

Summary Brief

Health Risks from New Companion Animals Report

Background

In recent years, there has been an unprecedented boom in the keeping of wild animals as pets, or “new companion animals” as they are called in France. Many of these animals originate from other parts of the world and some are protected species. The ever-growing trend in wild animals as pets raises concerns regarding human and animal health, animal welfare and threats to biodiversity.

Over centuries, certain local species have been “domesticated” and become quite cosmopolitan, such as dogs, cats, ferrets, parakeets and white mice. Yet today, new species are found on the market of which little is known in terms of husbandry and needs, breeding and health risks. Indeed, some people call truly wild animals their pets such as: raccoons (*Procyon lotor*), skunks (*Mephitis* spp.), sugar gliders (*Petaurus breviceps*), Barbary macaques (*Macaca sylvanus*), Egyptian fruit bat (*Rousettus aegyptiacus*), and reptiles such as the green iguana (*Iguana iguana*).

Zoonotic Diseases

This phenomenon raises in particular the issue of zoonoses and animal diseases that imported wild animals may transmit to human and animal populations in the country of import. 60% of Emerging Infectious Diseases are zoonotic with over 70% of those originating in wildlife presenting an increasing and very significant threat to global health¹. A number of zoonoses that can be conveyed by wild animals are severe including rabies, the plague, salmonellosis and Ebola.

Scale of Wildlife Trade & Globalisation

Species are being introduced to new parts of the world at an unprecedented rate due to the increased volume, speed and intensity of trade, transport and tourism. The transportation conditions can facilitate the spread of disease as species are co-mingled, transported under stressed and confined conditions in which immune systems may be compromised. The duration of transport may be shorter than the incubation period so that signs of disease may not be detected until after the transport period once the animal arrives at pet shop or in a home. As a top importer of live wild animals, the EU should pay serious attention to potential health risks².

This report is a literature review of zoonotic diseases transmitted by wild animals to humans with examples below.



Primates – Due to the close genetic relationship to humans, primates present one of the higher risk species groups for zoonoses. Zoonoses presenting risks are rabies, Herpes B virus, Monkeypox, tuberculosis, digestive bacteria (salmonella, shigella), zoonoses transmitted through bites (pasteurellosis) and various parasites (amoeba, whipworms, roundworms). Barbary macaques have been given rabies vaccines intended for cats and dogs resulting in accidental contamination with rabies.



Rodents – This group is the most widespread wild pet in Europe. The most frequent zoonotic risks include benign skin infections (dermatophytosis (mycosis infection), scabies, pulicosis (dermatitis caused by flea)), leptospirosis and contamination with bacterial agents present in the intestinal tract when the owner changes the litter (*Yersinia* spp., *Salmonella* spp.) More rarely, wild rodents can transmit severe diseases such as the plague. Burrowing species (Marmots, ground squirrels, gerbils) represent the highest risk. Prairie dogs in the U.S. transmitted monkeypox to humans after being co-housed with infected rodents from Africa at a pet shop.



Carnivores – Even though carnivores are less frequently imported than monkeys or reptiles, some wild carnivores are kept by private people, including skunks, raccoons and fennec foxes. The major risk associated with these species is rabies. At the time the epidemic of severe acute respiratory syndrome (SARS) was detected, some Chinese breeders were trying to tame Masked Palm Civet (*Paguma larvata*) which is a likely link between the wild reservoirs of the coronavirus, which causes SARS in humans.



Marsupials – Some marsupials such as the sugar glider (*Petaurus breviceps*) and the Common Brushtail Possum (*Trichosurus vulpecula*) have recently been sold in Europe as pets. The latter has become the reservoir of bovine tuberculosis caused by *Mycobacterium bovis* in New Zealand, where it was introduced in 1840. There is a real risk that this species could establish a new tuberculosis strain in Europe.



Bats – Bats are known to function as a reservoir for rabies among other viruses. Fruit bats in Australia and Malaysia have been linked to severe zoonoses of the Hendra virus and Nipah virus, respectively, which caused human fatalities. An Egyptian fruit bat sold in a French pet shop later died of rabies, resulting in the vaccination of 130 people and the euthanasia of all animals it had come in contact with in France.



Reptiles – Salmonellosis is the main zoonosis transmitted by reptiles. It is estimated that 90% of captive reptiles are healthy carriers of salmonella. Reptiles can also transmit tuberculosis (*Mycobacterium marinum*), as well as some parasitosis. Children, immunocompromised individuals and pregnant women can be sensitive to such diseases. Cases of salmonellosis have been reported in individuals, including infants, who have not had direct contact with reptiles but live in a household where the animal is kept as a pet.

Wild pets can also spread diseases to native and domestic animals

Most of the pathogenic agents causing these zoonoses can also be transmitted to other animals. This is for instance the case with rabies (primates, carnivores, chiroptera), tuberculosis (all mammals and reptiles), leptospirosis (rodents), but also Q-Fever (reptiles, primates) and brucellosis (all mammals).

Recommendations

The probability of introducing a severe zoonosis by an exotic animal may be low, but the danger that it poses to public health requires vigilance. Furthermore, it seems clear that some animal species do pose greater health risks than others. Consequently, Eurogroup for Animals offers the following recommendations to address the health risks associated with the trade in wild animals.

Overall goal – reduce the trade in wild animals & establish measures to prevent health risks

- **Inform prospective pet owners of risks & special needs of wild animals** – The education of prospective and current pet owners on the health and ecological risks and the special welfare needs of wild animals is vital. Impulsive purchases in pet shops and by poorly informed tourists illustrate that few prospective owners consider the difficulties associated with the proper care and keeping of animals in humane conditions.
- **Protect the welfare of animals and humans** – Member States can set restrictions on the types of animals which can be kept as pets, such as prohibiting the keeping of wild animals. Belgium established a list of 42 mammal species which may be kept based on criteria covering health, safety and ecological risks, along with the capacity to keep the animal in humane conditions while meeting its biological needs, and available knowledge on veterinary care and husbandry of the species.
- **Assess species in trade for health & ecological risks** – A targeted effort to assess species in trade for health and ecological risks should be undertaken. The epidemiology of diseases in areas foreign to the species may be poorly understood making it difficult for health professionals to offer a diagnosis. Certain groups may pose greater risks than others such as primates due to their genetic similarity to humans.
- **Establish sanitary measures** – Based on species risk assessments sanitary measures should be established. For imported species, the best solution to minimise risks would be to put in place sampling procedures, detection methods and reference diagnostic tests for the main zoonoses. The creation of procedures to take care of clinically suspect animals would allow quicker and more effective action in case of emergency. Another possibility would be to limit or prohibit the imports of certain species similar to the trade restrictions on wild-caught birds.

Access the report here: <http://eurogroupforanimals.org/files/publications/downloads/Zoonotic-risk-report.pdf>



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¹ Jones et al. (2008), "Global Trends in Emerging Infectious Diseases", *Nature*, Vol.451, p.990-994.

² Engler, M and Parry-Jones, R (2007), "Opportunity or threat: The role of the European Union in Global Wildlife Trade", *TRAFFIC Europe*, Brussels, Belgium.