sold as an exotic pet throughout the country. Store bought Burmese Pythons soon become unwanted pets because of their incredible size, and were deserted in the North American wilderness

by pet owners. Abandoned Burmese Python's have become an ever growing concern for the United States because of their great adaptability, which has made them an invasive species of the Everglades.



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Picture of Burmese Python in Everglades

### **The Burmese Python**

The Burmese Python is a very large snake capable of growing to a length of twenty plus feet (6.09 meters) and weigh around two hundred pounds (90.7 kilograms) (Harrison). This python species can live up to twenty years, continually growing throughout its lifespan. The female grows faster and is much larger than the male. The incredible size of the Burmese Python is thanks to its shedding process, or Ecdysis. The outer layer of skin sheds to allow for the Burmese Python to grow. Ecdysis may occur monthly depending on the rate of growth.



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#### Average size of Burmese Pythons

The Burmese Python's natural habitat is found in Burma, Malaysia and Thailand. It lives in jungles and scrubland where all its needs are met. This snake species is carnivorous, with a diet consisting of mainly small to middle sized mammals and birds.

The snake uses its sharp serrated teeth to seize its prey. It then coils its powerful body two or more times around the prey while contracting its muscles. This contracting action can deliver up to several hundred pounds per square inch of pressure. The prey is killed by asphyxiation. Once the Burmese Python has consumed its prey it can survive several months without having to eat again (Cornett 2008).

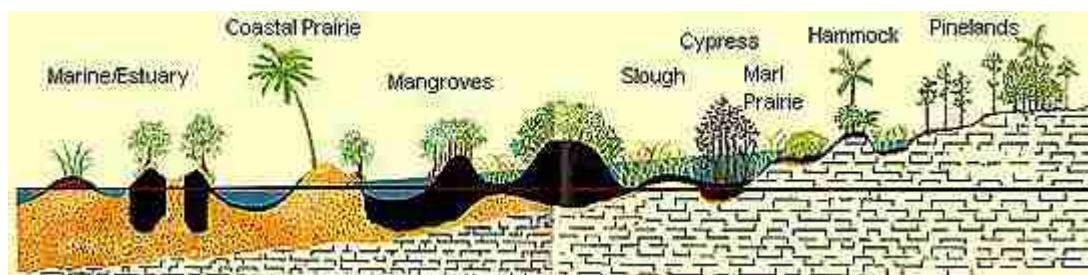
## Wildlife Ecology

Burmese Pythons reach puberty at two years of age. They are egg laying reptiles and capable of laying more than fifty eggs in a single clutch. The female coils around to incubate the eggs and remains on her clutch for sixty to eighty days – the incubation period needed to hatch a Burmese Python (Cornett 2008). The rate of growth is influenced by the conditions, under which the snake lives i.e. amount of natural prey in its habitat.

### **The Everglade Ecosystem vs. the Burmese Python's Natural Habitat**

The Everglades is one of the largest freshwater marshes on the North American continent with principle vegetation communities varying from sawgrass marshes, sloughs, tree islands, wet prairies and mangrove swamps. Tree islands are the most distinct plant communities in the Everglades consisting of over 10,000 islands.

The Everglades is positioned between temperate and tropical zones; this allows for a vast variety of plants and animals. The Everglade climate is also the ideal habitat for Burmese pythons as they are adaptable to a wide variety of habitats, such as grasslands, swamps, marshes, rocky foothills, "open" jungle, woodlands, and river valleys (Mehrtens 1987). Populations are dependent upon a permanent source of water. Burmese Pythons prey upon mammals, birds, and reptiles of appropriate size (Mehrtens 1987) (USGS Nonindigenous Aquatic Species).



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A picture diagram of Everglade niches



Picture of the Everglade Mangroves by © cesmec.fiu.edu

The Burmese Python has unintentionally been introduced into the everglades by pet owners and not only has survived, but is now reproducing and competing with the top natural predators of the Everglades. The Burmese Python's immense size has made the Florida Alligator its only main competition. As seen in the images bellow, the Burmese Pythons are eating the Florida Alligators, but the Florida Alligators are also eating the Burmese Pythons.



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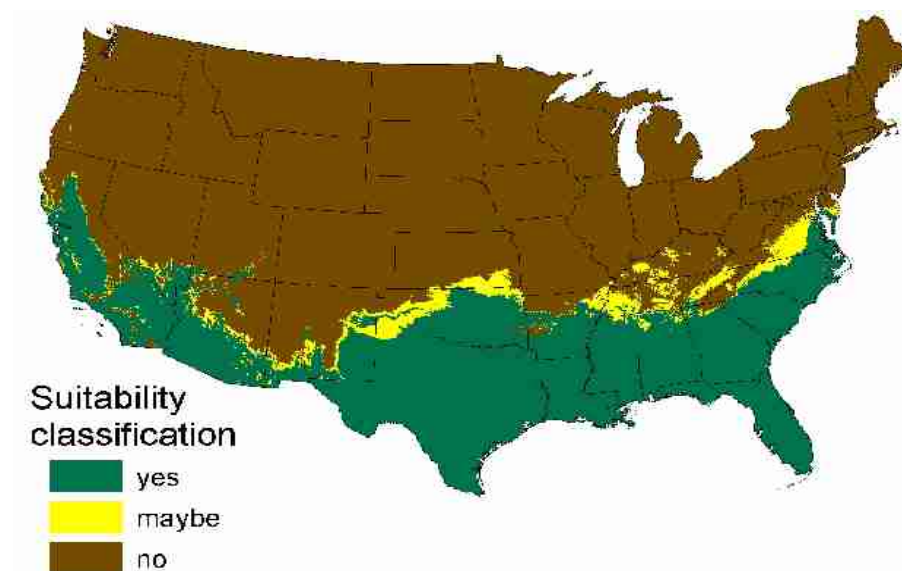
## Wildlife Ecology

Between 1995 and 2005, 212 Burmese pythons were captured and removed from the Everglades. The largest being 4.8768 meters long and weighing in at 70.76 kilograms

(Wisniewski,

2006). The number of

This image by © [redtailboa.net](http://redtailboa.net) showing potential regions in North America where the Burmese Python can survive and thrive.



captured Burmese Pythons has gradually increased within the past few years.

Burmese Pythons are the cause of a serious imbalance in the natural ecological cycle of the Everglades. It is believed that Burmese Pythons are the reason for the decreasing endangered Key Largo Woodrats population; only 200 of these wood rats are present in the wild. Other decreasing endangered species populations, such as the Lower Keys Marsh Rabbit and Cape Sable Seaside Sparrow, are believed to be affected due to the presence of the Burmese Python.



© fosbirds.org  
Key Largo Woodrat



© favourfloridakeys.com  
The Cape Sable Sparrow

## Wildlife Ecology

Various methods are being used by Everglade wildlife officials trying to control and prevent the increasing Burmese Python population. Manual traps using snake hooks and barehanded capture are the main methods used to trap these snakes, along with cage trapping. (Wisniewski 2006)



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Burmese Python caught by wildlife official

### **Conclusion**

The Burmese Python is a remarkable reptile capable of adapting and inhabiting new habitats similar to its own. Due to its ability to survive long periods of time without food and having a high fertility the Burmese Python is a serious threat to the indigenous species of the Everglades.

Continuous trapping and culling out of trapped adults, young specimens and hatchlings, the Burmese Python population continues to exponentially grow. As the number of caught specimens compared to the number of Burmese pythons dwelling in the Everglades is un-proportional. The main reason is the number of hatchlings from a single female Burmese python is far greater than the number of snakes caught annually. In ten years only 212 have been caught and recorded and each female may have a clutch of 50 eggs.

The Burmese Python has come, has seen and has conquered the Everglades as one of the top predators, and is now here to stay.

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