

# **TESTIMONY OF**

## **National Environmental Coalition on Invasive Species**

American Lands, Defenders of Wildlife, Environmental Defense,  
Environmental Law Institute, Great Lakes United, International Center for  
Technology Assessment, National Wildlife Federation, National Wildlife  
Refuge Association, The Nature Conservancy

Before

The Senate Environment and Public Works Committee  
Hearing on the Importation of Exotic Species and the Impact on Public  
Health and Safety

**July 17, 2003**

Mr. Chairman and members of the Committee, my name is Gabriela Chavarria, Policy Director for Wildlife Conservation at the National Wildlife Federation. I would like to thank you for the opportunity to address you today on the important issue of the importation of exotic species and their impact on public health and safety. I am testifying on behalf of nine members of the National Environmental Coalition on Invasive Species (NECIS), which is a group of environmental organizations working to promote the prevention, control and eradication of invasive alien species, particularly through sound policy solutions at the state, federal and international levels. Together, our organizations have nearly six million individual members and supporters, and span a broad range of experience including: management and protection of private preserves; work with community groups, hunters, anglers and labor unions; and scientific, economic, and legal expertise on the issue of alien invasive species.

Invasions by exotic plants, animals, and pathogens into non-native environments pose one of the most significant, but least addressed, threats to human health, agriculture and our natural ecosystems. Monkey pox, SARS and West Nile virus are the new buzzwords of public health, as communicable diseases increasingly leap hosts from animals to humans. In the United States, in 2002 alone, West Nile virus claimed more than 60 lives among constituencies represented by this committee and sickened more than a 1,000 people. Deliberate animal imports (legal or illegal) are thought to be one of the most likely ways that WNV got to New York City in 1999.

For agriculture, current estimates put the cost of exotic livestock diseases at \$10 billion per year, and the total cost of agricultural pests, including invasive insects, weeds and livestock diseases, amounts to \$90 billion (Pimentel 2000). Invasive species also represent a primary threat to approximately 50% of endangered species in the U.S., and are well established in more than half of the U.S. National Wildlife Refuges and National Parks. In the past weeks alone, media attention has focused on invasive rats decimating

auklet and other sea bird populations in the Aleutian islands, and the impacts of the mute swan on the Chesapeake Bay. These merely add to the long list of other exotic invaders, including kudzu in the southeast, Dutch Elm disease, the Asian longhorned beetle, the Northern snakehead, Asian carp, the zebra mussel and nutria.

While all invasive species are of central concern for environmental, agricultural and economic reasons, our testimony today will concentrate on intentional imports of species and the related aspects of public health and safety.

### **Invasive Species and Concerns for Public Health and Safety**

As noted above, the import of alien and invasive species can present severe threats to human and environmental health. The recent spate of animal related diseases has highlighted the increasing opportunity for viral diseases to jump from animals to humans thereby presenting significant concerns for public health safety. SARS, monkey pox, West Nile virus and AIDS are but a few examples of such communicable diseases. Additionally, imported reptiles can convey salmonella, wild parrots may carry psittacosis a form of Chlamydia, and rodents are infamous for carrying a range of diseases.

One particularly telling example is the class of paramyxoviruses, fifteen of which have been discovered over the last four decades. This class of viruses, which is related to measles and mumps, as well as Exotic Newcastle disease (a particularly deadly virus affecting poultry) uses a wide range of animal hosts, including rats, bats, pigs, dolphins, seals, snakes and horses, and have jumped from animal species to animal species as well as to humans. In 1999, in Malaysia, an outbreak of the Nipah virus, listed as a potential viral bioagent by the U.S. Centers for Disease Control and Prevention caused more than a hundred deaths – almost half the population of the local village. The virus was communicated from bats to pigs to humans. Outbreaks of paramyxoviruses have also occurred in recent years in Singapore and Australia, and scientists are investigating SARS as a potential member of that class of disease. The wide range of potential hosts, combined with the speed and rapidity at which SARS spread, reveal the significant threat posed by imports of animal host species as well as by and to the people who handle these animals.

Other vectors for disease include ticks, entering the country on imported turtles or other animals, which caused a rash of fatal bovine heart disease in the late 1990s. Medical research indicates that such heart disease could feasibly be communicated to humans as well. There are over 100 known arboviruses, including West Nile virus and St. Louis encephalitis, which are carried by an array of mammals and birds. Finally, with more than 2,000 species, rodents are infamous as carriers of disease, including monkey pox, hantavirus, murine typhus, and pneumonic and bubonic plagues. In many cases, there are known diseases, such as four European varieties of the pathogenic hantavirus, which have yet to arrive.

In addition to being transferred from exotic plant and animal trade, pathogens and disease may also be transferred directly from ballast water discharges. For example, the Great Lakes Panel on Aquatic Nuisance Species notes the potential for communication of

ballast water-mediated pathogens and diseases, such as cholera and cryptosporidium. Additionally, the outbreak of disease within animal populations could pose public safety concerns. The recent invasion of the Great Lakes by the zebra mussel, quagga mussel and round goby is now being linked to the rash of Botulism outbreaks in fish and bird populations in Lake Erie. The public hazard associated with these outbreaks needs to be clarified, particularly for those species which are commonly consumed by humans.

Aside from the viral threats to human health, many imported invasive species present more direct threats to personal health and safety. Exotic carnivores and primates can be a physical threat to families, particularly children, in ill-conceived attempts at domestication. Such concerns don't even touch upon the widespread environmental damage to native habitats and high mortality levels of invasive species that are transported legally and illegally across borders.

### **Inadequacy of Present Measures**

While there have been major advances in modern medicine and hygiene, such progress has not been sufficient to prevent outbreaks of viral diseases, particularly in a globalized era of international travel, intensive livestock production, and increasing population density and growth. Significant efforts have been made to develop sanitary and phytosanitary regulations to protect our livestock and agriculture, yet similar protections are lacking to protect humans from the range of threats presented by the import of exotic animals.

Compounding the tremendous problem of a largely unregulated trade in invasive species, there is a particular lack of knowledge regarding the biology of many invasive species, particularly how they will affect a new environment. While pre-screening has been used in some cases, there are still difficulties in evaluating species for the complete range of environmental, human and animal health threats they may pose. Finally, there is no guarantee that end users – those who purchase exotic animals – have sufficient knowledge to address animal or human health issues. There are numerous examples – from the Northern snakehead to larger exotic cats – of animal owners discarding or letting these animals loose with a wide range of potentially adverse impacts.

### **Recommendations**

Congress needs to focus regulatory efforts on areas where the larger risks to human health, economies and the environment outweigh the potential social and/or economic advantages. Such tactical decisions need to be taken proactively as prevention is the best means for combating widespread human health and environmental impacts. Significant attention has recently been paid to unintentional or accidental aquatic introductions, such as the National Aquatic Invasive Species Act whose passage could provide valuable guidance on the issue before us. However, similar legislative attention needs to be

devoted to intentional imports and introductions of exotic animal species into the U.S. More specific recommendations for Congressional action on the issue include:

- Imposing import restrictions where risks outweigh benefits. As highlighted above, import restrictions are needed to deal with imports of exotic species that present significant threats to human health or the environment far beyond their ornamental value or other social benefits. The burden of proof that a species does not pose significant threat to human health or the environment must be the responsibility of the importer, and must be proven before importation. Prevention should be the focus, particularly in areas of high risk or potential scientific uncertainty about the impacts of a particular species. For example, this could include restrictions on new imports of species known to host a virus or disease that is closely related to a known human pathogen. Also, determinations of harm should be made for invasive species already permitted in the U.S.
- Controlling key pathways for introduction. Prevention measures should focus on key pathways for the introduction of harmful exotic animals, as opposed to the more laborious species by species approach. Pathways can include various modes of transportation as well as imported animals, live food products and plants.
- Developing screening approaches. For areas and pathways where imports are permitted, authorities should develop supplementary screening approaches to evaluate potential adverse impacts to human health and the environment. However, developing effective screening protocols requires significant investment in research, because the qualities of invasiveness and the ability of diseases to jump species are difficult to predict. Further research is necessary regarding the environmental and health impacts of invasive species, and decisions to allow imports should be based on thorough scientific assessments.
- Coordinating control efforts domestically. Any new programs or legislation to control the import of exotic species must be placed within the context of existing regulations, whether it is for protecting agriculture and plant health or for preventing trade in endangered species.
- Coordinating control measures regionally. Focusing on controlling alien species at U.S. borders by themselves is inadequate to control trade and introductions. While pursuing domestic measures to prevent introductions, the U.S. also needs to engage with Canada and Mexico to ensure a consistent and coordinated regional approach to regulating and managing intentional introductions within North America.
- Advocating strong international rules. Congress and U.S. representatives need to promote rules within the negotiation and implementation of regional and international trade and environmental agreements that will ensure appropriate sanitary levels and means to protect human health and the environment.

- Ensuring financial responsibility for impacts. Appropriate mechanisms and incentives need to be put in place to ensure that those importing and/or housing species with potential adverse impacts assume financial and legal responsibility for adverse impacts. Otherwise, public agencies and the taxpayer ultimately bear the burden.

We appreciate the opportunity to appear before this Committee to discuss the issue of the importation of exotic species and their impact on public health and safety.