House Subcommittee on Insular Affairs, Oceans and Wildlife

Legislative Hearing on H.R. 669,

the "Nonnative Wildlife Invasion Prevention Act"

Thursday, April 23rd, 2009 at 10:00 a.m.

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Managing the import of wildlife to Israel to prevent invasive species

SUMMARY

- Israel is one of the few countries in the world which has a risk assessment program in place for evaluating wildlife imported for the pet industry and general public, to determine if they could become invasive species.
- Although it is small country, Israel, like the USA, has a wide variety of ecosystems and habitats, and the program has been successful in preventing any new invasives.
- The importer pays the application fee for a permit from the Israel Nature and Parks Authority (INPA). The high application fee pays for the risk assessment, which is done by the INPA. A biologist collects data on the species, especially: its natural history, ecological requirements, (food, temperature, habitat), and any history of invasion elsewhere.
- These data are used by a committee of biologists to determine the risk category as High, Medium, or Low Risk. This is done by consensus without a formal scoring system.
- Only Low risk species are allowed for the general public and the pet industry. Medium Risk species are allowed to mini-zoos and licensed collectors and breeders. High Risk species are allowed only to licensed zoos and research institutions.
- Species not yet assessed are not allowed into Israel for the general public. Once assessed, a species is listed either in the White List of approved Low-risk species, or the Black List of species not allowed to the general public.
- Species already in the country may be re-assessed, and their risk category is subject to change at any time.
- In a new project, the INPA is working with Israeli wildlife importers and major pet shop owners in order to find attractive species on the world market that pose a low risk that could be imported in lieu of species on the Black List. This new cooperative initiative has been welcomed by the pet industry and greatly reduced feelings of frustration from having attractive but harmful species banned.

INTRODUCTION

Israel is a very small country - ca. 8,000 mi², which is about the size of New Jersey. Despite this, Israel sits at the junction of three continents, so like the USA, it has a very wide diversity of ecological zones and bio-geographical habitats.

Since Israel's independence in 1948, twenty-two species of exotic terrestrial vertebrates have become established in Israel (Hatzofe and Nemtzov, 2004): two mammals, eighteen birds, and two reptiles (no amphibians). The majority of these are escapees from commercial breeders or public zoos (only four cases are from the pet industry), which is not the case in many other countries (Burgiel et al. 2006).

The government's wildlife and nature conservation agency, the Israel Nature and Parks Authority (INPA), works to prevent any future invasions of wildlife, using controls at borders and ports of entry, enforcement of conditions for keeping exotic wildlife by breeders and zoos, public education, fast response for capturing escaped animals, and a risk assessment program (below) for new imports.

The responsibility for aquatic species, for invertebrates and for all plants is in the hands of a separate government agency. Current efforts are underway to unify the efforts by these agencies in a new National Invasive Species Project.

ISRAEL'S RISK ASSESSMENT PROGRAM

After common mynahs (*Acridotheres tristis*) became established in Israel in the late 1990's, the INPA established a new system for risk assessments for import of vertebrates for the pet industry, which was based initially on an Australian system (Bomford, 1991, 2003), but is much simplified. The Australian program has recently been updated (Bomford, 2006, 2008) to include a better climate-matching model and an updated scoring system.

Israeli law requires a valid INPA import permit for all wildlife coming into the country. Israeli law places the onus upon the government to prove how importation may pose a substantial risk to the country's natural or protected resources; the importer does not have to prove that such trade is risk-free.

Israel's Risk Assessment Procedure

1. Application

Importers of wildlife for the pet trade submit requests to INPA for permits to import live wildlife. The importer pays an application fee for each species, and this covers the cost of conducting the risk assessment. The applicant need only provide some basic data on the species (such as the scientific name and country of origin).

2. Initial Risk Assessment Report

INPA ecologists conduct a formal risk assessment on each species by gathering detailed biological information on the species and its ecological requirements in nature (Nemtzov, 2006). The task is often assigned to a freelance biologist who is paid to do the actual literature search and to write the initial Risk Assessment Report based on a set of Risk Assessment Questions, as follows:

a. Could the species survive and breed in Israel's climate?
b. Does the species have what to eat all year round in Israel?

c. Has this species (or a close relative) invaded successfully elsewhere?
d. Could the species hybridize with any Israeli species?
e. Could this species pose a threat to agriculture, human health, or other species or ecosystems in Israel?
f. Could this species provide any benefit to humans or nature if it became established in the wild in Israel?
g. Would it be feasible to eradicate it if it were to become established in the wild?

3. Initial Risk Assessment Category

The answers to the Risk Assessment Questions above are not scored or weighted, as is done in other countries using the scoring method of Smallwood & Salmon (1992), or the Australian scoring system (Bomford, 2008). Rather the information in the Initial Risk Assessment Report is used by the INPA to assign an Initial Risk Assessment Category as High, Medium or Low Risk.

Experience has taught that the two most important factors in predicting risk are climate matching and a previous record of invasiveness elsewhere (see: Hayes & Barry, 2008, De Poorter et al., 2009). Therefore, species that have previously invaded habitats similar to those in Israel, especially Mediterranean ecosystems (see e.g. Kark & Sol, 2005) are immediately classified as having High Risk.

Only species with Low Risk may be imported and sold as pets and kept by the public. Medium Risk species may only be kept in mini-zoos, and by breeders or collectors. High Risk species may be imported and held only at a special research or conservation institutions (such as universities and licensed zoos). In addition Israel's trade policy allows the import of only captive-bred individuals so this limits the higher risk associated with wild-caught wildlife (Carrete & Tella, 2008).

Since beginning the program in the mid-1990's, there have been no new cases of invasive vertebrates in Israel.

4. Referees and Final Risk Category

The Initial Risk Assessment Report and Initial Risk Assessment Category are evaluated by a committee of at least three ecologists. The final risk category (Low, Medium, or High Risk) is decided upon by consensus, and if there is disagreement the species is assigned for further research in order to clarify the points of conjecture until consensus is reached.

The INPA ecologists then prepare a summary of the Risk Assessment in the form of a written scientific opinion. The species' final risk category and the scientific opinion are then posted on the INPA web site.

5. Amendments to the Risk Category Assignment

Once a year, a public hearing is held on the internet so that comments may be submitted in writing to the INPA by the public about the scientific opinions and the Black and White Lists (see below). The comments are checked for accuracy and after consultation with experts (or with the person submitting the comment), the species' risk category may be retained or amended (sometimes stricter and sometimes more lenient). To date, none of the scientific opinions or decisions has been challenged in court. Many of the comments are from collectors or importers seeking a more a lenient categorization, but <u>most</u> comments have been

from scientists or wildlife proponents encouraging the INPA to restrict the import of exotic species.

BLACK LIST, WHITE LIST OR BOTH?

Some countries publish a White List of species which may be imported, while others publish a Black List of those that are not allowed. There are advantages and disadvantages to each approach, but the first method was deemed preferable in Israel, i.e., to initially disallow all species, such that only those that have been checked and approved would appear on a White List of species allowed. Having only a Black List of disallowed species implies that all others species are permitted, which would have lead to a variety of problems.

Israel works according to the White List system mentioned above, where all species are initially disallowed for the public unless they have been assessed for risk and have been designated as Low Risk. In other words, only Low Risk species appear on Israel's White List, which includes all the species permitted for import and trade to the general public. In Israel's case, a Black List is also published which includes those species that have already undergone a risk assessment and have been classified as Medium or High Risk, and are therefore deemed not suitable for the pet trade or for possession by the public.

PROACTIVE RISK ASSESSMENT

According to reports from pet store owners, in most cases where potential customers enter a pet store, they have not determined in advance which specific species they want to buy. In general, if a customer comes to the store and intends to buy a parrot or a snake, he will almost always end up buying one from among the species that the store has available. It seems reasonable that if the store offers for sale only species carrying a Low Risk of becoming invasive, it won't matter to most customers that High Risk species aren't being offered. (This is not the case for collectors or breeders, but they are a small segment of the wildlife trade industry in Israel).

Wildlife importers generally seek to import attractive species that are readily available on the world market, and they would be satisfied importing Low Risk species if the marketability were no different from that of High Risk species. The INPA has therefore begun working together with Israeli wildlife importers and major pet shop owners, in order to find on the world market attractive species that pose Low Risk, in order for them to import these in lieu of ones on the Black List.

This new cooperative initiative has been welcomed by the pet industry and greatly reduced feelings of frustration from having attractive species banned.

CONCLUSION

The Israeli risk assessment program was initially based on one used in Australia. In order to make the program useable in Israel with a small staff of biologists and limited resources for conducting such assessments, the program had to be simplified. This was done by eliminating the scoring system and relying on scientific opinion based on data. The resulting program links the level of risk with a determination who or what institutes may possess the species.

By having an expensive application fee, importers only apply for permits for those species they really want, and the fee then covers the cost of conducting the risk assessment. Having

the risk assessment conducted by the government and not the applicant, prevents bias and increases fairness.

In conclusion, Israel has now a useable, flexible, scientifically sound, and fully transparent risk assessment system that reduces greatly the risk of invasive species from the pet industry.

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