Disposable Pets, Unwanted Giants: Getting a Grip on Pythons in the Glades

1 November 2007 Gulf and South Attlantic Regional Panel On Aquatic Invasive Species

> Skip Snow & Lori Oberhofer Everglades National Park Homestead, Florida

What are Burmese pythons?

Natural range of *Python molurus*

<u>2 subspecies:</u> P. molurus molurus P. m. bivittatus



What are Burmese pythons?

Thought to be able to reach over 20' Max documented mass 91 Kg (~200 lbs) Max documented length 5.9 m (~19')

Mating is Feb - March, Eggs laying May – June

Eggs hatch July – Aug after about 60 + days

Fast growth, 75 mm/mo 1st yr, and 40 mm/mo thru maturity

Trophic generalist eating wide taxonomic and size range of vertebrate prey... Generally up to 80% of snake's mass



Reptile Extravaganza











Pythons Removed



17 May 2006 Everglades National Park



Python Non-native Range



Image © 2007 TerraMetrics Pointer 25°55'20.21" N 81°57'02.16" W elev 0 ft Streaming |||||||| 100%

Eye alt 278.85 mi





Do they present a problem for the Park?

Prey on species of special concern (e.g. endangered Key Largo woodrat)

Competition with native animals for prey

Competition with native animals (e.g. federally threatened eastern indigo snake) for critical and limited microhabitat features (burrows, cavities, solution holes, tip ups, dry ground)

Spread diseases, such as IBD, to natives

iluman (visitor) salety

Python Eats Endangered Woodrat



* preliminary results * rabbit (Sylvilagus sp.) (8) rodent (Sigmodon sp.) (7) squirrel (Sciurus sp.) (5) rodent (Peromyscus sp.) (3) raccoon (Procyon lotor) (3) opossum (Didelphis virginiana) (3) rodent (Rattus sp.) (2) rodent (Oryzomys sp.) (1) muskrat (Neofiber sp.) (1) cat (kitten) (Felis ? sp.) (1) pied- billed grebe (Podilymbus podiceps) (2) limpkin (Aramus guarauna) (1) house wren (Troglodytes aedon) (1) white ibis (Eudocimus albus) (1) unknown rodent (1) unknown mammal (1) unknown bird (7) unknown item (2) no food item present (4)

Prey items found inside pythons



samples examined to date = 54 number of pythons = 53



Exotic Tick on an Exotic Snake



Snakes Wearing a Wire Implanting radio tags



Radio Telemetry Feasibility Project

Four radio tagged pythons released in December 2005 within Everglades National Park have led us to 12 untagged pythons; all twelve were captured and removed.

Snakes Under a Plane



Trap Prototypes





ANIMAL RELEASE PROHIBITED SE PROHIBE SOLTAR ANIMALES

PLEASE REPORT UNLAWFUL ANIMAL RELEASES



FLORIDA FISH & WILDLIFE 888-404-3922 WILDLIFE ALERT REWARD PROGRAM



EVERGLADES NATIONAL PARK 305-242-7740



*FWC OR #FWC

WHERE WILL YOU KEEP YOURS WHEN IT GETSTHIS BIG ? PLEASE DO YOUR HOMEWORK BEFORE YOU BUY!

UP FRONT | ENVIRONMENT IT'S ALIEN VERSUS PREDATOR IN GLADES CREATURE CLASH

service and an entities of the service of the servi

A giant exotic snake's fatal mistake of trying to swallow an alligator has provided scientists with strange new evidence that pythons are continuing to spread in the Everglades.

BY CURTIS MORGAN

A meeting between two of the largest and fiercest predators in the Everglades - a Burmese python and an American alligator -ended in a scene as rare as it was bizarre.

both wound up dead, locked so grue- prey, have not only invaded the Eversomely it is hard to make heads, tails or any other body part of either creature. *TURN TO EVERGLADES, 13A

When the carcasses were found last week in an isolated marsh in Everglades National Park, the gator's tail and hind legs protruded from the ruptured gut of a python - which had swallowed it whole.

As an added touch of the macabre, the snake's head was missing.

For scientists, exactly how the clash occurred is a compelling curiosity. More importantly, the latest and most extraordinary encounter provides disturbing evidence that giant exotic snakes, which can top 20 feet in length The 13-foot-snake and six-foot gator and kill by squeezing the life out of



PECHAIL BARNON/EVERSLADES NATIONAL PAGE WILD DEATH: The carcass of an alligator protrudes out to the right from the curved body of a Burmese python in the Everglades.



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To report a python in Everglades National Park call the Python Hotline at (305) 242-7827 or (305) 815-2080.

Burmese Pythons





How can they survive here?

- Generalist in terms of diet, habitat use, and behavior
- Lives in some very temperate climates in South Asia
- Lays relatively large clutches of eggs (8 to 107)
- Long lived, 30 years or more
- Able to survive long periods without eating
- Invasive elsewhere
- Hundreds of animals in the pipeline









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Sit back. Relax. Enjoy the fright. SAMUEL L. JACKSON



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(And the next sequel...?)

Pythons in a Park! (gator vs python in ENP July 2005 - animated)



How did they get here?

Bred by the hundreds

Hatchlings sold for as little as \$20

A 20" baby can be a 6 foot juvenile in 1 year

Difficult to give away (let alone sell) a 6 –12 foot python

Increasingly being abandoned at vets and animal shelters, or simply turned loose.

Do you really want a snake that may grow more than 20 feet long, weigh 200 pounds, urinate and defecate like a horse, live more than 30 years, and for whom you will have to provide mice, rats, and eventually rabbits?

Aerial view of the L-67 Extension canal (Perfect python habitat)





"Berms for Burms!"









"Hole-in-the-Donut" spoil mounds

an address of the state of the state



Python Sighting Within Great Egret Nesting Colony

Nesting Great Egrets

A large python was observed at this alligator hole.











Pythons on a Meal Plan

(How much wood would a woodchuck chuck if a woodchuck were a python?)



"Python Pete"









Florida's introduced herps

Total No. Exotic Herp Species



Introduced via cargo, except for Texas horned lizard (*Phrynosoma cornutum*)

Nearly all introduced via pet trade

Source: K. Krysko and K. Enge



Is it time for a "Living With Pythons" brochure?



When it comes to personal safety, always be aware of your surroundings. Florida envinces are most action at note: Exception and the Exception and the environment of that of friends and family.

- When it comes to personal safety, always be aware or your surroundings. For manthers are most active at night. Exercise more caution at dawn, dusk and Be Alert From Dusk 'Til Dawn during the night.
- Landscape for Sarety Remove vegetation that provides cover for panthers, Remove plan Nemove vegetation that provides cover for panthers. Kemove plan wildlife (especially deer). By attracting them, you naturally attract the container Landscape For Safety
- the panther.

Neep Pantner Proy Away Deer, raccoons and wild hogs are prey for the Rorida panther, B user, raccoons and who hogs are pay or use runnad pamines. B other wildlife, you may inadvertently attract pamhers. Wildlife fo Keep Panther Prey Away ourer www.e. you may waavertemuy atuact panuters, wrizime to unsecured garbage, pet foods and vegetable gardens also may

Roaming pets are easy prey for predators including panthers. Keep Pets Safe And Secure recommune pers are easy prey for prevalues uncurrent periodic service then bring them inside or keep them in a confortable, service uen omme menn manze or recep unen m a commerative, secure nel. Feeding pets outside also may attract raccoons and othe

Keep Livestock Secure Where practical, keep chickens, goats, hogs or other livesto Keep Livestock Secure

or barns at night.

Supervise Children Keep children close to you, especially outdoors between d Supervise Children Recep University outside to you, especially outsides between u Educate them about panthers and other wildlife they mig

Nover Approach A Faither Most panthers want to avoid humans. Give a panther the Never Approach A Panther

steer clear of you.

NIKE WITH A FILEND Always hike, backpack and camp when in wild areas wi Hike With A Friend Florida Fish and Wildlife Conservation Comm a Fish and wildline conservation comm United States Fish and Wildlife Service National Park Service 1.888-404-3922 🏶 MyFWC.com/pari



LIVING With ALLIGATORS

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

Visit HyPWC.com/gat ore information about ellisators Northwest Region, Panama City (860) 265-3676

North Central Region, Lake City (386) 758-0625

In Florids, increasing numbers of people living and rescrating near water have led to a steady rise in the number of alligator-related complaints. Although the majority of these complaints relate

to alligators occurring in locations where they simply aren't wanted, a small number tragically

simply aren't wanted, a small number tragically involve attacks on humans. The FWC removes more than 7,000 minasce alligators per year. Through removal of these alligators and increased public awareness, the rate of alligator attacks has

mained constant despite the increased potential alligntor-human interaction.

nor angener-minan inperation. Alligeners are an important part of Florids's baritage and play an important rela in the scalagy of our statist's wallands. A better understanding of these fasts and a broader knowledge of alligator

nators can continue to coexist. Call 1-866-FWC-GATOR (1-868-302-4286) to report

behavior will help common that humans and

alliga

Northeast Region, Ocale (362) 732-1226

west Region, Lakel (863) 648-3203

sth Region, West Palm Beac 661) 625-61.22

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Living With Florida's Black Bear

WHAT IS "BE BEAR AWARE": The new "Be Bear Aware" program leaches ways to avoid unwanted or The new be been Aware program teaches ways to avoid unwanted or unsafe encounters with bears. By learning how to Be Bear Aware, and unsate encounters with bears. By learning now to be bear aware, and teaching others what you've learned, you can help bears from becoming mayou vo earried, you can new beens non beens me, in your neighborhood or at your campsite.



ANCE" BEAR:

THE BEAK: What has lost is natural fear of people. Nuisance bears get into all kinds of junar nas nos as naturartear or people. runsance pears get mo at kan as o gene can s and eating pet food to occasionally killing liveslock and causing

tetle Conservation Commission (FWC) reports that the annual number of annex from one in 1978 to over 1,000 in 2000. Records have been that years and are expected to continue to increase. There have been to action to be the standard state and the state been to be the state of the state of the state been to be the state of the ix years and are expected to continue to increase. I nere have b buildings, bears attacking livestock and pets and other serious

have been documented in Florida, but as the state's human population There uses uscumence in norma, but as the state shuman population mach upon the remaining bear habitat, and as bear populations expand, and to grow in number and possibly intensity.

- sponsibility for keeping our wildlife wild. Conflicts between humans sponsibility for keeping our widane wid. Connects between humans ded by people. The prevention of nuisance bears relies on actions a by people, the prevention of husance bears relies on actions sear country. To control the situation, it is necessary to take personal lear county, το control are statement, it is received at so take is , and prevent the loss of property and possible human death.
- rmony with bears. The bear's presence (in nature) indicates the microry win users, the bear's presence (in million microry microsities use Natural areas that support bears are home for many other animal
- natural areas that support bears are nome for many other animal bears from becoming nuisance animals also prevent other species Deals inter becoming indicates animate and provent once operations § raccoons, skunks, fox, opossums, mice and rats), and theraby
- з raccoons, sкижа, rux, opossums, mice and rats), and mercuy fre to diseases (e.g. rables) and damage to crops and property.

armon mistakes that homeowners, campers and hikers innocently non matakes that noneconnecs, campers and liners another either by accident or on purpose is the number one source of

Care, Don't Feed The Bears

onservation Commission • Wildlife Foundation of Florida

Snake Under A Fence (Radio-jagged python ate pet goose)

Needs and Opportunities

- Expand HabitattitudeTM (or other preventative campaigns such as NRIP, etc., and rigorous implementation)
- Predictive Risk Assessments (provide the USFWS and State Fish and Game Agencies the info they need to implement (BPMs) Best Preventative Measures - what to worry about where)
- Early Detection/Rapid Response (FWC, CISMA, some kind of unified statewide approach and substantial funds?)
- Eradication and control R&D (tools and techniques, traps and lures)