National Environmental Coalition on Invasive Species

Audubon Florida, Ecological Society of America
National Audubon Society
National Parks Conservation Association
National Wildlife Federation, Natural Areas Association
The Nature Conservancy, The Wildlife Society

July 24, 2014

Public Comments Processing
Attn: Docket No. FWS-R9-FHC-2008-0015
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
Arlington, Virginia 22203-1610
Submitted online at: www.regulations.gov

Dear Sir/Madam,

Re: Injurious Wildlife Species; Listing the Reticulated Python, Three Anaconda Species, and the Boa Constrictor as Injurious Reptiles; Proposed Rule

The eight above-listed organizations in the National Environmental Coalition on Invasive Species (NECIS) request that the Fish and Wildlife Service (FWS) issue a final regulation listing the reticulated python, the DeSchauensee's anaconda, the green anaconda, the Beni anaconda and the boa constrictor as injurious under the Lacey Act.

On March 12, 2010, the FWS issued a proposed rule to list nine large constrictor snakes as injurious under the Lacey Act.[1] Despite the fact that reptile experts with the U.S. Geological Survey concluded that all nine species presented a "high" or "medium" risk of becoming invasive,[2] on January 23, 2012, the FWS issued a final rule stating that only four of those nine species would be listed as injurious under the Lacey Act: Burmese pythons, yellow anacondas, and northern and southern African pythons.[3] In that 2012 notice the FWS stated the remaining five species of snakes were still being considered. Of those snakes not included in the final rule, three are currently found in the U.S. pet trade—boa constrictors, reticulated pythons, and to a lesser extent, green anacondas.

[1] 75 Fed. Reg. 11,808 (Mar. 12, 2010)
[2] R.N. Reed and G.H. Rodda, Giant constrictors: biological and management profiles and an establishment risk assessment for nine large species of pythons, anacondas, and the boa constrictor: U.S. Geological Survey Open-File Report 2009–1202 (2009) (USGS)
[3] 77 Fed. Reg. 3,330 (January 23, 2012)

NECIS submitted detailed comments in support of the nine proposed snake listings more than four years ago (May 10, 2010). The points raised in this comment supplement, but do not repeat, our 2010 comments. NECIS and other groups also sent a detailed letter supporting listing the five remaining species to President Obama and then-Secretary of the Interior Salazar (Mar. 7, 2013); most of that letter is incorporated herein.

Current science demonstrates that the issuance of a final rule listing the five remaining snake species as injurious is essential to adequately protect the interests of wildlife as well as human safety:

- USGS concluded that the overall risk was either high or medium for these five species because they all share a large number of traits that promote invasiveness or impede population control.[4]
- A 2012 published study revealed that rates of establishment for reptiles are significantly higher than previously thought. In the past it was commonly assumed that only approximately 10 percent of introduced species establish wild populations successfully; this study showed that the danger of establishment for reptiles is actually above 40 percent.[5]
- Boa constrictors have established more introduced populations in the United States than any other constrictor species.[6] They are already established in parts of Florida and Puerto Rico and there are also threats to other areas, including Hawaii, where loose boa constrictors are being found with greater frequency.
- Research has linked large constrictor snakes with significant declines in vertebrate populations. Recent studies indicate that not only are large constrictor snakes a threat to rare endemic species, including the threatened and endangered species which they are known to consume, but also that their population-level impact can be substantial.[7] For instance, one study, Dorcas et al. 2012, suggests that after a decade of colonization, pythons in the Everglades have caused significant declines - as much as 99 percent of populations of the area's small and medium sized mammals. In 2013, a study was published in *Biological Invasions* documenting establishment of a major new harmful invasion of boa constrictors in western Puerto Rico.[8] An accurate wild population estimate is not available, but the large number of captured snakes (>150) led the authors of the paper to conclude it was "quite high". Their recommended actions included to "prevent introduction of new genetic material". This is the first proven establishment of a large constrictor snake population outside south Florida; it clearly shows the invasion threat is not limited to south Florida or to the Burmese python.
- Invading *B. constrictor* in Puerto Rico may severely impact native species, in particular Endangered Species Act (ESA) listed species. At immediate potential risk from snake predations are these ESA-listed amphibians: Coquí llanero (*Eleutherodactylus*

[4] USGS, supra note 2
[5] Rodrigo et.al., Global assessment of establishment success for amphibian and reptile invaders, 39(7) Wildlife Research 637, 640 (2012)
[6] USGS, supra note 2 at 158
[7] See Dorcas, et al., Severe mammal declines coincide with proliferation of invasive Burmese pythons in Everglades National Park, 109(7) PNAS 2418, 2418 (2012); Snow et.al., Birds Consumed by the Invasive Burmese Python in Everglades National Park, Florida, USA, 123(1) The Wilson Journal of Ornithology 126, 128 (2011).
[8] Reynolds et al. 2013. Genetic analysis of a novel invasion of Puerto Rico by an exotic constricting snake. Biological Invasions 15:953-959

juanariveroi), Golden coquí (*Eleutherodactylus jasper*), and Puerto Rican crested toad (*Peltrophryne lemur*). In addition, experts have identified the extremely rare, native Puerto Rican boa (*Epicrates inornatus*) as at risk from *B. constrictor* via competition, predation and genetic swamping. The above examples are not exhaustive; other threatened and endangered birds and mammals also may be at risk. As has been demonstrated in Everglades National Park, the island of Guam and elsewhere, invasions of top-predator snakes can decimate native species. The ESA adds an additional duty on the Service, beyond the Lacey Act, to prevent further invasions.

- According to a comprehensive Humane Society report, there have been more than 445 dangerous incidents involving large constrictor snakes held in captivity that include attacks, intentional releases, and escapes from poorly secured cages in 45 states and the District of Columbia.[9] Among them are 12 people who were killed in large constrictor snake-related incidents in the United States since 1990—17 since 1978. Four infants sleeping in their cribs, as well as three other children have been squeezed to death by large constrictor snakes. Children and pets have also been attacked while playing in their yards.

To reiterate: Boa constrictors have already been released or escaped and invaded at least twice in this country and are "high" risk per the USGS report. That risk includes potential harm to populations of ESA-listed species. Reticulated pythons were "moderate" risk invaders per the USGS. However, according to the report by the Humane Society on Incidents, they also are known as particularly "vicious," prone to unprovoked attacks and in their native ranges are reported as "man eaters" more so than any other species of snake. Reticulated pythons have killed more infants in this country than any other species, including an 11 month old boy, a 21 month old boy and a 7 month old girl.

The other three excluded species were the anacondas. Beyond their risk factors, it is frankly inconceivable that anyone would believe the United States needs huge anacondas as freely-available, unregulated pets. At least two of the three species proposed for listing (the DeSchauensee's and Beni anacondas) are not even currently in the commercial trade.

It has been more than five years since the agency started considering the listing of these five snakes and the necessity for the rule has not diminished. As these species present imminent threats to wildlife and human safety, we urge the Administration to take action and immediately list the reticulated python, the DeSchauensee's anaconda, the green anaconda, the Beni anaconda and the boa constrictor as injurious under the Lacey Act.

Please see the additional discussion of the economic issues pertinent to this listing in the **Economic Impacts Appendix**, below, and the attached **Exhibit A** - **December 12, 2011, letter of The Nature Conservancy Economist Timm Kroeger, PhD**. For additional information regarding this comment please contact NECIS's consultant: Peter T. Jenkins, Center for Invasive Species Prevention, email: jenkinsbiopolicy@gmail.com; tel: 301.500.4383.

[9] Humane Society of the United States. *Constrictor Snake Incidents*. Unpublished report (2013). Online at: www.humanesociety.org/assets/pdfs/wildlife/captive/captive-constrictor-snake-incidents.pdf

Sincerely,

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Economic Impacts Appendix

As was detailed clearly in the 2010 NECIS public comment, economic cost/benefit considerations cannot lawfully determine the Secretary's decisions under the Lacey Act criteria in 42 USC sec. 18(a), for listing "injurious species," which are limited to whether the species are:

> *injurious to human beings, to the interests of agriculture, horticulture, forestry, or to wildlife or the wildlife resources of the United States.*

While economic cost/benefit consideration is an inappropriate reason for the Administration to exclude the 5 species under consideration from the prior listing rule, NECIS is submitting this Appendix to provide counterarguments to the materials addressing economic harm to their industry submitted by the U.S. Association of Reptile Keepers (USARK), both in previous public comment periods and directly to officials in the Office of Management and Budget (OMB). In any event, several studies show that prohibiting risky invasives species is economically beneficial to the nation as a whole.[10]

[10] E.g., Springborn, M., C.M. Romagosa and R.P. Keller. 2011. The value of nonindigenous species risk assessment in international trade. Ecological Economics doi:10.1016/j.ecolecon.2011.06.016; Jenkins, P.T. 2012. Invasive animals and wildlife pathogens in the United States: the economic case for more risk assessments and regulation. Biological Invasions DOI: 10.1007/s10530-012-0296-8

Further, USARK's 2011 economic analysis was unreliable.[11] Georgetown Economic Services (GES), which prepared the USARK "reptile regulation study," was a subsidiary of the Washington law and lobbying firm that represented USARK in its opposition to the snakes listing rule, Kelly Drye & Warren. Economists have criticized the analysis as grossly inflated and biased. Its findings of high losses are contrary to analysis by the Fish and Wildlife Service, the Congressional Budget Office and Timm Kroeger, PhD., an economist with The Nature Conservancy (a NECIS member). According to Dr. Kroeger's statement (attached hereto as Exhibit A), the GES analysis has "serious flaws" because it:

(1) *Ignores likely substitution effects on the part of both the reptile industry and reptile owners, which leads to a likely large upward bias in the resulting estimates of negative economic impacts from the proposed rule.*

(2) *Focuses only on the negative impacts on one small segment of the reptile industry (that is, breeders and importers of these nine large constrictor snakes) and snake owners that may result from the implementation of the proposed rule, while completely ignoring the positive impacts the rule would have in terms of benefits for native wildlife, including threatened and endangered species, avoided control and eradication expenditures by government agencies, and human safety. Such a one-sided analysis cannot inform sensible public policy, which should consider both the costs and benefits of a regulation.*

(3) *Uses an inappropriate discount rate that by itself leads to a substantial (close to 20 percent) overstating of the projected future costs of the rule. This, together with the unreasonable expectation that no substitution effects will occur on the industry or consumer side, introduces a further upward bias in the study's cost estimates that makes the latter even more doubtful.*

(4) *Incorrectly applies the term "economic losses" when referring to what in fact are reductions in revenues for this small segment of the reptile industry. This is not merely a problem of semantics that is likely to mislead many readers of the report. Rather, economic losses – or net reductions in business assets - from reduced sales are always smaller than revenue reductions. By basing its analysis on revenues rather than losses expected to result from the proposed rule but referring to those revenue reductions as losses, the report overstates the actual losses industry may suffer as a result of the rule. This, combined with the likely dramatic overestimation of those expected revenue reductions for the reasons listed in comments (1) and (3) above, further exaggerates any negative impact the rule might have on the reptile industry.*

Additional points related to the USARK/GES report:

- It relies extensively on unreferenced data, i.e., "fact" assertions for which no source whatsoever is identified. It relies heavily on data for which the only source is an anonymous "personal communication" with unnamed people in the reptile industry. In

[11] Collis, A.H., and R.N. Fenili. 2011. The Modern U.S. Reptile Industry. Report for USARK by Georgetown Economic Services. 74 pp

short, the data sources cannot be checked. It frequently relies on unexplained calculations and includes several admissions that the information used for the study was inadequate.

- At least 710 different reptile species are in the import trade.[12] If the proposed snakes are listed, then the reptile importers and breeders face losing only up to five species from being imported – less than 1%. There are numerous safer, non-invasive, non-dangerous species they can substitute for those lost five species, only three of which are actually imported. The pet industry is highly adaptable to changing trends; a history that the USARK/GES study ignores.
- The importers and breeders of those three commercial species facing possible prohibition appear to number perhaps a few dozen small businesses, at most. And those businesses generally import and breed other species, too. Thus, they are unlikely to fail due to losing trade in these three species; rather, they will instead adjust their operations.
- The USARK/GES report gave no consideration of environmental benefits in the native range countries from reduced harvesting pressure, even though it is documented that some of these species are not sustainably harvested in some countries. The Service must consider those impacts.
- Future human deaths caused by these constrictor snakes species are predictable based on historical patterns and these snakes' inherent behavior. These are obviously high-impact tragedies and costs, as the Humane Society has documented.[13] Human deaths certainly must be considered as being far more important than speculative, biased claims of lost snake sales by USARK/GES.
- OMB recognizes a concept known as the Value of Statistical Life, or VSL. Currently, a "reasonable average" for the VSL is $5.5 to $7.5 million per life. By this admittedly cold measure, reducing the risks these snakes pose to humans, will provide a substantial economic benefit, while preventing real tragedies to our citizens and families that cannot be economically measured.

Unfortunately, the analysis of the economics of listing the snakes by USARK/GES, failed to consider the benefits in terms of human lives saved or in terms of environmental damage and public lands management and control costs avoided. When those savings are taken into account the national-level benefits of the snake listings are even stronger. The exaggerated economic interests of a few breeders and importers, who have successfully "externalized" the costs to date onto the public and who do not pay any of the government control expenses for their escaped or released snakes, which are footed by the taxpayers, should not block the nation from those benefits.

Moreover, the recent economic report conducted for the Humane Society of the United States (HSUS) by a third party economics firm, Blue Sky Consulting Group, submitted in comments by HSUS, shows that the listing of the five snake species would not have a drastic effect on small businesses that deal in the sale of reptiles. The report showed these large constrictors make

[12] Defenders of Wildlife. 2007. *Broken Screens - The Regulation of Live Animal Imports in the United States.* Report by Defenders of Wildlife, Washington, DC, p. 46

[13] HSUS supra note 9

up only a very small part of the sales of a much larger industry and their listing would result in consumers simply reallocating their money toward other items such as non-listed snakes – causing little or no net change in economic activity. Again, hundreds of less risky snake and reptile species are vailable to pet purchasers that would not be impacted by this listing.

Finally, the costly, multi-year, economic analysis commissioned by the Service that accompanied the Rule's Federal Register notice in 2012, and addressed the five species at issue now, was a more than adequate analysis of the impacts of their proposed listing. Any suggestion that the weakly-supported, biased, USARK/GES report somehow nullified the Service's prior compliance with its cost/benefit analysis requirements would be unfounded.

Attachment – Exhibit A - December 12, 2011, letter of The Nature Conservancy Economist Timm Kroeger, PhD.