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Testimony
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Committee on Natural Resources
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H.R. 6311 Non-Native Wildlife Invasion Prevention Act

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Madam Chairman, thank you for the opportunity to testify before this Committee on a matter of great importance to the South Florida Water Management District, specifically HR 6311, “the Non-Native Wildlife Invasion Prevention Act.” I am George Horne, Deputy Executive Director of Operations and Maintenance for the South Florida Water Management District. Our regional agency maintains 2,000 miles of flood protection and water management canals in South Florida’s 16 counties and is actively engaged in many initiatives to protect and restore the South Florida ecosystem, which includes Lake Okeechobee, the second largest lake in the southeastern U.S. and America’s Everglades. We have a long history of successful invasive plant management and experience, but only recently have we had to commit more and more resources to the emerging populations of non-native animals appearing across our landscape. If effective preventative programs were in place to limit introductions of non-native animals, such as the legislation now under consideration, these much-needed taxpayer-funded resources could be re-directed to other important resource management efforts. Today, however, the negative impacts from the unlimited importation of new pest animals require active responses on our part. Effective prevention of additional introductions, as proposed in this bill, is the only path to prevent these costs from continually increasing.

While Florida, California and Hawaii are currently among the states most impacted by introduced invasive species, every state is affected. Globally, exotic invasive species, including pest animals, weeds and pathogenic diseases are a major cause of global biodiversity decline. In particular, non-native animals compete for food and habitat, upset existing predator/prey relationship, degrade environmental quality, spread diseases and, in our case, may threaten the integrity of flood protection levees and canal banks, and electrical power delivery. Nationally, more than 50,000 species of introduced plants, animals and microbes cause more than \$120 billion in damages and control costs each year (Pimentel 2005). Already, 192 non-native animal species are established in Florida, calling for the development of methods to forecast and respond to the potential economic loss, environmental damage and social stress caused by invasives whether new introductions or long-established organisms. Collaborative management, education, training and broadening public awareness along with baseline population analyses may provide a foundation for building effective control strategies and tools. Several states, including California, Hawaii and Idaho are currently devising non-native animal invasion prevention programs and/or lists. The federal initiatives included in the bill could serve to unify and standardize these efforts and provide a critical framework to evaluate current and potential problems.

Specific Support for HR 6311 “the Non-Native Wildlife Invasion Prevention Act”

The South Florida Water Management District supports the underlying premise of the draft language. Establishing compulsory risk assessments and a “clean list” of approved species represents a needed and important step for regulating the flow of potentially harmful non-native wildlife into the United States. Our specific comments on the draft bill include:

- Inclusion of a “gray list” of provisionally-approved species. Such a list could limit trade in species for which inadequate information exists to call for their complete prohibition. The animals to watch list could be used to assess their

full importation risks. Requirements could mandate that these animals be imported and kept only under special containment. This action would allow fair commerce while not allowing unlimited importation of a potentially harmful species.

- The Non-Native Wildlife Invasion Prevention Fund, as proposed, is critical to the success of this initiative.
- The emergency rule provision, giving authority to temporarily place a species on the unapproved list, is another vital component of the draft legislation. This would prevent the establishment of potentially harmful animals while scientific and official processes proceed.
- The draft language correctly protects existing pets from being confiscated if that species is later prohibited from importation. This “grandfathering” clause should ease concerns of pet owners who legally purchased exotic animals.

Current Measures

In 2005, Florida’s Fish and Wildlife Conservation Commission created an invasive animals management section. One of their key recommendations led to a new Florida rule limiting commerce in “reptiles of concern” including the world’s five largest non-venomous snakes and the carnivorous Nile monitor. These animals were selected as most threatening because of their large size and extreme predatory natures. Now in force in Florida Administrative Code, the rule requires \$100 annual possession permits and they must be identified via implanted microchip. Prior to this action, however, these species were already present in Florida’s pet commerce and, to varying degrees, have been reported in Florida’s wilds. In fact, Burmese pythons are now thoroughly established in South Florida’s natural areas and already number from several thousands to more than 100,000. Uncertainty remains regarding their actual population and a comprehensive assessment of their numbers across the region would significantly help eradication. Currently, the Florida Fish and Wildlife Conservation Commission’s exotic animals section is engaged in serious management efforts against species present only in isolated areas and in small populations. Broader management efforts would benefit from federal engagement.

Introduction pathways – Florida’s pets on the loose

In Florida, the introduction of invasive pest animals has primarily been through the pet trade. Other pathways of introduction include overseas transport of ballast water which has introduced zebra and quagga mussels to North America. These Asian mussels imperil our aquatic ecosystems and clog commercial and public utility intakes and processes. Accidentally imported within cargo pallet wood, the Asian longhorn beetles now threatens North American hardwood trees. But, to date, Florida’s most threatening vertebrate pests have come to us via the pet trade.

Whether accidentally or intentionally released, when an animal succeeds in establishing a new population in South Florida the impacts may be broad and devastating or they may barely be detected. Better predictive methods would sufficiently gauge the risk posed by specific animals before they are regularly imported and bred as pets. Screening and risk assessment methods are imperfect, but must be developed. Several nations, including Australia and New Zealand, already have implemented pre-import screening and risk

analysis systems that proscribe import of potentially harmful animals. Further, new economics research indicates that proactive screening measures can be economically beneficial in the long run for nations that implement them. These programs may provide valuable guidelines and lesson learned in the control of exotic animals.

Building upon the successes of other nations, this legislation and related funding would enable us to better regulate imports and determine the appropriate levels of limitations. Practices can be developed without tremendous adverse impacts on the pet industry and yield savings to taxpayers and decreased threats to the environment.

Public education

Public education programs can be creative, such as the nationally-branded Habitattitude™ effort led by the Aquatic Nuisance Species Task Force. This program advises the public at pet shops never to release exotic aquatic fish and plants into any U.S. waters. Yet, releases continue regularly as evidenced by frequent appearances of new species in U.S. waters.

Sailfin catfish from South America appeared only within the past decade in Lake Okeechobee. Commonly sold as “plecostomus” as a fish tank “vacuum cleaner,” these fish dig deep burrows in sediments and potentially threaten the integrity of canal banks and flood protection levees. They are also overtaking areas of rocky lake bottom, depriving native fish of their preferred spawning sites. The ultimate impacts of the establishment of this species in South Florida are still unknown, but many thousands of the fish already inhabit our lakes and canals, disrupting commercial fishing and displacing natives.

The actions specified in this bill would strongly influence the public to recognize the risk inherent in releasing exotic pets into our natural areas and better support the effectiveness of programs such as Habitattitude™.

Public health concerns

Invasive vertebrate pests may also harbor other threatening organisms such as parasites and disease. The three-pound African pouch rat has become established on Grassy Key in the Florida Keys and serves as a vector for African monkey pox virus. The first human infections from this virus were reported in Africa in the 1970s, arising from contact with monkeys and rodents. In the U.S., this virus was first reported infecting humans in 2003 and was traced to contact with pet African pouch rats. Fortunately, monkey pox is rarely a serious disease for humans with symptoms similar to mild chicken pox or smallpox. But, this disease spread to our shores directly as a result of importation of the African pouch rat as pets. What other species will be imported carrying currently unknown diseases or parasites?

Innovations needed

There may be creative solutions that enable trade in some otherwise invasive species. For instance, Asian grass carp are legal for use in aquatic weed control in Florida only when the fish are certified as triply-chromosomed, sterile varieties created by treatments

of the eggs. Research is needed to identify how other species could be rendered unable to establish wild populations. Tropical species could be legal for sale only outside their climate tolerance range, only males of a species may be legal for sale, or sterile hybrids may be developed. It is simply too irresponsible and too dangerous to keep trading in pest organisms capable of unlimited spread when, with appropriate research, credible ways may be found to allow trade in some of these species.

Management case history: brown tree snake

The Australian brown tree snake made its way to the U.S. territory of Guam in the late 1940s, most likely as stowaway in airplane cargo. This relatively small, nocturnal snake quickly spread and has devastated the island's native bird, lizard and flying fox populations, resulting in numerous extirpations of species. Also, brown tree snakes routinely climb across power lines leading to outages as the lines short circuit. There is promise for management of brown tree snakes, but only after decades of environmental and economic losses. Development of management methods has taken decades as the biology and susceptibilities of this snake were researched. One current management method involves baiting the snakes with mice treated with toxic doses of acetaminophen, although serious challenges remain such as how to place such baits in vast areas of isolated forest.

Select invasive species in South Florida

South American apple snails

Several species of South American apple snail are established in South Florida waters. The largest of these is the island apple snail reaching tennis ball size and producing many times more eggs than the smaller, native Florida apple snail. In Asia, these voracious mollusks are known to strip rice fields and wetlands of vegetation. They are displacing our native Florida apple snail with sheer overwhelming numbers and reported predation upon the native snail. Apple snails are the sole food of the Federally-endangered Everglade snail kite. Lake Tohopekaliga, an 18,000-acre located in Central Florida, now harbors thousands of island apple snails. During recent years of drought, this lake has been a critical refuge for snail kites. Because the exotic snails are larger, heavier and stronger than the native snail young snail kites have difficulty lifting and opening them to extract their meat. As a result, many young kites are not surviving to maturity there. Also, Lake Munson in the Florida panhandle was historically heavily vegetated, yet today has no vegetation due to the snail's arrival and proliferation. Rice crops in South Florida and the vast wetlands of the Everglades may become fodder to this rapidly spreading, readily reproducing pest snail.

Monk parakeets

The South American monk parakeet is firmly established in South Florida, perhaps numbering as many as 150,000. To date, their numbers have doubled roughly every five years. Stable North American populations of the bird may also be found from Connecticut to Colorado. They breed rapidly and extensively damage grain, fruit and citrus crops in their native Argentina. As escaped pets in South Florida, they readily

establish breeding colonies and build large colonial nests, often choosing power poles and niches in power substations and transformers. The accumulated nest materials damage power transmission hardware with accumulated humidity and serve as sources of ignition. Significant crop damages seem inevitable, but have not yet been documented in Florida. They are outlawed in many states, yet thousands are still sold annually in others. Enacting this bill will provide a standardized, nationwide mechanism for limiting further incursions of this species.

Burmese python

Upfront prevention of the introduction of new pests will not only prevent damages to natural areas but would also preclude economic loss stemming from an injurious species' gaining economic value in the pet trade only to be regulated later. For instance, the Burmese python is a top predator that is known to prey upon more than twenty native Florida species. Notable among these are the federally-listed Key Largo wood rat, white tailed deer, American alligator, bobcat and numerous wading birds common to the Everglades. Our agency is deeply committed to preserving and restoring South Florida's environmental health and, unfortunately, the Everglades ecosystem is now home to these exotic snakes. Attempts to manage Burmese pythons divert taxpayers' funds from these other urgent primary restoration and protection tasks. Yet, failure to do so will leave this aggressive animal as a serious impediment to our Everglades restoration progress. This python also threatens agricultural interests as small livestock are also likely prey. In 2008, USGS published a climate tolerance model predicting that this snake will likely survive throughout most Southeastern states and westward across the southern reaches of the country to the Pacific.

Adverse experience already gained in Florida strongly indicates the need to regulate the importation and sale of this snake. The significant value of current sales of this snake would be affected if commerce in the species is regulated. Such economic loss could have been avoided if the Burmese python had earlier been identified as a serious potential pest and trade had focused on less threatening snakes.

Green iguana

Central American green iguanas already number in the hundreds of thousands in South Florida. They are herbivores and prefer riparian sites where they dig extensive burrows on slopes such as highway embankments, canal banks and flood protection levees. The resulting erosion threatens canals and levees critical for flood control and water management. Their burgeoning numbers in South Florida recently spurred Palm Beach County commissioners to petition the Florida Fish and Wildlife Conservation Commission to add them to the State list of regulated "Reptiles of Concern." They are sold for as little as \$5 in area pet stores.

Spiny-tailed iguana

South American spiny-tailed iguanas are also established in Florida and are known to occupy the burrows of the federally-threatened gopher tortoise. Further, the USDA Wildlife Services has confirmed that this lizard preys on juvenile gopher tortoises. This

is another aggressive predator threatening South Florida's environmental preservation and restoration goals.

Nile monitor

The African Nile monitor is now established in a 20-square-mile area around Cape Coral, Florida. This lizard grows to seven feet and is highly aquatic, climbs well and runs very quickly. It consumes a large variety of prey including the State-protected burrowing owl. Stomach content analyses also indicate that the Nile monitor is a voracious egg eater, raising serious alarm for many of Florida's threatened native animals that are egg-bearing and/or occupy burrows. Wildlife biologists consider the Nile monitor to be a serious threat to gopher tortoises, burrowing owls, Florida gopher frogs and other ground nesting species. According to the USFWS Law Enforcement Management Information System (LEMIS), there were more than 60,000 Nile monitors imported through Florida's ports between 2000 and 2004.

Conclusion

While the South Florida Water Management District and other agencies try to contain the documented damage and growing threat of existing invasive animals in Florida, the flow of potentially harmful exotic animals into the state continues. For example, nearly 1,000 venomous puff adders were imported through Florida's ports between 2000 and 2005 (LEMIS data). This African viper is common in its native range and is considered to be one of Africa's most dangerous snakes. The Oriental water dragon is another popular imported species with a potential for establishment in south Florida. Between 2000 and 2005, more than 210,000 Oriental water dragons were imported through Florida ports (LEMIS data). More effective tools are needed to accurately predict if either of these reptile species will become established in Florida. Our state appears to offer an agreeable climate for both species and their broad feeding preferences suggest they are likely to adapt readily to our subtropical setting. Rather than wait for the next Burmese python or zebra mussel to become established in the United States, a proactive approach such as the proposed legislation being discussed today is urgently needed to protect our environment, economy and quality of life -- not just in Florida but throughout the nation.

Citations

Pimentel, D., L. Lach, R. Zuniga, and D. Morrison. 2005. Update on the environmental and economic costs associated with alien-invasive species in the United States. *Ecological Economics* 52:273-288.

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