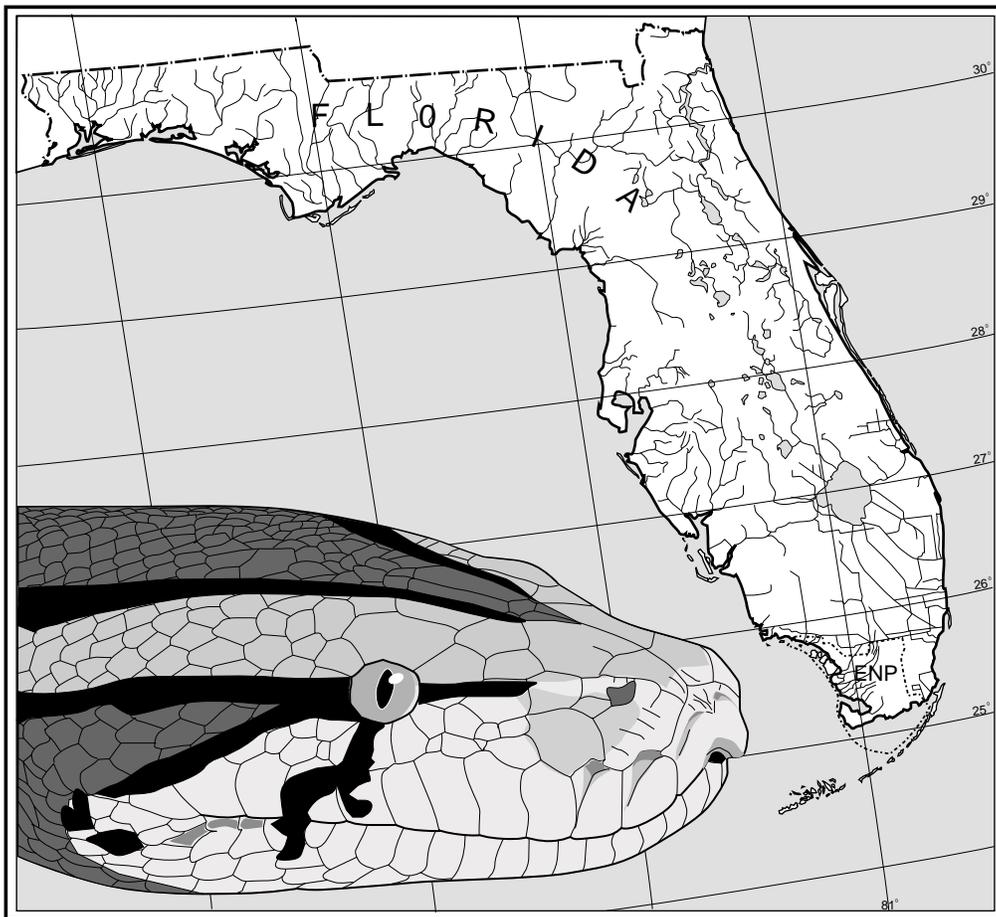


On Burmese Pythons in the Everglades

Questions Posed and Answered on the Issues of Pythons
in South Florida and in Captivity

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Summary

There is no doubt and no denying that a population of the Burmese python, *Python molurus bivittatus*, is now established and thriving in Everglades National Park and in adjacent areas of South Florida. The new presence of such a large snake species in the continental United States has precipitated proposed legislation that threatens to attack and very negatively affect the rights of all Americans to own, study, maintain, and breed pythons.

The issue at stake is Senate Bill 373, a proposal by Florida Senator Bill Nelson to place pythons on the Injurious Wildlife List of the Lacey Act. There may be more than a million pythons in captivity in the USA—no provision is made as to their disposal should this bill be passed. Passage would surely cause bankruptcies and foreclosures for thousands of American citizens at a time of the worst American economy in decades. This proposal is anti-science, anti-education and anti-conservation. It is poorly and ambiguously written. It amounts to a sweeping confiscation of the property rights of 500,000 or more Americans.

We traveled to South Florida so that we personally could speak with folks who have seen and collected pythons, and in the hope that we might come to a better understanding of the issue of the presence of this addition to the list of herpetofauna of Florida. We make the following observations.

Burmese pythons are now established and, by all reports, flourishing in South Florida. It is unlikely that the species will be eradicated from Florida. It is equally unlikely that the species will migrate or expand its range in Florida beyond the historical Everglades region. The presence of Burmese pythons in South Florida should be regarded a state issue, not a national issue.

At this time the Burmese python is correctly identified as an “established exotic species,” but not an “invasive” species. Burmese pythons have not demonstrated any potential to pose increased risk to human health, agriculture, or the ecosystem of South Florida.

Florida has two native giant carnivorous reptile predators, the American crocodile and the American alligator. Both will prey on Burmese pythons when given the chance. They are the apex predators of South Florida, not Burmese pythons. In South Florida, Burmese pythons have predators at every size class.

Despite claims to the contrary, there is no evidence that the source of the founding stock of Burmese pythons in South Florida was released pets. No person has ever been witnessed, charged or convicted of releasing a python in South Florida. The founders of the Everglades python population were most likely imported hatchling pythons—not deliberately released, large, captive-raised adults. We discuss various possible scenarios and propose that hurricane damage to pet industry animal distributors is the most likely source.

Career biologists employed by the United States Geological Survey (USGS) have published a paper and map claiming that Burmese pythons can survive in the southern third of the continental USA. This paper is flawed and its conclusions are incorrect.

Likewise, the recently announced plan to overwinter Burmese pythons in outside unprotected enclosures in South Carolina is the antithesis of science. It adds to the sensationalism begun by USGS biologists; this is a misappropriation of funds better spent in South Florida actually addressing the issue at hand. In our opinion, research contracts should be canceled.

The government entity best suited to manage the project to control Burmese pythons in South Florida is the United States Department of Agriculture (USDA) Wildlife Services. It is an agency with the most experience in this type of project, an excellent record of results, and it is the only government agency with federal authority for this type of project. Wildlife Services has demonstrated a practical results-based approach to resolve the projects with which it has been charged. If anyone is going to receive funding, these are the biologists for this project.

If further introductions of exotic tropical species of plants and animals are to cease, then we propose that the Port of Miami be closed to international shipments of plants and animals, and a northern port then be designated as the port-of-entry for tropical exotic species.

What is so special about the Everglades and South Florida?

Everglades National Park (ENP) is a huge place. The park itself is more than 1.5 million acres, larger than the state of Delaware. Most of the park is accessible only by



photo by Bill Love

helicopter or airboat. It's not only a national park, but also is recognized as an International Biosphere Reserve, a World Heritage Site, and a Ramsar Wetland of International Importance.

The climate of South Florida is semi-tropical, hot and muggy in the summer, dry and pleasant in the winter. All of South Florida, from the Big Cypress Swamp at the northwest, north to and including Lake Okeechobee in the center, and the Atlantic Ridge on which the Miami metropolitan area sits, is recognized as the Everglades ecoregion or sometimes as the "historic Everglades," an area of about 3 million acres.

Water defines the Everglades. Water flows through the Everglades, draining the rains of Central Florida as a slow continuous shallow sheet of water that flows southward to empty into Florida Bay. Over the past century, the water has been routed and re-routed by 1400 miles of canals and levees, most constructed with the aim of draining wetlands for development and providing water for agriculture.

To drive through the classic Everglades "river of grass" is to view a big sky over a flat plain of grass and sedge. South Florida is just a few feet above sea level, the very bottom of the peninsula of Florida, surrounded on three sides by the salt water of the Atlantic Ocean, Florida Bay, and the Gulf of Mexico. The Everglades barely emerge, mostly four or five feet higher than sea level. Across the plains, the grasses grow in water that rises and falls with a wet and dry season, sometimes a foot or 18 inches in depth, sometimes only thick mud. Out across the grassy flats are scattered low hummocks, most with a stand of scrub and low trees.

The ENP is the most polluted and the most disturbed ecosystem of any national park or preserve in the United States. In the 1950s and 1960s, some areas of the Everglades were sprayed with four times the concentration of Agent Orange as was sprayed in Vietnam. Between the ENP and Lake Okeechobee is a vast area of 700,000 acres of sugarcane; the waters draining this area carry the pesticides and fertilizers from that industry. Much of the runoff from the lawns and golf courses of Miami and the agricultural fields of Homestead and Florida City flows through the ENP. The World Wide Fund for Nature estimates that only 2% of pristine Everglade ecosystem remains.

South Florida, including the ENP, is home to more exotic species of plants and animals than any other region of the United States. Indeed, there is probably no similar-sized area of the world with more alien species so well established. Several thousand plant and animal species recorded in ENP are nonnative species.

Most of the exotic species are plants escaped from the yards and fields of surrounding South Florida. The waters teem with exotic fish, plants, algae, and mollusks; some fish are escaped tropical fish from the aquarium trade and some purposely introduced by government biologists for sport fishing. Most of the lizard species in South Florida

are exotic species. There are 10 taxa of introduced anole lizards; green iguanas and spiny-tailed iguanas are the most commonly observed large reptiles in Miami. South American caiman are found out in the swamps. Monk parakeets are seen along the roads. Nile monitor lizards and giant veiled chameleons are found in the northwestern corner of the region. Feral hogs and house cats are common, widespread, and recognized as the most detrimental predators of native wildlife. There are even several established colonies of wild monkeys.

Despite the extraordinary changes and challenges brought by the twenty-first century, the impression one gains when experiencing the ENP and South Florida is that the place is wonderful. The productivity of the land is extraordinary. Driving down any road, there are constant scenes of ibis, herons, egrets, various waterfowl, fish crows, kites and ospreys. The place is vibrant, verdant, bursting at the seams with life. Outside the park there are more palm tree species and varieties of fruit trees than can be identified. There are vast fields of potatoes, tomatoes, onions, green beans and squash, and fallow fields overgrown with scrub and grasses. There are groves of all manner of citrus, nurseries full of ornamental plants, stands of cypress, live oaks and sabal palms.

The Everglades of today is like America itself—a blending of species from around the world, an ecosystem changing and adapting to new influences that have arrived with the growing flood of people that now inhabit all of South Florida. The people are barred from living in the ENP, but the plants and animals that have arrived with them know no such boundaries.

Despite the addition of so many exotic species in ENP, the ecosystem has proven to be resilient and remains functioning and productive. Its biodiversity is greater today than at any time since the settlement of Florida. Yes, it has to be monitored and sometimes managed. However, the fears and predictions of environmentalists that any ecosystem so riddled at all trophic levels with exotic species could not function have not proven to be true. Most of the ecosystems of the entire planet include a significant percentage of introduced species as a consequence of the actions of humans. The simple fact is that most exotic and "alien" species, both plants and animals, don't derail ecosystems and they may make positive contributions.

The Everglades of yesterday, the Everglades of 200 years ago, is gone. The purity of the old historic Everglades has not been experienced by any living human. Still, a return to that ecosystem is held as the ultimate goal by many conservationists and restorationists of the "Glades." They fail to accept and acknowledge that the remembered ecosystem itself was but one vignette in a changing landscape. The Everglades and all of South Florida have changed, have always changed, and will continue to change. But they will never change back.



Photo by Bill Love

Burmese pythons are most often seen crossing roads at night.

When did the Burmese python colonize South Florida?

The first published report of a Burmese python in South Florida is of an individual found in 1979 along the Tamiami Trail, just outside the ENP at the northern boundary. In the following 21 years, another 11 Burmese pythons were recorded. Then, in 2002, 27 pythons were reported. Since then the numbers of reported and captured Burmese pythons have increased each year. According to an interview in *The New Yorker* (April 20, 2009) with National Park Service biologist Skip Snow, more than 900 pythons have been recorded in the ENP and surrounding areas.

Estimates of the total numbers of wild Burmese pythons living in South Florida are varying and premature, but there is no doubt that the species is present in large numbers, widespread throughout the area, successfully breeding, and there to stay. Most authorities believe that the range of the Burmese python in North America will be restricted to the Everglades ecoregion.

What is a Burmese Python?

An adult Burmese python is a big snake. South Florida is famous for big snakes. The biggest native snakes are eastern diamondback rattlesnakes and indigos; both are big species known to exceed eight feet in length. In comparison, average adult Burmese pythons are 9 to 12 feet in length. A 12-foot captive Burmese python weighs about

85 to 100 pounds; a wild python of similar length would weigh less, in most cases about 50 to 70 pounds.

The maximum size for the species exceeds 17 feet. There are various historical reports of lengths for the species that range from 18 to 30 feet, but there are no accepted or verifiable records that exceed 20 feet. There have been tens of thousands of Burmese pythons raised in captivity since 1970. Most never exceeded 12 feet in length; we are aware of only one that may have exceeded 18 feet in length.

In captivity few snakes attain anywhere near maximum size; most examples of large older adult males are 11 feet long and females 12–13 feet long. Just as in humans, where maximum height for the species surpasses eight feet but most humans are less than six feet, most Burmese pythons can be expected to attain a size that is about two-thirds of the maximum.

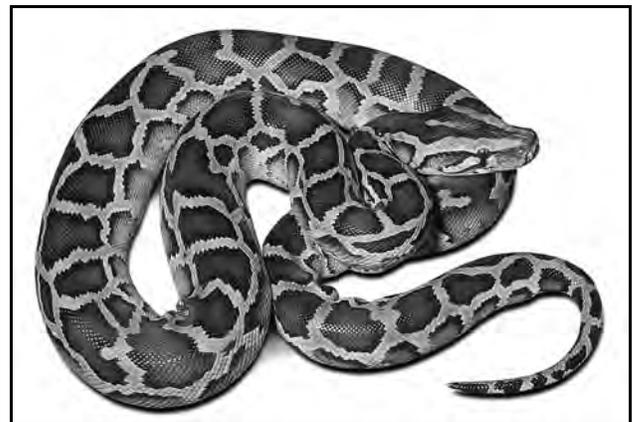
As an aside, we mention that the maximum length of the American alligator exceeds 17 feet and maximum weight approaches a ton. Alligators are much larger than Burmese pythons. Of course, most alligators are nowhere near the maximum size, but even the average adult gator is bigger and heavier than the biggest pythons.

The weight of a huge female python in captivity can exceed 200 pounds. There are a few reports of captive Burmese pythons that exceeded 300 pounds in weight, but that is roughly equivalent to the 800-pound humans you see pictured on the front of grocery store tabloids. Wild snakes would be leaner and lighter than captive specimens; weights of about 120–150 pounds seem likely for the biggest specimens.

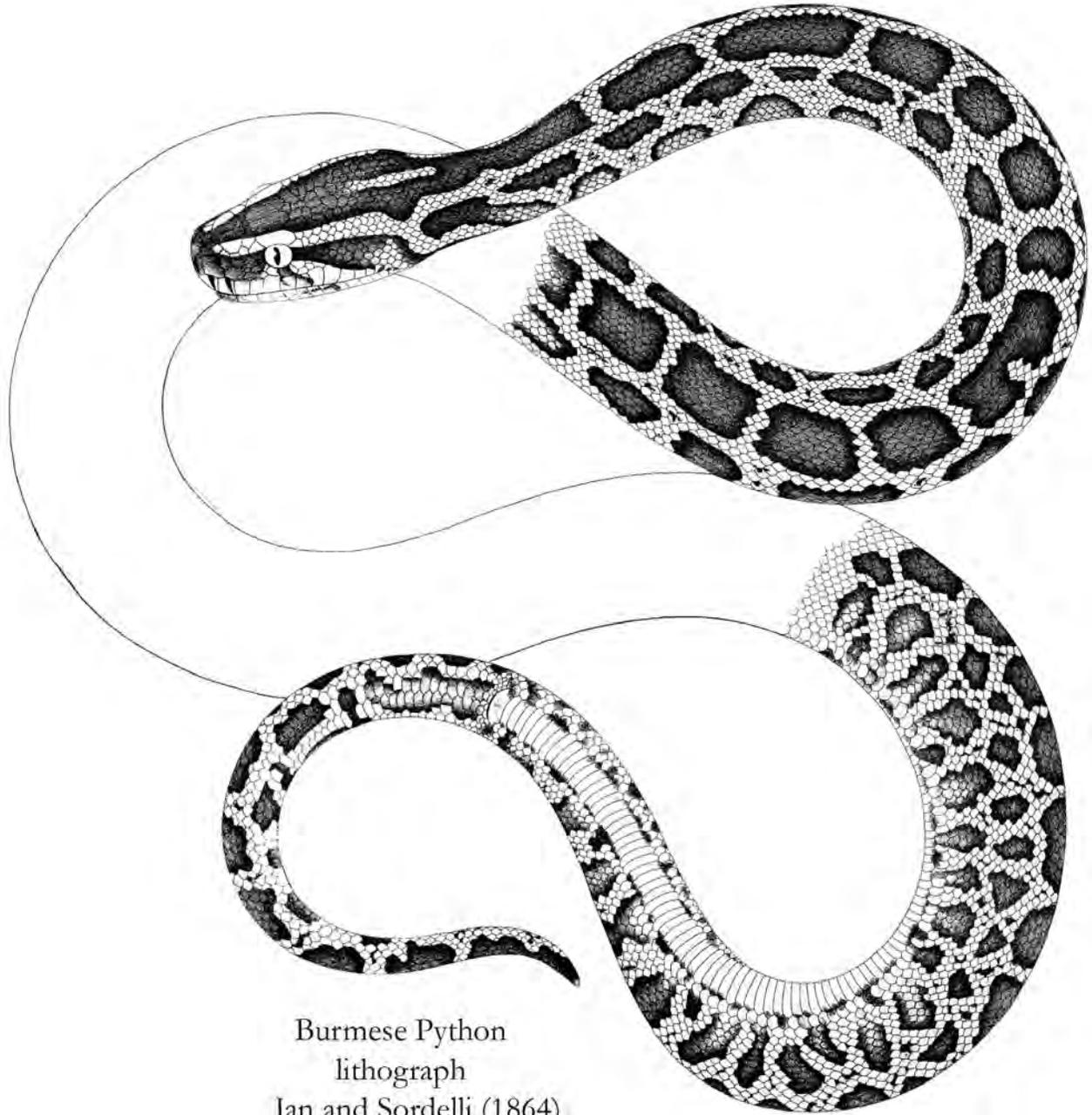
We are not aware of any studies published on the diet of Burmese pythons in their native lands. Burmese pythons in South Florida are recorded to have eaten a variety of vertebrate prey—birds, mammals, and even an alligator or two.

Most alligator–python interactions observed in the Everglades have been the alligator eating the python.

Burmese pythons are not venomous and not aggressive snakes. Pythons encountered in nature can be expected to



Juvenile Burmese python, *Python molurus bivittatus*.



defend themselves with hissing, defecation, striking, and biting. This is true for essentially all wild snakes, no matter their size.

Burmese pythons are considered a common species throughout much of their native range in southeastern China, Southeast Asia, and Indonesia; for centuries the species has coexisted in peaceful close proximity with humans throughout its range. In the thousands of years of written history in that region, we are not aware of a record of a Burmese python eating a human.

Is the Everglades suitable habitat for Burmese pythons?

The ENP may be better habitat for Burmese pythons than exists anywhere in their native range. It seems an

irony that the dominant invasive plant growing on the dikes and berms that crisscross the Everglades is called Burma reed. It's a tall cane that forms thickets, and it's a part of the native habitat of Burmese pythons back in Southeast Asia. When Burmese pythons arrived in ENP, they found it welcoming.

In ENP there are more than a million acres of protected suitable habitat, mostly inaccessible to humans, with essentially only one short road with low traffic cutting diagonally from the east side southwest to Flamingo. The ENP is the only place where Burmese pythons don't compete with humans for food.

We predict that—protected from hunting, traffic, and farm equipment—Burmese pythons will grow to large

proportions in the Everglades. Every now and then, an immense python will be discovered in the park. These large pythons will receive a lot of media attention, at least until the public tires of the story. They will be touted as monsters that the public should fear by the National Park Service (NPS) employees and USGS invasive-snake biologists who will be wrestling them in front of cameras.

These big adult Burmese pythons are not going to leave the park and crawl to Miami, although a number of governmental “authorities” have implied that. These big snakes don’t move far. They have obviously found a good place to live, evidenced by their size, and they are staying there. The large established snakes breed, and it is their babies that travel to find their own niche in the world.

The paradox is that nowhere else in Florida is a good place to be a python. The further away from ENP that Burmese pythons spread, the smaller they will be. There are strong selective pressures against being a big snake. For one thing, it takes longer to cross a road. Bigger snakes have fewer places to hide. Traffic, mechanized agriculture, poor habitat, cooler temperatures, increased exposure to humans, all will serve to select for small size once the pythons leave the ENP. We predict that the average size of Burmese pythons outside the park will be dramatically smaller. Most adults will be only six to ten feet in length, similar in size to the larger native Florida snake species.

Who is responsible for Senate Bill 373 (S. 373) to ban the importation and possession of pythons?

The establishment of a population of Burmese pythons in South Florida has provided an opportunity for several entities to advance their agendas—they will benefit if pythons can be made to appear as a serious problem. Of course, it’s most effective if they can make certain that the public knows it is a really terrible problem.

Senator Bill Nelson, a Democratic legislator from Florida is responsible for S. 373, a proposal to ban pythons by placing them on the Injurious Species List of the Lacey Act. If Senator Nelson can convince the United States Congress that pythons are a **SERIOUS PROBLEM**, he stands to make money for his state and provide support for Everglades National Park. Money will flow into his state to study the Burmese pythons that now are solidly established in South Florida.

A second entity is a group of USGS invasion biologists who specialize in snakes. A significant percentage of their income is federal funding. The invasive-snake biologists figure that when the money comes rolling in to study the python problem, they are going to be the recipients. They apparently want to make their careers as the python fighters of Florida.

Another entity consists of non-government environmental organizations. The Defenders of Wildlife, Nature Conservancy, and Humane Society of the United States (HSUS) all have expressed support for S. 373. Removing

exotic animals from captivity is a goal of each of these organizations. Every year and every legislative session, these and other similar organizations work with sympathetic legislators to remove animals from the American public. Senate Bill 373 strongly resembles typical animal-rights regulation proposals.

Why did Senator Bill Nelson create S. 373, a proposal that will place pythons on the Injurious Wildlife List of the Lacey Act?

Senator Nelson undoubtedly wants to bring attention to what he sees or what he has been told is the “plight” of the Everglades.

Senator Nelson has worked to convince people that those pythons living quietly down at the southern tip of his state will be spreading across the nation. If pythons could be framed as a national problem, then maybe federal funds will be made available to study the problem. S. 373 is a proposed federal law that would ban pythons inside this nation, and if passed would be some confirmation that pythons must be of national importance.

Senator Nelson claimed in a television interview that he was going to warn the senators from other states that Florida pythons were going to spread all the way west to California and north to Washington, D.C. He was apparently unaware that the paper and the map he referenced had already been completely discredited. Most authorities believe that the eventual range of the pythons will be the Everglades ecoregion.

In our opinion, Senator Nelson has been misinformed—the researchers to whom he has turned for information have little knowledge of or experience with pythons. We argue that these biologists have a conflict of interest and lack of objectivity as they will benefit if they can maximize the magnitude of any problems that Burmese pythons might present, real or hypothetical.

Senator Nelson’s proposed S. 373 is an inappropriate national solution for what amounts to a local state problem. The proposed law is, in its essence, an animal-rights regulation that confiscates the rights of lawful Americans to own animals.

Will passing S. 373 have any effect on the pythons in South Florida?

Of course not! Burmese pythons are in the Everglades to stay. They are now a permanent member of the herpetofauna of Florida.

What is the result if S. 373 is passed?

S. 373 is poorly written and ambiguous; the species it includes cannot be identified with certainty. As written, the bill confuses and misuses several taxonomic ranks. It could be interpreted to include all pythons, a group comprising 9 genera and 52 species and subspecies. It might be interpreted to apply only to pythons that are classified

in the genus *Python*. It might be that the Senator's aim was to specify only the Burmese python, in keeping with a petition sent to the U.S. Fish and Wildlife Service (USFWS) by the South Florida Water Management District (SFWMD) in 2007 to initiate the procedure to place that taxon on the Injurious Wildlife List.

If the bill is interpreted to include pythons in the genus *Python*, then that would include the following taxa: ball pythons (*P. regius*); blood pythons (*P. brongersmai*); Borneo pythons (*P. breitensteini*); Sumatran pythons (*P. curtus*); southwestern desert pythons (*P. anchietae*); Asian rock pythons, (*P. molurus*); African pythons (*P. sebae*); southern African pythons (*P. natalensis*).

The first five species of pythons listed above are small to medium-sized snakes that are found in hundreds of thousands of American homes throughout the country—common captives and absolutely harmless to humans. The last three in this list are large species. The Burmese python is a subspecies of the Asian rock python.

The three large *Python* species do attain sufficiently large size to pose some risk to their keepers. However, a person is at least 100,000 times more likely to require a trip to the emergency room because of injuries from a dog than from one of these large snakes. Consider that in the period of one month in early 2009 two children were killed by their own family dogs in the San Antonio area.

The fact is that all large animals carry varying degrees of risk. Measured on a per capita basis, the probability of injury or death from large non-venomous snakes is the lowest of all large animals.

The Lacey Act provides some leeway for differing interpretations from state to state. However, the reality is that if pythons are listed as injurious wildlife, the owners of these pythons would not be able to sell, breed, or transport the snakes, under penalty of federal law. The snakes could not be entered into any type of commercial activity.

No attempt would be made to confiscate privately owned animals. That would be impossible; neither the manpower to do it nor the knowledge of where the animals are located currently exists. The animals would be valueless, and current thought is that over the years, not being bred, they would just die out.

There is no consideration for the hundreds of thousands of owners of these snakes who suddenly can't do anything with them. Hundreds of thousands of people have made significant investments of money, time, and equipment with their pythons. *The direct result of S. 373 would be to destroy many successful small businesses at a time of the worst economy in American history. There will be foreclosures and bankruptcies resulting from the passage of this proposal.*

Just how many pythons are there in captivity?

No one knows how many pythons are in captivity in the U.S. Based on what we do know about annual imports over the past 20 years, survivorship and breeding success, we feel that a conservative estimate of the total number of pythons in captivity in this country is around a million animals.

In fact, it's possible that as many as a million ball pythons currently reside in the United States. There may be more than 50,000 blood pythons in captivity. Borneo pythons and Burmese pythons also have large captive populations numbering perhaps 20,000 to 40,000. There are large self-sustaining captive populations of green pythons, carpet pythons, centralian pythons, Children's pythons, large-blotched pythons, spotted pythons, reticulated pythons, freckled pythons, and more.

Likewise, the number of people affected by this action is unknown. We have found estimates of the number of American homes with reptile pets that range from 4.4 million to 11 million.

Pythons are among the most common of all snakes in captivity, so it does not seem unreasonable that at least 500,000 people would be affected by this proposed legislation, maybe more than a million. That's a lot of people very unhappy with the government and legislators responsible for this unwarranted and unkind violation of American liberties.

Where do all these pythons in captivity come from?

The overwhelming majority of all pythons in captivity are captive-bred and -hatched. Most people do not realize that the vast majority of all reptiles in captivity are captive-bred animals. Commercial breeding projects have been successfully going on for the past 20 years.

What will happen to all of these pythons in captivity if S. 373 passes?

Senator Nelson's proposal has made no provision for the safe and secure futures of the snakes that suddenly will be made pariahs by his proposal. Some may be euthanized; some—perhaps many—could be released just for spite. Some will be tended quietly until they die. We suspect that many law-abiding citizens will be made into criminals, breaking the law by breeding and dealing.

Can you imagine that with the economy in a shambles, unemployment and foreclosures rising, the embarrassing state of education, two wars, a war on drugs, most of the citizenry without health insurance, crime, pollution, and global warming (to name a few issues of the twenty-first century), that a committee of the U.S. Senate is taking the time to consider whether or not people should have snakes for pets?

Most people do not realize that the vast majority of all reptiles in captivity are captive-bred animals.

Who are the invasive-snake biologists currently studying or planning to study Burmese pythons in Florida?

Invasion biology is a new branch of science. It's the study of exotic species of plants and animals that have deleterious effects on ecosystems.

There has only ever been one "invasive snake" and that is the brown treesnake, *Boiga irregularis*. It probably was introduced to the island of Guam back in the 1940s when it arrived as a stowaway in shipments of military equipment.

Guam was an important military base in the Cold War, as it was home to Western radar arrays that were pointed at the eastern Soviet Union. The brown treesnake originally came to the notice of the government because its arboreal habits took it up into the power lines and transformers where it caused thousands of electrical shorts, resulting in power outages to military and civilian installations over a period of several decades.

Several government agencies have been involved in programs to control brown treesnakes, the best funded being a USGS program headed by biologist Gordon Rodda. Rodda might end up as the administrator of the Burmese python project if the USGS gains control of Burmese python research, as happened in Guam.

After 25 years and tens of millions of taxpayer dollars, the bottom line is that brown treesnakes are just as plentiful in Guam as ever and they have eaten most of the native wildlife. In fact, there are areas in Guam today that have some of the densest known snake populations in the world. The project received at least a million dollars last year and will ask for more this year.

In contrast to the USGS project, USDA Wildlife Services was charged with carrying out an integrated pest-management program to deter the spread of brown treesnakes from Guam through military and commercial transportation routes, primarily to Hawaii. In the process, they developed highly successful tools and strategies that have resulted in no brown treesnakes identified alive in Hawaii since the program became fully operational. This same government agency is able to work on the Burmese python project in Florida if funding is made available. They can apply their focused and practical approaches to directly addressing the python situation in South Florida.

The USGS invasive-snake biologists have taken the lessons they learned in Guam studying brown treesnakes, and now want to apply that learning to the "python problem" in Florida. Of course, what they learned was how to get tax dollars to fund their research. Taxpayer dollars funded their visits to a tropical island—their research and the research of their graduate students; they made their careers at taxpayer expense.

It is to their great advantage to inform the public that

Florida pythons are a terrible menace to the American way of life. That is because the *real* money comes from federal funding. If the "python problem" applies only to the Everglades, then the invasive-snake biologists would likely receive funding only from the state of Florida. But what if Burmese pythons could spread across the country...?

...they glossed over the fact that if there is significant global warming, all of South Florida will be submerged under ocean water, even much of Miami.

To that end, three USGS biologists—Rodda, Jarnevich and Reed—generated a now discredited paper in 2008 in a journal called *Biological Invasions*. The paper is a crystal ball prediction complete with fancy colored maps, and it foretells that Burmese pythons will spread across the southern United States, from Washington, D.C., to San Francisco. To make sure this sensationalist piece didn't get overlooked, Rodda issued several press releases—official USGS government press releases.

The press releases were made before the publication of the paper and before scientists had any chance to evaluate it. They went viral online, and for a few days dominated television, radio, and print media, too.

Even though this paper was quickly criticized and discredited in print by multiple publications, the fallacious statement that Burmese pythons could spread through the southern USA had opened Pandora's box and became indelibly etched in the public and political consciousness.

In the following weeks, Rodda and other invasive-snake biologists were interviewed by countless publicity and media outlets. They claimed that pythons would endanger everything from beavers to dogs to grandmothers as they cut a swath of ecological destruction across the country.

One has only to "google" the term "Burmese python Everglades" to see these ridiculous claims and threats repeated over and over in video clips and print articles throughout the mainstream media. Apparently if a lie is repeated often enough, it becomes the truth no matter how big a lie it was to start with.

Will the pythons spread if there is global warming?

Rodda et al. not only foretold the spread of pythons in the near future, they pushed their predictions even farther into the future and warned that global warming would increase the potential favorable climate for pythons in the United States.

However, they glossed over the fact that if there is significant global warming, all of South Florida will be submerged under ocean water, even much of Miami. All of the Everglades will be a marine park and no money, not even a government bailout, will save it.

Are the invasive-snake biologists experts on pythons?

The invasive-snake biologists may be experts on brown treesnakes, but from what we have seen, they have very

little experience with pythons. Some of the public statements made to the media sound more like they were the consultants for the movies *Anaconda* and *Snakes on a Plane* than calm, knowledgeable scientists.

Many individuals in the private reptile community have more experience with pythons than all of the USGS invasive-snake biologists combined, but not one has been consulted in this matter.

Why would the USGS
invasive-snake
biologists want to kill
the goose that lays
golden eggs?

Is the Burmese python an invasive species?

No. We have it on presidential authority that the Burmese python in Florida is not an invasive species. They can be correctly identified as an “exotic species,” or an “established exotic,” a “non-native species,” or even an “alien species.” They are not by legal definition an invasive species.

Presidential Order 13112, signed into law by President Bill Clinton on February 3, 1999, and titled *Invasive Species*, provides the following definition [Section 1 (f)]: “invasive species means an alien species whose introduction does or is likely to cause economic or environmental harm, or harm to human health.”

To date the Burmese python has not caused harm to humans, environment or agriculture. All vertebrate species in Florida that currently are recognized as endangered or threatened had received such status long before Burmese pythons came onto the scene. By the book, the Burmese python is not an invasive species.

Why do the invasive-snake biologists refer to the Burmese python as an invasive species if it is not?

Maybe a species has to be identified as “invasive” before funding is available for invasive-snake biologists to study it. Since most people don’t know there is a difference between an exotic species and an invasive species, the invasive-snake biologists apparently feel free to call it what benefits them the most.

Will the invasive-snake biologists be able to eradicate Burmese pythons from South Florida?

Of course not!—in the past 25 years, with tens of millions of dollars, the USGS invasive-snake biologists couldn’t control brown treesnakes on the densely populated island of Guam, much less eradicate them. The ENP is an area ten times larger than Guam and most of it is inaccessible on foot or by wheeled vehicle. The historic Everglades area is more than 20 times larger than Guam. Burmese pythons are firmly established in the area.

Why would the USGS invasive-snake biologists want to kill the goose that lays golden eggs? As soon as the problem is “fixed,” the funding money dries up. Look at their history in Guam. They perpetuated their existence by convincing funding sources of the importance of ar-

cane and superfluous research without practically and effectively addressing the problem at hand.

It will be a waste of taxpayer money to spend one dime on the promise of eradicating Burmese pythons from the Everglades.

That is the lesson that the brown treesnakes in Guam should have taught us, the taxpayers.

How many nonnative snake species are established in the country?

There are few successful snake introductions anywhere in the world. Snakes apparently aren’t very good at it.

The Brahminy wormsneak, a tiny worm-sized burrower, has been spread to many international locales, including Florida and Hawaii, apparently traveling in flowerpots. The Florida banded watersnake was purposely introduced to a small resaca in South Texas and 50 years later there remains a small quiet population. For about 40 years a very small population of boa constrictors has lived in a stand of trees in a small park in Miami. These species have not created any known eco-destruction.

The brown treesnake is a special case. Guam was an island without predators. Not only was there nothing native on the island that would eat brown treesnakes, the other species native to the island had evolved in the absence of predators. The only vertebrates on the island were birds, geckos, skinks, bats, and introduced mice and rats—all preferred dietary items of the introduced snakes.

The snakes ate most of the species on the island while the invasive-snake biologists watched. Brown treesnakes became the poster-child for the crusaders against invasive vertebrate species.

What ever the future holds for the Burmese python in South Florida, it will not follow the path of the brown treesnake. The historic Everglades is an area replete with all manner of snake-eating predators, and all potential prey items have also evolved in the presence of ophidian predators.

Is it a fact that pythons in the Everglades are a terrible ecological problem?

No, it truly is not yet known what changes or problems the pythons in South Florida will cause. At this point in time, Burmese pythons are just one of the thousands of established exotic species in South Florida. They are predators, and we know that they, in turn, also have predators at all age and size classes.

The ecology of the Everglades is in constant flux and has been for at least the past century. It remains to be seen if the presence of Burmese pythons will have any significant effect on the Everglades beyond what already is at play there. Remember, this already is the area of the

world with the most introduced non-native species.

Could they prey on endangered or threatened species? Yes, certainly that is possible. But, in turn, pythons will likely be identified as significant predators of feral cats and young feral hogs, both identified as detrimental invasive species in the Everglades.

It may be that Burmese pythons become a valuable resource. As is true for alligators, the hide of pythons has value; python skins are commercially harvested throughout their native ranges. Just as iguanas in Miami are harvested for meat, many cultures consider python to be a delicacy.

What Burmese pythons are is an unexpected change, a new factor in the ecology of an already highly modified ecosystem. It is a fact that they are in the Everglades to stay, a permanent addition to the herpetofauna of Florida.

What about that cute little rodent that was eaten by a Burmese python?

Two Key Largo woodrats were found in the stomach of a Burmese python that somehow had gotten from mainland Florida several miles across Florida Bay to Key Largo. This rat is a formally listed endangered species (even though it actually is only a subspecies.)

The Key Largo woodrat is a subspecies of the common and widespread Florida woodrat, also called a “packrat.” At one time the rat was found over the entire island; the population numbered in the hundreds of thousands. The population crashed due to traffic, predation by cats and dogs, loss of habitat due to rampant over-development, and all of the other problems that come with the human development and overpopulation of a tropical paradise.

Key Largo has an unusually large population of feral cats. In fact, a well-to-do neighborhood next-door to Crocodile Lake National Wildlife Refuge purposely feeds and supports a colony of hundreds of feral cats. These cats are undoubtedly the major predators of woodrats.

A few years ago the population of Key Largo woodrats had dropped to an estimated 25 individuals.

With a large grant of money (millions), a largely unsuccessful attempt was made to improve the woodrat habitat in Crocodile Lake National Wildlife Refuge, a protected area on the northeastern half of Key Largo, site of the last remaining woodrats. The population today is estimated at a hundred woodrats or so.

So when one Burmese python ate two at a meal, alarms bells went off. It was repeated over and over—these alien pythons are about to eradicate a unique taxon of rodent! Of course, this ignores the fact that people (and feral cats) have already eradicated about 99.99% of all Key Largo woodrats.

Adult Burmese pythons eat feral cats. But it will take

the hatching of only one clutch of Burmese python eggs in or near rat habitat in Crocodile Lake NWR to draw the curtain on Key Largo woodrats. Those 40 little hatchling pythons will eat every woodrat in short time.

It is our sad belief that most of the USGS invasive-snake biologists are impatiently waiting for this moment. Never mind that the Key Largo woodrat has been swirling the bowl for a decade and that, snakes or no snakes, it already is functionally extinct.

The day that the Burmese python eats that last rat, those USGS invasive-snake biologists are going to compose a tear-jerking press release that says “Alien Python Causes Extinction of Endangered Species.” There will be a close-up picture of the cute little fuzzy big-eyed rat.

What they won’t broadcast is “We Knew It Was Going to Happen and We Didn’t Do Anything to Stop It.”

On the day that rat dies, the USGS invasive-snake biologists will immediately double their requests for funding and as a result of Burmese pythons now being “known species-killers,” they will probably get all the money they request and more. Forget the fact that most of our representatives couldn’t tell a woodrat from a hamster. No red-blooded American legislator wants to be accused of inaction while an alien invader is consuming our endangered species.

Right now, after reading the past two paragraphs, all the biologists and researchers in South Florida involved in the “Key Largo woodrat recovery project” have paused and thought “what the hell do they know; we’ve done everything we can.” But they have not.

It’s a matter of priorities. If Key Largo woodrats are truly important and if we want future generations of kids and biologists to be able to experience them as living creatures, then it is time to catch every last one of them and put them in cages with exercise wheels; create two or three colonies, each managed by a commercial rodent breeder; remove the endangered status; and let them be commercially bred. It will cost a fraction of the money that has already been spent, and it will ensure that this rodent will survive into the future.

On the other hand, if these rats are left in their (semi-) wild state, they are doomed. They will go extinct. If the object is to study how they go extinct, this is a ready made classroom. But let there be no misunderstanding—even at this point, the outcome is known and it is certain. Let no tears be shed when the rat passes.

Will Burmese pythons eat dogs?

Unlike alligators, Burmese pythons really don’t like to eat dogs. It has happened, it might happen again, but most Burmese pythons act terrified and try to flee if confronted by even a small terrier. They do eat cats, however.

...even at this point,
the outcome is known
and it is certain.

In the natural range of the Burmese python there are a number of small and medium-sized wild feline species. Based on captive behavior and stomach-content analysis of wild Florida pythons, there seems no doubt that in their native range Burmese pythons eat cats—they may be cat specialists.

However, the dominant canine species in the native range of the Burmese python was the dhole. The dhole is a pack animal, a social wild dog species that lived and hunted in large packs of over a hundred dholes. At least it used to, back before it was hunted to near extinction. Then there was no such thing as a solitary dhole—when a Burmese python encountered a dhole, it didn't go well for the python. The dholes were known to attack and kill tigers and buffalo, overwhelming them with numbers. It seems logical that the reason why most Burmese pythons show no interest in eating dogs is that canine avoidance is a survival instinct.

Can Burmese pythons eat Florida panthers?

Maybe, if they can find one. Pythons in the Everglades are recorded to have eaten bobcats and feral house cats. A Florida panther is a possibility, if the python is big enough. The problem is that there are panthers living in Florida, but they are not “Florida panthers”—not the real thing. The real thing was probably wiped out when conservation biologists imported Texas mountain lions into Florida, with the stated aim of strengthening the Florida panthers by interbreeding them to the Texas lineage.

Perhaps they got the idea from the fishery biologists of other states who for decades have imported Florida large-mouth bass and released them into their waters to “improve” the genetics of the native fish. [The irony of government biologists making exotic introductions is not lost on us, but they do it all the time.]

The decision to outcross panthers was made because even 20 years ago it was obvious that the Florida race was doomed. The purity of the bloodlines was lost. A small number of panthers still roam Florida, but even with Texas genes, the population is dwindling—a dozen or more are killed every year on the highways.

You better believe that if the rat is going to get a press-release memorial to mark its passing, then if that last panther happens to be eaten by a python, there will be helicopter coverage and satellite images. The invasive-snake biologists will be so grateful that they will use some of their federal funding to erect a marble cenotaph in memory of that great python.

What about “Python Pete,” the python-hunting beagle?

Python Pete is a publicity stunt. Oh, there really is a cute beagle named Pete who was trained to follow the scent of a python. He even has his own website. However, after three years, Pete has yet to find a single python.

Mostly Pete and his handler do media events to tell the public about the terrible python problem.

What is the story of the famous picture taken in the ENP of the dead headless 13-foot python, ripped open with a 6-foot alligator hanging halfway out of its body?

It seems a curious coincidence that one of the persons who will benefit the most from federal funding to fight the python problem would be the one passenger in the helicopter flying over the enormity of the ENP that just happened to pass right over this very bizarre scene. Dr. Skip Snow, the National Park Service biologist stationed in the Everglades and the on-site biologist most involved with Burmese pythons, and pilot Mike Barron happened to notice the carcasses as they flew over the swamp. After making this absolutely extraordinary discovery, they flew back to base and retrieved a National Geographic photographer who was apparently just waiting around until someone could find him something to shoot. They returned and took the photos that shook the Internet. Never before have pictures of two dead rotting animals been so popular online.

From the comments and reactions of biologists and conservationists in Florida, you would have thought that a rottweiler had just torn their kitten apart on the front lawn. For years biologists and conservationists have worried about the overpopulation of alligators in Florida—they even allow hunting them. Then a python comes along, eats an alligator, and suddenly it's the apocalypse for Florida gators.

CSI would have had a field day investigating this apparent gator-cide. It wasn't the simple eat-and-disappear act of predation typical of pythons. For one thing, the head of the python was missing. A careful survey of the area did not turn up the missing head, so it probably didn't fall off. It almost certainly was ripped off by an even larger gator.

The head of the dead gator, crammed headfirst into the split-open gut of the dead python, was either slightly digested or maybe just decomposed and picked clean by aquatic organisms. Interestingly, it was reported that the bones in the head of the ingested gator were crushed; that's not a python wound and it's a pretty mysterious clue. We can find no mention of the proximity of the crime scene to a road, but perhaps the python ate a road-killed gator? It might have been a smaller gator killed by a larger gator.

Of course, it's also possible that some prankster stuck the nose of a road-killed gator in a gash into the body cavity of a dead python and positioned it on an exposed bank along a flight path. The biologists who investigated the scene reported that it seemed strange that vultures, plentiful throughout ENP, had not taken a single bite out

Never before have pictures of two dead and rotting animals been so popular online.

of the decomposing bodies of the two dead reptiles. In the words of Dr. Stephen Secor, one of the investigating biologists, “We will never know exactly what happened in September 2005 in the struggle between python and alligator; it will always remain a mystery.”

South Florida is already a place where you keep the dog on a leash and an eye on all small kids.

Is South Florida made more dangerous by the presence of Burmese pythons?

Come on—it’s South Florida, home of Miami Vice and Scarface! We know all about South Florida from television and the news media, just like we know all about pythons from television and the news media.

Those USGS invasive-snake biologists, Senator Nelson, and the environmentalists all are doing their best to implant the perception of hazard into the consciousness of the public with statements like “now a new carnivorous reptile predator is vying for the slot of top predator in the swamp” and “it won’t be long before this giant snake will be found in backyards and canals all through Miami.” It amounts to a government campaign to create fear and the media is not even questioning the statements that are made.

Let’s be realistic here—all the waterways of the Everglades and, for that matter, all of Florida are already ruled by a giant carnivorous reptile predator that can weigh over a thousand pounds. More than 1.5 million gators are in Florida.

Alligators live in the cities, they prowl the canals and the backyards, they are found in people’s swimming pools, they eat dogs, occasionally they kill people, and they eat Burmese pythons. South Florida is already a place where you keep the dog on a leash and an eye on all small kids.

Based on the history of Burmese pythons and humans in their native lands, and considering the dangers of South Florida in general, it’s difficult to imagine how Burmese pythons are going to make life more hazardous than it already is.

What about statements that the Burmese python is now the apex predator in the Everglades?

Anyone making that statement has been listening to the USGS invasive-snake biologists. They like to say it a lot. Apparently they forgot about alligators.

How are environmental organizations involved in all of this?

There are a number of well-organized and well-funded national groups that come under the umbrella of the environmental movement. The underlying philosophy is, in essence, that Mother Earth, (“Gaia,” as many environmentalists affectionately refer to her) and all her ecosystems were just perfect until humans came along and messed everything up.

There are all degrees as to just how strongly and zealously these views are held. Depending on the group, there are environmentalists who don’t like Texas antelope ranching, agriculture, hunting, translocating game fish, landscaping with nonnative plants, logging, or the tropical fish industry. If it has anything to do with changes to an ecosystem, you can be cer-

tain that there is an environmental organization that disapproves of what you are doing. To borrow a term from Woody Allen, they are “polymorphously perverse.” By having many organizations, they cover all the bases.

Changes to an ecosystem include the introduction of new species, usually referred to as “alien” or “invasive” because those labels make the issue sound so much more serious. We xenophobic humans certainly do not want to be invaded by aliens.

In this case, environmentalists don’t like kids and keepers who maintain nonnative snakes and other reptiles in their homes as a hobby, a business, or a passing interest. Those animals might get loose and become invasive.

The environmental movement is well financed. They are a powerful lobbying force at every level of government. It hasn’t hurt that for years they have contributed to the campaigns of sympathetic legislators. As soon as the new administration came to Washington, D.C., the environmental groups called in their chits from the Democratic legislators with whom they have been friendly.

Environmental groups and animal-rights groups (two ends of a continuum) have endorsed Senator Nelson’s proposal that will place pythons on the Injurious Wildlife List, amending the Lacey Act. This bill, mentioned earlier, is identified as S. 373. Surely they do not realize the content and far-reaching consequences of this proposal.

What is the value of captivity from the view of conservation?

It was in the late 1960s that we first heard the saying, “better extinct than in captivity.” We have heard it repeated by biologists, conservationists and environmentalists up to the present. We are shocked and repulsed by the hubris of that statement. Captivity must now be accepted as a viable and important alternative to extinction.

It is a matter of preserving life on earth as we know it by any means possible. The rate of extinction on our planet is unprecedented and accelerating. Estimated rate of loss is currently somewhere between several dozen to several hundred species every day due to anthropogenic causes.

It’s desirable to maintain biodiversity within the framework of ecosystems; we make no argument against that point. However, the ongoing degradation of ecosystems leaves some species without a place in nature. When possible, such species must be maintained in captivity.

That is the responsibility of this generation to future generations.

Does an example of conservation in captivity exist?

One of the greatest achievements of conservation in the past 20 years has been the establishment of several hundred species of reptiles in viable, self-sustaining, captive populations maintained by private herpetoculturists. This has been accomplished with a decentralized, non-governmental, economically driven model of conservation.

Not one penny of American taxes has gone to the foundation of these colonies of animals, yet there they are. Some of these species are so rare that the number of captive-bred individuals far exceeds the total number of specimens ever observed in the wild. A number of these animals are highly endangered, most notably the Asian turtles—some may be extinct in nature.

Yes. Quietly and with little fanfare, the past 35 years have seen dramatic advances and achievements in the maintenance of reptiles in captivity. A significant percentage of all reptile species have now been bred in captivity. There is little doubt that it is possible to create ancillary captive colonies of any reptile species, following the model that has been created by private businesses and hobbyists.

No other group of vertebrate animals is so well established in captivity as are reptiles. Many reptile species, by every measure and definition, could be considered as domestic animals. Fifty-one of the 52 species and subspecies of pythons in the world have been bred in captivity and over 35 are now maintained in viable, self-sustaining captive populations.

The legislative proposal S. 373 would destroy what has been accomplished for pythons, apparently with the blessings of government biologists, Senator Nelson, Defenders of Wildlife and HSUS.

It is our most fervent hope that thoughtful representatives in the Congress and President Obama will not support this baseless, punitive and radical bill.

What is the value of a viable, self-sustaining, captive population of reptiles if the species is not endangered?

Not endangered today does not mean not endangered tomorrow. One has only to look at the dim future of many amphibians—that is, those that have not recently gone extinct—to imagine the different futures so many species might have, had they already been maintained in ancillary captive populations.

The catastrophic plight of amphibians today is a stirring example of the consequences of a blanket policy that

“animals should only be in their native habitat,” a philosophy endorsed by many in the environmental, conservation and animal-rights movements. At best such a misguided policy sidesteps serious issues of responsibility, and it is guilty of pure negligence at its worst.

Are the invasive-snake biologists and environmentalists so prescient that they can say that pythons or any other group of reptiles will not suffer a similar worldwide population crash, a Modern Age extinction event of unprecedented scale?

Now the World Association of Zoos and Aquariums (WAZA) has united in a joint project with the International Union for the Conservation of Nature (IUCN) to create Amphibian Ark (AArk) in a desperate attempt to save a few dozen frog and salamander species. Much of the major funding has been provided by zoos, and that means that tax dollars are being spent on this project. The motto is “the world’s amphibians safe in nature,” but the reality is that they are not safe in nature; AArk is attempting to set up captive populations of amphibians. This is a strong endorsement of the value of ancillary captive populations as a valuable conservation tool.

The goal of AArk is exactly what the private reptile keepers and breeders in this country have already accomplished for reptiles.

It’s unfortunate, but the AArk initiative started about 10 years too late. The time to set up ancillary captive populations of animals is before they are swirling the bowl.

Are the Burmese pythons in South Florida pets that were released by irresponsible pet owners?

During the 22-year period from the first sighting in 1979 through 2000, a total of 8 pythons were collected in the area of the park; four others were observed. It’s certainly possible that those few snakes might have been escaped or released pets.

Twelve snakes in 22 years is an average of about one snake every other year.

Considering that the Miami metropolitan area has a population of millions of people, is one of the two main ports of entry in the USA for imported exotic reptiles, has more exotic animal dealers and distributors than any other city, that keeping reptiles is particularly popular in South Florida, and that all of this is right next door to ENP, it certainly seems possible that a half-dozen snakes every decade could have ended up in the wilds of South Florida.

However, from 2001 to the present, more than 900 Burmese pythons have been collected and observed in South Florida. Anyone implying that this increase in the

One of the greatest achievements of conservation in the past 20 years has been the establishment of several hundred species of reptiles in viable, self-sustaining, captive populations maintained by private herpetoculturists.

numbers of Burmese pythons is from animals brought to the park by irresponsible pet owners is either terribly deluded or is purposely trying to create a red herring.

In fact, pet owners continue to be accused even though there is research funded by and presented to the SFWMD that convincingly suggests that, based on the genetic characterization of 150 Burmese pythons collected in and around the ENP, all of the ENP pythons are very closely related, possibly all descended from as few as a single pair of snakes. This is compelling evidence that the increasing numbers of ENP Burmese pythons are neither randomly released “pets” nor the offspring of some large number of randomly released pets.

The genetics report submitted to SFWMD is authored by Timothy Collins and Barbie Freeman from Florida International University, and Skip Snow, the NPS biologist in the Everglades. The conclusions of the 2008 final report have been known for several years, but were not released, citing that it could not be released as it was based on the unpublished thesis research of a graduate student. But the USGS invasive-snake biologists knew all about it. The report is available by request to SFWMD.

We find it troubling that even with this evidence in hand, the USGS invasive-snake biologists and Senator Nelson continue to accuse pet owners.

Of course, the strategy is to charge that “python owners are irresponsible” and therefore it would be defensible to remove pythons from captivity everywhere.

The proposed S. 373 then is based, at least in part, on the premise that if one python owner every two years is irresponsible or unlucky enough to break several already existing laws by releasing an exotic pet (even though this has not been proven and is far from certain), then all keepers in the nation should lose their rights to pursue their interests and hobbies. That is a travesty of justice.

Where did the pythons in South Florida come from?

It is a violation of state law in Florida to release an exotic animal. So far as we have been able to learn, no one has ever been charged with releasing a Burmese python anywhere in Florida. The ENP is patrolled day and night by Immigration, State Troopers, and National Park Service—no person has been observed to release a python in the park.

Of course, it is possible that some misguided novice snake keeper purposely took his Burmese python out into the swamp and set it free. There is no record of it, but it might have happened. But there are several reasons why this doesn't seem very likely to be the source of the wild population.

One is that pythons cost money—they have value—and when keepers get tired of the snakes in their collections, those snakes are sold, not released. In our com-

bined 75 years of experience in the snake community, it is our observation that it is a rare event for an exotic snake to be released.

...when keepers get tired of the snakes in their collections, those snakes are sold, not released.

Another reason is that any pet owner who did release a python would release a large snake that had outgrown its circumstances, not a baby. Older captive-raised snakes generally do not survive long when released. It's probably because they haven't learned what is necessary to avoid trouble and they don't know the area.

Large size is a terrible liability to any snake in the best of cases, and a released large, captive-raised snake rarely is able to prosper. It is baby snakes that are the colonizers—and it's hard to imagine who would purposely release baby snakes. It's the baby pythons that have the most value to the wholesalers and distributors.

Other evidence that the wild pythons are not descended from captive populations is that Burmese pythons with unusual color and pattern mutations have not been recovered from the wilds of South Florida—all of the pythons have been normal. These days it's difficult to purchase a captive-bred Burmese python that is not an unusual color morph or heterozygous for some unusual color or pattern mutation. [Watch, now that this has been publicly stated, probably a whole string of albino Burmese pythons will show up.]

A significant consideration is that the genetic study funded by SFWMD demonstrated that the Burmese python population in the Everglades was not descended from the Burmese pythons imported from Vietnam. They did not demonstrate from where the snakes actually came, just that they weren't from Vietnam.

This is an important finding in the determination of the source of the Florida pythons. Vietnam has been essentially the sole source for imported baby Burmese pythons since 1994. So the Burmese pythons that founded the present population were almost certainly baby Burmese pythons imported before 1994. There just happens to be that exact combination of factors.

Based on all these clues, including the chronology of the recent python population boom in ENP, we propose that the growing population of Burmese pythons is descended from juvenile pythons released into the Everglades along with almost every other surviving animal when Hurricane Andrew devastated South Florida in August of 1992.

It was the worst hurricane in the history of an area famous for hurricanes. The storm hit South Florida from the east, the eye went through the middle of ENP, and the hardest winds were north of Florida City blowing to the west with gusts over 150 mph, straight into ENP. Immediately afterwards, South Florida looked as if it had been carpet-bombed.

South Florida is the epicenter of the imported exotic plant and animal industry of the United States. Scattered throughout Homestead, Florida City, and South Miami there were animal and plant businesses that were destroyed, buildings literally blown apart and the contents blown straight into the ENP. We are told of one reptile import business in a Quonset hut situated just outside the northwestern corner of ENP that had 900 baby Burmese pythons on the day of the hurricane (and hundreds of other reptiles)—the storm took it all right into the ENP, building and all. That is one of several of which we are aware.

It is our opinion that Hurricane Andrew, a devastating natural disaster, was the force that released Burmese pythons into South Florida.

The evidence is overwhelming that the presence of the established, breeding population of Burmese pythons in Florida has NOTHING to do with irresponsible pet owners.

Why haven't Burmese pythons established breeding populations all across the southern United States, as deemed possible by Rodda et al. in their range-expansion paper?

One can ask most fourth-grade snake keepers why Burmese pythons can't live in Dallas or Oklahoma City and they will reply that it is too cold. They are correct. If the algorithms and the computer models say otherwise, then bad data has been used—garbage in, garbage out.

Florida keepers especially should resent the comments of the USGS invasive-snake biologists and Senator Nelson. If (as contend Rodda et al.) Burmese pythons can survive anywhere in the southern third of the United States from Washington, D.C., to San Francisco, and if (as contend Senator Nelson and the chorus of USGS invasive-snake biologists) the source of Burmese pythons in the wild is "irresponsible pet owners," then it follows that the presence of Burmese pythons in South Florida is strong evidence that over the past 30 years Florida reptile keepers have been completely irresponsible. Elsewhere the absolute absence of established populations of pythons is evidence that all python keepers outside of Florida must be the very epitome of careful reptile keeping.

Why place Burmese pythons and other pythons on the Injurious Wildlife List?

In a word—power. Okay, two words—**power** and **money**.

If pythons are placed on the Injurious Wildlife List, then only government biologists and contracted biologists will be able to say who gets to work with pythons. They get all the money and no one can contradict their work.

The brown treesnake is the ONLY snake on the Injuri-

ous Wildlife List. It's also the only snake on which the government has spent millions of taxpayer dollars.

Placing pythons on the Injurious Wildlife List will do NOTHING towards solving the "Burmese python problem" in Florida. But it will cost taxpayers a fortune.

So what do the invasive-snake biologists plan to do in the Everglades?

No one knows.

They can certainly conduct Burmese python research whether or not the species is placed on the Injurious Wildlife List.

It has been inferred that they will work to eradicate the species, but considering their lack of success after 25 years in Guam, that seems an unlikely scenario.

Surely it is reasonable to request that they make public their research plans and goals for the management of pythons in South Florida.

Is there any action that might prevent still more species of plants and animals from establishing in South Florida?

Yes, there is one very practical solution.

Miami is the primary American port of entry for imported plants and animals, especially *tropical* plants and animals. Because of this, Miami is full of and surrounded by wholesalers and distributors of exotic plants and animals. At any given time, an inventory of exotic plants and animals with a cumulative value in the hundreds of millions of dollars can be found in Miami. Florida has made a lot of money from the importation business. Every shipment, every box, is stamped and cleared by USFWS, Customs, and for some cargo, even USDA.

Some plants and animals come into the port and are nearly immediately shipped on to other destinations in the United States. Others, including exotic trees, fruits, palms, cycads, vegetables, ornamental shrubberies, exotic grasses, reptiles, mammals, birds, and tropical fish are maintained in South Florida for commercial propagation, agriculture, and captive breeding. Miami is seething with exotic species.

The problem is that South Florida has the most tropical climate in the continental United States. Many species of escaped plants and animals thrive outside the nurseries and cages of the distributors and wholesalers. Released and breeding in South Florida are literally thousands of species that can survive nowhere else in the United States. And it's all because Miami is the port of entry.

The solution is to remove the status of the Port of Miami as an agricultural port and a port of entry. Move the port of entry north, maybe to one of the New England ports.

The brown treesnake is the ONLY snake on the Injurious Wildlife List. It's also the only snake on which the government has spent millions of taxpayer dollars.

If Senator Nelson really believes that exotic species are a terrible problem and if he wants to remove the chance of future introduction of snakes or any other exotic species into his beloved Everglades, then his choice is clear. As the Senator from Florida, he needs to spearhead a political movement to stop the importation of more exotic plants and animals into the Port of Miami. For the sake of nature and on behalf of the environmentalists, he needs to move this lucrative business out of his state to a place where the chance of alien invasion is minimized.

It isn't going to happen. It would cost Miami and Florida too much money and too many jobs. But is it a better strategy to attack the rights of hundreds of thousands of American snake owners, destroy thousands of successful American small businesses, and give millions of tax dollars to the invasive-snake biologists?

Has the State of Florida taken action to prevent future problems resulting from releases of pythons?

Yes. Florida spent several years hosting committee meetings that included state and federal biologists, conservationists, environmentalists, private reptile keepers, commercial breeders, and law enforcement officials in order to design the very thorough set of laws now in effect that require responsibility and accountability on the part of the pet industry and the reptile community. At the same time, these laws respect the rights of individuals to pursue their interests and businesses with reptiles, acknowledging the significant and important economic contributions that these entities make to the welfare of the state.

Consider that there is NO NATIONAL PROBLEM with pythons despite what the USGS invasive-snake biologists are preaching. The presence of Burmese pythons in South Florida is a state issue. Federal legislation such as has been proposed and now being considered is inappropriate and without basis. The state of Florida is ably managing its responsibilities to its ecosystems and citizens. To suggest otherwise should be considered as insult to the competence of the wildlife officials of Florida.

What about banning imported reptiles, but grandfathering what is already legally here?

This is an interesting proposition that would find considerable support in the community of reptile keepers and breeders. This action would raise alarms from importers and distributors for the pet industry, as cheap imported reptiles are imported primarily for the pet industry, not the reptile community.

Of course, placing a species on the Injurious Wildlife List is one means of banning importation. However, such action also goes further and bans the breeding, sales, and transport of that species. This action would damage hundreds of thousands of citizens and destroy the existing captive populations of reptiles. It is not acceptable.

But a very successful law, a compromise, could be modeled after the Wild Bird Conservation Act of 1992 which prohibits the importation of certain wild bird species, including most parrots, from their native countries, but does not prohibit owning, breeding, selling or transporting captive-bred birds already legally in the USA for decades.

A law tailored with the intent to accommodate already established populations of reptiles and their keepers, with provisions to allow the importation of important, specified breeding stock, would find significant support in the reptile community.

To conclude:

We were sad to hear that Burmese pythons had become established in South Florida. When we first were made aware, we were certain that this would be a giant issue played out in the media, and that the voice of reason would likely be muffled by the media excitement, focused on whoever wanted to talk about disaster and danger. All of that has come to pass.

The terrible legislative solution that has been proposed in calculated response to a campaign of purposeful fear-mongering and propaganda desperately needs to be moderated by a conservative and objective assessment of what has actually happened, and the reality of the disastrous consequences of the proposal being considered. We fear that all the decades of important work by reptile keepers and professional herpetoculturists will be pushed aside in the rush to "legislate for the public good" when the legislation that is considered is tyrannical, offensive, anti-conservation, anti-education, and anti-American.

The media has been an accomplice in the attempt to create hysteria from the "invasive giant pythons" storyline. In fact, it has been our observation that much of the public has been little more than amused by the half truths and horror that was broadcast from every media outlet when this story broke. When we asked people around South Florida what they thought of their neighborhood pythons, most just rolled their eyes. The decades of educational talks given by reptile people have made a genuine contribution to the public perception of snakes; armed with the facts, the public is not falling for the sensational journalism.

We did not foresee the corruption and deceit that we have witnessed from several of the parties involved in the Florida python issue. By "corruption," we do not mean to imply that there has been bribery or other illegal behavior; rather we mean that a number of these people have shown their inferior character and lack of integrity. Their actions have been strictly self-serving and without thought to the effect these actions might have on other people—in this case, hundreds of thousands of people—their lives, their income, their freedoms. It's shameful to see invasion biologists, and senators work so hard to make people afraid.

The “pythons on the loose” theme in the media has provided momentum to keep rolling the slow, steady removal of animals, all types of animals, from American life. County by county, city by city, state by state—there has been a steady increase in the prohibition of the possession of animals over the past 30 years. Agricultural guidelines turn into dangerous animal ordinances that turn into exotic animal ordinances. When finally only dogs and cats remain, then the numbers that are allowed to be possessed are restricted, no breeding is allowed, penalties are imposed for unsterilized pets.

The public cannot be expected to love and support that which they fear or that with which they are unfamiliar. Support for animals, support for ecology, support for national parks and zoos, support for environmental groups, support for nature in general—all will wither and die if animals are removed from the lives of people.

The invasion biologists could have done all their work on Burmese pythons in the Everglades with the full support of the reptile community. We were a ready-made cheering section for them. The reptile community, especially python keepers, would have supported their work by any means available. Instead the invasion biologists

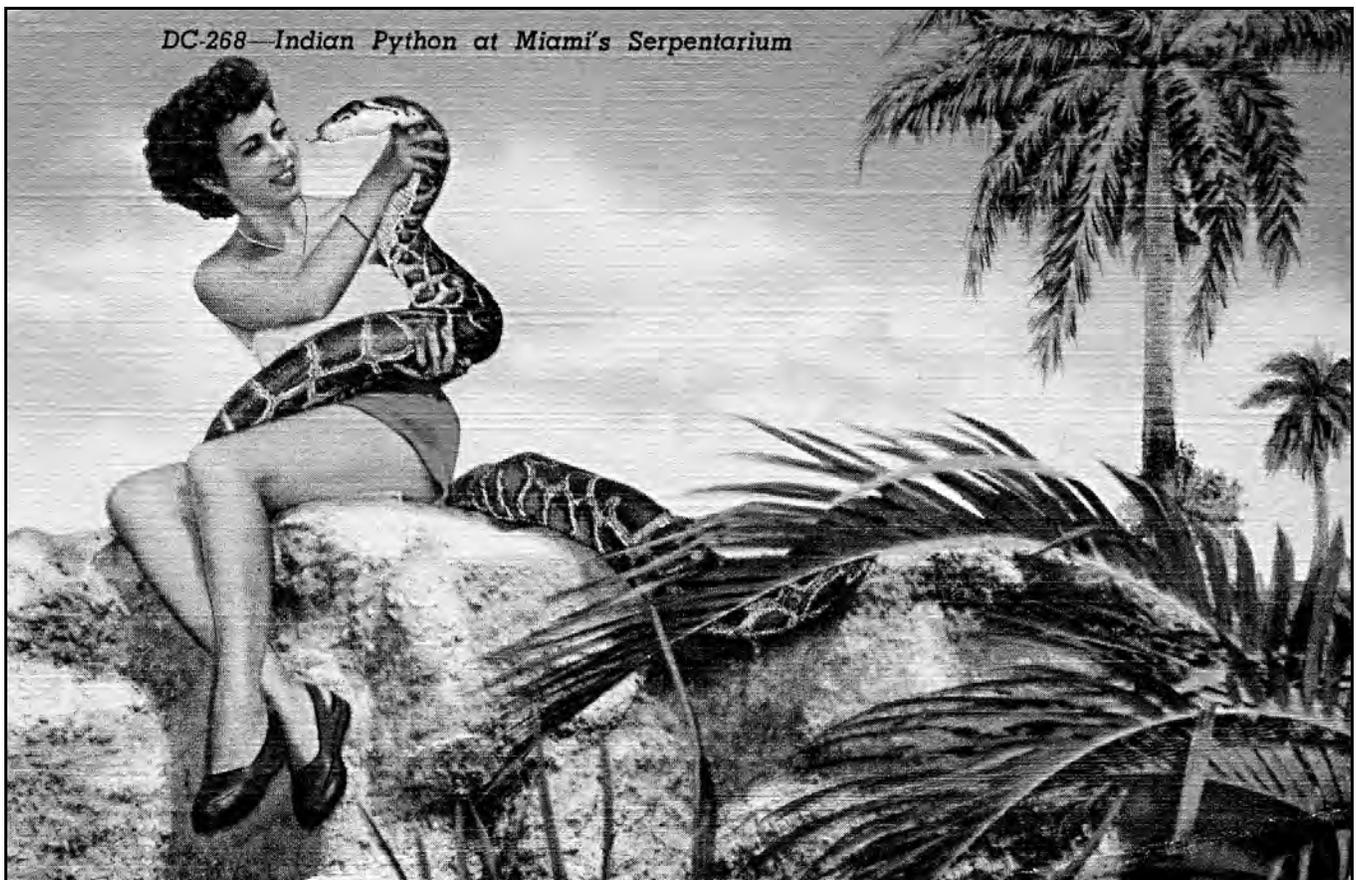
attacked the keepers and hobbyists, they attacked the rights of all American people, today and future generations.

There was and is no point in trying to remove any captive populations of reptiles from the reptile community across the country. There is no basis and no justification for infringing on the rights of American animal keepers. The presence of snakes in captivity makes no difference on the pythons out in the swamps.

The viable, self-sustaining, captive populations of pythons and other snakes are the life work of many people. Those populations are our gifts to future generations. For many people in the future they will provide their only contact with living snakes.

If it had been our choice, we would never have allowed the release of Burmese pythons to happen. However, it did happen, likely born out of the ferocity of a storm, a natural disaster. There it is, they are here and we do not have any choice to make.

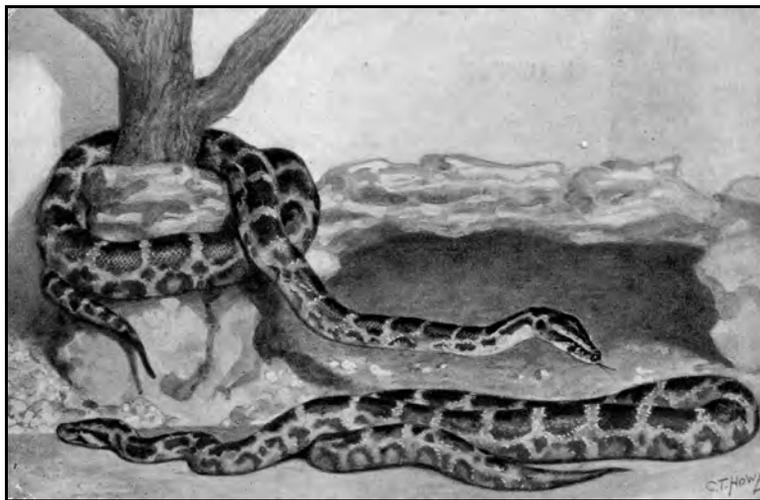
We do not feel that the presence of Burmese pythons has in any way diminished Everglades National Park. They are magnificent snakes. We will see how they adapt to a new world, and how that world will react to them.



A linen postcard from the Miami Serpentarium, ca. 1950



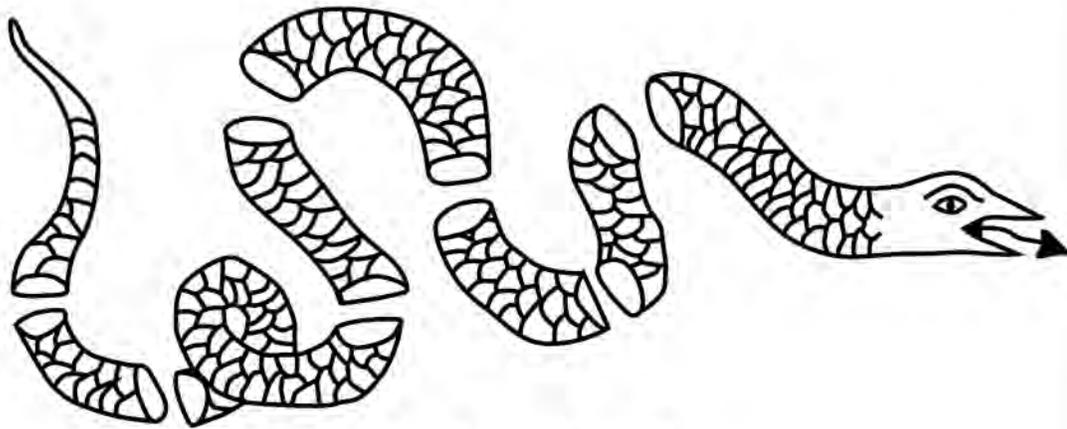
A postcard from the Rangoon Zoo, ca. 1920



Burmese pythons at the London Zoo, 1927



Frankie La Marche and her Burmese python,
ca. 1910



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