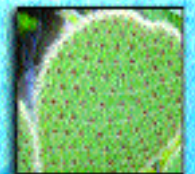


# ILLEGAL TRADE IN WILDLIFE

A North American Perspective



Commission for Environmental  
Cooperation of North America

North American Wildlife  
Enforcement Group

The Commission for Environmental Cooperation (CEC) was established under the North American Agreement on Environmental Cooperation (NAAEC) to address environmental issues in North America from a continental perspective, with a particular focus on those arising in the context of liberalized trade.

This publication was prepared by the Secretariat of the CEC. The views contained herein do not necessarily reflect the views of the CEC, or the governments of Canada, Mexico or the United States of America.

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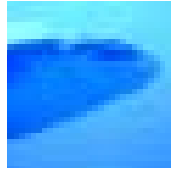
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## CONTENTS



Acronyms	2
Preface	3
1. Introduction	4
2. The International Wildlife Trade	6
3. The Illegal Global Trade in Wildlife	8
4. A Global Response	13
5. Enforcement Cooperation Efforts in North America	17
6. NAWEG and the Need for North American Cooperation	21



## ACRONYMS

<b>CEC</b>	Commission for Environmental Cooperation
<b>CITES</b>	Convention on International Trade in Endangered Species of Wild Fauna and Flora
<b>EWC</b>	Enforcement Working Group
<b>Interpol</b>	International Criminal Police Organization
<b>IUCN</b>	World Conservation Union
<b>NAAEC</b>	North American Agreement on Environmental Cooperation
<b>NAFTA</b>	North American Free Trade Agreement
<b>NAWEG</b>	North American Wildlife Enforcement Group
<b>NWFP</b>	nonwood forest product
<b>UNEP</b>	United Nations Environment Programme
<b>USFWS</b>	US Fish and Wildlife Service
<b>WWF</b>	World Wildlife Fund

## PREFACE

In North America, we share a rich environmental heritage that includes air, oceans and rivers, mountains and forests. Together, these elements form the basis of a complex network of ecosystems that sustains our livelihoods and well-being. If these ecosystems are to continue to be a source of life and prosperity, they must be protected. Doing so is a responsibility shared by Canada, Mexico and the United States.

The Commission for Environmental Cooperation of North America (CEC) is an international organization created by Canada, Mexico and the United States under the North American Agreement on Environmental Cooperation (NAAEC) to address regional environmental concerns, help prevent potential trade and environmental conflicts, and promote the effective enforcement of environmental law. The Agreement complements the environmental provisions of the North American Free Trade Agreement (NAFTA).

The work of the North American Wildlife Enforcement Group (NAWEG) has been an important component of the CEC's work. The smuggling of rare and endangered plants and animals is a significant problem in North America. It is imperative that the countries of North America enhance cooperative efforts to monitor and control legal wildlife trade and to stem illegal trade. This booklet outlines some of the reasons why this cooperation is necessary and why groups such as the NAWEG are important vehicles in combating the illegal trade in wildlife.

This booklet was prepared by the Secretariat of the CEC under the Law and Policy Program. The Secretariat wishes to thank TRAFFIC North America which contributed significantly to the development of this booklet. TRAFFIC is a nongovernmental organization whose mission is to ensure that trade in wild plants and animals is not a threat to the conservation of nature. The Secretariat also wishes to thank the many employees of Environment Canada, the United States Fish and Wildlife Service, and Mexico's Ministry of the Environment and Natural Resources whose reviews and comments helped move this booklet to completion.

# 1. INTRODUCTION

The illegal trade in wildlife is a big problem worldwide. Domestic and international black markets in a broad range of wildlife commodities cover the globe. From animal parts such as tiger bone and bear gallbladders for the medicinal trade, to live reptiles and birds for the pet trade, caviar for the gourmet food market, rare furs and wools for the apparel industry, elephant ivory for the ornamental trade, and orchids and cacti for the garden trade, smugglers illegally traffic a staggering variety of wild species and associated products, often with devastating consequences for the species involved.

North America is a central player in the international wildlife market as both a consumer and supplier of wildlife products. Canada, Mexico and the United States not only engage in direct cross-border commerce in various endemic North American species, but also serve as trade conduits for wildlife products from other regions and continents. In particular, Mexico, with its rich diversity, represents a highly potential exporter of wildlife and genetic resources. The increase in trade among the three countries since the passage in 1994 of the North American Free Trade Agreement (NAFTA) requires closer cooperation between the countries to both manage the legal wildlife trade and combat the illegal trade.

The wildlife trade in Canada, Mexico and the United States is regulated by national laws and through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), a treaty signed by all three countries. With the passage of NAFTA, the three countries recognized the need for cross-border coordination of common environmental issues in North America. This recognition led in the 1990s to the creation of the trilateral Commission for Environmental Cooperation (CEC).

As part of this effort for closer cross-border coordination, wildlife enforcement officials in Canada, Mexico and the United States also formed the North American Wildlife Enforcement Group (NAWEG) to address the specific issues revolving around wildlife trade and enforcement.

The chapters that follow describe a North American perspective on the illegal international wildlife trade and the role of CITES, the CEC and NAWEG in combating this trade. The overview in Chapters 2 and 3 of the global trade—legal and illegal—in wild fauna and flora is followed by a closer look in Chapter 4 at the global response to the illegal trade, especially the subset of species and wildlife products whose international trade is governed by CITES. Chapter 5 then summarizes the steps each of the three countries has taken to meet its CITES obligations and the cooperative steps the countries have taken together through the CEC and NAWEG. Chapter 6 concludes by describing the gaps, obstacles and challenges to improving the implementation of CITES in North America, and especially the role of NAWEG in that effort.





## Convention on International Trade in Endangered Species of Wild Fauna and Flora

### CITES

The Convention on International Trade in Endangered Species of Wild Fauna and Flora grew out of a resolution adopted in 1963 at a meeting of members of the World Conservation Union. The text of the convention was finally agreed at a meeting of representatives of 80 countries in Washington, DC, on 3 March 1973, and on 1 July 1975, CITES entered in force.

CITES is an international agreement to which states (countries) adhere voluntarily. Those that have agreed to be bound by the convention (that is, they "joined" CITES) are known as parties. Although CITES is legally binding on the parties—in other words, they have to implement the convention—it does not take the place of national laws. Rather, it provides a framework to be respected by each party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

Not one species protected by CITES has become extinct as a result of trade since the convention entered into force, and, for many years, CITES has been among the largest conservation agreements in existence, with now 167 parties.



### CEC

The Commission for Environmental Cooperation is an international organization created by Canada, Mexico and the United States under the North American Agreement on Environmental Cooperation (NAAEC). The CEC was established to address regional environmental concerns, to help prevent potential trade and environmental conflicts, and to promote the effective enforcement of environmental law. The agreement complements the environmental provisions of the North American Free Trade Agreement (NAFTA).

In 1995, the CEC established an Enforcement Cooperation Program to provide a forum for regional cooperation and to exchange expertise, build enforcement capacity and explore alternative approaches to effective enforcement. The Council of the CEC then constituted a North American Working Group on Environmental Enforcement and Compliance Cooperation (called the Enforcement Working Group or EWG) to serve as this forum for regional cooperation. The North American Wildlife Enforcement Group (NAWEG) is a member of the EWG.



### NAWEG

The North American Wildlife Enforcement Group, created in 1995, is a network of senior wildlife enforcement officials from Canada, Mexico and the United States. It seeks to improve North America's capacity to enforce laws regulating the sustainable use and conservation of its wildlife, particularly with respect to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In doing so, it works with other cooperative enforcement and compliance programs in collaboration with the Commission for Environmental Cooperation.

## 2. THE INTERNATIONAL WILDLIFE TRADE



The international wildlife trade is a massive, multibillion-dollar-a-year business.<sup>1</sup> The two major categories of traded items are live specimens of wildlife species and products derived from wildlife species.

The international trade in live specimens of wildlife species is dominated by reptiles, birds and ornamental fish, but it also includes mammals and invertebrate species such as scorpions and spiders. Trade in exotic animals for pets or hobbyist collections has expanded dramatically in recent decades, perhaps in part because farther-reaching air transportation now allows traders to move wild species around the globe. Many common garden and indoor plants have also found their way into international trade, including species such as snowdrops, crocuses, cyclamens, orchids, tree ferns, bromeliads, cycads, palms and cacti. Even though much of the trade now consists of artificially propagated plants, millions of wild plants are still traded internationally every year, including a specialist trade in rare species.

Medicines derived from wild plants or compounds extracted from them also figure prominently in the international wildlife trade. The global trade in medicinal and aromatic plants exceeded 440,000 metric tons in 1996 and was valued at US\$1.3 billion. Traditional medicine, particularly in Asia, also uses derivatives from animals such as bear gallbladders and tiger bone.

And there is a substantial international trade in a variety of food products such as fruits, mushrooms, nuts, leaves and starches, as well as meat and fish. Although not usually thought of as wildlife, marine fish are the largest group of wild animals exploited for food.

Beyond these consumptive uses, a wide variety of wildlife products are found in the ornamental and apparel trades, and are used in manufacturing and construction. Items often associated with the ornamental trade are ivory, coral, turtle and mollusk shells, reptile and other skins, and feathers, as well as mounted insects such as butterflies and beetles. Tourist items are often fashioned from local wildlife such as jewelry and ornaments crafted from corals and shells, curios that consist of insects or other small animals encased in plastic, and stuffed animals. Skins, furs and fibers from many mammal, reptile, bird and even fish species are traded internationally to make products ranging from clothing and accessories (e.g., footwear, bags, shawls and wallets) to ornaments and furnishings such as charms, rugs and trophies. Forest products, including timber, rattan and bamboo for





Tourist items are often fashioned from local wildlife such as jewelry and ornaments crafted from corals and shells, curios that consist of insects or other small animals encased in plastic, and stuffed animals.

house construction and furniture making, plant oils and gums, dyes, resins and latex, are all traded internationally in large volumes.

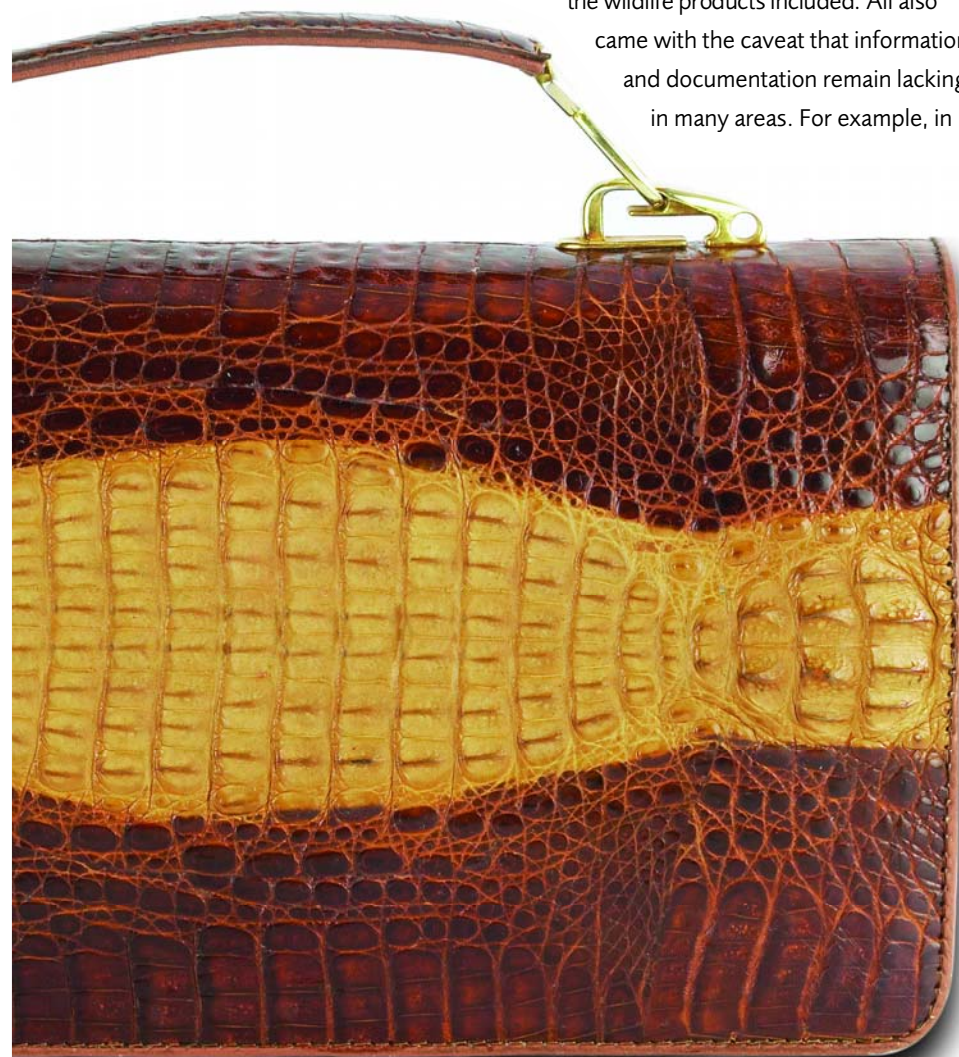
Attempts to quantify the scope and scale of the international wildlife trade have produced very different estimates, depending on what categories of trade and which types of species are included. For example, timber and fishery products dominate the international wildlife trade in both volume and value, even though the public may not think of many of the species involved as "wildlife." In the late 1980s and 1990s, various attempts were made to document the quantities and value of the international wildlife trade, but these studies reached different conclusions and figures, depending on the statistics used and

the wildlife products included. All also came with the caveat that information and documentation remain lacking in many areas. For example, in

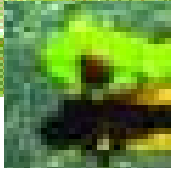
1989 the United Nations Environment Programme (UNEP) estimated the value of the international wildlife trade, not including timber and fisheries, at US\$4–5 billion a year (Broad et al. 2001). Fitzgerald (1989) estimated a wholesale value of wildlife products in trade of "at least" US\$5 billion. In the early 1990s, TRAFFIC estimated an import value approaching US\$15 billion for all wildlife products, excluding wild-sourced timber and fish products (Broad et al. 2001). Finally, Iqbal (1995; cited in Broad et al. 2001) estimated the value of trade in nonwood forest products (NWFPs) at US\$11 billion.<sup>2</sup>

Another major complication in efforts to estimate accurately the scope and scale of the trade is the fact that wildlife products are both consumed directly and sold into the cash economy, sometimes by the same people at the same locations. Local use of wild plants and animals may account for the majority of global wildlife trade in terms of trade volume and perhaps even value, but the nature of the trade is such that it is often carried out through informal networks and seldom closely monitored. Such subsistence-level trade or bartering often does not show up in government trade statistics, even though it may account for a significant proportion of the world's wildlife trade (Broad et al. 2001).

1. This chapter is based largely on Broad et al. (2001), Roe et al. (2002) and TRAFFIC (2003).
2. Categories of commercially significant NWFPs measured by Iqbal were food products, herbs and spices, industrial plant oils and waxes, plant gums, natural pigments, oleoresins, fibers and flosses, vegetable tanning materials, latex, insect products, incense woods, essential oils, plant insecticides, medicinal plants, wild plants, animals and animal products, and other miscellaneous items.



### 3. THE ILLEGAL GLOBAL TRADE IN WILDLIFE



#### Caviar

Caviar from sturgeon forms the basis for large industries, contributing greatly to national economies and the economic survival of whole communities. In recent decades, however, burgeoning human populations, unsustainable harvesting and increasing illegal harvesting have put tremendous pressure on these resources. For example, in four former Soviet republics on the Caspian Sea, the legal catch of sturgeon at the end of the 1990s plummeted to less than one-tenth of the catch in the 1970s. It is also estimated that the illegal catch is now at least 10 times higher than the legal catch.

More information: <http://www.traffic.org>.

Most wildlife trade is legal, but some is not. It is for all practical purposes impossible to define the precise extent of the illegal wildlife trade worldwide. The International Criminal Police Organization (Interpol), however, estimates that wildlife smuggling is worth up to US\$10 billion a year, ranking it third in illegal trade behind drug trafficking and arms dealing.

All categories of wildlife products are traded illegally; the black market commerce continues even when trade is restricted or banned. For some products, the illegal trade parallels the legal trade. For example, alongside a legal, regulated international trade in caviar from the Caspian Sea region of the former Soviet Union to primary markets in the United States, Europe and Japan is a significant black market caviar trade that spans several continents (De Meulenaer and Raymakers 1996; Williamson 2003). Similarly in North America, alongside the legal trade in live reptiles from South America for the exotic pet market, is an illegal one. The same is true for Chihuahuan Desert cacti in the United States and Mexico, which are used primarily for landscaping and for ornamentation (Hoover 1998; Robbins 2003).

Sometimes, the illegal trade is in species and products that are banned from legal trade, often with very serious implications for the species involved. For example, the illegal trade in tiger bone for the Asian medicinal market has had a devastating impact on wild tiger populations—their numbers have dropped by some 95 percent since the turn of the 20th century. Poaching for the black market trade continues to threaten the survival of remaining populations, which are now believed to number only 5,000–7,000 animals (Jackson and Kemp 1999).

#### Factors Driving the Illegal Wildlife Trade

The international trade in wildlife, both legal and illegal, is largely driven by market demand. Meeting the world's market demand for illegal wildlife can be a lucrative business, and the poachers who collect wildlife and the smugglers who transport it to market are largely in the business for the profits (Moyle 1998).

Wildlife generally flows from developing nations to developed nations (Broad et al. 2001). The demand for wildlife and wildlife products in developed country markets is so enormous that it often surpasses what the legal market can provide. Between 1990 and 2000, for example, the European Union, United States and Japan reported annual caviar imports averaging 288 metric tons a year, even as concern about the Caspian Sea fisheries led to the imposition of quotas on the catch and trade of sturgeon from the states of the former Soviet Union (Williamson 2003). The gap between demand and legally available supply has helped to open the door for significant illegal trade activity. In one 2002 law enforcement case alone, the president of a Miami caviar company was prosecuted and convicted for running a smuggling ring that unlawfully took more caviar out of Russia in one year than was allowed under the country's entire export quota (USFWS 2003).

In North America, Mexico is a potential exporter of wildlife specimens, products and by-products aimed at the US and European markets. The most highly trafficked species are orchids, cacti, cicadas, tarantulas and songbirds and ornate birds, such as passerinos and psittacids. Mexican wildlife is exported illegally to member and nonmember countries of the European Union, including Austria, Belgium, the Czech Republic, Germany and the Netherlands, and as well as to Asian countries such as Japan

# The international trade in wildlife, both legal and illegal, is largely driven by market demand.



## Tiger Bone

Many traditional medicines use wildlife as ingredients. Traditional East Asian medicine, for example, uses more than 1,000 plant and animal species. Throughout Asia, nearly every part of a tiger is believed to have a prescribed benefit, with cures claimed for ailments ranging from epilepsy to laziness. Tiger bone is the most used. The marked fall in the consumption of tiger-bone medicines in recent years is an indication that close cooperation and work with traditional medicine practitioners and users are essential. These communities can play an important role in eliminating any remaining illicit trade, promoting the use of substitutes and raising conservation awareness among consumers.

More information: <http://www.traffic.org>.

and to the United States. A high percentage of the exports to Europe and Asia pass through US territory. The most notable example is the cactus. Some 7–8 million specimens are traded worldwide, at a market value ranging from US\$2 to \$2,000 per specimen.<sup>3</sup>

Beyond economic incentive, strong cultural elements are also driving some wildlife trade. A well-known example of this phenomenon is the trade in traditional Asian medicine, which has used ingredients derived from wild plant and animal species for thousands of years. But international trade in rhino horn, a substance once widely used in traditional Chinese medicine, has been banned since 1977. And trade in tiger bone, also once widely used in traditional Chinese medicine, has been banned since 1987. Yet TRAFFIC investigations<sup>4</sup> since then have found such medicines claiming to contain rhino horn and tiger bone in Australia, Canada, China, EU countries, New Zealand and the United States, despite domestic and international trade bans. Although the factors driving this continuing trade are complex and include market demand and profit, the TRAFFIC findings seem to confirm research indicating that some people may not obey laws that contradict cultural traditions or what they believe is the greater human good. This observation is supported by statements from some specialists in traditional Chinese medicine, who believe that the bans have hampered their efforts to alleviate human suffering (Lee et al. 1998). The wildlife trade, both legal and illegal, is also driven by diverse socioeconomic and cultural factors. After all, people need to secure a food supply and health care (from herbal remedies to ingredients of industrial pharmaceuticals), practice their religion (sometimes requiring live animals and a wide range of wild plants and

animal parts), and obtain industrial and building materials. They also enjoy collecting things, including live plants and animals and a range of wildlife specimens and curios; buying clothing and fashions such as leather, furs and feathers; and engaging in sport, including trophy hunting and falconry (Broad et al. 2001).

## How Illegal Wildlife Products Enter the Stream of Commerce

The illegal wildlife trade is by its very nature highly secretive. It is dominated by well-organized networks of poachers, wholesalers, middlemen, smugglers and retailers. Illegal wildlife products often enter the stream of commerce along this chain, with price markups at each step. The bear gallbladder trade from the Canadian province of British Columbia is one example of how the illegal wildlife trade chain often works. Although the province prohibits the sale or trade of black bear gallbladders, provincial wildlife officials believe both continue, with the product passing from hunters, through middlemen such as Asian traffickers and apothecary shops, to destinations in the United States, Republic of Korea, Hong Kong (China) and Taiwan. Provincial officials estimate that along this chain hunters receive C\$75 for a gallbladder, middlemen receive \$200, and retailers receive \$850–\$1,200 (Williamson 2002).

In some areas, traditional organized crime groups may even be players in this trade. For example, in the former Soviet Union there is evidence that the "red mafia" may be heavily involved in the illegal caviar trade. The US Fish and Wildlife Service (USFWS) has reported discoveries of illegal wildlife shipments mixed in with shipments of illegal narcotics, suggesting the participation of drug cartels in illegal wildlife trade in nations such as Colombia.



# The advent of the Internet may have opened the door to a new stream of commerce. . . .

African black rhinoceros  
*Diceros bicornis*  
CITES Appendix I



## Bear Gallbladders

Bear gallbladder and bile are used in traditional Chinese medicine to treat many ailments, including convulsions, fever and hemorrhoids. But this traditional way of treating these complaints is starting to take its toll on its source—the bears. The Asiatic black bear, sloth bear, sun bear and certain Asian brown bears are all endangered because of, in part, the demand for gallbladders. Although the black bears in North America are in pretty good shape, they, too, are sometimes killed illegally for their gallbladders.

More information:

<http://www.worldwildlife.org/buyer beware/bear.cfm>.



## Ivory

The demand for ivory fueled a dramatic decline in African elephant populations in the 1970s and 1980s, and eventually led to a CITES ban on international commercial trade in 1989. Monitoring systems are being developed to provide countries with a deeper understanding of the illegal trade and the illegal killing of elephants. For example, in 2001 the Elephant Trade Information System held the details of nearly 4,500 ivory seizures in 54 countries totaling 125 metric tons.

More information: <http://www.traffic.org>.

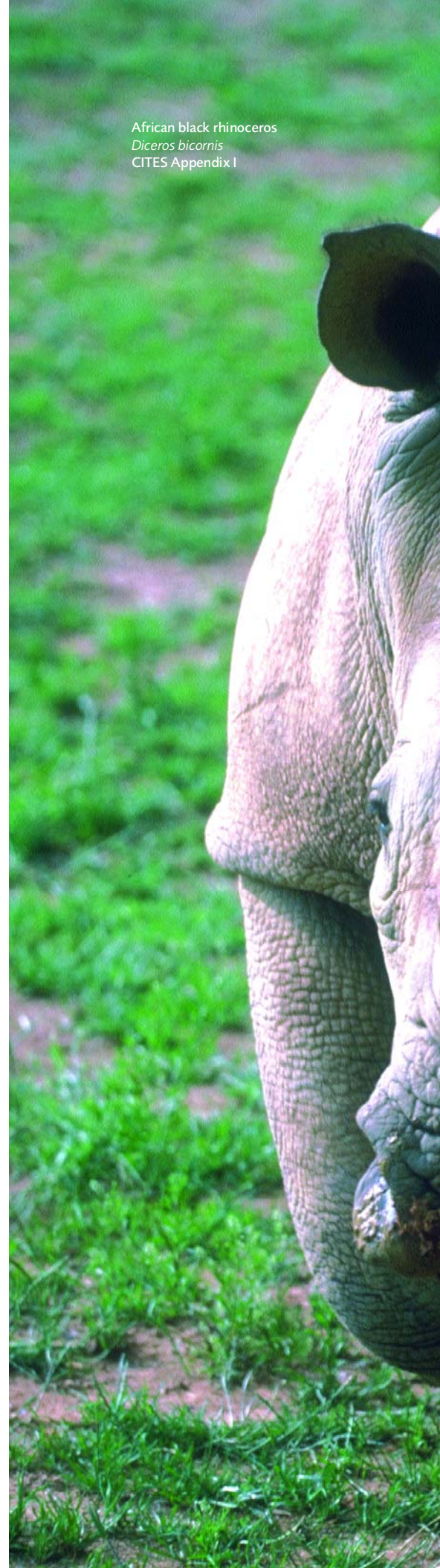
Although hard evidence on the extent to which traditional organized crime is involved in illegal wildlife trafficking is limited, the adeptness of such groups at evading detection points to the difficulty of determining the full extent of the trade (Cook et al. 2002).

Beyond such organized efforts, illegal wildlife products sometimes enter the stream of commerce in yet another way—the "pocket" trade. In this aspect of the trade, tourists or other travelers often wittingly or unwittingly purchase wildlife items that are banned from international commerce and then transport them across borders to either keep or sell. In recent years, officials have seized products ranging from ivory, to illegal coral or other curios, to caviar and even live reptiles. Such trade is difficult to stop, because it is principally detected at airports or other ports of entry where the likelihood of inspection is extremely low.

Finally, the advent of the Internet may have opened the door to a new stream of commerce—illegal trade through online auction sites or direct Internet sales. For example, a 2002 report on the US ivory market found that ivory dealers in China, Hong Kong (China) and Europe were willing to ship ivory items to the United States without proper documentation of its legality (HSUS 2002). Like the pocket trade, such trade is very difficult to detect and combat, because sellers find it easy to ship small items across borders and because of the immense scope of the Internet itself.

## Environmental Effects of Illegal Trade

The illegal trade in wildlife, for subsistence or commercial purposes, is leading to the depletion of populations of great whales, marine turtles, rhinoceroses, elephants and tigers, among other species, through overexploitation (Broad







et al. 2001). For example, populations of the African black rhinoceros have plummeted dramatically in recent decades because of poaching for their horns, which are in demand as a component of traditional Asian medicines and for the manufacture of traditional dagger handles in Yemen. Shot, snared and speared for their horns alone, black rhinoceroses saw their numbers decline from an estimated 65,000 in 1970, to 14,785 by 1980, to perhaps 2,000 by 1997. African white rhinoceroses, even though better protected in South Africa, also disappeared by the thousands in their northern range in Central Africa (Martin et al. 1997).

According to the World Wildlife Fund (WWF), parrots, or psittacines, constitute a significant part of the global black market trade in wildlife. "Parrots' beauty, ability to mimic, and tendency to bond with humans make them among the most valued species in illegal trade. And despite national and international laws protecting them, the United States has one of the world's largest black markets," said Ginette Hemley, when she was director of international wildlife policy at WWF in the mid-1990s. The smuggling of endangered parrot species along the Texas-Mexico border remains a serious conservation concern. John Flicker, president of the National Audubon Society, has noted that "smuggling operations typically involve young birds that frequently die before reaching markets. . . . Unfortunately, smugglers have found that chicks are easier to smuggle. They can be laundered as captive-bred hatchlings and bring more money than adults." Bird smugglers also often destroy habitat by cutting down trees to catch birds (<http://usembassy-australia.state.gov/hyper/WF980601/epf110.htm>).

In 2003 a TRAFFIC study reported that a large part of the Chihuahuan Desert in West Texas is the "dominant producer of showy cacti (such as barrel cacti and hedgehog cacti) and other succulents . . . for urban markets in Arizona, Nevada, and southern California. Between 1998 and June 2001, nearly 100,000



succulents, with an estimated value of US\$3 million, were harvested from mostly wild populations in Texas or were illegally imported into Texas from Mexico and destined for consumers in cities such as Phoenix and Tucson, Arizona." The TRAFFIC study found that even though none of the species identified faces imminent extinction, with one possible exception, the robust trade does raise questions about the "long-term transparency, legality, sustainability, and impact of large-scale harvest. Faced with the added pressures of habitat loss and the vagaries of an unforgiving and possibly changing climate, many of the taxa exploited for trade may become threatened and even disappear locally if conservation measures are not implemented" ([http://www.traffic.org/news/press-releases/prickly\\_trade\\_part1.pdf](http://www.traffic.org/news/press-releases/prickly_trade_part1.pdf)).

Illegal wildlife trade is a means of dispersing infectious-contagious diseases. The deliberate cross-border entry or movement of wildlife could be a form of dispersion of infectious-contagious disease, with fast zoonotic or anthroponotic dissemination among domestic and wild animal populations. As an example, in Mexico the taxonomic and ecological affinity of nationally distributed taxa to taxa of other New and Old World regions may lead to the establishment of pathogens in Mexican taxa not having adequate immunological capabilities. A review by the National Technical Advisory Board on Animal Health (*Consejo Técnico Consultivo de Nacional de Sanidad Animal*—Conasa) in 2000 identified 203 infectious diseases in amphibians, reptiles, birds and mammals in Mexico. Of these, 25 are regarded as exotic species in the country, including 7 high-risk and 33 low-risk enzootic diseases, according to the International Office for Epizootic Diseases. These data indicate the extent of the potential risk to biodiversity in a country such as Mexico.

Finally, illegal wildlife trade may also represent a threat to ecosystems and economies as well as to species survival. Countries around the world have long recognized the need to

keep their borders closed to invasive species — species that supplant native wildlife, change ecological relationships, and take an economic toll. The United States, Canada and Mexico have legislation banning the importation of certain injurious species.

Laws alone, however, cannot stem the tide of "bioinvaders," particularly given the globalization of the world's economy and the resulting ease of species movement, not only from country to country but from continent to continent. Scientists report that the pace of "bio-immigration" is accelerating worldwide. In San Francisco Bay, for example, a new exotic animal, plant, or microbe now "moves in" every 14 weeks on average (compared to one every 55 weeks in the period from 1851 through 1960). While many invasive species arrive "by accident" (sucked into the ballast of cargo ships, for example), others are deliberately imported to be eaten, kept as pets, displayed in home aquariums, or used for fish farm predator control. Preventing the importation of species banned as invasive is another challenge for agencies tasked with regulating global wildlife trade.

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3. Information provided by the natural resources branch of Mexico's Federal Attorney General for Environmental Protection (Procuraduría Federal de Protección al Ambiente)
  4. TRAFFIC, a wildlife monitoring network, is a joint program of the World Wildlife Fund (WWF) and the World Conservation Union (IUCN).

## 4. A GLOBAL RESPONSE



In the 1960s the international community began to recognize that the exploitation and trade levels for some species, combined with other factors such as habitat loss, could deplete populations to the brink of extinction. An international framework was needed, some nations concluded, to ensure the sustainability of the trade in endangered and threatened species.

### CITES

In response, an international agreement, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), was developed to safeguard species vulnerable to trade from overexploitation. CITES entered into force in 1975, and as of May 2005, 167 nations were parties to the convention.<sup>5</sup>

CITES established a worldwide system of controls on international trade in threatened and endangered wildlife and wildlife products. At present, some 5,000 species of animals (mammals, birds, reptiles, amphibians, fish and invertebrates) and 28,000 species of plants are covered by the convention (see table). CITES's appendices describe the status of the species and specify which species may enter international commercial trade. The most endangered species, listed in Appendix I, are all those species threatened with extinction that are or may be affected by trade. Commercial trade of these species is not permitted, and other trade for purposes such as scientific research is strictly controlled through import and export permits. Listed in Appendix II are those species that are not rare or endangered at present, but could become so if trade is not regulated. International trade in such species requires the issuance of a CITES export permit by the exporting country. Appendix III species are not endangered, but they are subject to regulation within the listing

for the purposes of preventing or restricting exploitation and, as requested, promoting the cooperation of other parties in the control of trade. (The complete appendices appear on the CITES web site <<http://www.cites.org>>.) Within this system, legal trade continues in species listed under CITES Appendices II and III (see box).

### Parties to CITES

When the government of a state decides that it would like to be bound to the provisions of CITES, it can "join" the convention by making a formal declaration to this effect in writing to the "Depositary Government," which is the government of Switzerland. Once a document containing this declaration has been received by the Depositary through diplomatic channels, the convention enters into force for the state concerned 90 days later (see Article XXI of CITES).

Currently, 167 countries are parties to CITES. A party to CITES may withdraw from the convention at any time by a process of denunciation (see Article XXIV).

More information: <http://www.cites.org>.

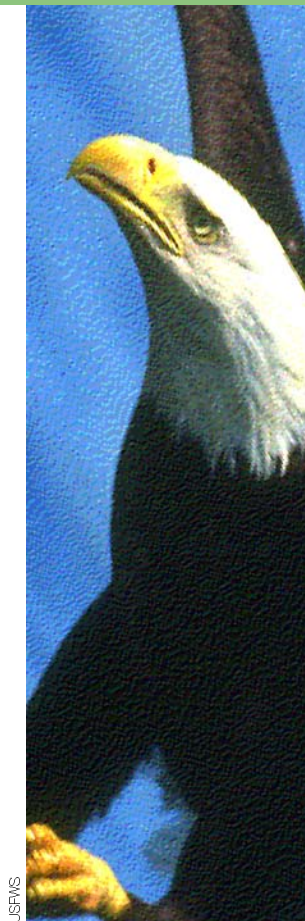
5. This chapter is largely based on information provided on the CITES web site, <http://www.cites.org>.

**Total Number of Plant and Animal Species Listed in the CITES Appendices as of October 2003**

	Mammals	Birds	Reptiles	Amphibians
Appendix I	228 species 28 subspecies 13 populations	146 species 19 subspecies 2 populations	67 species 19 subspecies 4 populations	16 species
Appendix II	369 species 34 subspecies 14 populations	1,401 species 8 subspecies 1 population	508 species 3 subspecies 4 populations	90 species
Appendix III	57 species 11 subspecies	149 species	25 species	—



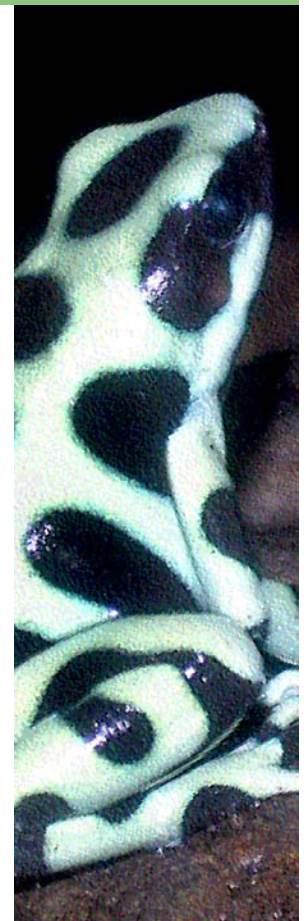
Walrus  
(*Odobenus rosmarus*)  
Appendix III



Bald eagle  
(*Haliaeetus leucocephalus*)  
Appendix I



Boa constrictor  
Appendix II



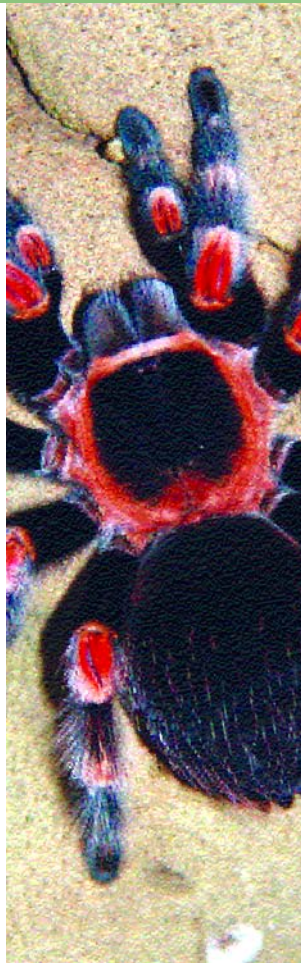
Green poison arrow frog  
(*Dendrobates auratus*)  
Appendix II

Fish	Invertebrates	Plants	Total
9 species	63 species 5 subspecies	298 species 4 subspecies	827 species 52 subspecies 19 populations
68 species	2,030 species 1 subspecies	28,074 species 3 subspecies 6 populations	32,540 species 49 subspecies 25 populations
—	16 species	45 species 1 subspecies 2 populations	291 species 12 subspecies 2 populations

Source: <http://www.cites.org>



Beluga sturgeon  
(*Huso huso*)  
Appendix I



Mexican red-kneed tarantula  
(*Brachypelma smithi*)  
Appendix II



Ocotillo  
(*Fouquieria splendens*)



## Reported International Trade in Selected CITES-listed Flora and Fauna

The following lists reveal the scale of the reported international trade in selected CITES-listed species between 1995 and 1999. As the statistics indicate, the trade is significant, even though no precise monetary estimate is provided.



Adrian Reuter, TP4/FFC North America.

### Fauna (annual mean, 1995–1999)

- Over 1.5 million live birds (250,000 Appendix II; 1.25 million Appendix III)
- 640,000 live reptiles
- 300,000 crocodilian skins (world trade is over 1.2 million, but mostly farmed)
- 1.6 million lizard skins
- 1.1 million snake skins
- 150,000 furs
- Almost 300 metric tons of caviar
- Over 1 million pieces of coral
- 21,000 hunting trophies.



### Flora (1999)

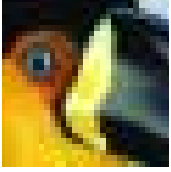
- 19 million bulbs exported from Turkey
- Over 53,000 live wild-collected orchids exported from Central America and Vietnam
- Over 200 metric tons of dried orchid roots exported from Vietnam to the Republic of Korea
- 360,000 cacti "rainsticks" exported from Chile and Peru
- 70 metric tons of *Aloe ellenbeckii* resin exported from Kenya to China
- Over 300 metric tons of *Aloe ferox* exported from South Africa
- 120 metric tons of Agarwood *Aquilaria malaccensis* chips exported from Indonesia and Malaysia
- 30 metric tons of American ginseng *Panax quinquefolius* roots exported from the United States.

Source: Broad et al. (2001).

CITES obligates each party to designate one or more "management authorities" to administer the permitting system that controls the trade in CITES-listed species, and also one or more "scientific authorities" to determine what effects trade may have on the status of the species in question (these authorities are listed in the table in the next chapter). Enforcement of the convention, including efforts to combat illegal trade, falls largely under the purview of law enforcement agencies at the national and subnational levels.



## 5. ENFORCEMENT COOPERATION EFFORTS IN NORTH AMERICA



Canada, Mexico and the United States have all enacted legislation to govern the domestic and international trade of wildlife generally, and to implement CITES specifically. The three nations have also designated management and scientific authorities, as called for by the convention, and the agencies responsible for enforcement of wildlife trade statutes. Wildlife enforcement officials work closely with customs authorities and other specialized agencies to stem the illegal trade in wildlife. The table in this chapter summarizes the key laws, management and scientific authorities, and law enforcement authorities responsible for CITES implementation in Canada, Mexico and the United States.

### Key Laws and Regulations, Management and Scientific Authorities, and Enforcement Agencies Pertaining to CITES: Canada, Mexico and United States

	Laws and regulations	Management and scientific authorities	Enforcement agencies
<b>Canada</b>	<ul style="list-style-type: none"> <li>● Wild Animal and Plant Protection and Regulation of International and Provincial Trade Act (WAPPRITA)</li> <li>● Wild Animal and Plant Trade Regulations (WAPTR)</li> <li>● Customs Act</li> <li>● Criminal Code</li> </ul>	<ul style="list-style-type: none"> <li>● Canadian Wildlife Service</li> <li>● Fisheries and Oceans Canada (DFO)</li> <li>● Canadian Forest Service</li> <li>● Provincial and territorial wildlife agencies</li> </ul>	<ul style="list-style-type: none"> <li>● Environment Canada</li> <li>● Royal Canadian Mounted Police (RCMP)</li> <li>● Canadian Customs and Revenue Agency (CCRA)</li> <li>● Provincial and territorial wildlife agencies</li> </ul>
<b>Mexico</b>	<ul style="list-style-type: none"> <li>● General Law of Ecological Balance and Environmental Protection (LGEEPA)</li> <li>● General Wildlife Law (LGVS)</li> <li>● Federal Criminal Code</li> <li>● Mexican Official Standards: NOM059-Semarnat and NOM126-Semarnat</li> <li>● Semarnat's Manual for the Import and Export of Wildlife</li> </ul>	<ul style="list-style-type: none"> <li>● National Commission for the Knowledge and Use of Biodiversity (CONABIO)</li> <li>● Secretariat of Environment and Natural Resources (Semarnat)</li> </ul>	<ul style="list-style-type: none"> <li>● Federal Attorney General for Environmental Protection (Profepa)</li> <li>● Federal Attorney General of the Republic</li> <li>● Customs Agency</li> </ul>
<b>United States</b>	<ul style="list-style-type: none"> <li>● Endangered Species Act of 1973 (ESA)</li> <li>● Lacey Act</li> <li>● Marine Mammal Protection Act of 1972 (MMPA)</li> <li>● US Criminal Code</li> <li>● Animal Welfare Act</li> </ul>	<ul style="list-style-type: none"> <li>● US Fish and Wildlife Service, Division of Management Authority (USFWS/DMA),</li> <li>● Division of Scientific Authority (USFWS/DSA)</li> <li>● Animal and Plant Health Inspection Service (USDA)</li> </ul>	<ul style="list-style-type: none"> <li>● US Fish and Wildlife Service, Office of Law Enforcement (USFWS/OLE)</li> <li>● US Customs and Border Protection (CBP)</li> <li>● State wildlife agencies</li> <li>● US Department of Agriculture</li> </ul>

Sources: Hoover and Tarr (1997); Cooper and Chalifour (in press); Pérez Gil and Arroyo (in press).



Smugglers in North America operate as part of global networks. In the development and implementation of enforcement actions, domestic law enforcement agencies work directly with other law enforcement agencies or through international police organizations such as Interpol. Although there are no reliable estimates of the percentage of illegally traded wildlife captured or seized by enforcement personnel, the following cases illustrate the types of smuggling faced by North American wildlife personnel.

In 1999, cooperation between Environment Canada, the Canadian Wildlife Services, the US Fish and Wildlife Service (USFWS) and other agencies led to the conviction of the owners of Flikkema Aviaries, a major supplier of exotic birds that illegally imported into Canada and then illegally exported into the United States endangered tropical birds (finches) protected under CITES. The illegal operations of this organization between December 1997 and October 1999 involved over 4,000 tropical finches, 30 parakeets and 20 mynas, with an estimated value of over C\$100,000. Most species of birds were from Africa. After an investigation of about six months, enough evidence was obtained to press 162 charges against three people in Canada for possessing illegally imported birds, importing and exporting birds without a permit, and possessing birds for the purpose of illegal export.

In another example of cooperation between the United States and Canada, a large network of trade in black bear gallbladders was dismantled in November 2002 when the US Fish and Wildlife Service alerted Canadian officials that bear gallbladders were being sold via Internet from Ontario and Quebec. Bear gallbladders, which are used in traditional Asian medicine, have a foreign black market value that ranges from C\$2,000 to \$10,000 per gallbladder or up to \$55 per gram.

A common smuggling route in North America is from Mexico into the United States and Canada. From cactus to protected parrots, Mexico's natural diversity makes its wildlife susceptible to the demands of the North American black market. Cacti are particularly valuable items on the global black market. Mexico, the world's richest cactus breeding ground, has 850 species of cacti, many of them extremely valuable. But, of these, 270 species are considered threatened or endangered, and it is illegal to remove them without a permit. Collectors in the United States, Europe and Asia will pay thousands of dollars for a single rare cactus from Mexico in an increasingly sophisticated smuggling network. Diana Ponce Nava, a lawyer with the enforcement division of Mexico's Secretariat of Environment and Natural Resources (*Secretaría del Medio Ambiente y Recursos Naturales—Semarnat*),









Adrian Paular, TRAFFIC North America

told the *Washington Post* in 2003, "It used to be just people with shovels and suitcases, but the trafficking is getting much more sophisticated" (Jordan and Sullivan 2003). Ponce's agency recently raided the famous Xochimilco flower market just south of Mexico City and a private greenhouse in Monterrey, where it recovered thousands of rare cacti.

According to a report by TRAFFIC, Mexican authorities seized nearly 800 cactus specimens from travelers entering or passing through the United States from Mexico in 1998. Many consumers and tourists are unaware they

may be breaking the law when they collect, purchase or export cacti from countries that restrict their trade. US border agents are finding them, too. In one celebrated cactus bust, US Customs agents, working with US Fish and Wildlife Service investigators, arrested two Americans in 1999 for smuggling 21,000 Mexican ocotillo cactus plants into Texas (Jordan and Sullivan 2003).

Parrots are another common form of wildlife smuggled into the United States and Canada. In 1998 US Customs Service and the US Fish and Wildlife Service broke up an international smuggling ring dealing in protected birds and other wildlife. The smuggling ring, which was located along the US-Mexico border, extended into nine states, the Commonwealth of Puerto Rico, and 10 other countries. The birds seized during Operation Jungle Trade included 356 yellow-headed Amazon parrots, 110 yellow-naped Amazon parrots (a Guatemalan species), 57 Mexican red-headed parrots, 31 red-lored Amazon parrots and small quantities of several other psittacine species.

Another case that highlights the global reach of these smuggling rings involved Anson Wong, a well-known wildlife dealer and smuggler of endangered animals. The USFWS tracked Wong for more than five years on the suspicion of smuggling wildlife into the United States, including species such as Komodo dragons and plowshare tortoises, already on the brink of extinction, that are found only in very limited, geographically isolated habitats. Mexican authorities arrested Wong, and he was extradited to the United States, where he was convicted of several offenses, including conspiracy and money laundering. He was sentenced to six years in a federal prison—one of the longest sentences ever handed down for violating US wildlife laws—and fined US\$60,000.

## 6. NAWEG AND THE NEED FOR NORTH AMERICAN COOPERATION



International capacity building and information sharing are vital components of international law enforcement efforts. Although domestic law enforcement agencies work directly with other law enforcement agencies or through police organizations such as Interpol on specific enforcement actions, establishment of contacts, training and identification of problems and trends require international collaborative efforts—efforts that often occur through the support of international organizations. In North America, this cooperation largely stems from the work of the North American Wildlife Enforcement Group.

When Canada, Mexico and the United States strengthened economic ties through the North American Free Trade Agreement (NAFTA), they also pledged to undertake a new environmental partnership. In 1993 the three nations signed the North American Agreement on Environmental Cooperation (NAAEC) and created the CEC. The NAAEC commits the NAFTA parties to building regional cooperation aimed at conserving, protecting and enhancing the environment, and to enforcing their respective environmental laws, including those protecting wild flora and fauna.

Responding to these commitments, the CEC established in 1995 an Enforcement Cooperation Program to provide a forum for regional cooperation and to exchange expertise, build enforcement capacity and explore alternative approaches to effective enforcement. The Council of the CEC then constituted a North American Working Group on Environmental Enforcement and Compliance Cooperation (called the Enforcement Working Group, or EWG) to serve as this forum for regional cooperation.

Created in 1995, the North American Wildlife Enforcement Group is a member of the EWG. NAWEG is a network of senior wildlife enforcement officials from Canada, Mexico and

the United States devoted to improving North America's capacity to enforce the laws that regulate the sustainable use and conservation of its wildlife, particularly CITES. NAWEG, which works with other cooperative enforcement and compliance programs in collaboration with the CEC, provides guidance in identifying priorities for regional cooperation in protecting wildlife across the continent and it develops strategies and proposals for cooperative enforcement activities. It also tries to serve as an effective voice for North America in the global enforcement community and to strengthen participation within international alliances such as Interpol, CITES and the World Customs Organization.

NAWEG's efforts to address wildlife trade and enforcement issues have received invaluable support and participation from numerous private conservation groups, the business sector and the academic community across North America. Groups as diverse as the Association of Zoos, Breeders and Aquariums of the Mexican Republic (*Asociación de Zoológicos, Criaderos y Acuarios de la República Mexicana*) from Puebla, the Institute of Ecology of Xalapa (*Instituto de Ecología de Xalapa, A.C.*), the North American Fur Auction House, the Northwest Association of Forensic Scientists, and TRAFFIC North America have taken part in NAWEG workshops and other activities. Federal and state and provincial agencies in all three countries also have supported NAWEG's mission by offering scientific and technical support.

### **NAWEG Workshops**

NAWEG-sponsored workshops have allowed wildlife officials to take a closer look at the illegal practices surrounding big game hunting and game farming, orchids and cacti and coral reefs. For example, in 2000 NAWEG sponsored a meeting in Monterrey, Mexico, on big game



hunting and game farming. Big game hunting in the wild is an accepted practice in nearly every corner of the world. However, the poaching of big game remains a serious problem in all three countries because of the big profits that can be reaped by poachers. A large mule deer rack with a 1-meter spread can fetch US\$40,000. Animal antlers can be sold as trophies or sent to Asia where they are ground up and used in traditional medicines. The gallbladder of one bear can bring as much as US\$18,000 in Asia.

Game farming is an increasingly common practice in which wild animals are enclosed so that they can be harvested for sale of the meat. Private game management facilities can and do trade, move and sell game, crossing state and sometimes international borders. These movements of animals between states and countries take animals far beyond the range they would move on foot. Moving game animals can accelerate the spread of disease if the moved animals are infected.

At the Monterrey workshop, enforcement officers from the three countries examined ways to close enforcement loopholes, improve understanding of regulations among the countries and exchange information on enforcement and compliance strategies. The officers also reviewed the status of animal populations and the ranges of the main trophy species, the legal framework for hunting in North America, as well as case studies that highlight ways to deal with import/export fraud and smuggling.

In February 2003 NAWEG organized an enforcement workshop on the trade and illegal harvest of protected plant species. In view of the black market that has emerged for protected species of plants, NAWEG recognized that enforcement officers must be better able to identify these species and understand how organized crime is driving this activity.

In great demand as ornamental plants or for use in the production of medicines, foods, commercial beverages, cosmetics and furniture, CITES-protected species of cacti, cycads,

orchids and tropical wood are being smuggled into and from North America. Out of the world's 298 cycad species, more than half are endangered, vulnerable or extinct. Their rarity has made them highly prized targets for wealthy collectors, who are willing to pay several thousand dollars just to own a specimen. And, as noted earlier, cacti, in high demand as a landscaping plant, have also become targets for poachers willing to supply a multimillion-dollar market.

Attended by over 50 enforcement officers from the three countries, the NAWEG workshop gave participants information on ways in which to apply laws so that they could tighten the illegal traffic in plants. Officers also received technical information, such as the characteristics of the major taxonomic groups of commercial plant species, and learned more about the trends in international trade and the role of networks in monitoring illegal trade.

In yet another example of a NAWEG capacity-building effort, the group held a seminar on the Use and Sharing of Intelligence in Wildlife Enforcement in Ottawa in February 2004. This seminar brought together intelligence officers, analysts, seasoned investigators with limited intelligence awareness, and high-level managers with enforcement supervisory duties from the three countries. The seminar demonstrated the purpose, value and accomplishments of an integrated intelligence unit within a wildlife enforcement service. Enforcement agencies in the three countries recognize that it is important to enhance the capabilities of wildlife enforcement officers to gather and analyze information so that they can better understand the methods of operation used by violators, identify trends in the illegal wildlife trade and anticipate likely violations.

The seminar succeeded in establishing a common understanding of the intent and purpose of intelligence and the specific language used by intelligence practitioners. Participants took part in workshops and case studies to further demonstrate the understanding of intel-



USFWS

North American mule deer  
(*Odocoileus hemionus*)

ligence, the intelligence process and the tools required to operate an intelligence unit. The seminar also provided participants with an understanding of the national and international constraints in setting up an intelligence network and the obstacles both internally and externally with the three countries.

### **The Remaining Challenges**

Although it is difficult to predict future trends in the illegal wildlife trade with any precision, the black market will no doubt continue to flourish, and may well expand. As noted earlier, levels of wildlife trade in general have risen in recent decades, indicating that the markets for wildlife and wildlife products are continuing to grow, both globally and in North America.

Enforcement of CITES trade control measures and national wildlife laws is likely to become ever more complex and difficult as more species are added to the convention's appendices. Furthermore, assuming that all nations continue to negotiate and implement bilateral and multilateral free

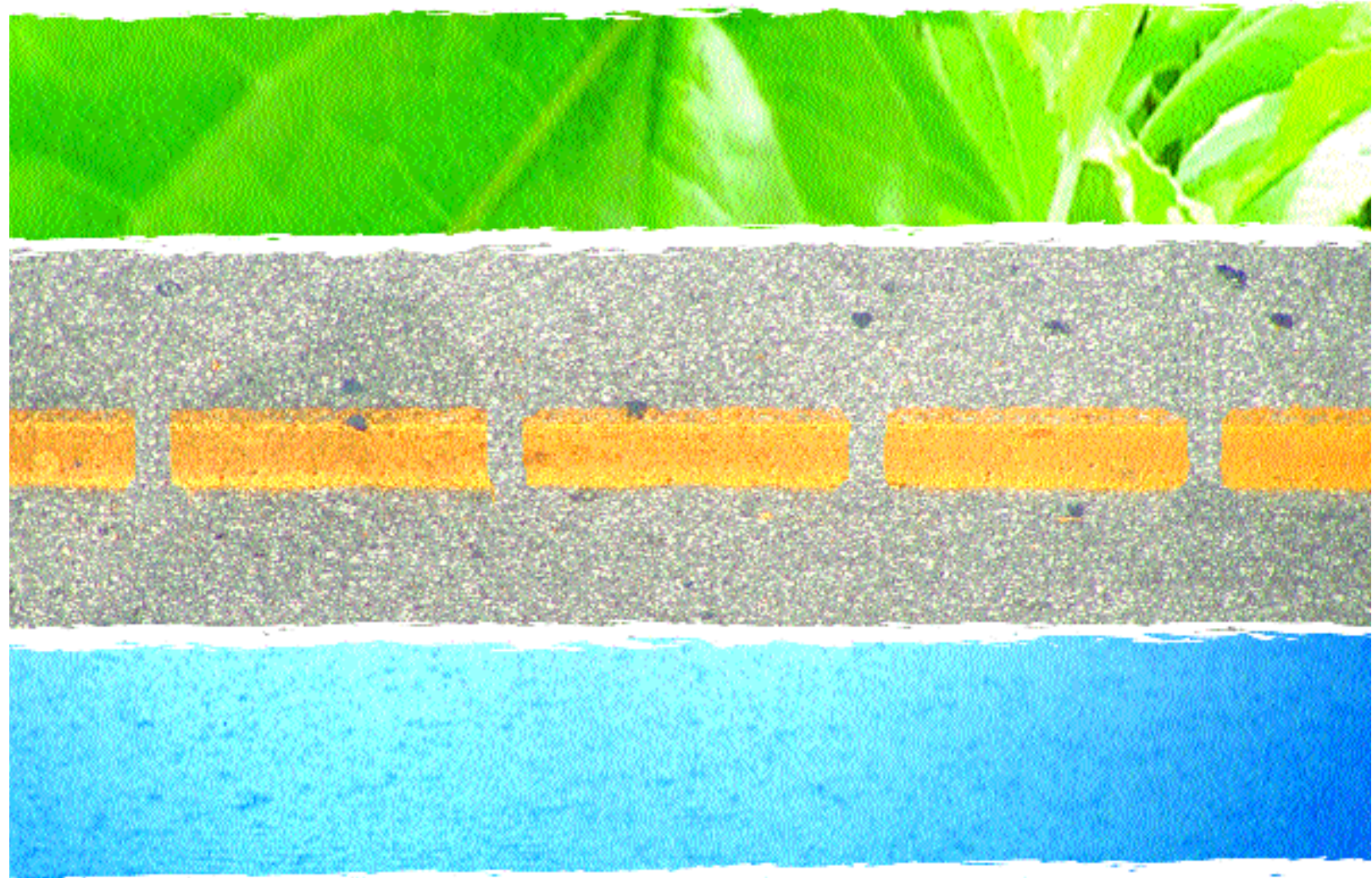
trade agreements, the challenges already facing wildlife inspectors and customs agents in monitoring trade between Canada, Mexico and the United States may well be exacerbated by an increased flow of goods from other nations.

In this environment, enhanced cooperative efforts to monitor and control legal wildlife trade, to stem illegal trade, to enable preventive actions and to establish stricter mechanisms to control and track transboundary movements are likely to become an imperative. Groups such as NAWEG serve the vital function of improving the integration of wildlife enforcement activities in North America, strengthening communication and the exchange of intelligence between Canada, Mexico and the United States, and enhancing domestic operations in each country through training and capacity building. Canada, Mexico and the United States need to take steps now to ensure that their individual and cooperative wildlife trade control programs will be effective in the future.

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