Transnational Criminality: An analysis of the illegal wildlife market in Southern Africa

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TRANSNATIONAL CRIMINALITY: AN ANALYSIS OF THE ILLEGAL WILDLIFE MARKET IN SOUTHERN AFRICA

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Transnational crime, the illicit procurement, transportation, and distribution of commodities across international borders, is an area of increasing interest for criminologists. Most of the current research focuses on drug trafficking, human smuggling, and money laundering. However, one serious type of transnational crime, the large-scale exploitation and theft of natural resources, has yet to be studied in detail by criminologists. This article reports the results of a descriptive criminological analysis of a specific kind of transnational criminality involving the theft of natural resources—the transnational illegal wildlife trade. The findings include a description of the organization and operation of the illicit wildlife market and profiles of the participants and their motivations and methods.

Transnational crime, the illicit procurement, transportation, and distribution of commodities across international borders, has long been an area of interest for criminologists. Most current research focuses on the illegal narcotics trade, money laundering, and human smuggling, with limited interest in the areas of nuclear arms dealing, art and antiquities trafficking, and the theft of natural resources. Of the latter, one specific crime—the black market in endangered wildlife, worth an estimated $6 billion per year—has received little attention from criminologists. The goal of this article is to present the results of descriptive criminological field research into the transnational illegal wildlife market conducted in South Africa and Namibia, two source countries for trafficking in endangered species. The article describes the illegal wildlife market in terms of species in demand and the magnitude of the crime, develops a criminological profile of poachers and their methods, and also develops a criminological profile of wildlife traffickers and their methods.

PREVIOUS LITERATURE

Transnational Crime

"Transnational crime" refers to offenses whose inception, prevention, or direct or indirect effects involve more than one country (United Nations, Crime Prevention and Criminal Justice Branch, 1997). The activities of transnational criminal enterprises include drug trafficking (Eck & Gersh, 2000), terrorism (Adler, Mueller,
& Laufer, 1998), human smuggling for prostitution and low-cost labor (Bensinger, 2000; Feve & Finzel, 2001; Zhang & Gaylord, 1996), nuclear and conventional arms dealing (Begley, 1996), and trafficking in art, antiquities, and bulk currency (U.S. Department of Justice, Drug Enforcement Administration, Strategic Intelligence Section, 1994), motor vehicles (Resendiz & Neal, 2000; United Nations, Crime Prevention and Criminal Justice Branch, 1997), and endangered wildlife (Shelly, 1998).

Over the past few decades, transnational crime has increased exponentially, irrespective of international law enforcement efforts (Tanzi, 1996). This increase has been facilitated in part by the development of the European Union with its open borders and by the breakup of the Soviet Union and Eastern Block (Shelly, 1996). By taking advantage of these political developments, transnational criminal organizations have amassed incredible wealth by supplying new markets with illegal goods and services. As a result of their financial windfall, international organized crime groups recently became more involved in sophisticated financial crimes, most notably money laundering or the conversion of their profits from the illegitimate sphere to the legitimate (Tanzi, 1996).

However, even given the extent of transnational crime, criminologists have yet to research many of the different types of lawbreaking. The limited research is a consequence of the nature of transnational crime. It defies the way many criminologists and criminal justice practitioners think about crime (Shelly, 1996). Street crime remains the most common area of concern for researchers. Organized crime, which includes transnational crime, is inaccurately viewed as a separate phenomenon. However, the distinction is both artificial and inaccurate. Criminal organizations commit both street crimes and sophisticated economic offenses (e.g., street-level narcotics sales and the laundering of their profits through legitimate businesses and offshore banks). Complicating efforts to study different types of transnational crime are the unique political, economic, cultural, and geographic factors influencing offender behavior (Shelly, 1995). As a result, only select activities of international organized crime—narcotics trafficking and money laundering—have been studied to any significant extent. The human smuggling market is now also receiving attention from researchers (Williams, 1997).

An emerging and very lucrative form of transnational crime, the large-scale theft of natural resources including wildlife, timber, and diamonds, has yet to be researched in depth. Participants in this form of crime include not only opportunistic poachers and traffickers but also guerrilla insurgency groups, military units, and organized criminal syndicates (Venter, 2003). This form of crime is so widespread that it presently threatens the political and economic stability of several developing African nations (National Public Radio [NPR], 2003). Over the last decade, for example, Zambia has lost more than U.S. $10 million from the commercial poaching of its elephant population and another U.S. $200 million annually from the illegal emerald trade (Ndhlouvu, 2003). Conflict diamonds
illegally mined from Sierra Leone fueled a long and bloody civil war (Campbell, 2002). In 2003, the Bush administration announced a $50 million effort to protect natural resources including wildlife in Africa to prevent future destabilization of the region (NPR, 2003).

The poaching and trafficking of endangered wildlife is one aspect of natural resource theft. This illicit activity involves the unsanctioned international trafficking of wildlife and their parts. According to Interpol, wildlife trafficking is the second largest form of black market commerce, behind drug smuggling and just ahead of illegal arms trade. Its value is estimated at $6 billion annually (Speart, 1993). The impact of wildlife poaching and trafficking goes beyond the threat posed to the survival of select species. Extensive cross-border commercial wildlife poaching and trafficking operations by Sudanese and Somalis currently present a direct threat to the stability of the developing nations of east and central Africa. Nevertheless, an extensive search of the National Criminal Justice Reference Service's database, a large electronic database of criminal justice and criminological literature, reveals no references regarding this specific illegal international market.

Much of the existing literature on the illegal wildlife trade is in journals dedicated to conservation, ecology, and environmental protection. This literature examines topics that include the environmental impact of the illegitimate wildlife trade on endangered species, the ecological hazards of illegally importing species to the United States and abroad, and the effectiveness of antipoaching efforts. However, in terms of criminological approaches to the illegal wildlife trade, little attention has been paid to the causes of this problem, the profiles and motivations of participants (beyond the superficial), or the political, social, and cultural context influencing lawbreaking and lawmakers. The lack of attention and understanding for this topic among criminologists offers researchers an opportunity to make a significant contribution to the literature. This article establishes a foundation for future studies to build upon.

The Illegal Wildlife Trade: An Overview

The Species, Their Uses, and Values

The transnational wildlife market, worth an estimated $159 billion, involves the annual trade in more than 350 million animals and plants. This trade is regulated by the United Nations (U.N.) 1975 Convention on the International Trade in Endangered Species, referred to commonly as "CITES." A portion of the trade, worth about $6 billion dollars, is illegal. It includes the trade in live exotic and endangered animals (mammals, birds, and reptiles) that are sold to private collectors, pet shops, animal brokers, game farms, biomedical labs, circuses, and even exotic meat dealers (Burgener, 2002; Speart, 1993). This illicit trade also
includes trafficking in animal parts, such as elephant ivory for decorative objects, in addition to rhino horns, tiger bones and genitals, leopard pelts and paws, and bear paws and gallbladders for use in traditional African and Asian medicines (Hewson, 1998) and pelts from various animals used for clothing, rugs, and wall hangings (Adams & McShane, 1992). Plant species, rare and common, are poached to meet the consumer demand for holistic medicines and yard decorations (Hewson, 1998; Newton & Chan, 1999). Certain marine species that are considered delicacies, such as abalone, shark fin, and beluga caviar, are illegally overfished (Redpath, 2001); the majority of the retail consumers of these products are in developed countries, with the highest demand in, respectively, the U.S., Western Europe, and the Far East (Hanback, 1992).

The profits are exceptional as consumers willingly pay large sums for live exotic animals and wildlife products. The lucrative nature of the trade is a great incentive for poaching, as noted in Caputo’s description (2002, p. 85) of the value of elephant ivory:

One elephant’s tusks almost touch the ground as he stands with his massive forehead braced against a tree trunk to give himself a break from carrying all that ivory . . . estimated at one hundred pounds for each tusk; the other elephant’s might be slightly less, say 90 pounds. Three hundred and eight pounds works out to 172 kilos. In 1988, before the ivory ban went into effect, ivory was going for $6,000 (U.S.) per kilo. To a poacher or trader, those two elephants represented a gross profit of $1,032,000 in a part of the world where the average annual income wouldn’t cover an American family’s monthly grocery bill.

High profit margins are not limited to ivory. A rare Bolivian toucan bought for $10 from poachers might bring as much as $1,500 from a collector in the U.S. or Europe. A scarlet macaw or hyacinth parrot can retail for $10,000 to $15,000 each (Spear, 1993). North American bear gallbladders netting poachers $50 to $100 each can be sold for between $2,000 and $8,500 in China, Taiwan, and Korea (Sullvan, 1999). A radiated tortoise, one of the rarest reptiles in the world, bought for 30 cents in Madagascar, will sell on the black market for up to $10,000. An orangutan sold by a poacher for $200 in Indonesia will bring up to $50,000 from a retail purchaser (Spear, 1993).

In addition to the outright sales of live animals or animal parts, poached wildlife have been used as containers for secreting illicit narcotics. The U.S. Fish and Wildlife Service reports cases where narcotics have been sewn into the stomachs of live animals or secreted in a dead animal’s hide and bones (Spear, 1993). The wildlife trade also fulfills the need of transnational criminal organizations to launder their profits from other illicit activities. Animals and their parts are now being traded as payment for narcotics, arms, gems, etc.—a new method of money laundering that is cashless, traceless, and not subject to seizure like bank accounts.

Finally, combatants in civil wars in Africa poach and traffic wildlife on a large scale both to fund their military efforts and for personal profit. During the early 1990s in the Sudan, Kenya, Mozambique, and Namibia, conservation officers often
confronted well armed poachers using money from ivory, rhinoceros horn, and bushmeat to support their political and military causes. During the civil war in Angola when the national government was unable to protect its natural resources, poaching by opportunistic profiteers increased dramatically (Adams & McShane, 1992).

The Magnitude and Impact of Wildlife Trafficking

As worldwide demand has increased for wildlife products, the populations of some species have dramatically declined. Africa offers several examples of the impact of this crime on wildlife populations. From 1979 to 1989, when the ivory trade was legal, Africa’s elephant population declined from approximately 1.3 million to 600,000, primarily as a result of poaching to meet world demand for ivory. The scale of poaching was so extensive that it actually threatened the economies of several nations (Humane Society of the United States, 2003). The impact is obvious when individual countries are examined. In 1970, there were 167,000 elephants in Kenya. By 1989, the population had dropped to fewer than 20,000, mainly as a result of rampant poaching (Bouju, 2001). Efforts to control the trade were complicated by the ethnic links across borders that allowed smugglers to create an informal international market for trading in wildlife parts (Puffer, 1982).

Even more troubling was the change from mainly individual poachers to organized gangs and paramilitary units in east Africa ("Zimbabwe Smugglers," 1991). Describing the nature of poaching in Zambia, Ndhlovu (2003, p. 415) writes, "Commercial poachers are affluent individuals or groups of individuals who carry on their illegal activities by hiring poor villagers who have few other avenues of income. They have modern, long-range communication devices. They carry sophisticated, military firearms and ammunitions. They also have modern automobiles that make the transportation of the killed animals easier. In many cases, the logistical capacity of the poachers is better than that of the law enforcement officers."

In 2003, National Public Radio (NPR) in the United States reported on the magnitude of this serious development in east Africa—the presence of armed commercial poaching gangs from Somalia using automatic weapons to kill wildlife on a large scale in Kenya. The impact of commercial poaching is so severe that it now threatens the fragile economies and political stability of several east and central African nations including Kenya, the Democratic Republic of the Congo, and Zimbabwe (NPR, 2003).

In 1989 when the ivory trade was made illegal, elephant populations in some countries began to rebound slowly. However, the threat remains. The Humane Society of the United States (2003, para. 6) has reported, "Poaching and illegal trade continues to threaten the survival of elephants in both Africa and Asia.
Between January 2000 and July 2002, at least 1,063 African and 39 Asian elephants were reported to have been poached for their ivory, while 54,828 ivory pieces, 3,099 ivory tusks (equal to 1,550 dead elephants), and 6.2 tons of raw ivory (equal to about 794 dead elephants) were seized."

The decline in rhinoceros numbers further illustrates the impact of the illegal trade on wildlife populations. Although protected, rhino populations have declined in Kenya because of the demand for horns used to make ceremonial daggers in Yemen and for use in traditional Chinese medicines (Emslie, 1999). Caputo (2002, p. 53) elaborates:

In the 1970s and 1980s, a new status symbol arose among Arabs rich on petro royalties: Yemeni daggers with handles and scabbards made from rhino horn. They were more popular than gold Rolexes. The demand fueled a vigorous poaching trade. Efficient gangs armed with assault rifles slaughtered rhino by the thousands, and whenever the dagger handle market became saturated, the poachers fell back on the traditional sales to the Far East, where the horns were ground up into medicinal powders and aphrodisiacs. (p. 53)

Rhino horn has retailed for as much as $60,000 a kilo in the consumer market in Asia (TRAFFIC, 1997). Although Kenya banned the trade in horns in 1975, poaching still reduced the number of rhinos, from 20,000 in 1970 to just 500 in 1990. In neighboring Zimbabwe, rhino numbers plunged from 5,000 in the 1960s to fewer than 300 by 1997 ("An Elephantine Problem," 2000).

Demand for inexpensive sources of protein also fuels the illegal wildlife trade. Known as "bushmeat" in Africa, a wide variety of mammals, birds, reptiles, and even insects are illegally killed for sustenance (Barnett, 2000). The problem has become severe as human populations increase and political stability wanes in certain nations. This is especially the case in central Africa, where the bushmeat industry evolved from local hunters and poachers killing only what they could eat to a commercialized and militarized business using organized gangs or military units operating in economically weak nations. A 2003 NPR report described the result of a bushmeat hunt:

It was horrible, a tour guide said, speaking to a film crew that later sold some of its footage to NPR. Poachers used anti-tank weapons to blow the heads off elephants. Forests and savannahs were burned to the ground. Groups of animals were killed en masse. The meat is smoked and shipped to crowded African cities, or to exotic restaurants in Asia and Europe. Dirt-poor governments faced with problems ranging from health care crises to armed rebellions have been powerless to stop the so-called "bush-meat" trade, conservationists say.

While poaching for animal parts has decimated some populations, so has the trade in live wildlife. The methods used to smuggle live animals to the U.S., Europe, and the Far East are often crude and harsh. Mammals, birds, and reptiles seized by customs inspectors in the U.S. and abroad have been found malnourished and dehydrated, with broken bones, lesions, and even literally frozen to death. Lennard (1996) reported that it was not uncommon for 40 percent to 80 percent of an illegal animal shipment to perish en route to its destination. As with the drug
trade, animal traffickers expect and can sustain a certain amount of product loss as a cost of doing business.

The Market's Supply Chain: Initial Supplier, Trafficker, and End User

The literature on wildlife trafficking provides a model of the structure of this illegal market that guides this article. The illegal market is composed of a supply chain consisting of three components: the initial suppliers, traffickers, and end users, i.e., consumers (Meredith, 2001). Initial suppliers (poachers) typically are motivated by one of two objectives—sustenance or profit (Messer, 2000). Although some poaching is done exclusively for sustenance or to protect people and crops from large herbivores, most poaching is profit-driven. For-profit poachers typically work alone or in loosely organized groups supplying trafficking operations.

Traffickers (middlemen), the second link in the supply chain, facilitate the movement of the product from the initial suppliers to the end users. Little is known about traffickers of illegal wildlife products (or, for that matter, about other transnational criminal markets). Research on the drug trade indicates that trafficking operations are composed of numerous actors who participate at various stages in the transportation and distribution process. They are responsible for transporting the product from the initial supplier, across country and over international borders to the wholesalers, and then finally to the retailers who serve end users.

Of interest is the question of whether criminal syndicates are involved in wildlife poaching and trafficking or whether it is mainly the work of opportunistic individuals. Albanese (2003, p. 438) has noted that “organized crime is tenacious in its ability to change its form, targets, and operations in ways that respond directly to shifts in public demand, prosecution successes, and new criminal opportunities.” The literature also indicates that crime networks established in some African nations are also involved in firearms, drugs, vehicles, precious metal, diamonds, ivory, and rhinoceros horn trafficking (Venter, 2003).

Enforcement and Conservation Efforts

The wildlife trade is regulated internationally by a U.N. convention and domestically via legislation within each country. The U.N. Convention on the International Trade in Endangered Species, known as “CITES,” went into effect in 1975 to regulate the trade in wildlife and prevent the extinction of endangered species and habitat (Leakey, 2001). It covers about 34,000 different animal and plant species. The 132 signature nations to the treaty agreed to regulate the trade by the provisions of the agreement. The Convention functions by classifying plants and animals on three main lists or appendices. Species in danger of extinction are listed on Appendix I of the Convention. These include all the great apes, big cats
(cheetahs, snow leopards, and tigers), many birds of prey, sea turtles, orchids, and snakes. Species that are not yet endangered but may become so if their trade were not controlled are listed on Appendix II of the Convention. CITES permits are required to own, buy, sell, or transport Appendix II–listed wildlife. The final list, CITES Appendix III, includes species that can be traded without restriction (Leaky, 2001).

Regulation is also accomplished by national legislation and government enforcement agencies such as the Lacy Act, Endangered Species Protection Act, and the Fish and Wildlife Service in the United States. In South Africa, provincial law is a key component of the effort to regulate the wildlife trade (Burgener, Snyman, & Hauck, 2001). Nongovernmental organizations (NGOs) and private sector conservators also play a role in controlling the wildlife trade. NGOs such as the World Wildlife Fund, the Sierra Club, Wild Aid, the Humane Society of the United States, and the Endangered Wildlife Trust monitor and fund efforts to conserve wildlife in various regions of the world. Finally, private zoo owners, collectors, and consultants also play a role in protecting endangered species via political activism and education.

The actual methods used to combat poaching in Africa have changed considerably since the ivory wars of the 1980s. The initial efforts at protecting elephants and rhino from poaching involved the use of heavily armed antipoaching units backed by helicopter gunships aggressively pursuing poachers (Caputo, 2002). As more manpower was allocated to reduce poaching in Africa, the results often fell short, leading some to conclude that the poaching wars were similar to the Vietnam experience of the Americans, that is, “massive, well-armed forces struggling in vain against a poor but unyielding foe” (Adams & McShane, 1992, p. 130). Some contend that the implementation of the 1989 international ivory ban ending the legal trade had more of an effect on reducing poaching than many of the law enforcement efforts (Caputo, 2002).

Contemporary solutions commonly involve both strict penalties for poaching and the provision of a voice and an economic incentive to the local residents in areas with protected wildlife populations. The government of Zambia, for example, relies on the threat of a five-year prison sentence for illegally hunting, wounding, or killing rhinoceroses or elephants. Zambia combines this stick with a carrot in the form of the Integrated Rural Resource Development Project (IRRDP). This project “operates on the premise that any successful wildlife conservation program that seeks to root out poaching or illegal trade in wild fauna can only be achieved once the local people are fully involved” (Ndhlou, 2003, p. 419). The program places the residents of rural communities in a management role for local wildlife. Incentives include game meat provided for local consumption. Money from tourists and revenue generated from professional hunting are shared with the locals to improve water quality, schools, and basic infrastructure, resulting in each resident acting as a conservation officer with a material incentive to protect the wildlife.
Similarly, Project CAMPFIRE (Communal Areas Management Program for Indigenous Resources) in Zimbabwe illustrates this modern approach to conservation. The program was conceived after the realization of two key points: "People living with wildlife pay the price for conservation—threat of injury by dangerous animals, damage to crops, ... and so must reap the benefits; and second, these people have the collective capacity to manage their natural resources" (Adams & McShane, 1992, p. 178). This innovative program established natural resource cooperatives that gave participants in the community the same rights as farmers and ranchers.

**METHODOLOGY**

**Descriptive Analysis via Field Research**

Given the limited criminological literature on the illegal wildlife market, the authors decided that the most efficacious approach to the topic was descriptive research. Though quite challenging and time consuming, the specific methodology employed was field research via observation, interviewing, and secondary data collection. The role of complete observer was selected as the most appropriate method to use to obtain an in-depth understanding of the nature of the illegal wildlife trade in two southern African nations. This methodological strategy places the researcher in the natural setting of whatever he or she is studying (Berg, 1995). It allows the researcher to experience and interpret social expressions or processes between people and within groups of people. Through this methodology, the researcher is also able to "examine various phenomena as perceived by participants and represent those observations as accounts" (Fitzgerald & Cox, 1994, p. 87).

**Site Selection**

South Africa and Namibia were selected as the research sites for three reasons. First, the literature indicated that South Africa and Namibia have large indigenous populations of the endangered and exotic animals that are in highest demand by end users. Second, the literature further indicated that both countries have thriving illegal animal markets. Third, the researchers have established contacts in both countries to facilitate the study.

**Gaining Access**

A major challenge to conducting field research overseas is gaining access to the populations. This challenge was readily overcome because one of the coauthors of this article is a faculty member with Technikon University, Pretoria, South Africa. Discussions with this coauthor greatly facilitated the other researchers'
understanding of the basic structures of the public and private conservation and law enforcement agencies in South Africa and Namibia and the nature and extent of the problem prior to their arrival in the country. Upon their arrival in Africa, the coauthor’s connections significantly facilitated access to the subjects.

Population and Sample

Snowball sampling, which is commonly used in criminal justice field research, was selected as the most practical method. Snowball sampling works by first identifying one or several interview subjects who are then asked to identify other knowledgeable subjects willing to participate in the study (Maxfield & Babbie, 2001). Although this strategy cannot ensure a representative sample, the use of in-depth unstructured interviews and observations combined with secondary data helped to create a detailed picture of the nature of the illegal wildlife market in South Africa and Namibia, the magnitude of the crime, the participants and their operations, and efforts at controlling the trade.

The sample was drawn from three unique populations who are actively involved in investigating or monitoring the illegal wildlife trade within the site countries: (a) U.S. law enforcement and intelligence officials stationed in the site countries (U.S. Customs, DEA, FBI, CIA), (b) government and law enforcement officials in the site countries (customs officials, game park managers, and police investigators), and (c) representatives from nonprofit international conservation organizations with offices in South Africa and Namibia.


Data Collection Methods, Triangulation, and Confidentiality

The data were gathered via semi-structured interviews, observation, and the collection of secondary sources of information. By employing multiple methods of
data collection, the researchers were able to assess the validity and reliability of the results. The interview questions were tailored in advance to the subjects' sphere of knowledge of the illegal wildlife trade and the nature and extent of crime. Questions were formulated to elicit information on the criminal organizations (the number operating within the site countries, their degree of organization, and their chain of command and leadership), their characteristics (the number and ethnicity of members, the volume of their business, and their relationships with other trafficking operations and overseas foreign entities or syndicates at other levels of the trade), and their operations (recruitment of initial suppliers, transportation routes, smuggling methods, and methods used to avoid detection and apprehension). Follow-up questions were employed as needed for clarification and elaboration of subjects' responses.

Observation was employed during visits to locations where illegal wildlife products were poached or offered for sale. These included game and nature reserves, private and public zoos, and specialty stores and traditional medicine markets. Secondary data including statistical summaries, law enforcement and intelligence reports, and policy manuals were collected to supplement and validate the interview and observational data. To protect the identities of the subjects, the field notes were constructed with no reference to their names. A system of numeric codes was employed to identify the subjects and their responses.

**Analytical Techniques**

Guided by the three general objectives of the study, the researchers recorded detailed field notes after every interview and observation. Each night, the notes were reviewed and transcribed. On occasion the researchers would find it necessary to fill in gaps by returning to the site or reinterviewing certain subjects to clarify responses and add needed detail. The final product of these field notes was a comprehensive record of all activities, events, comments, and observations that occurred in that particular encounter.

Unlike quantitative methods, there are no firm rules for analyzing qualitative data. Two aspects of this study, however, provided some guidance for the analysis. First, the researchers' predetermined objectives structured the data analysis phase of identifying themes and patterns. Second, the preparation of an extensive literature review and input from their South African coauthor about the nature and extent of the crime also facilitated the analysis of the data. The data analysis phase began with a labor-intensive content analysis of the field notes, observations, and secondary data. This initially involved identifying and then classifying the patterns in the data. Although the main purpose of the article was to describe this phenomenon, inductive analysis was also employed to uncover themes and, eventually, patterns in the data relating to the three main objectives of the study. Triangulation was employed to check the consistency of the themes and patterns.
uncovered during this phase. This was later followed by a determination of the significance of the findings and their subsequent interpretation.

**FINDINGS**

This article describes the illegal wildlife market in terms of species in demand and the magnitude of the crime, develops a criminological profile of poachers and their methods, and also develops a criminological profile of wildlife traffickers and their methods. The findings are organized around each of these objectives.

**The Illegal Wildlife Market in South Africa and Namibia: Species and Magnitude**

The study's first objective was to identify the species poached and trafficked in the illegal wildlife trade in South Africa and Namibia and assess the magnitude of this crime. In the two site countries, the fauna and flora that were identified as poached and trafficked in the illegal wildlife market included mammals (primarily elephant, rhino, and African cats), exotic and rare birds and reptiles, select marine animals, and plant species.

**Elephant and Rhinoceros**

Elephant and rhino have long been poached throughout sub-Saharan Africa for their ivory and horns, for use as decorative objects and for traditional Asian medicines (Adams & McShane, 1992). In a sense, they have been the "poster animals" for conservation agencies dedicated to protecting African wildlife. To examine the threat to these species in the site countries, the researchers collected data at the headquarters of the South African Police Service's Endangered Species Protection Unit (ESPU) by observation and interviews with the superintendent and criminal investigators. The ESPU is an elite police unit charged with enforcing wildlife conservation laws in South Africa. The unit claims a conviction rate of poachers and traffickers of over 95 percent due to their extensive use of buy-bust operations.

The interviews at the ESPU revealed that, although elephant and rhinoceros are poached in South Africa and Namibia, the present threat to these domestic species is not very serious. While at the ESPU headquarters, the researchers observed a warehouse stocked with hundreds of confiscated ivory tusks and rhino horns. Although the amount of confiscated wildlife products found in the warehouse was staggering, only about 10 percent to 15 percent of these items were from South African animals. Ivory and horn are still confiscated in South Africa and Namibia, but the majority of this material originates from animals poached in other African nations and is smuggled through South Africa to its final destination. Investigating
this issue further, the researchers discovered that South Africa is a major transshipment center for poached wildlife. This is a function of South Africa’s geographic location, extensive system of good roads, international airports, numerous remote airstrips, and seaports.

Though they are still threatened, poaching of elephant and rhino has declined in South Africa and Namibia, with losses numbering fewer than five animals of both species for 2001. This is the result of effective law enforcement, strict penalties for poaching, and the implementation of a successful conservation strategy that increased the involvement and ownership role of the local community living near the wildlife reserves. Specifically, by giving the local residents a voice in game management policy and educating them to the value of the animals for tourism or for paying professional hunters, poaching by locals has been dramatically reduced. It is important to note, however, that ivory is still available for purchase in South Africa. During a visit to Durban with an official from KwaZulu Natal Wildlife, the researchers readily found illegal ivory products for sale in curio shops catering to tourists.

African Cats

A second group of animals identified in the literature as poached and trafficked in the site countries are large African cats. To examine this issue, the researchers conducted interviews with officials of Namibia’s Ministry of Environment and Tourism and staff at Harnas Wildlife Foundation near Gobabis. Harnas is a privately owned conservation organization dedicated to protecting large African cats. The interviews revealed that most African cats are poached for three reasons and are also sold both wholesale and retail in South Africa and Namibia. First, most poaching of cheetahs, leopards, and lions is done by ranchers protecting their livestock from the actual or perceived threat posed by these predators. Second, the data revealed that there is a demand for African cats for the pet and hunting business. Cheetah cubs are poached for the international pet trade. The adult mothers are killed and the cubs captured alive and illegally sold and exported. Most live cubs are exported to the Middle East as a “status” pet for the very wealthy. A small number of adult cheetahs and leopards are captured alive and sold to game farms.

Third, African cats are poached for their body parts for use in “muti” or traditional African medicine. This finding was confirmed during a visit to the traditional market in Durban, South Africa, with an official from KwaZulu Natal Wildlife Conservation. At the market on prominent display, the researchers observed leopard paws for sale as talisman against bad luck as well as numerous pelts and bones from leopards and other African cats for use in holistic remedies and for traditional African clothing for sangomas (traditional African healers). Although these items were obviously illegal to possess and sell, the authorities
would not confiscate them. When questioned about this, the officials told the researchers that even if the illegally harvested wildlife were confiscated from the market they would only be restocked in a few days, resulting in the deaths of many more protected animals. Given that these items sell rather slowly, leaving these products in the market is considered the lesser of the two evils.

**Birds and Reptiles**

Although elephant, rhino, and African cats are poached and trafficked in South Africa and Namibia, they constitute a minority of the species in the illegal wildlife market. Rather, the illicit wildlife trade in the site countries was found to be dominated by a thriving illegal business in reptiles and birds. To investigate the specifics of the reptile trade, the researchers interviewed the owner of the Hartbeespoort Snake and Reptile Zoo, KwaZulu Natal conservation officials, and Namibian Ministry of Environment and Tourism officials. During the interview at the private zoo, the researchers were initially treated with considerable suspicion by the owner. Halfway through the interview the owner explained that he had first assumed that the researchers were animal brokers or traffickers rather than academics conducting research. His concern for his collection was further illustrated by the use of electronic alarms on each and every exhibit in the zoo. Once his concerns were alleviated, he was very forthcoming with information about the illegal trade in poached reptiles.

The interviews revealed that reptiles are heavily poached in South Africa and Namibia for collectors and local pet shop owners, for illegal export to buyers in Europe and the United States, and for shipment to Asia as exotic foods. Interviews with South African Nature Conservation, law enforcement, and customs officials provided additional evidence of the high demand for these animals, especially in Europe. Reptile collectors and pet shop owners from Germany, Holland, and the Czech Republic have frequently been apprehended by South African and Namibian police with the poached creatures in their possession. The data indicated that South Africa is also a major importer of snakes and reptiles that are illegally caught in other African nations to meet the demand for the newest trend in the domestic pet trade. The domestic demand in South Africa for exotic reptiles as pets was described to the researchers as “growing rapidly.” Interviewees explained that, although it is common for South Africans to have dogs or cats, they are typically viewed by their owners more as a working member of the household (security or rodent control) rather than as a family pet. Exotic species of reptiles, on the other hand, are preferred because they are less expensive to feed, easier to care for, and cheaper to purchase than a rare breed of dog or cat.

The trade in birds constitutes the other major segment of the illegal wildlife market in South Africa and Namibia. This finding was the result of interviews with officials at two private zoos—a reptile and snake park in Hartbeespoort and Umgeni...
River Bird Park—and at the Durban traditional African medicine market in South Africa and the Ministry of Environment and Tourism in Namibia. Very similar to the market in reptiles and snakes, the trade in birds is highly specialized and dominated by collectors, breeders, and dealers in rare and exotic species. Officials informed the researchers that only private individuals, not public zoos, have the most rare and exotic birds in their collections. Furthermore, some birds are poached for the muti markets for medicinal purposes.

As with the reptile trade, South Africa is also classified as both an exporter and importer of birds. In addition to the export of native birds, large numbers of rare African birds from other nations are illegally imported to South Africa for the pet trade or for eventual transshipment overseas. The interviews also revealed that the bird trade is far more organized than the illegal markets in ivory, rhino horn, and African cats. Networks of bird breeders and collectors rely on verbal agreements, e-mail and Internet sites, and classified ads in bird enthusiast magazines to order, sell, or trade birds.

While many birds poached from the wild remain in country to meet domestic demand, large numbers are exported to Europe, Asia, and the United States by sea or air to fill orders from overseas collectors. The movement of birds across borders, unlike the other species of wildlife, involves the secreting of birds in suitcases and shipping cartons, the extensive use of falsified or forged permits for export or import, and corruption of police and customs officers. The inability of many customs officers to identify the exact species of birds facilitates the job of the smugglers who rely on falsified shipping bills or forged CITES permits listing their birds as unprotected species legally obtained and legal to export or import.

Flora and Marine Life

Poaching of plants is widespread in South Africa and Namibia. The most high-profile plant species poached is a rare and exotic species of palm tree called a cycad. Cycads are a popular ornamental tree with homeowners and collectors in South Africa. With demand outstripping the legal supply, poaching and theft of cycads from protected nature reserves, public parks, landscape nurseries, and private homes has become rampant. During interviews with the Endangered Species Protection Unit, the researchers observed hundreds of immature cycads that had been confiscated from poachers. The young trees were stolen to fuel the domestic demand for exotic plants. Cycad root balls were also found for sale at Durban’s traditional market. The loss of these plants is so severe that police are considering inserting microchips into cycads growing in protected reserves. This would allow conservation officers to digitally scan suspect cycads offered for sale to determine their origin.

The poaching of marine life includes the extensive illegal overfishing of a variety of species, with abalone, a protected rare shellfish found around the Cape, being the
most high-profile animal. Abalone is a very popular and expensive delicacy in seafood restaurants in South Africa and Asia. To protect populations, the Ministry of Marine Fisheries established limits on the number of abalone that can be harvested in any one season. However, the poaching of abalone is widespread, both to meet the increasing demand in South Africa and Asia and as an easy source of income for local fishermen.

African Traditional Medicines

As noted in the previous sections, muti (traditional African medicines) turned out to be a very significant factor in the illegal wildlife trade and one of the most interesting findings reported in this article. The full range of species identified in South Africa’s and Namibia’s illegal wildlife market is also represented in the muti trade. In southern African societies, traditional healers are well respected and hold a position of authority. Their job includes the functions of a doctor, counselor, psychiatrist, spiritualist, and minister. People rely on traditional healers for problems ranging from social problems to serious illnesses. Traditional healers rely on a variety of herbs, roots, leaves, tree bark, and a wide variety of animal parts (many of which are from endangered species) to prepare their potions and remedies.

The relationship to the illegal wildlife trade was found during collection of data at Durban’s Queen Street traditional market. The researchers’ guide from KwaZulu Natal Wildlife noted that more than 50 percent of the animal parts and plant products on display were from endangered species poached from the wild. This was confirmed during interviews with South African Customs officers. The officers also noted that entire sections of protected forests have been defoliated by locals harvesting roots, leaves, or tree bark for the muti market. Government efforts to develop commercial plantations of plant products commonly sold in the muti markets in order to prevent poaching of these species from the wild have failed. This is a consequence of the strongly held cultural beliefs passed down from generations of muti dealers and consumers that only wild grown and harvested products are effective for treating ailments.

The Poachers’ Motivations and Methods

The second objective of the article was to construct a criminological profile of the poachers and their methods. The researchers found considerable variation among poachers in South Africa and Namibia. Their profile is a function of the type of species that they poach and trade in. The typical poacher, regardless of the plant or animal species that are stolen, is best described as an individual operator rather than a member of an organized criminal syndicate. Demographically, poachers include both white and black South Africans, Namibians, and foreigners, with lower to upper-middle income and all levels of education. Poachers include people who live near the game reserves, farmers, fishermen on the Cape, pet shop
owners, private game farm and zoo owners, tourists, animal and plant collectors, and landscape nursery owners. One group not identified as involved was professional hunters. The South African Police Service’s ESPU reported that there was no evidence of illegal sport hunting in the game reserves because of the severe criminal and financial penalties.

A poacher’s motivations include sustenance, profit, the desire to add a rare animal to a collection, and the need to eliminate a problem animal threatening a ranch or farm. A frequent comment made by interviewees was that “poaching begins with a need which turns into greed.” Poaching is also motivated by cultural reasons. Local residents living near game reserves view the wildlife as a resource that they have a right to harvest. The level of organization among poachers runs from nonexistent to, at best, a loosely associated network of friends or fellow collectors.

**Elephant and Rhinoceros Poaching**

Elephant and rhino poachers in South Africa and Namibia are few in number and no longer constitute much of a threat. The few who risk poaching are best described as locals residing near game reserves who kill in order to protect their crops from these large herbivores or to profit from the ivory or horn. Conservation officials informed the researchers that a typical scenario would consist of two locals who kill a rhino, assuming a profit of as much as U.S. $50,000 from the horn. In most cases, these unsophisticated poachers have difficulty finding buyers because they seldom have contacts with the necessary middlemen. If they succeed in locating a buyer, they may be offered as little as U.S. $50 for the rhino horn. Given current penalties in South Africa for rhino or elephant poaching—10 years in prison and a monetary fine three times the value of the animal—the risk far outweighs the benefits.

**African Cat Poaching**

The profile of African cat poachers is more varied. Cat poachers include ranchers, game farm owners, local residents, and exotic animal dealers and collectors. Ranchers are typically arrested for poaching when they disregard the legal requirements for dealing with problem animals. Ranchers are first required to report the problem or “conflict” animal before taking action so that the animal can be translocated rather than killed. However, it can be legal for a rancher to kill these cats provided the rancher adheres to government requirements. These include reporting the killing to local conservation officials, justifying the action as needed to protect livestock, and bringing the pelt to the authorities. Once reported, the farmer can keep the pelt or sell it domestically. The new pelt owner must be registered with the national government and the pelt tagged. Ranchers, however, cannot legally sell the pelts on the international market. Yet the reality is that
ranchers often avoid these requirements and simply kill the suspect cats without reporting it to officials. Some ranchers are caught by the police when attempting to sell the pelts.

Local residents living near game reserves are involved in poaching African cats, though typically for pragmatic reasons. Often considered nothing more than pests, lions, cheetahs, and leopards that are either a real or a perceived threat to humans are illegally killed and disposed of by poachers. Other South Africans or Namibians seeking to profit are also active in killing African cats in order to supply these species to the muti traders.

Exotic game hunting is a major industry in the site countries, with hunters—mainly from North America and Europe—willing to pay as much as U.S. $50,000 to kill certain animals. An entire industry of game farms and professional hunting guides developed over the past decades to meet this demand. Hunters willingly pay lesser, though still significant, amounts for hunting large African cats. This gives some unscrupulous game farm owners a financial incentive to stock their farms with these desirable species when legally procured animals are either not available or too expensive to buy from animal brokers.

Reptile and Bird Poaching

Poaching of protected reptile species is a relatively simple operation. This aspect of the illegal wildlife trade is dominated by local South Africans and by rural residents, collectors, and pet shop owners both domestic and international. The researchers learned that demand for exotic African reptiles is increasing in North America and Europe. A common scenario is for reptile collectors from Europe to travel to remote areas of South Africa in search of exotic species in the wild. Collectors approach local residents who are familiar with the area and its wildlife and offer to pay them a set amount (generally the equivalent of a few U.S. dollars) for certain protected species of lizard or snake. A financial arrangement is reached and the collectors return in a few days or a week to obtain the poached animals from the local Africans. The locals procuring these protected animals are neither professional criminals nor full-time poachers. Rather, they are opportunists making “easy money” from foreigners.

The poaching of exotic birds is more complicated but is similar to the reptile trade in some aspects. Poaching is done by local Africans living near bird populations, collectors, and bird dealers and pet shop owners. Exotic birds are also stolen from dealers and collectors and from pet shops, though not from zoos, because the latter seldom have ultra-rare birds (CITES Appendix I–listed species) in their collections. Just prior to the researchers’ visit, more than U.S. $25,000 in rare birds were stolen from a legitimate Pretoria bird dealer. Poaching of select bird species is also linked to the muti market. In 2002, a South African newspaper story included a claim that one could improve one’s odds for winning a lottery by killing a vulture—two species of which are already classified as “vulnerable” in the
country. Conservation officers told the researchers that this claim led to dramatic increases in vulture poaching by superstitious Africans.

**Flora and Marine Life Poaching**

Flora poaching is a relatively simple operation done mainly by individual thieves rather than criminal networks or syndicates. In addition to exotics like cycads, a wide variety of flora are poached for use as traditional medicines. Cycad poaching is mainly done by individual homeowners seeking to have these exotic palm trees for their yards and by landscapers supplementing their legal stock with poached trees. Plants are poached from protected nature reserves, from people’s yards, and from landscape nurseries. Police report that they seize about 50 poached cycads per month in the KwaZulu Natal province alone.

Black South Africans and Namibians from rural areas were identified as responsible for poaching flora for the muti market. Realizing that there is some value to certain plants, locals will enter a forest to collect tree bark, leaves, roots, grasses, and plants for wholesale to retailers at the traditional medicine markets. Conservation officers noted that it is common to see several acres of wooded regions in rural areas deforested in a matter of weeks by locals in search of products.

The poaching of abalone is the work of local individual fishermen working off the Cape (the so-called “abalone coast”) in search of extra profit rather than commercial operations. A typical scenario described to the researchers during interviews with the Ministry of Marine Fisheries in Durban is a local fisherman intentionally exceeding his limits on an abalone catch. In order to prevent detection by the South African Marine units, the shellfish are kept in bags tied to the ocean floor. The bags are retrieved usually during periods of foul weather when the Marine units are not on patrol. The abalone are temporarily stored in coolers and refrigerators before pickup by traffickers. During the interviews at the ESPU, the researchers observed nearly 100 small refrigerators and coolers as well as several refrigeration trucks confiscated from abalone poachers and traffickers. The abalone then move directly from poacher to traffickers—Chinese criminal gangs—who sell the fish to restaurants in South Africa or Hong Kong.

**The Traffickers’ Motivations and Methods**

The article’s final objective was to follow the illegal wildlife trade to the next link in the chain (i.e., the traffickers) and to construct a criminological profile of these middlemen and their methods of operation. The data showed variation in this role as a function of the species trafficked. Similar to poachers, wildlife traffickers are predominantly individual operators or at most informal groups rather than organized criminal gangs. The one exception to this finding is abalone traffickers.
The relationship between traffickers is accurately described as loose networks of friends with common interests in birds, reptiles, or plants who buy from poachers and know where to find retail customers. Traffickers do not operate in all segments of the wildlife trade. In some instances, the poacher is also the end user of the plant or animal. These would include subsistence hunters and collectors of rare reptiles, cycads, or birds who obtain these species for themselves from the wild. The researchers also determined that there may be several levels of middlemen involved in the illegal wildlife trade. A poached product may move from one poacher to another or to several traffickers before reaching the consumer market.

Ivory and Rhino Horn Trafficking

Trafficking in ivory and rhinoceros horn often involves several middlemen before the product is delivered to the consumer in Asia or the Middle East. Illegally moving ivory and horn from poacher to trafficker is fairly easy. Rhinoceros horn is relatively small and easy to hide, and larger elephant tusks are cut into smaller pieces for concealment in order to facilitate the cross-border trade. The porous nature of South Africa’s and Namibia’s borders and large numbers of remote airfields facilitate the movement of wildlife products into and out of these nations. Two traders moving poached ivory from Angola to Namibia, for example, will stop their automobile just before reaching the border checkpoint into Namibia. One trader will exit the automobile and walk the product across the border via an unobserved path, rejoining the other trader after the latter crosses the frontier in their contraband-free vehicle. Sometimes even this simple method is not necessary. Interviews of U.S. Embassy officials conducted on the first day of the site visit revealed that corruption is endemic among low-paid law enforcement officers in South Africa and Namibia. This theme was confirmed in each subsequent interview. A payoff of a few dollars to border control officers is often enough for them to look the other way.

As noted earlier, the poacher will receive very little compensation for the wildlife products. However, the commodity’s price steadily increases with about a 20 percent markup as it moves from one trafficker to the next. Because there is no domestic market for ivory or rhinoceros horn in South Africa, the trafficker’s final task is to locate a buyer with connections to foreign purchasers from Asia or the Middle East. Ivory buyers primarily operate out of the two large South African cities of Johannesburg and Durban. This is mainly because of the international airport in Johannesburg and the seaport in Durban. The interviews also revealed that Chinese triads are represented among the buyers of African ivory for eventual retail sale in Asia. Unfortunately, additional data to support this finding were not uncovered.

Prior to export, the ivory is often cut into small cubes for eventual processing into jewelry, carvings, chess pieces, or stamps. Most of the ivory is smuggled by airline passengers or in ship cargo mixed with other products, making it difficult to identify
during electronic scans of containers by port authorities. Customs officers at the Johannesburg International Airport reported that, when aggressively searched, contraband can be found on every flight bound for Asia. Ivory couriers are commonly found carrying two to three kilos of the product. Rhino horn bound for Asia is often ground into powder and secreted into innocent-looking containers for final sale as an aphrodisiac, thus making it difficult to identify during baggage screening. Evidence indicates that embassy staffers from Asia and the Middle East are involved in the trade. Arrests of some buyers led to confessions that the products leave the country in diplomatic pouches that are not subject to search by customs officers. Of note, the traders of ivory and horn are also likely to traffic other types of contraband including diamonds, weapons, or drugs.

African Cat Trafficking

As in the ivory trade, traffickers of African cats are primarily individuals and loosely structured networks of thieves rather than well organized criminal enterprises. The specific details of this crime were found during the researchers’ work in Namibia, which is home to the world’s largest wild population of cheetah. This species is in demand as both an exotic pet and a game animal for hunting. The data gathered at Harnas Wildlife Foundation in Gobabis and the Ministry of Environment and Tourism in Windhoek revealed that live cheetah are poached and smuggled out of Namibia via light planes using remote air fields. Cheetahs are also smuggled out of the country “overtly” using falsified or forged CITES permits. The large size of Namibia with its very low population density hinders detection of this crime. Some poached cheetahs are used for captive breeding for the pet trade or to supply game farms. The interviews revealed that there is no trade in African cat pelts by tourists because of the strict and well known penalties.

Bird and Reptile Trafficking

South Africa and Namibia are identified in the CITES agreement as major importers and exporters of legally and illegally obtained birds, indicating a thriving legal and illegal domestic and international trade. The legal bird trade is valued at about U.S. $2 million per month. The researchers found that the trade in birds is the most organized of the different species. Bird traffickers are best described as a loose network of individuals who communicate via e-mail, Internet sites, and advertisements in avian magazines and by word of mouth. The traders also traffic other illegal commodities. That is, they trade the wildlife for other products, including drugs and weapons. Over time the trade in birds has increased in terms of volume rather than in the actual number of traffickers. Poached birds are now moved by the planeload to South Africa and Zambia because of the good transportation infrastructure of both nations. The data gathered further indicated that Libyan criminal groups participate in the illegal avian trade, moving planeloads
of poached southern African birds to Europe. The bird and reptile traders employ a variety of somewhat more sophisticated illicit techniques to avoid apprehension as they move their products domestically and transnationally. These include extensive CITES permit fraud and forgery, mislabeled shipping invoices, smuggling, bribery, and disguising the birds' true species by using dyes.

As noted earlier, nominally legitimate bird collectors and dealers (mainly small-volume operators) are deeply involved in the illegal avian trade. Many legitimate collectors and dealers become involved in the illegal trade in order to obtain the exotics. This is done out of greed or the desire to have the most exotic species for their collections. However, the researchers found that zoos are not involved in bird trafficking because of the legal requirement that they have CITES permits for all of the animals in their collections. Zoos are also reluctant to deal with private individuals when seeking to buy or sell wildlife. As a result, legitimate zoos seldom have the rare and exotic birds in their collections.

Avian traders are seldom deterred by the maximum fine of U.S. $1,000 for trafficking because the value of the bird often exceeds the fine. The majority of the smuggling of poached birds is done overtly by falsified paperwork rather than by concealment, though some covert methods are employed. A common method is to place the birds in cylinders that are then secreted in small cardboard boxes for shipment as air freight. Furthermore, smugglers simply lie about the breed on the export or import paperwork, claiming that their birds are not covered in a CITES appendix. Customs officers are challenged to distinguish among breeds in order to identify legal and illegal birds in a shipment. During interviews of customs officers at the Johannesburg airport, the officers explained the difficulty of this task. Lacking formal training in avian biology, the customs officers showed the researchers large color reference books that they had to use to identify the birds in shipments. Birds are sometimes dyed different colors to disguise their true breed. At other times, officers simply misidentify the species.

Bird trafficking is also facilitated by corruption. Legal shipments of birds from other African nations to South Africa are required to be placed in quarantine for 30 days prior to being turned over to the owners. Quarantine facilities are in the charge of a Quarantine Master (QM). Once the quarantine period is over, the QM will notify the owner to collect the shipment. However, a certain number of the birds will die while in quarantine. QMs subsequently dispose of the “die-offs” before turning the shipment over to the owner. However, some corrupt QMs may overreport the number of die-offs and then illegally sell live birds to bird traders. The bird traders sell these to pet shops or collectors who in turn claim that they bred these in their own aviaries. In addition to corruption during quarantine, a common practice is the intentional undercounting of the actual number of birds in a shipment. Bribery of QMs is also not unheard of. The “R200 form”—a 200 Rand note (about U.S. $25) attached to a falsified document—is often enough of an incentive for the officials to accept obviously fraudulent paperwork. KwaZulu Natal wildlife officials and customs officers reported that as much as 50 percent of all CITES permits and shipping manifests are fraudulent.
In addition, simple but effective laundering schemes (facilitated by obvious statutory flaws) are used to traffic birds. For example, a bird dealer or pet shop owner may legally have a pair of exotic birds with the legitimate CITES permits required for ownership. This dealer or owner may continually buy poached birds of the same species at regular intervals for resale, claiming that these are the offspring of the original pair. The lack of legal requirement to document the offspring of the legally obtained original pair is an incentive to this crime.

Reptile trading offers some parallels to the bird trade in that it is dominated by a loose network of collectors and dealers communicating and placing orders via e-mail, Internet sites, and word of mouth. Another parallel to bird trafficking that drives the reptile trade is the collector's desire to have the most exotic species that cannot be legally purchased. A small percentage of reptile poaching is also done to supply the exotic food markets in Asia. Once the reptiles are collected from local African poachers in rural areas, they are transported to domestic or international buyers by the traders. The small size of poached reptiles facilitates their smuggling. Customs officers noted that a common method is to conceal small reptiles in video cassette containers, in small cartons that are gift-wrapped, in smugglers' pockets, or in the waistbands of their pants in order to deceive airport security. The smuggler simply boards the aircraft with the lizard or snake in his or her carry-on luggage or clothes. Reptile traffickers also send the creatures via express mail to their buyers in Europe, Asia, and the United States. Death rates of the reptiles in transit vary depending on the skill of the trafficker.

Although imported reptiles are required to be quarantined upon arrival in South Africa, there is less chance for corruption than with the bird trade. All imported reptiles are required to stay in quarantine for life. Only their offspring can be moved off quarantine for the consumer market.

*Flora and Marine Life Trafficking*

The trafficking in flora is primarily done by retailers of exotic plants and the muti trade. Landscape nursery owners comprise the majority of the traffickers of cycads; after the cycads are poached, they are added to their retail inventory and resold to the public as quickly as possible under the guise of legally obtained plants. The researchers found that it is not unusual for new landscape shops to stay open for only a month to sell their stock of poached cycads to the public. They then cease operations only to reopen later under a different name in a new location after restocking with more poached trees.

The muti traders trafficking in plant species operate differently from cycad dealers. The retailers in the traditional African medicine markets are somewhat organized and have informal price controls in effect to maximize their profits. The researchers found that gaining access to the traditional medicine market can be difficult for prospective new retailers. Local residents bringing a stock of poached flora are prevented from retailing their products at the market. Their only option is to sell the flora at the traditional medicine dealers' prices, not their own.
Although most trafficking does not involve formal criminal enterprises, there is one exception—the illegal trade in abalone. Chinese triads (criminal gangs of local Chinese) control the lucrative trade in poached abalone. Although the actual poaching is done by local South African fishermen, the triads are responsible for moving the abalone to their final destinations, either Chinese restaurants in South Africa or overseas. Triads also have some involvement in the export of raw or semiprocessed ivory and rhino horn to China, Taiwan, Yemen, and Saudi Arabia. The researchers were able to identify three major Chinese triads that controlled the South African abalone trade.

CONCLUSION

The impact of wildlife poaching and trafficking goes beyond the threat posed to the survival of select species. Those who are involved in the illegal wildlife trade also traffic in other illegal commodities, including drugs, weapons, gems, and humans. These commodities are stolen and traded by groups ranging from Asian criminal syndicates to international terrorists and guerrilla insurgency forces fighting civil wars. The rampant commercial wildlife poaching and trafficking operations by Sudanese and Somalis threaten the stability of the developing nations of east and central Africa and illustrate the severity of this crime. The threat is so serious that in 2003 the Bush administration announced a major initiative to fund resource conservation efforts in central Africa. Yet, even given this situation, little interest has been paid to this type of transnational crime by criminologists. The main goal of this descriptive article is to make initial inroads into understanding this form of transnational criminality that will serve as a basis for future studies. The objectives of this article were to describe the illegal wildlife trade in southern Africa in terms of the species exploited, the poachers, and the traffickers.

This study resulted in several major findings. First, although elephant and rhinoceros, and to a slightly lesser extent large African cats, have long been the poster animals for conservation efforts on the continent, poaching of South African and Namibian wildlife is not centered about these high-profile animals. Rather, the illegal wildlife trade in the site countries was found to be dominated by extensive poaching and trafficking in birds and reptiles for the domestic and international markets. This is a function of the high demand for these species. Furthermore, the poaching of marine and plant life also comprises part of the trade in South Africa and Namibia. Finally, the use of a wide variety of plant species in African traditional medicines drives much of the plant poaching in the site countries.

Second, the data indicate that there is no one distinct profile to describe all wildlife poachers or traffickers. Rather, there is considerable variation among participants in this crime. The variation is a function of the type of wildlife that the poachers and traffickers trade and their individual motivations. Poachers and traffickers of southern African wildlife range from individual subsistence hunters, locals offering to obtain wildlife for foreigners for a few dollars, muti market
suppliers and dealers, collectors of exotics, pet shop owners, breeders and dealers of exotic birds and reptiles, landscape shop owners, and Chinese triads.

Third, South Africa and Namibia were not subject to the ravages of large-scale commercial poaching operations by armed gangs or military units as was the case in Kenya, Zimbabwe, and the Democratic Republic of Congo. Additionally, the domestic wildlife trade in South Africa and Namibia did not threaten the political or economic stability of either of these nations. However, the use of South Africa as a major transshipment point for wildlife from other African nations has significantly contributed to economic and political instability in other east and central African nations that lack the resources to combat commercial poaching operations.

Fourth, smuggling is often done by relatively uncomplicated methods. Techniques for smuggling include CITES permit forgery and fraud, simple concealment, and transportation techniques, some involving diplomatic personnel. Smuggling is also facilitated by statutory flaws covering CITES permit transfers, the lack of a CITES requirement to document offspring of legally owned endangered species, and the corruption of law enforcement and conservation officers. As in the United States, other, more important security concerns have forced efforts at controlling wildlife trafficking to the back burner for the time being.

Fifth, in contrast to the illegal wildlife trade in central and east Africa, the level of organization of poachers and traffickers in South Africa and Namibia does not indicate the involvement of well organized criminal syndicates, gangs, or paramilitary units in poaching and smuggling operations. However, the one exception to this is the identification of formal Chinese organized crime groups controlling the trafficking in abalone. The article revealed that these highly organized groups dominate this market, both in the domestic trade and in the export of abalone to Asia.

The article revealed that the illegal wildlife trade in the two site countries is primarily the domain of individuals and loosely organized informal criminal networks of collectors, dealers, and smugglers. Formal syndicates have yet to engage in this criminal enterprise in the two site countries. Furthermore, the influence of technological developments on both poachers and traffickers is apparent. Traffickers rely on the modern communications technology of e-mail and Internet web sites to trade their stolen goods. Law enforcement efforts also involve the use of modern technology to combat the illegal wildlife trade.

Though the illegal wildlife market in the two site countries has yet to be significantly penetrated by formal criminal syndicates, the situation is ripe for change. The highly lucrative nature of wildlife crime, combined with increasing demand for live exotic species and wildlife products in developed and developing nations, population increases throughout the African continent with the resulting demand for cheap sources of protein, and the somewhat fragile economies of South Africa and Namibia all serve as a great incentive for established organized crime
groups to enter this market and for existing informal networks to expand their operations.

Finally, efforts to combat the illegal wildlife trade reveal the challenge in understanding and considering deeply held cultural beliefs regarding the appropriate uses of wildlife. This was revealed in examining the role and impact of the muti trade in all types of wildlife. In response, conservation efforts are no longer based on the "hands off all wildlife" and "shoot poachers on sight" strategies that were common during the ivory wars of the 1980s. Contemporary strategies include a combination of harsh financial penalties, lengthy prison sentences, and financial incentives and provisions for community involvement of those living near and having to deal with potentially dangerous wild animal populations. Enforcement efforts also illustrate the problem of widespread corruption among low-level South African and Namibian government officials who are willing to take a few dollars to facilitate illegal wildlife trafficking.

The opportunities for future research in this area are fairly extensive. To date, few contemporary studies have described the operations and assessed the effectiveness of antipoaching units. Research should assess, compare, and contrast the effectiveness of both the government units operating on the public reserves and privately funded operations in the privately owned game reserves. In addition, long-term comparative studies are needed to examine the value of community-based game management programs similar to Project CAMPFIRE. A third area of great concern is the commercialization of the illegal bushmeat trade in central Africa and its devastating impact on wildlife populations. Once a crime committed by opportunistic locals in search of cheap protein with little impact on wildlife populations, the illegal bushmeat trade now involves large-scale poaching by criminal organizations. A final, though more challenging, topic in need of research is that of the criminal syndicates involved in the wildlife trade, such as the Chinese triads controlling abalone trafficking in South Africa.

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