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The Status Of Poaching In The United States—Are We Protecting Our Wildlife?**

ABSTRACT

Poaching activities in the United States are on the rise, depleting both game and nongame wildlife. Federal laws for protection of wildlife, such as the Lacey Act and the Endangered Species Act, provide some muscle to enforcement efforts, but it is largely the states that must bear the brunt of enforcement of wildlife laws. This article describes the extent of the poaching problem in the United States and compares various types of state laws that can impact poaching. Interviews of enforcement officers in the field and original research regarding the content of and differences between state laws yield an array of proposed solutions and recommendations for action. Among the recommendations are education of the judiciary and prosecuting attorneys, and making state laws consistent in their enforcement of wildlife protection policy.

INTRODUCTION: SCOPE OF THE PROBLEM

Wildlife suffers from human activities causing habitat loss, but wildlife also suffers immensely from poaching, or illegal taking of wildlife, incidents and commercial operations. Almost nowhere is poaching of wildlife more lucrative, more dangerous and more difficult to control than in the United States, yet the poaching problem in this country seldom receives international attention. The level of poaching has reached a crisis here at home both financially and in loss of numbers of game and nongame wildlife. From the local and state level to federal and international border operations, poaching is causing depletion of our irreplaceable national wildlife resources. It is a situation that must be given prompt and firm attention.

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** This article is a revised version of Chapter 3 of the Center for Wildlife Law's State Wildlife Laws Handbook, published by Government Institutes, Inc. in November, 1993. A report version of the article was also published separately by the Center for Wildlife Law in August, 1992.
This article analyzes the phenomenon of poaching in the United States. Analysis of the problem includes a review of state and federal laws which attempt to restrict poaching activities, as well as a preliminary review of cultural and economic factors that currently impact the poaching industry in the United States. Although various federal statutes grant authority to federal agents to protect certain wildlife species, it is primarily the states that regulate the taking of wildlife within their respective borders, through their own state fish and wildlife codes. But with poaching on the rise, the effectiveness of both state and federal laws is being questioned. For example, comparisons of states' restrictions, penalties and enforcement powers reveal gaps in consistency and level of enforcement of wildlife protection laws. Poachers can use these gaps between states' laws to their advantage, trafficking illegally taken wildlife through and out of the country.

As economic and other pressures make poaching more attractive, methods of dealing with poaching will have to become proportionately more creative and proactive. Our preliminary survey of factors affecting poaching, comparison of state and federal laws and penalties, and interviews with wildlife professionals across the country has produced many recommendations for action and proposed deterrents and other solutions.

In attempting to review and compare the states' wildlife laws which can impact poaching, the undertaking is too massive and complex to cover exhaustively in this article. However, the wildlife poaching problem is so immense that an initial overview of the issues, the inconsistencies between laws and the potential solutions is necessary and indeed crucial to outline possibilities for affirmative action. A more in-depth study and analysis of each state's fish and wildlife laws must be done so that a determination can be made about what is and is not working toward solving the poaching problem in the United States.

There is an urgent need for states, federal agencies and the public to begin to work together in earnest to protect wildlife from illegal exploitation. In this article workable and reasonable recommendations for action are offered that can be implemented almost immediately. In the meantime and indeed ultimately, it is public awareness and governmental understanding of the problem that is the first step in changing laws, in educating judges and prosecutors and in activating other solutions and deterrents to poaching.

MAGNITUDE OF THE POACHING PROBLEM IN THE UNITED STATES

In recent years, much has been revealed about the worldwide depletion of wildlife caused by poaching. Headlines include African
elephant herds decimated for their ivory tusks and primates captured for sale as pets, for food and for medical research. The focus is turning homeward to the United States where the illegal taking of wildlife, both commercially and non-commercially, is on the rise. One United States Fish and Wildlife Service (FWS) agent remarked that poaching is more severe now than at any other time in his 27-year career, and this observation was echoed in other interviews.¹

For purposes of this article, poaching is defined as the illegal “taking” of wildlife. Taking can include such activities as hunting, fishing, trapping, seining, netting and other methods of capturing and/or killing wildlife. As will be explained further, poaching in this article implies but does not always include taking of wildlife for strictly commercial gain. States do not generally have a specific statute addressing poaching, nor is poaching defined in the statutes. Rather, laws which are meant to protect against poaching are scattered throughout each state’s fish and wildlife codes under various headings. Poaching encompasses a wide range of illegal hunting and fishing activities and can be traced further to transporting, selling and buying illegally taken wildlife parts.

The FWS estimates that $200 million is illegally earned each year in the United States from the illegal taking of wildlife.² It is also estimated that the total amount of imports to and exports from the United States, the largest consumer of wildlife in the world, are valued at approximately $1 billion annually in live wildlife and wildlife products.³ A 1990 article reported that poaching and illegal trafficking networks were operating in the United States in at least 17 states.⁴ In a single investigation, agents from Tennessee, North Carolina and Georgia arrested and convicted over 30 poachers who were fined over $100,000.⁵ As early as 1979, United States Customs and Fish and Wildlife Service agents confiscated from one operation 17,500 illegally taken furs valued at $1.2 million. Other studies suggest that in certain parts of the country, the illegal taking of wildlife now equals or exceeds the number of animals taken legally.⁶

¹. Personal communication with Terry Grosz, Regional Director, U.S. Fish and Wildlife Service, by S. Parker, University of New Mexico Center for Wildlife Law (Summer 1992) (on file with the University of New Mexico Center for Wildlife Law).
A recent *National Geographic* article revealed startling information about the number of wildlife species from the United States that were included in the national and international illegal trade of wildlife. Among the more lucrative illegal domestic wildlife products discussed were walrus tusks taken for their ivory; bear gallbladders taken for medicinal purposes and as aphrodisiacs; bear paws and bear meat used for soup and exotic foods; paddlefish and sturgeon eggs taken for sale as caviar; eagle feathers taken for use in Southwestern art; elk antlers used for medicinal purposes; bobcats taken for their pelts; seal penises taken for medicinal purposes; redfish, shellfish, trout and salmon taken for their meat; white-tailed deer taken for their antlers and meat; bighorn sheep taken as trophy animals; and snakes taken for their skins.\(^7\) Western states especially have experienced increased poaching activity in recent years as the popularity of trophy hunting and the proliferation of commercial poaching has soared. Commercial poachers in particular prey on Western populations of grizzly bears, moose, bighorn sheep, elk, mountain lions, eagles and snakes.\(^8\)

Trophy animals are not the only game animals vulnerable to poaching activities. A 1974 FWS study of 3,600 waterfowl hunters disclosed that 70 percent of individuals admitted to illegal party, or group hunting; 48 percent admitted to shooting before and after legal hours and 39 percent admitted to violating bag limits.\(^9\)

One of the most sensitive poaching issues in the United States is the slaughter of domestic bear species for their parts, namely gallbladders and paws, caused by pressure from international markets. One-third of the world still practices traditional Oriental medicine, which uses bear gallbladders for medicinal and aphrodisiac purposes. The demand for bear parts is of particular concern in the United States as native Asian bear populations decline.\(^10\) Between 1985 and 1990, an estimated 80,000 pounds of bear gallbladder were exported from China to Japan, and that amount included gallbladders from the American black bear.\(^11\) A wildlife investigator in New York reported that he had seen 2,000 gallbladders at one time in New York City's Chinatown.\(^12\) Wildlife enforcement officials estimate that nearly 3,000 American black bears are illegally taken nationwide each year—a figure twice the number of legally taken bears.\(^13\)

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A 1989 report revealed that some private zoos and game farms in the United States are also involved in laundering schemes involving live black bears that are bred in captivity or illegally trapped for use in the black market trade. A 1981 investigation of the use of dogs to track bears revealed that every one of the 100 hunters interviewed was involved in illegal commercial activity.14

Not all state laws address the bear poaching problem, as some still allow the sale and transport of bear parts (see discussion below).15 A further handicap to enforcement efforts is the difficulty of recognizing species or subspecies once parts such as gallbladders are removed from the animals. This recognition problem caused pressure for international protection for the American black bear under the Convention on International Trade in Endangered and Threatened Species of Flora and Fauna ("CITES").16

One type particularly inhumane type of poaching wildlife enforcement agents face is the "canned hunt." This involves various unethical and often illegal activities such as trapping bears and mountain lions so that hunters can shoot them in traps, drugging lions or roping them in a tree or cutting their feet with razor blades, or keeping animals in cages until a client is ready for their release to hunt. Undercover operations are usually necessary to stop these activities, but such efforts require both financial and personnel resources, both of which are extremely limited.17

It is difficult to accurately determine overall depletion of wildlife populations from poaching, but several methods have been used to gain more information about the impact of poaching on wildlife. In Wisconsin, law enforcement agents obtain the black market price for wildlife species to estimate the number and condition of wildlife resources. If the black market price is high, for example, it is perceived that the numbers and taking opportunities of a species are down.18 Wildlife enforcement officers also use interviews with convicted poachers to determine how many animals have been taken and how many other violators may exist.

Poacher Profiles

Distinguishing between the commercial poacher who violates the law for profit and the noncommercial poacher who violates for other

15. Mills & Servheen, supra note 10, at 84.
reasons is not necessarily useful for assessing impact on wildlife. Although the media and federal enforcement programs focus primarily on commercial poachers who take endangered, threatened and other species for profit, commercial poachers are not the only violators contributing to the decline of wildlife populations. Some wildlife professionals argue that the cumulative impact of noncommercial poachers is just as great to wildlife populations because they are more numerous than commercial poachers. However, distinguishing between the commercial and noncommercial poacher may be necessary to formulate effective deterrents to poaching because of different motivations driving their actions.

Profile of the Commercial Poacher

The federal Lacey Act defines any transaction of $350 or more involving wildlife as a "commercial" activity.19 Thus the hunter who pays a guide $500 to assist him in killing a trophy animal out of season is legally just as culpable as a commercial poacher under the Lacey Act as the professional poacher who takes 200 gallbladders to sell on the black market. However, the professional commercial poacher is found to be frequently involved in other illegal activities such as drug trafficking.20 In fact, with the professional poacher ties with organized crime are often suspected.21

Commercial poachers are clearly motivated by economic profit. The monetary value of wildlife and wildlife parts illustrates the lucrative nature of this illegal industry, as trade in wildlife can bring profits as high as those for illegal trade in heroin or cocaine. For example, "velvet" elk antlers bring up to $140 per pound. Bear gallbladders are sold for up to $800 per gram. In fact, one report estimated that South Korea, which has perhaps the largest trade in bear parts, recently set a new price for a single bear gallbladder at $64,000.22 A cup of bear paw soup sells for as much as $800 in Asian markets.23 Paddlefish eggs are another lucrative product for commercial poachers, selling in Iran as caviar for approximately $500 a pound.24

A 1989 report listed the price of teeth from coyote, raccoon, badger and porcupine to be between 50 cents and $2.50 each.25

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20. Tennesen, supra note 13, at 92.
21. Poten, supra note 2, at 110; Speart, supra note 2, at 26; Glick, supra note 2, at 110.
22. Memorandum from Defenders of Wildlife to members, (May 28, 1992) (on file with the University of New Mexico Center for Wildlife Law).
24. Glick, supra note 2, at 55.
25. Tennesen, supra note 13, at 93.
feathers bring between $50 to $100 each.\textsuperscript{26} It is, of course, not illegal to harvest and sell these parts unless a state or federal law specifically restricts or prohibits the activity or the time of harvest. Game ranches have become big money enterprises, and are legal primarily in the Western United States. A New Mexico state enforcement agent reported pregnant cow elk being sold to elk ranch owners for approximately $16,500 each.\textsuperscript{27} Elk antlers are harvested for sale for aphrodisiacs and for medicinal uses. Harvesting antlers is perhaps painful but not fatal to the elk, and depending upon the state, it may or may not be legal.

Unfortunately, the incentive to poach commercially is only increasing as wildlife numbers decrease and their value rises. Furthermore, given the low penalties that many judges and legislators have traditionally set for wildlife violations, the current judicial system provides little deterrent to commercial poachers.

Profile of the Non-Commercial Poacher

Non-commercial poachers comprise by all estimates a large group encompassing a variety of backgrounds and reasons for poaching. One type of noncommercial poacher is the "opportunistic poacher," who risks violating the law because he believes he will not be caught. For example, researchers who witnessed waterfowl hunters violating the law or behaving unethically noted that hunters also had more opportunities to violate without being seen by authorities.\textsuperscript{28} Another profile is the "trophy hunter" who will go to any length to take a trophy animal, even if it means violating the law.

The despised "slob hunter" is a serious abuser of wildlife. This type of violator hunts out of sheer greed, indifference to hunting laws and conservation, or ignorance of any laws concerning protection of wildlife. This attitude is illustrated by the story of a man arrested in Montana for allegedly stopping alongside an interstate and killing two trophy elk grazing inside a game reserve. When a local resident told him he had committed a crime, he replied that this was the way they hunt back in New York.\textsuperscript{29} The "slob hunter" degrades not only the tradition of hunting because of the public outrage his conduct invokes, but he also destroys wildlife resources.

\begin{thebibliography}{9}
\bibitem{26} Gavitt, \textit{supra} note 3, at 3.
\bibitem{27} Personal communication with L. Bell, New Mexico Game and Fish Department, by S. Parker, University of New Mexico Center for Wildlife Law (Summer 1992) (on file with the University of New Mexico Center for Wildlife Law).
\bibitem{29} Favre, \textit{supra} note 8, at 1-7.
\end{thebibliography}
Causes of Poaching

It is important to understand the poacher’s attitude about wildlife and how it developed in order to change his behavior. Wildlife professionals are hopeful that non-commercial illegal activity is modifiable through techniques such as education and peer pressure.

Cultural Influences

Hunting behavior is often shaped by family and community influences. Cultural influence may differ regionally, yet the national impact of cultural values on hunting behavior and on wildlife is significant. For example, FWS Special Agent Dave Hall is convinced that many rural Louisiana hunters are products of the cultural “Robin Hood Syndrome.” Hunters intentionally violate wildlife laws as a sign of defiance to state control of wildlife, much like the English folk hero who defied the king’s ownership of wildlife.  

Studies further suggest that cultural influence on poaching is sometimes specific to both economic class and geographical region. A Wisconsin study revealed that a high percentage of waterfowl violators were white-collar businessmen, suggesting possible influence from a business ethic that the ends justify the means. A study of convicted deer poachers in Missouri revealed that a high percentage of poachers were unemployed blue-collar workers who lived in the region. The study concludes: “From a sociological viewpoint, it is probable that Missouri deer poachers belong to a subculture from which they derive distinct values and norms.”

Misperceptions about Wildlife

Non-commercial and commercial poachers may also harbor misperceptions about wildlife which may include a belief that wildlife resources are unlimited or that wildlife belongs to the hunter and thus the harvest should not be regulated. A common misperception is that the hunt will not have a marked effect on wildlife populations. Waterfowl hunters in the South often have this misperception because they live near one of the North American waterfowl flyway bottlenecks, which serves as a virtual funnel for migrating waterfowl. Hunters may be inclined to exceed the bag limit because they falsely believe that the

30. Personal communication with D. Hall, U.S. Fish and Wildlife Service, Slidell, Louisiana, by S. Parker, University of New Mexico Center for Wildlife Law (Summer 1992) (on file with the University of New Mexico Center for Wildlife Law).
31. Personal communication with R. Jackson, Professor, University of Wisconsin-LaCrosse, by S. Parker, University of New Mexico Center for Wildlife Law (Summer 1992) (on file with the University of New Mexico Center for Wildlife Law).
multitude of ducks seen in their locale is representative of duck populations nationwide. The hope is that education will eventually deter this illegal hunting behavior.

A good example of how a poaching mentality can be changed when misperceptions are cleared up occurred in the sport fishing community more than two decades ago. When information was disseminated nationwide about the worsening condition of certain fish populations, many tournament and recreational fishermen readily adopted the "catch and release" method of fishing. Furthermore, peer pressure proved to be a forceful tool in altering behavior in that instance. Another example of the positive results of education was demonstrated when waterfowl hunters were informed about the poor condition of many waterfowl populations. Many hunters refrained from shooting hens by stopping short of their bag limit and by counting cripples as part of their limit.33

Subsistence Poaching

There are still hunters who poach for their own subsistence, although their numbers are uncertain. Alaska is known for its numbers of both subsistence hunters and poachers. Residents of rural areas of the country with poor economies are particularly susceptible to subsistence poaching. For example, the study of convicted deer poachers in Missouri revealed that the unemployment rate of poachers was over 30 times greater than that of legal hunters.34 More than 50 percent of poachers convicted for closed-season violations said they killed for the meat, though it is believed that this response was tainted because of the attempt to justify illegal behavior.35

STATE LAWS

Clearly, the bulk of American wildlife management and protection is at the state level. Where states' wildlife laws do not conflict with federal laws and are not preempted by federal laws or regulations, states are free to regulate wildlife taking. States derive their authority to manage and protect wildlife from the Tenth Amendment of the United States Constitution, which gives states the power to regulate areas not reserved by the federal government, and further permits states to define and prevent the commission of crimes under their general police power to govern the welfare of their citizens. In addition

34. Glover, supra note 32, at 108.
35. Id.
the states arguably "own" wildlife in trust for the benefit of their citizens, which gives states authority to impose limits on the taking and sale of wildlife, within certain limitations. Historically state wildlife laws developed to some degree in response to sportspersons' complaints that professional hunters harvesting wildlife indiscriminately for quick profits were depriving them of prize game animals. Because field enforcement historically was underfunded and difficult to implement, state laws in the nineteenth century began focusing on the possession, sale and transport of illegally taken wildlife as well as on the taking itself.

State wildlife laws are the main legal tools available to restrain poaching. Comparisons referred to herein between states are the result of a summary and analysis of the 50 states' fish and wildlife codes in the *State Wildlife Laws Handbook*. Comparisons reveal enforcement and protection problems caused by inconsistencies between states. Only state laws for fish and wildlife regulation, protection and enforcement was surveyed for this article. State regulations promulgated by fish and wildlife agencies, often contain more precise and detailed hunting and taking restrictions.

**Taking Restrictions**

States generally prohibit unlawful "taking" of either game (subject to hunting) or nongame wildlife. Most states define taking as hunting, pursuing, harassing, capturing, possessing, trapping or killing any protected wildlife or the attempt to do so. For example, Illinois broadly defines taking as hunting, shooting, luring, killing, destroying, capturing, using gigs or spears, trapping, ensnaring, and harassing, or attempting to do these things. Taking prohibitions emphasize field enforcement at the point of capturing or killing the animal.

In the majority of states it is a misdemeanor to take game animals during closed season and/or at night. Many states also ban the luring of game animals to hunting areas with food, recorded calls, de-

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36. Geer v. Connecticut, 161 US 519 (1896), overruled in part, Hughes v. Oklahoma, 441 US 322 (1979). In *Hughes* the Court ruled that a state may protect its wildlife only in ways consistent with the nation as one economic unit, and that discrimination against interstate commerce is not allowable when equally nondiscriminatory alternative conservation measures are available.


38. State legislative language was reviewed by the authors and other staff of the Center for Wildlife Law for this article and for the *State Wildlife Laws Handbook*, Government Inst., Inc. 1993. As this was original research, by the center, references to numbers of states with certain provisions will not always contain footnotes. The *Handbook* contains tables comparing state laws on some of the topics discussed in this section.


coys, or the like. Baiting, in which poachers stock an area with food so that they have a better chance of shooting the game, is a common tactic by poachers to lure waterfowl and big game. One-third of the states prohibit baiting.

Almost two-thirds of the states also prohibit the use of automatic machine guns, poison, explosives, snares, nets and pitfall traps in taking wildlife. Still other state statutes establish vehicular crimes such as hunting from aircraft or having a loaded firearm in the vehicle. Finally, almost all states criminalize the taking or possession of game beyond the legal bag limit. The penalty for violating a wildlife taking law in all states is a misdemeanor. In addition, forfeitures of wildlife, vehicles and weapons can often accompany conviction under takings statutes (see section on Penalties). 41 A first conviction under South Dakota's takings laws, for example, results in a misdemeanor plus mandatory hunting license revocation. A second violation for illegally taking big game in South Dakota is a felony. 42

While these statutes apply only to poaching activities at the taking level as opposed to sale and purchase activities, they are vital to catching both for-profit and other poachers. Such laws give wildlife officers broad authority to enforce wildlife laws before the illegally taken wildlife enter the stream of commerce. A wide range of poaching activities can be prosecuted under these laws, from commercial poaching to hanging a trophy on the wall or putting meat on the table. As a result, some wildlife enforcement officials prefer judicial discretion in sentencing, allowing judges to sentence each violator in accordance with the severity, intent and/or number of wildlife violations committed.

Waste

Waste statutes typically prohibit the taking of wild game while intentionally or knowingly permitting edible portions to go to waste. 43 Theoretically waste provisions can be extremely useful for intercepting commercial poachers who exploit parts such as gallbladders and paws, for which there are thriving black markets. Similar provisions more precisely prohibit the removal of elk and/or deer antlers from live animals for commercial purposes, 44 or specify other parts that cannot be removed from game carcasses. 45 A few states' waste provisions

44. Cal. Fish & Game Code § 2118.3 (West 1984).
45. Colo. Rev. Stat. Ann. § 33-6-117 (West 1990) (it is unlawful to remove, with the intent to abandon the body, offly the head, hide, claws, teeth, antlers, horns, internal organs or feathers of any wildlife).
apply specifically to detaching deer heads without removing the carcasses from the scene of the kill.\textsuperscript{46}

Over one-third of the states, mostly in the western United States, prohibit waste. Alaska's statute makes it a crime to waste wildlife even negligently, to fail to salvage from big game at least the hock, or to possess the horns or antlers of big game without possessing the edible meat as well.\textsuperscript{47} Most waste statutes do not criminalize waste if the hunter did not have an intent to abandon the edible portions of the animal.

The penalty for wasting wildlife is a misdemeanor under all states' waste laws. Alaska nonetheless imposes steep fines for violations and requires mandatory hunting license forfeiture. Alaska's waste provision defenses include theft of the carcass, unanticipated weather conditions, unavoidable loss in the field to another wild animal, or the meat having been consumed by humans or delivered (given, sold or bartered) to another person.\textsuperscript{48} Waste of big game in Colorado is a felony and waste of other wildlife is a misdemeanor. Colorado's statute is particularly specific and thorough (see note 45 for text of the statute).

Waste statutes should be effective deterrents to commercial poaching, but in practice understaffing of wildlife enforcement personnel and inaccessibility to the latest technology hinder enforcement. Currently, state fish and wildlife agencies do not have the funding to send specimens to the FWS Forensic Lab in Oregon for genetic identification whenever an officer discovers animal parts in possession of a hunter or wasted remains of an animal in the field. More fundamentally, there are not enough enforcement officers in the field to discover wasted remains, and once a carcass is found with parts missing, it is very hard to discover who is the violator unless he is caught in the act. In addition, it is difficult to establish that the alleged violator had the intent to abandon the edible portions of the carcass. Finally, specific defenses in a statute such as those in Alaska's are hard to disprove.

Spotlighting Laws

Forty four states have prohibitions against spotlighting, or hunting with artificial lights at night. Typical is West Virginia's statute which states that hunters cannot use or take advantage of artificial lights in hunting, locating, attracting, taking, trapping or killing wildlife, or attempting to do so, while possessing or having under control a firearm.\textsuperscript{49} Some statutes, as West Virginia's, do not require that the violator have

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\end{itemize}
the intent to take wildlife. Others either require such intent or explicitly exempt from the statute's proscription the normal use of headlights on roads or flashlights not used for the purpose of taking wildlife.

California's spotlighting statute is comprehensive. In that state, it is unlawful to throw rays of any artificial light on any highway, field or forest where game and nongame mammals are commonly found, or while having in possession or control any firearm or weapon with which such mammals could be killed. However, it is lawful to use a flashlight if not affixed to a weapon, a lamp or lantern, and headlights of a vehicle operated in a usual manner, if no attempt is made to locate mammals. Delaware's spotlighting law, unlike California's, provides that fines for violators cannot be suspended. Common among states is that in order to show that the statute was violated, the state prosecutor must only show that a violator used an artificial light to hunt big game while possessing a firearm at night, in a place where big game can reasonably be expected to occur.

Spotlighting violations constitute a misdemeanor in all states with spotlighting laws. The amount of fines and jail terms fluctuates widely among the states, however, depending on how serious the state legislature considers the offense. In Colorado, for instance, punishment for the first offense is $200 and mandatory hunting license suspension for up to three years. New York's penalty for using an artificial light to take deer is a fine of up to $2000 and/or jail for up to one year. North Carolina's penalty, on the other hand, is a fine of between $25 and $100 and/or a jail term for 30 days or less. Also, a handful of states require a convicted spotlighter to forfeit the vehicle used to perpetrate the crime.

The effectiveness of spotlighting laws, according to wildlife enforcement officers, depends on the severity of the penalty. For example, statutes like North Carolina's probably would not deter illegal spotlighting because the penalty is so light. In addition, state and local judges in some regions who take poaching violations less seriously, may consider a spotlighting violation as socially acceptable, and may therefore suspend violators' punishment or dismiss the spotlighting charges altogether. Delaware's solution to increase the effectiveness of spotlighting statutes is to expressly prohibit judges from suspending punishment. Although such a measure would not preclude judges from

dismissing the charges, it could serve as a message to judges to take the crime seriously.

Some spotlighting laws recently have come under constitutional scrutiny. In a few states, statutes have been repealed under the First Amendment as overbroad. A statute is overbroad when its language fails to put the public on notice of how a violation could occur and gives too much discretion to law enforcers to interpret its meaning. Those spotlighting statutes that would render the normal use of headlights in driving, or a landowner’s use of a light to survey his or her property, would be overbroad and therefore unconstitutional. An example of a possibly unconstitutional statute is New York’s, which simply makes it a misdemeanor to use artificial lights to take deer.58

Sale and Purchase of Wildlife

Most state fish and wildlife codes include a wildlife sale and purchase provision, which typically reads that it is illegal to sell or purchase wildlife species or their parts, unless authorized by the state’s laws.59 Other prohibitions may apply to a single species or category of wildlife such as endangered species. For example, Florida’s code makes it a misdemeanor to sell illegally taken alligators or their skins and a felony to sell illegally taken deer or turkey.60 North Carolina prohibits buying or selling wildlife or selling bears, cougars, eagles or their parts.61 Other states regulate either the sale or the purchase of wildlife but not both. There is little consistency between states’ laws restricting the sale and purchase of wildlife because the provisions vary widely regarding the particular types of wildlife protected.

State codes contain various exceptions to wildlife sale or purchase prohibitions. Idaho, for example, prohibits the sale or purchase of any wildlife species or wildlife parts, but specifically exempts (1) the sale of legally taken hides, horns or heads of game animals accompanied by a statement of the lawful taking and (2) the sale of pelts or other parts of furbearers when legally taken.62 Illinois allows buying, selling and possessing all wildlife and their parts when legally imported. These include deer and their parts; furbearers and their parts when legally taken; and inedible parts of game mammals.63 West Virginia permits the sale of inedible parts of legally taken deer and bear and their organs.64 Connecticut allows the buying, selling and possessing

with the intent to sell or exchange wildlife and their parts, if such 
wildlife was legally taken in another state and legally imported into 
the state.65 These exceptions can create opportunities for commercial 
poachers to launder parts illegally taken in one state, through other 
states. Consistency of buying and selling laws among states would be 
especially helpful in stemming illegal wildlife trade.

Some states have attempted to further enforce wildlife buying 
and selling restrictions through rigorous penalties. Illinois prohibits the 
sale or receipt of protected wildlife valued at $300 or more "for profit 
or commercial purposes," and violation is a felony.66 In Arizona, it is 
a felony to sell big game and parts that were unlawfully taken, and to 
sell any wildlife or parts that were bought or imported illegally.67 Col-
orado makes it a felony to unlawfully buy, sell or solicit to illegally take 
big game, endangered species or eagles for money or commercial gain 
and makes it a misdemeanor to do so regarding all other wildlife.68 
Most states also provide that the unlawful sale or purchase of each an-
imal and/or each part constitutes a separate crime.69

All of the states with selling and/or purchasing restrictions 
make it a misdemeanor to unlawfully buy or sell wildlife. The pun-
ishment for the misdemeanor violation varies with each state, but most 
carry fines ranging from $10 to $1,000 and/or jail terms not exceeding 
six months, or both. Many states also permit the state prosecutor or the 
state fish and wildlife agency to sue for damages in civil court and to 
collect restitution for the loss of the wildlife. Some agencies also can 
further order the convicted violator to forfeit the wildlife or parts and 
any weapons or vehicles seized in connection with the violation (see Penalties section for discussion and comparison of civil liability, resti-
tution, and forfeiture).

The effectiveness of wildlife buying and selling restrictions de-
PENDS on their scope and on loopholes in the language of their laws 
(for example, laws making it legal to sell or purchase inedible wildlife 
parts, bear organs, or big game horns or antlers). The inconsistencies 
between states opens the door for the sale of illegally taken parts or 
animals from neighboring states. Connecticut's provisions which refer 
to other states' laws may be difficult to enforce because they require 
Connecticut officials' knowledge of other states' laws and regulations 
as to what is legally taken and imported.

Buying and selling laws directly address a wide range of poach-
ing activities and hurt the poacher's wallet. Inclusion of wildlife parts

in the statutes is extremely important because major markets in illegal wildlife trade are in parts such as bear gallbladders and paws, antlers, horns, hides and heads of big game, feathers of birds, and paddlefish eggs. Regulation or outright bans on buying and selling of particular animals like endangered species, birds of prey, and bears, and their parts, are vital if these animals are to continue to survive. Creating economic disincentives such as fining the violator for each animal or part involved and stacking mandatory jail sentences instead of allowing concurrent serving of sentences, are some of the states' options to control the illegal trade in wildlife. Also, eliminating exceptions that create loopholes for commercial poachers would be part of developing an effective state statute.

**Transportation Restrictions**

All states have some type of restrictions on transportation of wildlife. Wildlife transportation laws target poaching operations, persons attempting to profit from poachers' activities, and all transporters. Provisions usually prohibit transporting or shipping protected wildlife within or without the state unless accompanied by documentation such as shipping permits, affidavits of ownership, or lawful hunting licenses. These provisions often ban outright the transportation of more than one or two daily bag limits of game. Many states also regulate transportation of wildlife by requiring shipping permits and tags which openly identify the wildlife.

Other states further regulate the importation and/or exportation of wildlife. Import/export bans can apply to illegally taken or possessed wildlife or their parts. Some states, however, allow the importation of game lawfully taken in other states at all times or during the originating state's open season. Transportation, exportation, and importation bans also exist in some states for particular species of wildlife, alive or dead, such as bears, big game and/or endangered species.

In addition, almost half of the state statutes directly restrict the activities of common carriers (common carriers are means of mass transportation such as railroads and trucking). Some allow common carriers to transport wildlife or wildlife parts only upon proof of its

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70. Poten, *supra* note 2, at 100, 117.
76. Ark. Code Ann. § 15-44-107 (Michie 1987) (bears, deer, turkeys or their parts); Cal. Fish & Game Code §§ 2118.2 (elk), 2350 (deer, game birds or their parts) (West 1984).
legality. Other states prohibit common carriers from importing protected species taken in the state of origin or without ascertaining that a valid hunting license is in the transporter’s possession. Still others prohibit common carriers from transporting game or fish except during the open season for that species. Arkansas gives common carriers the authority to refuse to receive for export packages or baggage suspected of carrying wildlife.

A misdemeanor is the most common penalty for violating a transportation restriction, although Illinois’ statute makes it a felony to transport, export or receive protected species for profit or commercial purposes where the value of each animal is at least $300. While most common carriers are subject merely to fines for violating transportation laws, a few states criminalize violations.

As with sale and purchase restrictions, regulation of the transportation, importation and exportation of wildlife parts is an important enforcement tool. Unlike buying and selling laws, however, conviction under a transportation provision almost never requires that the state prove that the violator intended or knew that he or she was transporting wildlife or their parts. Often the state must prove only that the transporter was illegally possessing the wildlife at the time of transportation.

State export restrictions are especially useful once animal parts enter the stream of commerce because the federal government is often slow to respond to the spiraling market in some animal products such as bear gallbladders, where the animal parts are exported not only from one state to another but also from the United States to foreign countries. State exporting laws can be at least as effective as federal laws, and can also enhance the effectiveness of federal wildlife exportation laws. Interstate agreements to honor sister states’ export laws and full cooperation between state and federal governments would boost the effectiveness of state transportation laws (see section on Solutions for further discussion of interstate agreements).

Agency Enforcement Powers

The power that the state legislatures expressly give to wildlife enforcement officers determines the effectiveness with which they can detect and deter poaching. Police power includes the states’ authority to make arrests, searches and seizures, and further includes the power

to search and seize evidence without obtaining a warrant, subject to constitutional restrictions. Disparities in the extent of such powers exist among the states, with about half giving wildlife enforcement agents the same powers as peace officers generally; and half expressly limiting their authority.

State wildlife codes vary regarding the powers that wildlife enforcement officers have to search and arrest. Some states like Virginia and New York explicitly prohibit wildlife officers from conducting searches without a warrant.\textsuperscript{82} Wildlife officers have substantially less enforcement power than other peace officers in these states. On the other hand, over a dozen different states give wildlife enforcement officers greater power than other peace officers. Alabama authorizes wildlife officers to search vehicles without a warrant for waterfowl violations, except for vehicles traveling on federal or state highways.\textsuperscript{83} Tennessee empowers its wildlife officers to search vehicles without a warrant and to conduct warrantless searches, subject to constitutional restrictions.\textsuperscript{84} Other states either give wildlife enforcers the power to enforce only wildlife codes (which is interpreted variously among the states as conferring either equal or less power as other peace officers),\textsuperscript{85} or they give them general police powers like other peace officers.\textsuperscript{86}

Regulation of Hunting Businesses

Fur dealers, taxidermists and hunting guides or outfitters make profits from hunters and trappers. Because large volumes of legally and sometimes illegally taken wildlife pass through these businesses, many states regulate them. Many undercover enforcement operations have targeted fur dealing and taxidermy businesses because they are focal points for the illegal taker, seller and buyer of wildlife or their parts.\textsuperscript{87} Some hunting guides and outfitters also have been implicated in poaching operations (and thus can be deemed to be poachers) because some poachers rely on them to provide the wildlife, and are willing to pay a high price for the assurance that they will get the animals they seek.\textsuperscript{88}

Most states regulate fur dealers in several ways. Some states permit fur dealers to buy or sell raw ("green") hides only if they have a fur dealing license.\textsuperscript{89} In addition, these states require that fur deal-

\textsuperscript{87} Poten, supra note 2, at 129.
\textsuperscript{88} Id. at 124.
ers keep records of and report annually on all their purchases and sales. Taxidermists also must obtain licenses to practice and must report annually on the animals that come through their business in over one-third of the states. About half of the states with fur dealing laws criminalize violations as a misdemeanor; the other half impose civil fines and/or loss of licenses.

A third of the states regulate guides and outfitters (Table 6). These states require that each guide obtain a hunting license, and they provide for the suspension or revocation of that license if the guide is caught at hunting violations. A few states also require that each licensed guide report annually to the state on his or her guiding activities. Guides and others can be punished in many states for illegal taking not only as hunters, but also for conspiracy to violate the law and/or acting as accomplices. In some states the person who hires a guide to violate wildlife laws is guilty of a misdemeanor.

Taxidermy and hunting guide laws are designed primarily to catch illegal trophy hunters. Wildlife enforcement officers say that these laws give them the authority they need to investigate trophy poachers. Fur dealers as well as trappers are often rigorously regulated to cut down on exploitation of fur bearing mammals, but also to eliminate illegal trade in furs.

Penalties

Each state's penalties for violating wildlife protection laws determine to some extent the effectiveness of these laws. Penalties can range from small civil fines to criminal misdemeanors and their varying punishments, to felonies and forfeiture of property. Offenses that are punishable by small fines such as $10 to $25 do not deter commercial poachers who often make many times more from the sale of the animal or part than the amount of the fine. Penalties are most effective that dip deeply into the poacher's wallet, threaten stiff jail terms, and confiscate property, but only if judges take advantage of such measures.

Misdemeanors and Felonies

A common penalty for wildlife violations in all states is the criminal misdemeanor. For misdemeanors, most states give the judge discretion in choosing a fine that may vary widely from ten dollars to thousands of dollars or a jail term anywhere from several days to one

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year. Certain states consider certain wildlife violations to be especially egregious and therefore make various offenses a felony. Felonies carry longer jail terms and stiffer fines. In Arizona selling big game that are unlawfully taken or assisting another in unlawfully taking big game for financial gain carries a felony conviction. In Colorado, buying or selling big game, endangered species or eagles is a felony. In Florida, it is a felony to kill a Florida panther, to take or possess alligators unlawfully, and to sell unlawfully taken deer or turkey. West Virginia considers the use of explosives to take wildlife to be a felony. Violation of North Dakota's ban on paddlefish taking is a felony. The threat of felony conviction is certainly a greater deterrent than a misdemeanor even for hard-core, profit-seeking poachers.

Suspension of Hunting Licenses

The majority of states authorize the court, the fish and wildlife agency, or both, to suspend or permanently revoke hunting licenses for wildlife code violations. A few states have enacted mandatory license suspension. Maine, for example, requires license suspension for at least three years for a habitual violator. In Connecticut, a first conviction under any wildlife law carries a mandatory 30-day to 1-year suspension. License suspension provisions are extremely important to effective enforcement of wildlife laws (see section on Solutions). Enforcers across the country agree that taking hunting licenses away is one of the best deterrents to poaching.

Forfeiture

About half of the states also require convicted wildlife poachers to forfeit vehicles, weapons and/or equipment used to poach. The validity of vehicle forfeiture laws is highly contested because it involves giving up a big financial investment. So far, however, vehicle forfeitures have been upheld as valid exercises of the states' power to enforce wildlife laws. Forfeiture provisions, together with discretionary license suspension or revocation, can hurt poachers financially and thereby contribute to deterrence.

Various Laws with Stiffer Penalties

Some states impose stiffer penalties for violation of particular laws. In some Western states, waste violations carry stiff penalties. In Alaska, the minimum sentence for waste cannot be reduced or suspended, and both forfeiture of the wildlife and a mandatory one to five-year suspension of the violator's hunting license. As mentioned, waste of big game, endangered species, or eagles in Colorado is a felony. Virginia requires a license suspension for one year and mandatory vehicle and equipment forfeiture for spotlighting; Connecticut and Tennessee have similar punishments. In Delaware, the judge cannot suspend the fines for spotlighting. Finally, Oregon requires the permanent revocation of licenses for any unlawful taking of wildlife.

Civil Liability

In addition to criminal penalties, more and more states impose civil liability on convicted poachers. Violators may be liable for any damages incurred by enforcement officers as well as for damage to the wildlife taken illegally. About half of the state legislatures have assessed a value of wildlife for civil liability purposes. These states list the value of various important wildlife species and require the poacher to pay restitution to the state for the value of each such animal taken. For commercial poachers who deal in large numbers of wildlife, upon conviction restitution amounts to be paid can be high. In Washington, for example, restitution is mandatory and cannot be suspended, waived, modified or deferred. In that state, moose, antelope, mountain sheep and goats, and all endangered species are valued at $2,000 each; mountain caribou and grizzly bears are valued at $5,000 each; and elk, deer, black bears and cougars are worth $1,000 each. Arizona requires a minimum restitution of $750 for each buffalo, elk, bighorn sheep, eagle and endangered species unlawfully taken or possessed. Restitution and imposition of civil damages can be effective financial deterrents to for-profit poaching.

Miscellaneous Unique Penalty Provisions

As can be seen by the discussion above, sentencing and penalty structures vary widely between states and between violations. Overall

comparisons are hard to make, but certain state penalty systems are interesting. Colorado, for example, has a point system that is innovative and precise. The statutes set forth how many points are to be assessed for each wildlife violation. When violators accumulate 20 points within five years, their hunting license is suspended.109

Pennsylvania's code is interesting in that it does not allow judges to impose community service instead of the usual jail term and/or fine.110 This may limit opportunities for judges to impose innovative sentencing, but may at the same time force poachers to pay heavy fines. Texas has a penalty system that allows poachers to pay a civil fine of at least $150 for each day their hunting license would have been suspended instead of actually having their licenses suspended.111 This loophole may unintentionally cater to commercial poachers who can well afford to pay the civil fines to escape license suspension.

Specific Wildlife Protection Laws

Many states have separate provisions that protect certain wildlife species, most notably endangered species and bears. As discussed in the Federal Laws section below, citizens of the various states are also subject to federal wildlife protection laws such as the Endangered Species Act. Many states further protect species determined to be endangered within their own borders. States commonly prohibit hunting, possessing, selling, buying, and/or transportation of endangered species. Vermont like many other states has a general prohibition on taking endangered species.112 In Delaware, for example, there is a separate state ban on killing, possessing or bartering bald eagles.113

One-quarter of states also specifically regulate the taking and/or selling of bears or bear parts. Maine requires a permit to hunt or transport bears and a hide dealer's license to buy, sell or take the head, hide or gallbladder of bears.114 Georgia imposes restitution and forfeiture of vehicles and equipment for buying or selling bears or bear parts, possessing, transporting, taking or attempting to take bears during the closed season.115 Georgia also imposes stiff fines, prison terms, or both. Arkansas bans shipping, exporting, and accepting for export bears and bear parts.116 Because of the skyrocketing demand for American bear parts in Asia and elsewhere, strict regulations on taking bears and consistency in regulating between states is increasingly critical.

Particularly Effective State Laws

Several statutes do not fit within any of the above categories but are particularly effective against poachers or specifically address for-profit poaching. Often states explicitly allow citizens to recover a reward when they supply wildlife agents with information leading to arrests or conviction or when they apprehend wildlife violators. Hawaii requires half of fines collected to go to the person giving information that leads to arrest.\textsuperscript{117}

Restrictions on commercial wildlife operations are becoming more common because of the potential for illegal trade and abuse of species harvesting. West Virginia, for example, generally bans commercialization of wildlife except by permit. Utah prohibits the use of wildlife as a commercial venture for financial gain unless authorized by law. With a very specific provision, California bans removal of the horns or antlers of live elk for commercial purposes.\textsuperscript{118}

State legislatures also sometimes limit available defenses within wildlife poaching laws. In California and Tennessee, it is no defense to a wildlife violation that the defendant is mistaken as to species, sex or size of the animal. If there is more than one defendant on trial for wildlife violations in Texas, joint and several liability is imposed. Maine requires each district attorney to prosecute all wildlife law violators, regardless of the chances of a successful prosecution.\textsuperscript{119} Because these mandates can provide uniformity in prosecution of poaching violations in a state, they can be seen as positive attempts to deal with the breadth of poaching and the problems of judicial enforcement.

Interstate Compacts and Reciprocal Agreements Between States

Compacts and reciprocal law enforcement agreements between states can ensure uniformity and cooperation in enforcement where wildlife violations affect more than one state. The Wildlife Violator Compact of 1989 has been signed by states such as Arizona, California, Colorado, Idaho, Nevada, Oregon, Utah, Washington, West Virginia and Wyoming. These states have agreed to recognize each other’s license suspensions and to communicate with each other regarding wildlife violations and changes in state laws.\textsuperscript{120} Other states individually recognize their neighboring states’ laws. For example, Oregon’s wildlife code mandates the suspension or revocation of hunting li-

censes of persons convicted under another state’s laws who fail to comply with sentencing pronouncements.\textsuperscript{121} Rhode Island authorizes the director of the state’s wildlife agency to cooperate with fish and wildlife directors from other states.\textsuperscript{122} Illinois prohibits common carriers from importing protected species illegally taken in the state of origin.\textsuperscript{123}

States that make full use of reciprocal agreements can have an impact on interstate transport of illegally taken wildlife. Such provisions can also fill the gaps and loopholes in participating states’ wildlife laws because the more stringent laws will control interstate enforcement where the laws conflict or one is weaker than another.

As this overview of the various states’ provisions demonstrates, the lack of uniformity of laws to catch poachers is nearly as widespread as the poaching problem itself. Presently, interstate agreements or pronouncements to honor sister states’ wildlife laws or that foster communication among enforcement officers between different states, or between states and the federal government, are some of the only means of infiltrating poaching operations that cross state borders.

**FEDERAL LAWS**

There are many federal statutes which have been enacted specifically to protect wildlife in the United States. Apart from the site-specific federal wildlife refuge acts, major legislation includes:

- The Lacey Act, as amended (18 United States C. 42; 16 United States C. 3371-3378);
- The Bald and Golden Eagle Protection Act, as amended (16 United States C. 668-668c);
- The Marine Mammal Protection Act of 1972 (16 United States C. 1361-1407);
- The Migratory Bird Treaty Act, as amended (16 United States C. 703-712);
- The Migratory Bird Hunting and Conservation Stamp Act (16 United States C. 718);
- The National Wildlife Refuge System Administration Act of 1966 (16 United States C. 668dd-668ee);

\textsuperscript{121} Id.
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- The Airborne Hunting Act (16 United States C. 742j-l);
- The Antarctic Conservation Act of 1978 (16 United States C. 2401-2412);
- The Archaeological Resources Protection Act of 1979 (16 United States C. 470aa-470mm);

According to a 1991 government report, 65 percent of the investigations that FWS special agents performed during 1987 through 1989 were under suspected violations of four federal statutes: the Bald and Golden Eagle Protection Act; the Endangered Species Act; the Lacey Act; and the Migratory Bird Treaty Act.124

All federal FWS personnel interviewed for this report agreed that existing federal laws supplied them with adequate authority to protect wildlife. However, in a 1991 United States General Accounting Office report, federal agents raised two concerns. The first was that the Migratory Bird Treaty Act, unlike other wildlife laws, does not authorize warrantless searches and seizures, which are important to prevent destruction of evidence and to allow flexibility in the field. To use this power, the hunter must either be under arrest or consent to a search.

The second concern involved enforcement of the Endangered Species Act. Alleged violators often claim that the live wildlife they have captured is not endangered but is a hybrid of the protected species. The ESA does have a provision protecting species that are closely related or similar in appearance to the endangered or threatened species in order to protect the listed species, yet this provision is rarely used.125 The alternative is to have a live animal destroyed in order to determine whether it is an endangered or threatened species, but obviously this option is rarely considered.126

Passed in 1900, the Lacey Act is perhaps the most commonly used federal statute to protect wildlife. The law prohibits the importation, exportation, transportation, sale, receipt, acquisition, or purchase of fish, wildlife, or plants that are taken possessed, transported, or sold in violation of any federal, state, tribal, or foreign law. The Lacey Act grants agents the power to make warrantless searches and seizures when they suspect violations. A survey of federal agents revealed that when both the Lacey Act and another statute apply to a violation, agents prefer to enforce the Lacey Act because the violation is more likely to be a felony and penalties are more stringent under the Lacey Act. Lacey

126. GAO, supra note 124, at 16.
Act penalties include imprisonment of up to one year and fines of up to $100,000 for misdemeanors, and imprisonment of up to five years and fines of up to $250,000 for felonies. Vehicles, equipment, and illegally obtained wildlife are subject to forfeiture. The 1988 amendments to the Lacey Act added felony provisions to deal with commercial guides who are accessories to wildlife violations.\textsuperscript{127}

\section*{ENFORCEMENT OF EXISTING LAWS}

Law enforcement statistics, such as the number of citations or convictions in a given year, are ineffective as a measure of determining whether wildlife species are being protected. These statistics may reflect the diligence of law enforcement officers, the level of poaching activity in a specific area and the rate of wildlife cases which are prosecuted. However, they do not measure how many violators go unscathed by sentencing after they are convicted, or the numbers of wildlife actually protected as a result of law enforcement efforts. Nor do statistics accurately measure the likelihood that poachers will violate wildlife laws again.

Nonetheless, such enforcement statistics provide hard evidence that poaching is a real and present problem. Factors to keep in mind when analyzing enforcement statistics are the size of the enforcement staff, the area of the state, and the richness of wildlife resources in the state. State population may not always be relevant because of unlicensed poachers from out of state. For example, in 1991 the New Mexico Game and Fish Department reported that nearly 3,000 citations were given for state wildlife law violations. New Mexico, the fifth largest state, has 52 officers in full-time wildlife enforcement with a total of 140 commissioned wildlife officers.\textsuperscript{128} In Missouri, on the other hand, with an enforcement staff of approximately 173 field officers and staff supervisors, 21,863 violations were recorded out of 250,778 contacts officers made with sports persons.\textsuperscript{129} Texas, with a Parks and Wildlife Department enforcement staff of over 500 field officers, reported 34,363 citations in 1991.\textsuperscript{130}

Law enforcement activities to ensure compliance with wildlife laws is critical. Enforcement can be divided into field enforcement, prosecutorial enforcement and judicial enforcement, and an analysis of the problems at each level follows.

\textsuperscript{128} Statistics from the New Mexico Department of Game and Fish, 1992.
\textsuperscript{129} Statistics from the Missouri Department of Conservation, 1992.
\textsuperscript{130} Personal communication with H. Oates, Texas Parks and Wildlife Department, by S. Parker, University of New Mexico Center for Wildlife Law (Summer 1992) (on file with the University of New Mexico Center for Wildlife Law).
Field Enforcement

The first level of enforcement is in the field where wildlife enforcement agents are the key players. With an estimated 7,000 state wildlife agents and just over 200 federal agents nationwide, effective field enforcement is extremely difficult.131 According to FWS agent Dave Hall, "New York policemen alone outnumber the conservation officers of all 50 states combined by more than 10 to 1. America's 17 million hunters outnumber conservation officers by approximately 9,000 to 1."132

One result of this shortage is that wildlife agents are forced to selectively enforce wildlife laws. At the federal level, this means the focus is turned toward commercial poachers or "the worst of the worst," according to FWS agent Terry Grosz.133 Lack of funding restricts some state enforcement staff to desk work for several months a year. In some states agents are responsible for enforcing other environmental laws as well as wildlife protection laws.134 Both law enforcement officers and convicted poachers agree that as a consequence many poaching activities go undetected.

Some hunters complain that selective enforcement at the state level often means agents spend more time in the field on "technical" violations than on large-scale commercial violations. Covert operations are usually necessary to catch commercial violators and state agents have neither the time, money, nor agents to handle many of these cases. Selective enforcement is further reinforced by a system that measures law enforcement success by numbers of citations.135 Concentration on smaller violations, however, sometimes causes alienation between the wardens and the sportspersons.136 In addition, whereas hunters could be effective sources of information about violations, hostility may prevent sports persons from cooperating with law enforcement efforts. Furthermore, state agents also argue that they spend much of their time simply dealing with telephone complaints about violators. "State agents can't always pick and choose who to go after, they normally just take it as it comes," FWS Agent John Cross stated.137

When state agents take on commercial poaching cases, federal violations are usually involved and therefore federal agents are often

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131. Poten, supra note 2, at 131; Glick, supra note 2, at 34-44.
133. Grosz, supra note 1.
135. Hall, Bonnaffons & Jackson, supra note 9, at 350.
137. Personal communication with J. Cross, United States Fish and Wildlife Service, Albuquerque, by S. Parker, University of New Mexico Center for Wildlife Law (Summer 1992) (on file with the University of New Mexico Center for Wildlife Law).
requested to assist with the investigation. Shortages of personnel and money at the federal level means federal agents cannot always meet this request. Though most state and federal agents work well together, state agents are often frustrated at the lack of federal assistance. In fact, directors of 10 state law enforcement agencies in the northeast United States advised the FWS that they were not willing to renew cooperative law enforcement agreements with the FWS because of a lack of federal assistance in state covert operations.\textsuperscript{138}

\textbf{Prosecutorial Recognition}

The next level of enforcement occurs when wildlife cases are presented to the state or federal prosecutor to bring before the court. This level of enforcement has not always been used in favor of wildlife. "We get good sentences once we get to the judge, but the difficult part is getting the United States Attorney's office to recognize the importance of wildlife laws," according to Texas FWS Agent Jim Stinebaugh.\textsuperscript{139} The problem may be the result of value judgments prosecutors make about wildlife violations as compared to other crimes. Also, state prosecutors may feel that it is not worth the time to prosecute violations when such low penalties are involved. Like judges, prosecutors are also subject to political, community and cultural pressures which can sway decisions whether or not to prosecute or actively pursue wildlife cases.

\textbf{Judicial Recognition}

The last level of enforcement occurs once a case gets into the courtroom. Most of the problems at this level are in the state judicial systems. Federal judges are non-elected life-appointees and thus are not as affected by political and community pressures. State judges, on the other hand, are elected by the public or serve as political appointees, and are subject to pressures which often affect whether poachers are convicted or penalized.

If cases do get heard at the state level, state laws rarely provide for stiff enough penalties to provide an adequate deterrent. Most violators of state wildlife laws are charged with misdemeanors, which may mean a fine as low as a $10 to $50. These fines do little to hinder the lucrative activities of the commercial poacher. Second, federal judges have more discretionary power to apply penalties which will more effectively deter wildlife violators. For example, though federal

\textsuperscript{138} GAO, supra note 124, at 5.

\textsuperscript{139} Personal communication with J. Stinebaugh, United States Fish and Wildlife Service, Texas, by S. Parker, University of New Mexico Center for Wildlife Law (Summer 1992) (on file with the University of New Mexico Center for Wildlife Law).
judges must work within federal sentencing guidelines, they may also include forfeiture of vehicles and equipment, loss of hunting privileges and other innovative probationary measures as part of the penalty. State judges may have less innovative penalties available to them. They may suspend sentences, however, and substitute probationary measures to instigate some of the more innovative sentencing techniques.

SOLUTIONS

Since the illegal taking of wildlife is being recognized as a critical problem in the United States, the next step will be devising solutions to better protect our wildlife from poaching. The individuals interviewed for this article unanimously called for added enforcement combined with education to increase compliance with wildlife laws. Naturalist Aldo Leopold employed two terms to define this enforcement/education approach which he called the restrictive and incentive methodologies. FWS Agent Dave Hall describes the restrictive methodology as the judicial system, law enforcement, and wildlife laws and regulations. The incentive methodology involves participation of the hunter, an individual or communal vested interest in wildlife, and self-enlightenment brought about through education.140

Restrictive Deterrents

Increase Penalties

Studies indicate that the commercial poacher is likely to be involved in other criminal activities.141 The severity of the crimes that the commercial poacher perpetrates against wildlife, particularly the taking of endangered and threatened species, suggests a dispassionate and criminal mentality. Judges, prosecutors and wildlife enforcement officers often agree that incarceration, stiff fines, and/or revocation of hunting privileges are therefore the most appropriate remedies for commercial poachers and repeat offenders.

Those in the wildlife law enforcement profession seem more optimistic about the likelihood of rehabilitating the first-time convicted poacher or noncommercial poacher. The need for stiff penalties still exists, however. Fines should be steep enough to act as a deterrent to future violations and to convey the seriousness of the violation. Suspension or revocation of hunting privileges should also be applied more readily as a penalty for more serious offenses. Professor Jackson and Agent Hall both reiterate that hunters fear no other penalty as much as license revocation.142

140. Hall, supra note 132, at 24.
141. Tennesen, supra note 13, at 92.
142. Hall, supra note 30.
Federal Magistrate Michælle Wynne argues that court appearances should be mandatory at both the state and federal levels. This conveys the severity of the offense and allows judges the opportunity to apply innovative sentencing techniques. Though state judges have less sentencing discretion than federal judges, they can suspend sentences to substitute probationary measures like community service hours spent assisting wildlife programs.

**Simplify Laws**

The consensus of those interviewed recommended simplifying state wildlife laws and making them more consistent with each other. Some poachers justify their behavior by citing the complexity of current laws and their inability to comprehend them. Enforcement officers also suffer from the complexity and the constantly changing nature of their wildlife laws. If current laws were simplified, a greater willingness to comply with the laws may result. Professor Jackson argues that complexity of state laws can also be reduced by notifying hunters of changes in law in advance of their implementation.143

**Increase Law Enforcement Funding**

Many agree that increased funding for state and federal wildlife law enforcement agencies is needed to better protect wildlife. The initial need is for more wildlife enforcement agents. As FWS Agent John Cross stated, “All the laws in the world will do no good if you don’t have the people to enforce those laws.”144 Currently, there are just over 200 FWS agents and approximately 7,000 state agents in the United States. FWS personnel have estimated that the addition of between 100 and 200 federal agents and approximately 100 wildlife inspectors would adequately equip the agency to enforce wildlife laws.145

Increased funding would also allow for more wildlife agents and for updating agency equipment necessary to catch poachers. Law enforcement agencies currently complain that commercial and “hard-core” poachers have the most current equipment, such as aircraft and surveillance equipment, and elude capture because agency equipment is so outdated. Funding increases are naturally difficult to obtain from state legislatures. Fish and wildlife agencies are often funded solely through hunting and fishing license fees, so new sources of funding are sorely needed. Sale of wildlife stamps and emblems are bringing in additional funds, as are tax return check-offs and other programs.

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143. Arimond & Jackson, supra note 28, at 146.
144. Cross, supra note 137.
Regarding innovative funding sources, Missouri is the only state in the country to capitalize successfully on the support of its citizenry by passage of referendum for a .06 percent sales tax, which funds go to the Missouri Department of Conservation. The law is part of the state constitution; it can only be changed by a majority vote of the people. Among the benefits of the sales tax is that the constant influx of funds allows for long-range planning of programs such as law enforcement and habitat protection.

**Increase Law Enforcement Authority**

Many states confer full police powers to their wildlife enforcement officers which allow the officer to enforce all state laws as would any police officer (Table 5). The added authority is particularly beneficial to the lone game warden who is occasionally placed in dangerous situations. FWS Agent Stinebaugh stated, "Full police powers enables the wildlife agent to handle any situation that comes up."

Federal FWS agents do not have full police powers under federal law. However, in states where state and federal wildlife agents are cross-credentialed, federal agents are given the same authority as state agents, including full police powers when the state authorizes such powers. Cross-credentialed state agents have authority to enforce federal laws. Both forms of extended authority, full police powers and cross-credentialing powers, facilitate uniform and effective enforcement of wildlife laws and may actually further deter poachers who may be aware of this enforcement authority.

**Prioritize Law Enforcement Responsibilities**

Thomas Harelson, a wildlife law enforcement supervisor in Wisconsin, divided Wisconsin wildlife statutes into three categories: social, traditional, and laws which protect the resource. An example of the first type is the prohibition against hunting on Sunday. Such statutes can still be found in a number of states. An example of the traditional law is the prohibition against hunting waterfowl with an unplugged shotgun, that is, a gun that does not restrict the number of shells in the chamber. The third type of law directly influences the number of wildlife taken. The bag limit for each game species is an example. According to one study, law enforcement agents would better protect wildlife if they concentrated their time and energy on enforcing this third type of statute.146

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Regulate or Ban the Commercialization of Wildlife

Some wildlife professionals argue that the only way to effectively curtail the illegal taking of wildlife is to legislate a complete ban on the commercial trade in wildlife. They point to specific national restrictions which were placed on waterfowl and alligators and which proved successful in limiting the taking and the sale of those animals. Others argue that such a ban could be disastrous to certain regions of the country which rely on wildlife for their livelihood. Another argument is that the focus should not be placed on the economic value of the sale of animal parts, but rather on the indirect economic benefits that could be derived from protecting wildlife rather than trading in wildlife, through recreational and "watchable wildlife" activities.\textsuperscript{147}

Other wildlife professionals feel that better regulation of the wildlife trade would be more effective than total prohibition. Their belief is that a total ban on the sale of wildlife and wildlife parts in the United States will not stop poaching activities but will simply move the business farther into the black market. It is argued that when a commercial market for a species exists without controls, pressure to harvest the species will last until wildlife populations are nearly or totally depleted and then the focus will turn to another more plentiful species.\textsuperscript{148}

Others support creating uniform state wildlife laws, particularly those which regulate commercial trade in wildlife. As discussed above, many states allow the sale of some or all species and their parts, which makes laundering of illegally taken animals and parts through those states a substantial enforcement problem (see State Laws section). Uniformity between states in commercial trade prohibitions would clearly help solve the laundering problem. However, the right of each state to regulate its wildlife has strong historical ties, and individual states must be convinced that it is in their own interest to pass commercial trade laws consistent with other states.

Increase Reward Programs

Almost all states have established toll-free hotlines where persons may call anonymously to report hunting violations. These programs have proven to be a very effective tool in assisting wildlife enforcement efforts. The same two-year study of deer poaching incidents in Missouri, discussed previously in Poacher Profiles, revealed that informants were responsible for providing information on 83.7 percent of the poaching violations. Interest in conservation was cited by

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\item Gavitt, supra note 3, at 10.
\item Id.
\end{enumerate}
\end{footnotesize}
83.2 percent of the informants as the reason for reporting the violation.\textsuperscript{149} This also suggests that hunters police their own ranks. Reward programs should prove beneficial to states which have not already adopted these programs. Increased publicity about these programs would serve to educate more of the public, including non-hunters, who in turn may be willing to help law enforcement efforts.

\textit{Instigate a National Reporting System}

The FWS has plans to implement a National Incident Based Reporting System to improve documentation of reported or suspected crimes and facilitate enforcement efforts nationwide.\textsuperscript{150} Though the FWS has a nationally based computer system which records all federal violators, states are not yet linked into this system. Until law enforcement agencies can access information about both state and federal violators, the effectiveness of the system is limited. The FWS also has a forensics lab in Oregon for use primarily in commercial poaching investigations.\textsuperscript{151} Due to shortages of resources and personnel, state enforcement departments have limited access to the lab's services. Another benefit of increased funding, then, would be to provide state agencies access to these services.

It would be unrealistic to assume that large amounts of additional funding will be available in the near future for federal or state fish and wildlife agencies. States will be well advised to look to creative sources of funding for agencies.

\textit{Instigate a National Permit Assistance Program}

Another suggestion is to create a national center where hunters could get access to hunting and fishing laws and permit requirements of every state.\textsuperscript{152} Such a program would increase wildlife law compliance among hunters seeking this information. To make sure the hunter is receiving the most current state law, an independent organization could take over the task (and assume legal liability) for a fee.

\begin{itemize}
\item \textsuperscript{149} R. Glover, \textit{Locations and Timing of Closed-Season Deer Poaching Incidents in Missouri}, 1983 Transactions, Mo. Acad. Sci. 17, 88.
\item \textsuperscript{150} GAO, \textit{supra} note 124, at 30.
\item \textsuperscript{152} United States Fish and Wildlife Service, Report of Finding and Recommendation 19 (June 1990).
\end{itemize}
Incentive Methodology

Educate the Judicial System

Most federal wildlife enforcement officers feel that federal statutes provide adequate authority to intercept wildlife law violators. However, this does not guarantee judicial enforcement. The most often cited solution by wildlife experts was educating judges and prosecutors about the importance of supporting wildlife enforcement efforts. Traditionally, judges and prosecutors have not dealt harshly with poachers. An Alaskan federal judge reflected the lax attitude toward wildlife violations when during the sentencing of a defendant who illegally killed a brown bear he stated, “In my mind these offenses are no more serious than a moderate traffic offense, like speeding.” Such attitudes from the judiciary serve to encourage, not deter, poaching behavior. Through effective judicial education about the rapid depletion of wildlife resources combined with education about innovative sentencing techniques, the attitudes of judges and prosecutors may change.

Enforcement agents also argue that prosecutors should prepare more and better cases against wildlife violators. FWS Agent Jim Stinebaugh recommends having each United States Attorney’s office designate one person to handle wildlife cases so that enforcement officers do not have to repeat the importance of prosecuting wildlife law violators to different government attorneys. “This wouldn’t overburden the system. It would just involve one person spending more time with wildlife cases,” Stinebaugh said.

It has been suggested that mandatory penalties for wildlife violations may solve the problem of community and political pressure affecting state judges and prosecutors. It is also possible, however, that mandatory sentencing could result in judges choosing to impose no convictions at all. Others suggest that, in combination with education, judges must be given greater discretion to assess appropriate penalties. Uniform penalties do not always adequately reflect the crime, and slight penalties do not deter future violations. Federal Magistrate Judge Wynne stated, “In the event of a conviction, sentences should vary with the offense and with the offender. I, personally, do not believe that fines are very effective. The wealthy can afford to pay a fine without much problem, and it is the family of the poor that directly suffers rather than the violator.”

Furthermore, Magistrate Wynne has witnessed the benefit of using innovative sentencing techniques to alter attitudes. First, she in-

153. Hall, Bonnaffons & Jackson, supra note 9, at 343.
154. Stinebaugh, supra note 139.
sists upon mandatory court appearances to establish the severity of the violation. She also uses probationary measures like community service hours to rehabilitate violators. Often this includes watching and even participating in videos about poaching. According to Wynne, the video program has proven to be an effective tool in Louisiana to educate and rehabilitate all types of poachers into advocates of wildlife conservation.\textsuperscript{156}

**Improve the Relationship Between Law Enforcement and the Public**

Law enforcement is an effective deterrent in itself because it creates incentive among hunters to abide by the law for fear of retribution if they get caught. However, some hunters perceive that certain law enforcement officers are overzealous in their enforcement responsibilities, causing a division between these agents and the sporting community. Educating law enforcement agents about the importance of maintaining a good relationship with the sporting community and increasing agents’ involvement with the sporting community can be effective tools in bringing about compliance with wildlife laws.

Post-season interviews with waterfowl hunters revealed that the personality and attitude of the local game wardens were key factors in whether hunters violated the law. “Given respect for the individual, they (waterfowl hunters) choose not to violate. Without respect, violating becomes a way to test and defy the authority.”\textsuperscript{157} Laurence R. Jahn of the United Conservation Alliance calls this “community policing.” Jahn states that this form of enforcement “hinges on the philosophy that a good officer knows the community and knows enough to be able to solve problems, rather than just react to them. An officer’s priority task is to involve local people and gain their support for the good of themselves and their communities.”\textsuperscript{158} Jackson noted that wildlife professionals often alienate sportspersons by not involving them in department programs. He stated, “My point, of course, is that the agency, by denying involvement, is throwing away the most effective strategy we have in developing the stewardship and responsibility that it wants to develop in its citizenry.”\textsuperscript{159}

**Educate the Sporting Community**

Studies on convicted poachers reveal that most are experienced sportsmen. Unfortunately, they lack the knowledge or motivation to be

\textsuperscript{156} Id. at 25.
\textsuperscript{157} Jackson, Norton & Anderson, supra note 28, at 27.
\textsuperscript{159} Arimond & Jackson, supra note 28, at 60-61.
good stewards of wildlife. State wildlife agencies are hopeful that incorporating ethics into hunter education programs will help reverse this trend. All states currently have hunter education programs, and nearly all states have made attendance a requisite to obtaining a hunting license. Ethics are now part of the educational materials in every state. The importance of emphasizing ethics in these programs is not only as a deterrent to violations but also to preserve the integrity of the hunting tradition. Furthermore, statistics show that hunting accidents decrease in states where hunter education programs are mandatory.

Hunter education programs have also been advocated under the belief that no time is too late to change attitudes. Professor Jackson wrote, "I often hear calls for programs that will focus all efforts in teaching responsibility on the very young. No way! I have changed as an adult.... I changed when my kids said, 'Dad, why do you do that?' I have become a more responsible hunter. So can any adult."\(^\text{160}\) It has been recommended that states amend their laws to require all hunters to go through hunter education programs.

**Educate Youth**

Incorporating programs on conservation and hunting ethics into the school systems as early as kindergarten would provide another means to affect attitudes on a broader scale. Even children who will not be hunters should learn to be stewards of wildlife because wildlife belongs to every citizen. Furthermore, an informed public creates peer pressure to compel responsible behavior.

A study done in Nova Scotia illustrates the importance of educating children. In this study the children of known poachers were educated about the importance of conservation and protection of wildlife. Subsequently, the newly formed attitudes of the children profoundly altered their parents' attitudes about wildlife as well. The result of this strategy, among several others, was the increase in seabird populations because of decreases in poaching practice.\(^\text{161}\)

**Create A Vested Interest**

Hall and Jackson both advocate the theory that a person needs to have a "vested" or personal interest in something before he or she will care for it. As our society becomes increasingly urbanized, individuals become more isolated from wildlife. This includes the urban sports person who recreates but does not live in proximity to the out-

\(^{160}\) Id. at 59.

doors. Hall and Jackson believe that by making hunters feel they have a vested interest in the land, they will become more responsible for wildlife resources. 162

For example, if hunters could become more active in the wildlife regulation process, they not only would feel more informed about the laws but would like feel an added sense of responsibility in upholding laws they helped to create. "Most people are more likely to abide by a law they believe in and understand than one they don't." 163 African countries have used this incentive methodology to restore and perpetuate healthy populations of wildlife. The propagation of game farms is taking hold on the African continent where private individuals or communities allow regulated hunting of wildlife on the ranges. Turning wildlife into a valuable commodity creates an incentive to preserve and protect species and habitats.

**Involve The Media**

The media can be very effective in educating the public about the role of stewardship that humans must take to protect wildlife resources. The media is another vehicle for creating a vested interest in wildlife, particularly among the non-hunters. The FWS, in its attempt to educate the public, develops brochures and fact sheets, works with the media in coverage of enforcement efforts, gives presentations, uses direct mailings, creates airport displays, and donates forfeited property to educational programs and museums. 164

Sporting magazines should also be encouraged to include conservation and ethics material in their literature. Delwin E. Benson, of the Colorado State University Department of Fishery and Wildlife Biology, discovered that hunters rely heavily on hunter magazines to increase their knowledge about hunting. However, a 1991 study of 193 articles from three major hunting magazines revealed that the majority of articles covered information on species hunted, hunting techniques and places to hunt. Rarely were hunting ethics discussed. 165

Agent Dave Hall capitalizes on the importance the media can play in changing attitudes in his region. Publicizing the stories of "converted" poachers affects those in the community who consider the poacher to be a folk hero. When poachers confess the error of their ways and make public commitments to abide by the law, they make a sig-

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162. Hall, supra note 30; Jackson, supra note 31.
nificant impact on the attitudes and behaviors of other hunters. Further, Hall believes that once hunters are convinced that wildlife is worth protecting and that laws are necessary to protect wildlife resources, then peer pressure will encourage compliance with the laws.166

Similarly, a study of waterfowl hunters revealed that fines do not have much impact on violators, but the possibility that their names might appear in the paper as wildlife violators does. Peer pressure and public attitudes may be very important deterrents to poaching. "[S]ocieties can be law abiding where citizens themselves take responsibility for each other and become directly involved in demanding legal and ethical behavior of other members."167

CONCLUSION

The Father of Conservation, Aldo Leopold stated, "There are some who can live without wild things, and some who cannot . . . . "168 Yet none of us should be forced to live without wild things. As human beings, we have inherited crucial responsibility as stewards of all other living species. Wildlife professionals agree that educating the public and our decisionmakers about the need to preserve our wildlife heritage, and enforcing laws against those who would otherwise destroy this heritage, are both essential to protect wildlife.

The ultimate goal of this article has been to provide ideas, comparisons and solutions for managers, wildlife professionals, decisionmakers and the public to stem the tide of wildlife poaching that is depleting our precious wildlife populations. The information and state law surveys presented in this article are only an initial step toward improving the poaching situation in the United States. Much more work must be done to eliminate motivations to poach. Priorities should include creating legislative and regulatory uniformity among the states, educating judges, prosecutors and the public about the seriousness of the problem, and eliminating trade routes and markets for poachers.

166. Hall, supra note 30.
167. Jackson et al., supra note 28, at p.27.