

EarthTrends: Featured Topic

Title: **Endangered Species: Traded to Death**
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Warning: trade kills. Many people don't realize when they buy a product made of an animal's hide or body, or buy a shell or piece of coral as a souvenir while on vacation, that their purchase could be contributing to the loss of endangered species. Although habitat destruction and fragmentation are the biggest threats to biodiversity on a global scale, trade in wildlife and wildlife products also seriously harms many individual species.

Estimates of the size of legal and illegal trade in wildlife and wildlife products vary widely, but by any measure, it's clear that trade is booming. Legal trade in wildlife and wildlife products (excluding timber and fisheries) has grown from perhaps a \$3 or 4 billion business in the late 1980s to at least \$10 billion today, and involves more than 350 million plants and animals (WRI 1988:5; Hoover 2001a; TRAFFIC 1999). Another \$5-8 billion in illegal trade is estimated to occur every year (Sain-Ley-Berry 2000; Lewis 1995).

The sources of traded species and their uses vary. Live animals are captured in native habitats and sold as pets or for research, or are killed

and their parts sold for medicines, food, clothing, and accessories. A majority of some animals, like primates and live lizards, are raised in captivity specifically for the international market. Wild plants are commonly traded for use in botanical and pharmaceutical medicines. The value of medicinal plant exports in 1995 from approximately 100 countries was \$880 million (FAO 1999:36).

Trading Fair: The CITES Convention

The lethal toll of the species trade—both legal and illegal—has raised international concern for decades. This concern crystallized in 1973 with the signing of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The 154 nations that have signed the CITES treaty have agreed to regulate trade in about 30,000 species (5,000 animal species and 25,000 plant species) for whom biological and trade data show a threat (CITES 2001a; CITES 2001b; CITES 2001c). Of these, trade is completely banned for more than 800 already-threatened species (those listed in

Appendix I of CITES). Trade in another 29,000 species is strictly limited to prevent them from becoming endangered (those listed in Appendix II) (Hoover 2001b).

Under the treaty, species trade is regulated through a system of import, export, and re-export permits (Porter and Brown 1996:82; TRAFFIC 1999). Member countries of CITES enforce the treaty by imposing trade sanctions against violators. The countries that are not parties to CITES include many of the former Soviet republics and some Eastern European and Arab countries (WRI 2000:250-251; CITES 2001b).

Nations that are major sources of wildlife trade typically support CITES to help protect their resources from poachers and illegal traders. As the nature-based tourism industry continues to grow, some countries may come to perceive the protection that CITES affords as even more valuable; for example, for Kenya a single elephant is estimated to generate \$1 million in tourist revenue in its lifetime (EIA 1999). Importing countries also generally support CITES because it protects the interests

of their legitimate dealers (Porter and Brown 1996:82).

CITES has widely been deemed a successful international treaty—a conservation tool whose importance grows as the world economy globalizes and trade volumes increase. But the treaty has shortcomings, including the inability to control the behavior of nonparticipating nations and enforcement problems. Another potential loophole in CITES is the "reservations" that parties can take at the time of signing. Reservations are exemptions that countries can arrogate to themselves with regard to individual species—even ones listed in Appendix 1—and so continue its trade. There are currently 97 species listed as threatened or endangered in CITES for which one or more countries hold reservations (CITES 2001d). Iceland, Japan, Peru, and Norway, for example, all hold reservations on minke whales, which allows them to engage in international trade of minke whale products without violating the treaty.

The Pressures of Legal Trade

Legal trade doesn't always equal safe trade; problems can arise when trade volumes begin to exceed a species' reproductive capacity. For example, commercial demand for the bark of *Prunus africana*, used to produce an anticancer drug, has drastically reduced

populations of the tree in Africa (FAO 1999:36). The collection and trade of many such wild plants used for medicines is relatively unregulated. Another example of a legally traded species threatened by growing trade volumes is sturgeon. High demand for caviar has driven up sturgeon prices and, accordingly, increased legal and illegal trade and overfishing (Lazaroff 2000). In the Caspian Sea, where most sturgeon are fished, the amount of fish caught per year fell from 20,000 tons in the late 1970s to 1,000 tons in the late 1990s (Lazaroff 2000).

Sometimes parties to CITES resist "listing" species in the treaty despite data that suggests that the species is heavily traded and in decline.

This has been the case with big-leaf mahogany, prized for its durable and attractive wood. Proposals to regulate the mahogany trade under the CITES treaty have been defeated by narrow margins in part because the timber industry wants to preserve its lucrative mahogany markets in North America and Europe (Sizer et al. 1999:12; TRAFFIC 2000).

Monitoring trade is essential to species survival. With adequate warning that a population's reproductive capacities are dipping in the wild, countries can opt to regulate trade volumes, or launch or increase complementary captive breeding or cultivation programs. For example, monitoring of American

Exotic Pets Are Big Business

Figure 1: Top Exporters and Importers of Live Lizards, 1997 (legal trade only)

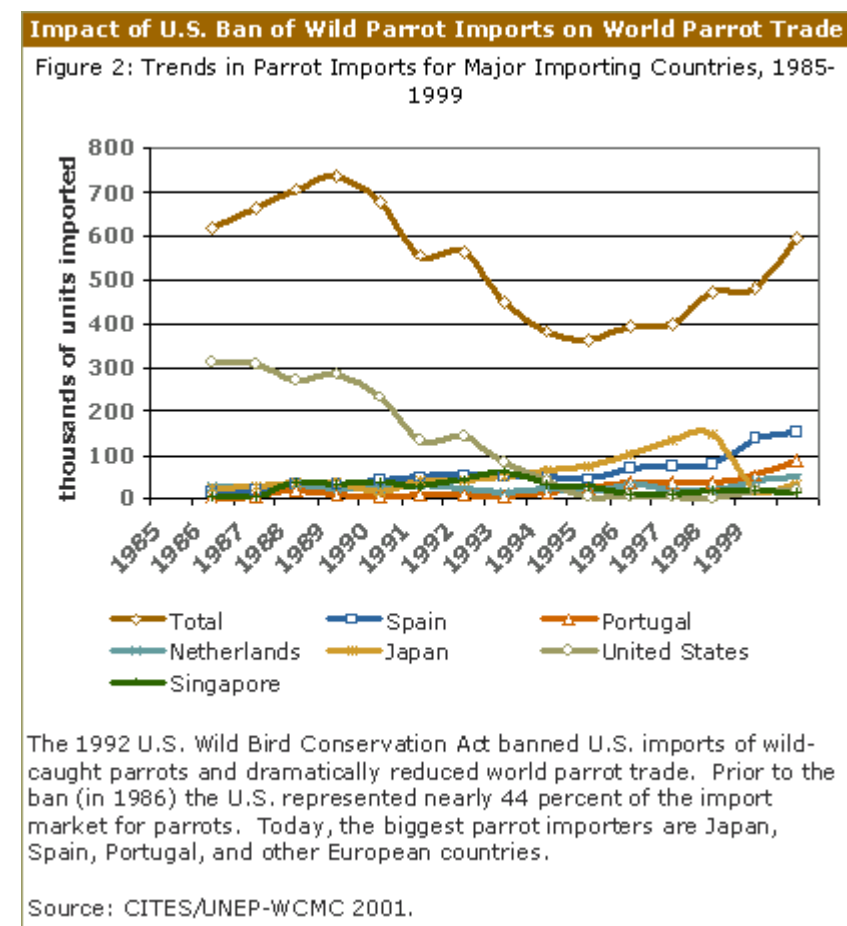
Top Exporters of Lizards	Number of Lizards Exported	Top Importers of Lizards	Number of Lizards Imported
Columbia	340,840	United States	640,793
El Salvador	295,723	Spain	50,654
Madagascar	83,029	Korea	45,448
Guatemala	38,154	Japan	39,255
Tanzania	30,834	Belgium	24,399
Togo	26,356	Germany	23,809
Ghana	17,809	Netherlands	20,164
Suriname	16,844	France	16,326
Nicaragua	16,255	United Kingdom	13,870

The United States, where exotic pets are popular, dominates lizard imports. Trade data for lizards includes those raised in captivity and those caught in the wild. The majority of live lizards traded are raised in captivity, but the relative number of captive-bred to live-caught lizards in trade is unknown.

Source: WRI 2000: Table B1.4, pp.250-251.

Ginseng (*Panax quinquefolius*)—commonly harvested from the wild in Canada and the United States and exported to East Asia where it is used widely in traditional medicine—eventually showed the need for trade protection. A 1996 study of harvest and trade levels of American Ginseng found that demand had increased rapidly, but the amount of wild American Ginseng harvested and exported had remained relatively constant. This indicated that the United States and Canada were protecting wild populations reasonably well (Robbins 1998). However, further study in 1999 alerted the U.S. Fish and Wildlife Service that it was time to institute a new policy in 18 states that would limit Ginseng exports to wild-harvested roots no less than five years old. Cultivated roots, on the other hand, can be harvested at any age (Robbins 1999).

CITES trade data also helps highlight where a plant or animal may be under the greatest pressure from legal and illegal trade, and the leverage points for controlling that pressure. For example, demand for exotic pets in the United States fuels the reptile trade (see Figure 1). Similarly, Europe and the United States share responsibility for most of the world trade in live apes, monkeys, and other primates (see Figure 2). What that data does not reveal, however, is what percent of the trade consists of species raised in



captivity rather than captured in the wild. More than 90 percent of the U.S. imports of live lizards, for example, consists of green iguanas bred for the pet trade on farms in Central and South America (Hoover 2001b). Of course, even breeding programs aren't a fail-safe solution to species survival in the exporting countries; without adequate wild stocks of reptiles, captive breeding stocks may decline (Hoover 1998). Asia is another significant importer of wildlife products, usually for traditional medicines or food. For example, Japan imports large numbers of whales and sea turtles, while freshwater turtles,

seahorses, tigers, and rhinoceros are popular in China (Hoover 2001b). Knowing these pressure points helps focus efforts to stop illegal trade, monitor potential damage from legal trade, and research efficient conservation and protection methods.

Trading Foul: Burgeoning Illegal Trade

Illegal trade statistics are scarce, but some limited information is available for certain species. For example, Asian countries, such as Japan, Hong Kong, Taiwan, and Singapore, are the largest consumers of products made

Wanted: Primates in North America, Japan, and Europe

Figure 3: Top Exporters and Importers of Live Primates, 1997 (legal trade only)

Top Exporters of Live Primates	Number of Live Primates Exported	Top Importers of Live Primates	Number of Live Primates Imported
Mauritius	6,488	United States	9,861
China	5,966	Japan	3,556
Indonesia	3,955	France	3,332
Philippines	2,809	United Kingdom	2,424
Viet Nam	819	Russian Federation	2,144
Barbados	641	Canada	1,016
Guyana	543	Germany	812
Kenya	436	Belgium	670
Peru	300	Netherlands	621
South Africa	148	Italy	412

North America and Europe comprise 42% and 41% of the world's imports of live primates, respectively. Data for primates include both primates raised in captivity and caught in the wild, but the majority of live primates traded are raised in captivity. Mauritius, China, Indonesia, and the Philippines are the world's top primate-breeding centers.

Source: WRI 1990: Table 20.3, pp. 304-305; WRI 2000: Table BI.4, pp. 250-251.

from illegally traded rhinoceros and tiger parts and ivory (Lewis 1995; EIA 2000). The United States is the world's largest market for wildlife and wildlife products and imports an estimated \$300 million worth of illegal wildlife every year (Lewis 1995; Cleava and Fisher 1998).

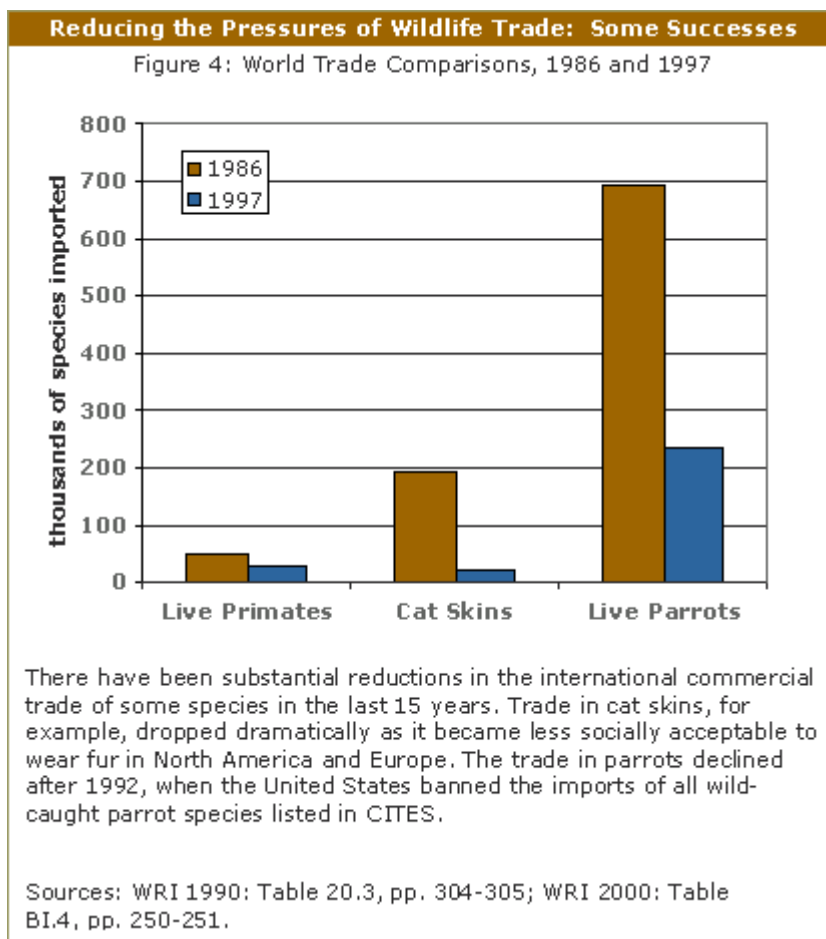
For seriously endangered and highly valued species like tigers, rhinoceros, and Asian bears, illegal trade has been overwhelmingly the biggest threat to their survival over the last 20 years (Motavalli 1999:12; Hoover 2001b). Many illegally traded species have body parts that are prized for traditional oriental medicine practices. These include tiger bones, rhinoceros horns, and

bear gall bladders. A bear gall bladder can sell for as much as \$15,000 (Lewis 1995), and a poacher can reap \$5,500 for a tiger (Motavalli and Bogo 1999:32; WPSI 1997). The Hyacinth macaw from the Amazon basin and the Australian palm cockatoo can sell for up to \$8,000 and \$10,000, respectively (Motavalli and Bogo 1999:32-33). The rare Tibetan antelope is similarly endangered because of the appeal of its fur, which is used to make scarves called "shahtoosh." It takes three or four pelts to make one scarf that can fetch up to \$8,000 in China, the United States, or Europe (Sain-Ley-Berry 2000; Ahmed and Nambiar 1999).

Efforts to Minimize Trade's Pressure on Biodiversity

Trade bans may seem an obvious way to protect species, but there is the danger that a ban may make the species more valuable and appealing to poachers. A grim cycle can ensue: the more endangered an animal or plant becomes, the higher its black market price, and the more poaching and illegal trade occurs. At the same time, a ban can drive trade underground, where it can't be monitored.

But for some species, bans have proven effective. In 1992, the United States—one of the biggest importers of parrots for pets—enacted national legislation (the Wild Bird Conservation Act) which banned imports of all wild-caught threatened parrots listed in CITES. As a result, parrot imports into the United States fell dramatically (see Figure 3). Recent research suggests that the Wild Bird Conservation Act may also have contributed to reduced poaching rates for 10 banned parrot species; in 8 years poaching rates fell from 50 to 20 percent (Wright et al. 2001:715). Similarly, a 1989 worldwide ban on ivory trade by CITES signatory countries nearly eliminated elephant poaching and brought a sharp decline in the price of ivory worldwide. The price of an average 8 kg elephant tusk fell from about \$3,800 before the ivory ban to just \$35 (EIA 1999). In Tanzania, for example, 10,000 elephants



were killed per year prior to the ban, but afterward poachers killed fewer than 100 annually (EIA 1999).

Many experts believe that the only way to significantly curb illegal wildlife trade or to minimize the growing

pressures of legal trade is to decrease or eliminate the demand for wildlife products. This is especially difficult for wildlife products that are harvested for traditional medicines that have been used in some cultures for generations, but researchers are working on synthetic and traditional alternatives for tiger and rhinoceros parts. Some NGOs and governments try to educate citizens about species trade issues and the need for conservation; some have launched campaigns to discourage the purchase of souvenirs made from wildlife parts or the purchase of fur, and have had significant success (see Figure 4).

Improved law enforcement and serious repercussions for poaching also help deter wildlife trade. In China, where panda smugglers get a life prison sentence, panda poaching levels have plunged (Motavalli and Bogo 1999:33).

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