Compliance: The Mission of Wildlife Law Enforcement

David L. Hall, U.S. Fish and Wildlife Service, Division of Law Enforcement, 56707 Behrman Street, Suite No. 2, Slidell, LA 70458

Abstract: The glorification of a poacher and the ingrained antagonism toward game laws and their enforcement has continued since early European immigration to North America. Effective wildlife law enforcement is a complicated discipline requiring selfmotivated compliance which will eventually change social attitudes and behavior regarding natural resource laws. A compliance philosophy evolved in Louisiana after implementing the results of research involving conservation officers, hunters, and violators. This team approach involves law enforcement, prosecutors, judges, probation officers, and convicted violators supported by mass media coverage of major poacher apprehensions and prosecutions. During a 5-year period, compliance with waterfowl regulations in Louisiana improved substantially. A video program entitled, "Innovative sentencing: A key to compliance with wildlife and fisheries laws," was produced and presented with this paper.

Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies 46:532-542

Aldo Leopold said in his book, "Game Management," that "monitoring society's compliance with restrictions on the taking and use of wildlife resources is a basic element of conservation law enforcement. There are 2 contrasting methods of controlling compliance: restrictive and incentive" (Leopold 1933:228). Restrictive control requires legislation, law enforcement, and the judicial system. Incentive control, on the other hand, requires an origin of enthusiasm, vested interest, and involvement from within the hunter (Jackson et al. 1979; Jackson 1989, 1992).

Philosophical commitment to improving compliance with wildlife laws must be affirmed by all concerned for law enforcement to become an effective, integrated, and equal tool of wildlife management (Leopold 1933, Hochbaum 1946, Swift 1957, Glascow 1966, U.S. Fish and Wildl. Serv. Law Enforcement Advisory Comm. 1990). Recent and timely attention to this issue by the outdoor media is illustrated by V. T. Sparano, editor-in-chief of Outdoor Life, who wrote, "I always believe that every story in Outdoor Life is important, but I can't recall when I have ever felt more strongly about the importance and impact of a story than 'Poaching: Crime in Our

Wilderness''' (Sparano 1992:10). This story, by Hanback (1992a, b) was featured in 2 parts in Outdoor Life. Conservation officers, supervisors, and wildlife agency administrators must understand that law enforcement responsibility extends far beyond apprehension and prosecution. Apprehension is only 1 method of prevention. Effective wildlife law enforcement is a complicated and academic discipline whose mission must be maximum compliance through modification of social attitudes and behavior. This paper discusses techniques that will improve compliance with wildlife laws whether it be commercial poaching or recreational hunting.

Discussion

Even though my father strictly adhered to wildlife laws, I was aware at an early age of a general social acceptance of those who violated game and fish laws. Regulating the taking of wildlife is as old as history itself, beginning with aboriginal people through the Egyptian, Roman, and Greek civilizations and into early common laws of England and the European immigration to North America. Immigrants were reluctant to surrender their newly-discovered freedom to hunt, fish, and trap. Ballads and tales served as remembrances of more than 1,500 years of oppression resulting from harsh and cruel punishment of poachers in Europe. Borrelli (1988:2) said, "The glorification of a poacher as a folk hero; a bold free-booter of the woods . . . like Robin Hood demonstrates the resilience of a frontier myth; a traditionally ingrained antagonism toward game laws and their enforcers." Like Royal Forest Guards, game wardens in North America have been stigmatized by the attitudes of common people that date back before the 12th century Sheriff of Nottinghamshire (Jackson and Hall 1991).

In 1930, my father's friend, the late Frank Vestal, outdoor editor of the Commercial Appeal newspaper in Memphis, Tennessee, accurately described the continuation of these social attitudes when he wrote: "Who, my good man, by the proverbial country mile is the most unpopular guy between our fair city and Podunk Junction? That's easy, brother—it's the game warden! And who, my good man, is the most necessary evil with which hunting and fishing devotees must contend? That, too, is easy, for he is still one and the same—the game warden!"

In 1952 The National Wildlife Federation published an article by Claude D. Kelley entitled, "What Our Courts Must Learn: Game Laws Are No Joke!" The article discussed blatant examples of judicial disregard for fish and wildlife laws. Kelley (1952:23) illustrated how law enforcement statistics and evaluation can be deceptive: "Too many conservationists—and courts—are lured into a sense of satisfaction by impressive percentage convictions. For instance, in 1949 Missouri had a conviction rate of 98.2%. On the surface that is pretty impressive and would seem to indicate effective enforcement. But let's dig a little deeper. The 2,856 sentences handed out that year averaged a fine of exactly \$7.95!"

The American judicial system was founded upon the principle that law violators are punished to protect the public's interest, thereby promoting respect for the law while affording adequate deterrence to others and also providing the convicted with the most effective correctional treatment. While society has generally upheld this system when applied to murderers, rapists, and robbers, a comparable support has only recently begun to develop toward wildlife law violators (Hall et al. 1989, 1992).

Punishment is necessary to implement criminal law which is based on the belief that people act as a result of their own free will and must be responsible for their actions.

Research indicates that the public is concerned about violations of fish and wildlife laws. A national study conducted by Kellert (1979) found that 87% of the respondents thought that wildlife violators should receive stiff fines and jail sentences. Likewise, the outdoor and general media has recently reacted to this public concern about poaching in America.

Studies of waterfowl hunters and violators (Hall et al. 1989, Gray 1992) indicate that severe penalties for violating regulations are perceived by hunters as effective deterrents. However, the penalty providing the greatest deterrent (Hall et al. 1989, Gray 1992), loss of hunting privileges for 3 to 5 years, is not included in the Federal wildlife statutes nor in most state and/or provincial codes.

Considerable progress has been made to professionalize conservation law enforcement resulting from training, more effective legislation, and improved judicial and public support. However, we do not yet completely understand methods and techniques that will enhance compliance. Discussing deterrence (Bavin 1989:176) agreed: "The subject is extremely complex and in the current state of knowledge, we only know that it is not well understood."

Punishment, however, is not the only element of deterrent. Violators also perceive a risk of being apprehended and prosecuted. Conservation officers are so outnumbered that they can only apprehend and prosecute a token number of violators. For example, New York police officers alone outnumber 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 (Hall 1992).

Insufficient violator risk or fear provided by traditional wildlife law enforcement techniques was illustrated by Smith (1982) who reported that deer poacher detection rates in California, Idaho, and Maine were estimated to be 2.2%, 1.1%, and 1.2%, respectively. Hunters believe an increase in the numbers of conservation officers would be an effective deterrent (Gray 1992). Fish and wildlife law enforcement agency directors ranked increased manpower as the most effective and desirable method to reduce violations (Nelson and Verbyla 1984). Unfortunately, the budget problems in most fish and wildlife agencies prohibit hiring more conservation officers. In some jurisdictions, law enforcement has in recent years received reductions in numbers of officers and working hours. Even if more officers were sufficient to increase by tenfold the violator detection or apprehension rate as reported by Smith (1982), the majority of violations would still go undetected. Therefore effective deterrent must be a major element for improving compliance.

Instruction regarding how to create a deterrent is rarely mentioned in wildlife law enforcement textbooks or manuals. William F. Sigler (1980:183) in his book, "Wildlife Law Enforcement," writes, "The underlying philosophy of modern law enforcement procedures stresses compliance with the law, not because of fear of punishment but because of an enlightened self interest growing out of a program of public information." This is easier said than done. Information alone will not change traditional values or behavior. Even Leopold (1933) was not explicit about how to transform compliance with regulations on taking and using wildlife from restrictive to incentive.

U.S. Fish and Wildlife Service reports on law enforcement (1990, 1991) are critical of the lack of law enforcement master plans, goals, strategies, and supervision necessary to ultimately attain greater voluntary compliance. Wildlife agency law enforcement basic and in-service training programs have only recently begun to include instruction on methods to create a deterrent that will improve compliance.

For the last 5 years, my duties as special projects officer with the U.S. Fish and Wildlife Service have permitted me to seek answers to the who, what, where, when, why, and how questions about wildlife law violators. Cooperators were solicited which included wildlife agents, university researchers, prosecutors, judges, probation officers, sportsmen, conservation organizations, media, and poachers throughout North America.

According to Jackson et al. (1979) violators often possess many skills which have elevated them to hero status as successful hunters in their respective communities. Hailey (1991:486–487) wrote, "Management of the defendant does not stop when you have completed your citation. Good defendant management has produced guilty pleas, informants, apologies, and even lasting and beneficial friend-ships."

Hunter education video programs produced with convicted violators as terms of probation under innovative sentences have been viewed by millions of people (Hall 1987, 1989; Hulen 1992; Buckley 1992). Poachers, through this process, are educating other hunters and law enforcement agents by providing answers to important imponderables: Why do people violate? When did they begin? With whom? What penalties create an effective deterrent? And, how can productive educational programs be established and cooperative working relationships developed between law enforcement and sportsmen supporting legal, ethical hunting?

Video interviews conducted with convicted poachers (Hall 1989) from Maine to Alaska and from the Yukon to Nova Scotia indicate that a common disregard for wildlife laws began at an early age; either from direct instructions or by observation from whom they first hunted. Video evaluations of poachers by Hall (1989) agree with results of Scialfa and Machlis (1992) study of poachers in northern Idaho and eastern Washington which found: "Social learning theory suggests that significant and permanent reductions in the rate of poaching are likely to result only when there are corresponding changes in normative evaluations towards wildlife laws. Indeed, the implementation of information and education programs have become an increasingly used wildlife management strategy. This is why the study finding with perhaps the most ominous implication to wildlife management is the early age at which most informants learned to poach, generally between 9 and 12. Furthermore, almost half of the informants reported that their first hunt was illegal. Most informants also reported that family members or close friends played critical roles in the development of their poaching behavior, either by actually teaching them how to poach, or by knowing they hunted illegally and more or less condoning it. These findings, coupled to the importance of early learning experiences in the formation of normative evaluations, suggests that the typical information and education programs designed to affect hunters' attitudes and behaviors reach individuals too late to be particularly effective. For example, Idaho does not open its hunter education courses to individuals under the age of 11 (Scialfa and Machlis (1992:33).

Obviously, youth hunter education needs to begin at an earlier age and also be required for adults who are permanently imprinting the attitudes and conduct of kids before they receive institutional training.

Born again poachers can enhance the credibility of wildlife enforcement agents. Scialfa and Machlis (1992:33) agreed, "Non-traditional methods used by Hall, such as using chronic wildlife law violators assisting law enforcement or videotaping interviews with violators and using their viewing as part of sentencing for other violators, should be given wider consideration. Wildlife agency personnel should develop and adopt strategies that will enhance voluntary compliance, rather than generate additional contempt and hostility toward wildlife and fisheries laws."

A concept now referred to as "Poachers to Preachers" has attracted considerable positive media attention. Ron Hayes, the well-known Alaskan hunting and fishing guide, is a noteworthy example. After a second conviction for illegally hunting brown bear with an aircraft, he was sentenced to 2 years in a Federal prison, forfeited 4 aircraft, fined \$100,000, his guiding privilege revoked for 5 years, and prohibited from association with his assistant guides. At the International Conference on Improving Hunter Compliance with Wildlife Laws, Reno, Nevada, on January 21, 1992, Hayes presented a paper entitled "Trophy Hunting the Right Way." Hayes (1992:42) said: "When I was in federal prison, Dave Hall called me and asked me to work with him. I just about dropped out of my shoes, wondering what a Federal game warden was calling me for. I'm sitting here in prison and he knows damn well I don't like him. He's calling me up and has the nerve to ask me to work with him. Dave asked me to help him make a film to get the message across to other hunters and people like me that illegal hunting is costly, dangerous, and degrading of your character and well-being. I would never have considered working with the Fish and Wildlife Service or any state agency 3 years ago. Now I'm convinced that we have to work together. We have to change the habits of guys like me. If you can change me, you can change anybody."

Ron continues to work on the right side of conservation, and assisted National Geographic with the production of the television series "Wildlife Wars USA: Bears Under Siege," and even accompanied me to the Soviet Union to advise the Russians concerning the need for wildlife and fisheries laws and enforcement. The Hayes case no doubt has created an effective deterrent for guides, outfitters, and big game hunters.

1992 Proc. Annu. Conf. SEAFWA

Recommendations

A wildlife law enforcement "deterrent philosophy" has evolved by implementing violator research results reported by (Hall et al. 1989, Gray 1992) and information derived from video recorded poacher interviews (Hall 1989, Daisey and Hall 1989, Treitler and Hall 1989). The philosophy is based upon a team approach which links critical elements together in a chain that "SERVES" to improve compliance. If one weak link breaks, the entire system fails. The "SERVES" compliance chain consists of 6 links as described by Hall (1989, 1992) and Bourne (1992).

1. (S) SIMPLE and understandable laws. Many who hunt in several states and other countries realize there are too many laws. While attempting to provide more hunter opportunity, complicated and confusing laws and regulations have evolved. Attitudes have developed within our legally oriented society: If there is a problem, enact a law! Conservation officers frequently carry the burden of being the messenger and are criticized when they enforce laws that hunters perceive to be confusing or unnecessary. Law abiding, responsible sportsmen should become involved with legislators and agency administrators recodifying wildlife statutes.

2. (E) EVALUATION of conservation officers must look beyond numbers of cases and fines collected. Small fines and bond forfeitures send the wrong message to violators (Hall 1992, Wynne 1992). Officers should concentrate the majority of their enforcement efforts on apprehending violators having the greatest negative impact on wildlife and fisheries resources (Hall et al. 1989). Apprehension and prosecution of chronic violators not only provides a direct positive impact on resources but enhances hunters' respect and support for wildlife agencies and the individual officer as well.

Agent training should include the "deterrent philosophy" incorporated into an agency law enforcement master plan or strategy outlining his or her responsibility regarding compliance. Agents must also be provided with equipment at least equal to the flagrant violator's tools of the trade (Hall 1992).

3. (R) RESPECT for wildlife laws by legislators, prosecutors, judges, and probation officers. Seminars should be established to explain agency law enforcement master plans and priorities emphasizing the team approach. Videotapes involving prosecutors, judges, and probation officers working with agents have proven very effective and can be readily distributed at minimal expense (Hall 1989).

The video "Innovative Sentencing: The Key to Improving Compliance with Wildlife and Fisheries Laws" has been used extensively throughout North America.

4. (V) VALUE of innovative sentences. Sentences that produce the most deterrents are often not included in wildlife statutes, i.e., revocation of hunting privileges, forfeiture of equipment, community service, mandatory court appearance, and required viewing and participation in the production of anti-poaching videos (Hall et al. 1989, 1992; Wynne 1992).

Fear, embarrassment, and awareness created by swift and tough sentences sends the message: violating game laws is risky business and will not be tolerated. Comments by The Honorable Michaelle Pitard Wynne (1992), U.S. Magistrate Judge, U.S. District Court, Eastern District of Louisiana, at the International Conference on Improving Hunter Compliance with Wildlife Laws illustrates the impact of the judiciary: "In order to deter violations, the judicial branch of government must consider wildlife violations as serious offenses and not just a traffic ticket type wrongdoing. If the offense is serious, the offender must be required to appear in open court to answer the charges against them. A person who is required to stand in a formal court outside of their normal environment and hear their name loudly proclaimed as versus the United States realizes that he or she is in a serious situation. Personally appearing is an extremely important method of conveying that the Judiciary means business and that the United States has charged them with a violation against its people. I have witnessed strong, able-bodied men shake with fear and go red-faced with shame as the charges and maximum penalties are read to them.

"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 suffer rather than the violator. Also, minimal fines send the wrong message, i.e., that wildlife infractions are minor. Further, large fines are often uncollectible.

"In the spirit of education it is my general practice to have all violators view the wildlife film prepared by Dave Hall. The film emphasizes the beauty and fragility of nature while explaining the reasons why hunters violate the law. Numerous 'outlaws' are interviewed and tell their story of conversion and redemption. Revocation of hunting or fishing privileges is another standard penalty. Failure to properly use a right should result in the temporary forfeiture of that right. Hunters hate to lose their hunting privileges. Seasons sitting at home are sufficient to make most sportsmen aware of the seriousness of the offense. Hunting during a restricted period will result in incarceration.

"Community service often gives a violator the time to think about their inappropriate and illegal behavior. Community service renders a direct benefit to society at a reasonable cost to the offender. When community service is in the field of wildlife preservation, there is the added benefit of education, involvement, and reinforcement.

"Confiscation of equipment and forfeiture of boats, guns, etc., are also an effective punishment. This punishment sends a very loud and clear message to other hunters.

"Incarceration is a proper sentence for serious offenses and repeat offenders. Innovative incarceration, such as weekend and holiday lock down, allows the violator to earn a living while causing him to lose some of the pleasurable qualities of life.

"Wildlife law enforcement in my district is one of the few areas where society is actually winning the war against crime. Sure, consistent, and fair consequences for disobedience appears to have a direct consequence on the frequency of disobedience. With the promise of swift and fair punishment regardless of social status or wealth, in the Eastern District of Louisiana I have witnessed a reduction in serious offenses.

"If we are to continue to win the war we must commit to continual law

enforcement and vigilance by well-funded, well-equipped, motivated, and dedicated wildlife agents. We must continue to educate the public on the positive aspects of obedience to wildlife law and conservation. We must convince the sportsmen that reasonable laws are necessary for preservation of wildlife and for the prevention of dangerous hunting activities. Judges and prosecutors must treat wildlife offenses as serious. Law enforcement's positive role in the education of the judiciary is extremely important to keeping the judiciary conscious of the egregious nature of a wildlife violation and to understand the serious natural consequences of the failure to respect wildlife. Human nature being what it is, hunters will always have a tendency to violate game laws. Consequently society must protect itself and its environment by maintaining sufficient law enforcement presence."

5. (E) EDUCATION of hunters and the public by the media. Deterrence is dependent upon knowledge. Therefore, there must be media sources reporting to the public when violators are apprehended, convicted, and sentenced. Wildlife agent evaluation should emphasize establishing professional relationships with hunting and conservation organizations and the outdoor media.

6. (S) SOCIAL CHANGES in attitude and behavior. If the first 5 deterrent links are collectively strong, social attitudes and behavior can rapidly change. Then compliance transforms more toward incentive rather than restrictive. The over-whelming majority of hunters must be convinced that natural resource laws are important and beneficial to wildlife and people as well. Then those who continue to violate will be subjected to negative peer pressure. They then are chastised by society rather than revered as folk heros. This last point is a key issue in a successful wildlife law enforcement compliance chain.

There will be critics who say, "This sounds like a good plan, but realistically will it work?" Conservation law enforcement has been challenged to illustrate with specific examples where compliance has significantly improved as a result of the enforcement of wildlife laws.

Judge Wynne's comment about reducing serious waterfowl violations in Louisiana illustrates the potential results from a strong "SERVES" compliance chain. In 1978, U.S. Fish and Wildlife agents in Louisiana initiated an annual series of seminars with judges, prosecutors, and the media. Outdoor media from throughout the state have responded with numerous feature articles about illegal waterfowl hunting. The continental duck populations plunged to their lowest levels during the late 1980s. Flagrant violations continued.

Responding to this crisis, Dennis Anderson, outdoor editor, St. Paul, Minnesota, Pioneer Press Dispatch, accompanied Louisiana state and federal wildlife agents in the field apprehending violators. Anderson wrote a 12-page, awardwinning special report entitled "Empty Skies: America's Ducks in Crisis." The article (Anderson 1987) created a national anti-duck poaching outcry directed primarily toward Louisiana. Sportsmen from throughout the nation supported the successful Izaak Walton League helicopter fund resulting in the purchase of a Bell-Jet Ranger helicopter and 2 airboats for agents to patrol the vast Louisiana coastal marshes. Waterfowl law enforcement research was conducted by Hall et al. (1989) and Gray (1992). Results of tough sentences were publicized by local and national publications and television programs. Violation statistics significantly decreased between 1987–88 and 1991–92.

Table 1 illustrates that law enforcement from a team approach involving agents investigating serious violations supported by legislators, prosecutors, judges, probation officers, law enforcement research, and followed up by mass media coverage can change hunter attitudes and behavior. Charles Clark, assistant chief of Law Enforcement of the Louisiana Department of Wildlife and Fisheries noted that "in the old days I might have written that many (total 31 overlimit) citations for teal season on my own. I think people who claim there's a new attitude among Louisiana hunters probably have a right to brag" (Marshall 1992:16).

Conclusion

Self motivated compliance with wildlife laws should be the mission of all natural resource agencies. This complex strategy is not yet fully understood and requires additional research. A successful wildlife law enforcement compliance philosophy evolved in Louisiana by applying the results from interviews and research with conservation officers, hunters, and violators. A team approach evolved consisting of 6 basic links in a chain that "SERVES" to improve compliance as follows: Simple, understandable, reasonable laws; Evaluation of conservation officers beyond numbers of cases and fines collected; Respect for and understanding of wildlife laws by judges, prosecutors, probation officers and legislators; Value of innovative sentences and penalties that create effective deterrents; Education by the media directed toward hunters and the general public; and Self-enlightenment resulting from effective law enforcement and education. SERVES changes hunter attitudes and behavior regarding compliance and the importance of wildlife laws. During a 5-year period, an increased law enforcement effort by state and federal wildlife

	1987–1988ª	1991–1992	% Reduction
Take ducks-			
aid of bait	79	5 ь	94
Take/poss			
over-bag limit	184	46°	75
Total waterfowl			
cases	930	219 ^d	77

 Table 1.
 Five year interval comparison of waterfowl cases

 prosecuted in Louisiana Federal courts.

*Major media exposure of illegal duck hunting in Louisiana.

^bResulted in no over-bag limit of violations.

^cSignificantly fewer birds taken over-bag limit compared to 1987-88.

^dGenerally minor violations compared to 1987-1988—only 2 serious over-the-limit cases in past 3 years. agents utilizing better equipment ended in migratory waterfowl convictions being decreased by 77% in Louisiana Federal courts.

Since deterrent is based upon knowledge, conservation officers should assume leadership roles in educating all involved in the SERVES process. Hunter education should be provided to youth at an earlier age, even before they are actually permitted to hunt in many states and provinces. Adult hunter education should also be required. "Compliance: The mission of wildlife law enforcement" should be included in basic and in-service training for all conservation officers.

Literature Cited

- Anderson, D. 1987. Empty skies: America's ducks in crisis. St. Paul Pioneer Press Dispatch. Minneapolis, MN. Jan. 12.
- Bavin, C. R. 1989. Federal initiatives in waterfowl law enforcement. Int. Waterfowl Symp. 6:175–179.
- Borrelli, P. 1988. On poaching. The Amicus J. 10(2):2.
- Bourne, W. 1990. A field with a fed. Southern Outdoors. Dec. pp. 61-67.
- Buckley, C. 1992. Game agent's project. Town Talk. Alexandria, LA. Oct. 18. p. B-8.
- Daisey, D. and D. L. Hall. 1989. For the ducks: It's a different day, A different time. Int. Waterfowl Symp. 6:212-218.
- Glascow, L. L. 1966. Law enforcement editorial. Louisiana Conservationist. Sept. p. 1.
- Gray, B. T. 1992. Illegal waterfowl hunting in the Mississippi flyway and recommendations for alleviation. Ph.D. Thesis. Mississippi State University, MS. 248pp.
- Hailey, W. F. 1991. Comments regarding defendant management and professionalism. Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies 45:484–488.
- Hall, D. L. 1987. Impacts of hunting on duck populations. Proc. Annu. Conf. Southeast Assoc. Fish and Wildl. Agencies 41:447–460.

- Hanback, M. 1992a. Poaching: Crime in our wilderness. Part I. Outdoor Life. Oct. Pages 57, 58, 70, 72–75.
- ——. 1992b. Poaching: Crime in our wilderness. Part II. Outdoor Life. Nov. Pages 79–81, 113–118.
- Hayes, R. 1992. Trophy hunting the right way. Int. Conf. Improving Hunter Compliance with Wildl. Laws 1:36-42.
- Hochbaum, H. A. 1946. Recovery in North American waterfowl. Trans. North Am. Wildl. Conf. 11:403–418.
- Hulen, D. 1992. Wildlife crime plea bargain includes televised apology. Anchorage Daily News. Anchorage, AK. Jan. 10. Pages B-1, 3.

542 Hall

Jackson, R. 1989. Elements of a model waterfowl hunter education program. Int. Waterfowl. Sym. 6:240–248.

-----. 1992. Educational and psychological principles for improving hunter compliance. Int. Conf. on Improving Hunter Compliance with Wildl. Laws 1:58-65.

— and D. L. Hall. 1991. Duck hunter traditions and responsibilities. Minnesota Waterfowler. Spring. pp. 1, 19–23.

-----, R. Norton, and R. Anderson. 1979. Improving ethical behavior in hunters. Trans. North Am. Wildl. Resour. Conf. 44:306-318.

Kellert, S. H. 1979. Public attitudes toward critical wildlife and natural habitat issues. Phase I. U.S. Dept. Inter. Fish and Wildl. Serv. Washington, D.C. 138pp.

Kelley, C. D. 1952. What our courts must learn: Game laws are no joke! Louisiana Conservationist. Nov.-Dec. pp. 6-7, 22-24.

Leopold, A. 1933. Game management. Charles Scribner's Sons, New York. 481pp.

Marshall, B. 1992. Game wardens marvel at hunter's ethics. The Times-Picayune, New Orleans, LA. Oct. 4. p. C-16.

Nelson, C. and D. Verbyla. 1984. Characteristics and effectiveness of state anti-poaching campaigns. Wildl. Soc. Bull. 12(2):117-122.

Scialfa, M. A. and G. E. Machlis. 1992. An ethnographic analysis of poachers and poaching in Northern Idaho and Eastern Washington. M.S. Thesis, Univ. Idaho, Moscow. 369pp.

Sigler, W. F. 1980. Wildlife Law Enforcement. Wm. C. Brown Co. Publ. Dubuque, Iowa. 403pp.

Smith, G. 1982. To catch a thief. Colorado Outdoors 31(5):5-9.

Sparano, V. T. 1992. Our war against poachers. Outdoor Life. Oct. Page 10.

Swift, E. 1957. By which we live. Natl. Wildl. Fed. Washington, D.C. 38pp.

Treitler, D. and D. L. Hall. 1989. A Louisiana marsh man. Int. Waterfowl Symp. 6:207-211.

U.S. Fish and Wildlife Service. 1990. Report of law enforcement Advisory Commission. 49pp.

---. 1991. Law enforcement functional analysis. 11pp.

Wynne, M. 1992. View from the judiciary. Int. Conf. Improving Hunter Compliance with Wildl. Laws 1:54-57.