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# THE FAILED REGULATORY SYSTEM FOR ANIMAL IMPORTS INTO THE UNITED STATES – AND HOW TO FIX IT

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**Abstract:** This paper provides a synopsis of the Defenders of Wildlife report entitled *Broken Screens: The Regulation of Live Animal Imports in the United States*, released in August 2007. That report assessed the complex federal system for regulating live wild animal imports as applied to the 2,241 non-native species that were identified in United States Fish and Wildlife Service records as being imported between 2000 and 2004, inclusive. The report describes the “coarse risk screening” conducted for those species by searching the scientific literature and United States and international databases. If one or more reliable sources indicated a species was known or predicted to be invasive, pose a disease risk, or otherwise be harmful, in the United States or elsewhere, the species was labeled “potentially risky.” Due to the hundreds of potentially risky species being imported with no-risk screening by federal officials, the report concludes the United States’ regulatory system provides a low level of protection to the nation. Absent major policy reforms, some of the potentially risky, imported animals will escape or be released and form invasive wild populations or cause disease outbreaks. Eleven policy recommendations are offered to reduce these risks to more tolerable levels.

**Key Words:** animals, disease, federal regulations, imports, invasive species, laws, non-native, risk, screening.

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## INTRODUCTION

The United States (US) is the world’s largest importer of live wild animals, receiving hundreds of millions each year, most destined for the pet and aquarium trade, some for zoos, research labs, and specialty food markets. The declared wholesale value of these imports from 2000 to 2004 was more than one-half billion dollars, but this lucrative import industry is a risky business. Inevitably, some of the animals escape or, no longer wanted, are let go. Unchecked by natural controls such as predators and pathogens found in their native ranges, these species can spread and cause serious environmental, health, and economic problems. Left unchecked by the federal agencies with regulatory authority over this trade, potentially risky species continually enter the US.

Remarkably, none of these federal agencies do comprehensive risk screening of these species before they are allowed into the US. Moreover, the species in trade are often not adequately documented in public records. Like a set of “broken screens,” the complex federal system for regulating live, wild animal imports is ineffective at keeping out harmful or potentially harmful, species. Absent

major policy reforms, some of the potentially risky non-native animals imported into this country will escape or be released and establish invasive wild populations or cause disease outbreaks.

Recognizing the failings of the regulatory system and the lack of data necessary to understand and fix the broken screens at the national borders, Defenders of Wildlife (herein after, Defenders) prepared an unprecedented study to: (1) describe the full scope of the trade -- what non-native species are being imported and in what cumulative quantities, (2) assess the risks of the trade -- the impacts these animals are having or could have on native species, U.S. lands and waters, and on human health, (3) examine the broken screens -- the federal system for regulating this trade, and detail their weaknesses and inconsistencies, and (4) make policy recommendations based on these findings.

The Defenders’ study, *Broken Screens: The Regulation of Live Animal Imports in the United States*, was released in August, 2007 (Defenders of Wildlife 2007). The report and extensive supporting information are available online at: [www.defenders.org/animalimports](http://www.defenders.org/animalimports). This paper is a synopsis of that fully-referenced report.

## SCOPE AND RISKS OF THE LIVE WILD ANIMAL TRADE

Defenders reviewed summaries of the 2000-2004 records kept by the US Fish and Wildlife Service (FWS) agents at ports of entry and gathered information never before collated, including species names for the 2,241 species of non-native, wild animals legally imported to the US. Working with the Consortium for Conservation Medicine (CCM) and the World Conservation Union (IUCN) Invasive Species Specialist Group (ISSG), Defenders coarsely screened all these species for potential risks by searching the scientific literature and online databases and canvassing recognized invasive species experts. If one or more of these reliable sources indicated a species was known or predicted to be invasive or harmful in the US or elsewhere, the species was labeled potentially risky.

According to the readily accessible scientific evidence gathered by Defenders and the ISSG, 302 of the 2,241 animal species imported to the US, 13 percent, were classified as potentially risky (Table 1). Sixteen percent of vertebrates were classified as potentially risky – mostly birds, fish and mammals. Although these species primarily presented as invasive risk, human and non-livestock disease risks also were prevalent. Only 3 percent of the identified invertebrates were tagged potentially risky, but this group of animals is relatively unstudied compared to vertebrates.

## IMPACTS ON ENVIRONMENT AND HEALTH

Invasive, non-native species can eat, out-compete, parasitize, and transmit diseases to native wildlife. They also can alter the physical environment, modifying or destroying habitat important to native wildlife. Particularly on islands and in isolated lakes and springs, invaders have done extensive environmental damage. In Hawaii, for example, the egg-eating Indian mongoose (*Herpestes javanicus*) has driven rare native birds toward extinction. Indeed, invasive species are a commonly cited contributing factor in listings under the federal Endangered Species Act. Hundreds of invasive species, including at least 26 considered by experts to be of “high impact,” are already established in the US. Several more, including Burmese pythons (*Python molarus bivittatus*) in the Florida Everglades, red lionfish (*Pterois volitans*) in the western Atlantic and suckermouth catfish (*Hypostomus plecostomus*) in the waters of the South, are gaining a foothold. Many other likely invaders lurk among the animals currently in trade. Imported animals can also carry infectious pathogens and harmful parasites.

Although the US is the top market for live animal imports, the federal government does not require most imported animals (with the exception of commercially-imported birds, livestock, and a

**Table 1.** Proportion of identified non-native animal species imported into the US with annotations for potential invasiveness or disease risk, 2000-2004.

<b>Taxonomic Group</b>	<b>Total Imported Non-native Species</b>	<b>Non-native Species with Risk Annotations</b>	<b>Proportion of Non-native Species with Risk Annotations</b>
Vertebrates			
Amphibians	172	13	8 %
Birds	559	129	23 %
Fish	121	36	30 %
Mammals	263	61	23 %
Reptiles	710	52	7 %
Total vertebrates	1,825	291	16 %
Total all invertebrates	416	11	3 %
Grand total	2,241 species	302 species	13 %

**Table 2.** Infectious agents introduced to the US via imports of live, wild animals, 1996-2006.

Infectious Agent	Most Recent Documentation	Imported Host	Known Carrier Hosts	Infected Animals	Status in US
Exotic Newcastle's Disease	1999	Various avian species	Various avian species	Poultry	Localized, recurring outbreaks
Heartwater	2000	African tortoise tick	lizards, snakes, and tortoises	Domestic livestock, white-tailed deer	Present
Malignant Catarrhal Fever	2002	Ankoli cattle	Wildebeest	Ruminant species	Eradicated
Monkeypox Virus	2003	Gambian giant pouched rats	Gambian giant pouched rats	Humans, prairie dogs	Eradicated
Viral Hemorrhagic Disease of Rabbits	2005	European rabbit	European Rabbit	European rabbit	Recurring localized outbreaks
Chytridiomycosis	2006	American bullfrog	American bullfrog, African clawed frog	Amphibians	Present
Ranavirus	2006	American bullfrog	American bullfrog	Amphibians	Present

few other animals) to undergo a quarantine period or to have proof of veterinary clearance from their country of origin. This relaxed approach leaves the US open to “pathogen pollution,” the human-driven introduction of various infectious agents to new locations (Table 2). In the current globalized marketplace, shipping and selling live animals with minimal regulation magnifies the risks to public health, animal health, and the economy. Examples include the 2003-2004 outbreak of SARS (severe acute respiratory syndrome) traced to the sprawling, unsanitary live animal markets of southern China, and monkeypox transmitted by prairie dogs (*Cynomys ludovicianus*) sold as pets that contracted it from Gambian giant pouched rats (*Cricetomys gambianus*) imported from Africa by a US pet distributor.

Now, a particularly virulent strain of avian influenza (AI), which has turned up in wild-caught birds imported into Europe, has the potential to spread to the US. This strain of AI poses a global pandemic threat should the virus evolve the ability to spread more efficiently among humans. Millions of people could die and worldwide economic damage could be \$200 billion or more. The US import trade in live animals that are potential AI carriers, if not better regulated, could be a major factor in a future US outbreak.

Global warming is likely to intensify the threats from harmful species invasions and diseases. Tropical species will acclimate better and be able to survive winters that once killed them with cold temperatures. New invaders may include hot climate vectors of West Nile virus and other destructive human and animal pathogens.

### **BROKEN SCREENS: THE SYSTEM FOR REGULATING WILD ANIMAL IMPORTS**

The US legal system for live animal imports generally gives authority to several agencies:

- FWS, under the Lacey Act to prohibit specified “injurious” animals;
- The U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS), under the Animal Health Protection Act and Plant Protection Act, allowing, but not requiring, APHIS to regulate any animal that is a pest or disease carrier threatening to farmed livestock or any plant;
- The Department of Health and Human Service’s Centers for Disease Control and Prevention (CDC), under the Public Health Service Act, allowing, but not requiring, CDC to regulate any animal posing a human disease risk.

The Lacey Act, a law enacted in 1900 that is in desperate need of an overhaul, is based on a listing approach that is excruciatingly slow, offers minimal coverage and is repeatedly criticized as outdated and ineffective by experts. The interagency National Invasive Species Council proposed a plan in 2001 to fill some of the import screening gaps, but has failed to follow through on it. APHIS's approach to protecting plants and domesticated livestock from harmful pests is stronger and more expedient than FWS's Lacey Act authority, but it focuses on just a narrow segment of risks posed by the animal import trade. CDC's statutory authority is broad, but is wielded reactively and minimally. For example, after the 2003 monkeypox outbreak caused by imported Gambian rats, CDC claimed it would be more aggressive in protecting public health, but it has not been.

In summary, FWS and CDC regulatory laws currently provide the nation a low level of protection from potentially invasive or "injurious" species and from species that pose infectious disease risks to humans, non-livestock animals or both.

## **MENDING THE SCREENS: POLICY RECOMMENDATIONS**

Defenders urges immediate implementation of 11 policy changes to mend the broken screens at the US national borders and vastly reduce the risks of the live animal import trade.

1. Pass new national legislation that clearly directs FWS, CDC and all other federal agencies to follow a more risk-averse national standard for wild animal imports. Defenders recommends the following language should be the standard: "Federal agencies shall only allow imports and interstate commerce in non-native animals that have been assessed by a responsible federal official and determined to pose a low likelihood of causing harm to the environment, the economy, public health or animal or plant health in the United States."

2. Amend the Lacey Act to direct FWS to conduct detailed pre-import screening of live, wild animals and give FWS authority to provisionally prohibit any species for which adequate scientific information is not available.

3. Promptly and fully analyze the risks of continuing to import the 302 species identified by Defenders and the ISSG as potentially risky. (Defenders of Wildlife 2007).

4. Aggressively enforce the existing federal regulation (50 CFR 14.53) that full species identification must accompany every animal shipment, and make that information available to the public.

5. Immediately address the threat of AI by rigidly enforcing the 30-day quarantine required for all bird imports and testing every bird.

6. Coordinate and strengthen the federal government's role in overseeing and regulating health risks associated with live animal imports.

7. Appropriate more funds for research on diseases transmitted by imported animals.

8. Implement the post-import recommendations adopted by the National Association of State Public Health Veterinarians and the Council of State and Territorial Epidemiologists (at [www.cste.org/ps/2003pdfs/03-id-13%20%20final.pdf](http://www.cste.org/ps/2003pdfs/03-id-13%20%20final.pdf)).

9. Increase funding and staffing for FWS port inspectors, the country's first line of protection from illegal and diseased animal imports.

10. Implement an application fee system to pay for the bulk of the cost of pre-import screening of live wild animals.

11. Include the animal import industry and other stakeholders in the development of policy solutions.

Harmful new invasions and threatening diseases must be stopped from entering the US. The federal government could readily enforce stricter controls because there are only a few dozen major shipping ports, airports and border crossings in the US where legal animal imports enter. The 11 recommendations presented here, supported by the new information on the animal import trade assembled by Defenders, CCM and the ISSG, show the way to fixing the nation's broken screens.

## **LITERATURE CITED**

DEFENDERS OF WILDLIFE. 2007. Broken screens: the regulation of live animal imports in the United States. Report by Defenders of Wildlife, Washington, D.C., USA. (Fully-referenced report and extensive background data and related information are available online at: [www.defenders.org/animalimports](http://www.defenders.org/animalimports)).