

# RESEARCH ADVANCES

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## Illegal Waterfowl Hunting And Ways to Reduce It

### Abstract

*A mail survey conducted by scientists Brian T. Gray and Richard M. Kaminski, of the Department of Wildlife and Fisheries, Mississippi State University (MSU), has given waterfowl managers and wildlife law officers valuable information on waterfowl hunting violations. Their survey, following the 1989-90 waterfowl hunting season, was a 12-page questionnaire, which went to 8,220 waterfowl stamp purchasers and 1,465 violators of hunting regulations. The purpose of the survey was to elicit information on whether respondents had violated shooting-hour, bag-limit, and/or baiting laws during the 1986-1990 hunting seasons. Also sought was information on hunters' knowledge about waterfowl and related problems, personal hunting and socioeconomic characteristics, waterfowl leg-band recovery and reporting, and attitudes toward proposed or existing illegal hunting deterrents.*

*Over 26 percent of Mississippi Flyway waterfowl-stamp purchasers admitted violations during the 1989-90 season, and 35 percent said they had committed violations on ducks during the three previous seasons. Goose-hunting violations were lower than duck hunting ones. The Southern region of the Flyway (Arkansas, Louisiana, Mississippi and Tennessee) consistently had the greatest percentage of violators on ducks but the lowest on geese. The Central region (Illinois, Indiana, Kentucky and Missouri) had the highest percentage of goose-hunting violators, but generally the lowest occurrence of duck-hunting violators. The Northern region (Iowa, Michigan, Minnesota and Wisconsin) mostly had intermediate percentages of duck and goose violators.*

*Violators averaged 34 years of age; legal hunters averaged 39 years. Violators also hunted more frequently and harvested almost twice the waterfowl. The two groups didn't differ appreciably in other charac-*

teristics, and both said magazines, *Ducks Unlimited*, fellow hunters, television specials, and other media were prime sources of information on waterfowl. These should be used to educate hunters to act within the law.

Most guilty hunters said they broke laws intentionally. Shooting hour violators comprised the smallest portion of accidental law breakers, followed by baiting and bag-limit violators. In all states, violators and legal hunters thought mandatory loss of hunting privileges, large fines, increased law enforcement, and jail terms would be most effective deterrents to illegal hunting. Gray and Kaminski concluded that state and federal agencies should impose these sanctions on serious and/or chronic offenders. However the long-term solution to illegal hunting of waterfowl and all game is nurturing ethical behavior and hunting in our youth - the hunters of tomorrow



Dr. Brian T. Gray and friend

hunter-observation studies before the Gray and Kaminski survey. Such observations underestimate illegal kill and proportion of violations. Moreover, they don't address sociological aspects of illegal hunting.

In a society endeavoring to accept only ethical hunting, a study to quantify illegal hunting, and ways of correcting violations, seemed warranted. So, the survey's first objective was to estimate percentages of hunters who shot over bait, shot outside legal hunting hours, and/or exceeded daily legal limits of birds. The researchers also wanted to determine characteristics of hunters who stayed within the law and those who didn't. They sought to learn hunters' sources of

**I**f wildlife is an asset to a state - and of course it is - illegal hunting brings economic and recreational losses. Two Mississippi State University (MSU) researchers in the Department of Wildlife and Fisheries surveyed waterfowl hunters after the 1989-90 season to garner information on illegal hunting throughout the Mississippi Flyway. The scientists are Brian T. Gray, then doing research for his doctorate, and Richard M. Kaminski, professor of wildlife, MSU.

That ducks and geese are valuable economically and recreationally has been widely recognized since the Migratory Bird Treaty Act of 1918 was passed to sustain continental waterfowl populations. Generous numbers of waterfowl were allowed to be harvested at first; but, when numbers of ducks and geese plummeted in the 1930's, laws were enacted to curtail exploitation of the birds.

Compliance with laws was not as good as game managers wanted. Many hunters were apathetic toward such laws, and it was necessary to increase state and federal enforcement activities to maintain prudent harvest of waterfowl. Waterfowl population and habitat management have expanded greatly since World War II. In fact, Gray and Kaminski say, "...no other wildlife management program has involved as many people, covered as broad a geographic area, or cost as much as has waterfowl management."

Waterfowl today gives pleasure to millions of hunters and bird watchers. But, numbers of some species dropped

to troubling levels during the 1980's. By the mid-1980's, 10 common duck species were estimated by United States and Canadian officials to approximate only about 28 million breeding birds in North America. Mallards and northern pintails were estimated to be at their lowest recorded levels at this time, despite being numerous in the past. Breeding populations for 10 common duck species continued a sharp downward trend through 1990. Subsequently, with improved wetland and nesting habitat conditions, breeding duck numbers have escalated to nearly 36 million in 1995.

Loss and degradation of much waterfowl habitat in the Prairie Pot-hole Region in the northern United States and Canada - due primarily to agricultural conversion of natural habitats, long-term drought, wetland disappearance, and predation of duck eggs and females ~ have cut into waterfowl populations. To maintain and increase numbers, a reversal of habitat impacts and predation was a "must."

Despite declining waterfowl populations previously, some hunters continued to ignore wildlife laws. Estimates from law enforcement officers have suggested that illegal waterfowl hunting in Texas and Louisiana has in recent years resulted in one to four times the legal kill, although these estimates were not confirmed by scientific investigation.

There has not been much investigation of illegal duck and goose hunting; most data had been obtained through



Dr. Richard and Matthew Kaminski

information about hunting, and which organizations and professionals they saw as credible sources on waterfowl. Finally, Gray and Kaminski were eager to get survey respondents' opinions on what would deter law-breakers. Indeed, they wanted to recommend ways to lower incidence of illegal waterfowl hunting.

The 12-page questionnaire went to 8,220 waterfowl-stamp buyers from 12 of 14 states in the Mississippi Flyway, and, with cooperation of law enforcement agencies, 1,465 known violators of waterfowl hunting laws in these 12 states.

Response rates were excellent, Gray and Kaminski said. Even for violators, response was 77 percent; for stamp holders not previously known to have broken hunting laws, it was 85 percent. A surprising 69 percent of previously identified violators told the truth about having intentionally or unintentionally stepped over the line to hunt illegally.

About 26 percent of responding waterfowl hunters in the Mississippi Flyway admitted one or more of the three violations on ducks during the 1989-90 season. About 35 percent had hunted illegally in one or more of the ways during the three previous hunting seasons. Duck-hunting laws were broken more than laws on geese; 10 and 13 percent of the respondents reported committing one or more of these violations on geese during the 1989-90 and 1986-89 seasons, respectively. Bag limits and shooting hours were violated most often for ducks, and shooting over bait was less frequent. For geese, all violations were committed at similar rates.

However, geese hunting over baited areas was the most prevalent violation on geese; it occurred most frequently in the central region of the Mississippi Flyway, where many geese spend the winter. Regarding all three violations on geese, hunters committed them most in the Central region of the Flyway, followed by **the** North and the South.

In contrast, the Southern region had the most duck-law violations in the Flyway; and Mississippi hunters had the most duck violations of all states.

**Hunters move into position. Mallards are in the air and the two sportsmen on the right spot them coming.**



**Waterfowl in a cypress swamp. Ethical hunting will preserve waterfowl for future hunters.**



Changes in regulations during the three-year period couldn't be shown to be a *primary* reason why hunters didn't follow the law. But, game-law breaking did decline somewhat during the period, and fine-tuning laws may have had some influence, along with media publications about illegal waterfowl hunting.

Some studies have indicated that hunters are less likely to commit illegal acts as they age and gain experience. This is possibly due to the "mellowing-out" phenomenon, whereby hunters put less emphasis on limiting-out and more on the total hunting experience - i.e., enjoying nature, reminiscing, and camaraderie.

Overall, violators were younger than legal hunters (averaging 34 vs. 39 years). Violators also hunted more frequently and harvested almost two times more waterfowl than did law-abiding hunters.

Certainty of punishment has been demonstrated as a better deterrent of illegal behavior than severity of punishment. Surprisingly, mandatory loss of hunting privileges for one or more years was perceived by legal and illegal hunters to be the best deterrent. Nevertheless, increased law enforcement, large fines, and mandatory jail sentences also were believed by legal and illegal hunters to be effective **deterrents**.

**Gray and Kaminski found that most**

of those who broke game laws did so intentionally and for a variety of reasons, including hunters' disagreement with regulations and because they could harvest waterfowl effectively.

Violators seemed to enjoy waterfowl hunting more than legal hunters, and most of all compared with other types of hunting. Gray and Kaminski suggest that, "Perhaps this enthusiasm toward waterfowl could be directed to benefit waterfowl populations instead of harming them."

Gray and Kaminski remarked that, "Some violators can be reformed through education, but resource agencies should invoke strategies to prevent hunters from violating in the first place."

They believe that perhaps by learning responsibility for obeying laws instead of developing poor behavior, impressionable youngsters could be molded into lifetime legal and ethical hunters.

Mass media appears to be excellent for teaching good hunting practices. "Articles and television programs, especially those portraying legal and ethical hunting behavior among adults and youth, should improve compliance with regulations and prevent young hunters from ever violating." Ducks Unlimited, with its widely distributed magazine, could play a major role in dissemination of infor-

mation on legal, ethical waterfowl hunting.

The survey also suggested that hunters' perceptions of waterfowl populations influenced behavior. It seemed the method of communicating numbers of waterfowl to hunters was viral in reducing violations. Thus, the wording "increasing but still low population levels for some species." seemed preferable to "best year in a decade."

Gray and Kaminski said, "Unfortunately, there will always be a segment of the hunter population that must be regulated into lawful behavior." They suggested that flyway-wide sanctions (so violators couldn't simply commit unlawful behavior in another state) would be effective. Such steps as mandatory license revocation, large fines, and mandatory jail terms seem necessary for serious violations (e.g., shooting over bait and overbagging).

Equally important to assessing penalties would be publicizing them. "Legal sanctions are effective only when they are known by the public, and the public is aware of their enforcement," said the authors. Again, mass media seems an effective channel for making waterfowl violations and punishment of violators known.

During the 1990-91 season, some Mississippi Flyway states - Arkansas,

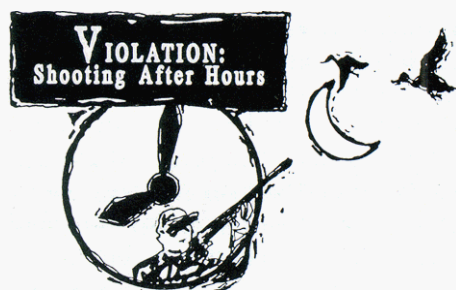
Louisiana, Minnesota, Michigan and Wisconsin - put undercover operations into use. Such aggressive and proactive law enforcement was effective and may be a model for future practice. Additionally, the State of Mississippi, recognizing the problem of illegal waterfowl hunting within its boundaries, hired a wildlife conservation officer in 1994 whose primary responsibilities are enforcement of waterfowl regulations and education regarding ethical waterfowl hunting. During the 1994-95 waterfowl hunting season (30 days), this person and another officer wrote tickets for 94 violations. Although waterfowl hunting violations still occur, the Mississippi Department of Wildlife, Fisheries and Parks recognizes the problem and is taking aggressive steps to alleviate it.

In the Gray-Kaminski survey, hunters agreed that being convinced of the detrimental effects of violating regulations on waterfowl populations would be fairly effective in slowing law-breaking. They noted, "Educational initiatives to inform hunters of the potential harm of violating could also be an effective way of reducing violation rates." Nevertheless, the authors believe that the long-term solution to this problem hinges on adults

demonstrating ethical hunting practices to youth. Kaminski recently advised, "Seize opportunities to be a good hunter role-model to children."

Editor's note: This article is based on *Wildlife Monograph* No. 127 (1994), "Illegal Waterfowl Hunting in the Mississippi Flyway and Recommendations for Alleviation," by Brian T. Gray and Richard M. Kaminski. For this publication, the authors received The Wildlife Society's 1995 Outstanding Publication Award in Wildlife Ecology in the monograph category.

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Percentages of hunters admitting shooting-hour violations on ducks in 1989-90 season

Miss.	54.3	Ind.	14.5
La.	31.7	Ill.	14.3
Ark.	24.7	Mo.	13.9
Minn.	20.0	KY.	12.0
Mich.	18.3	Wis.	11.8
Tenn.	18.2	Ia.	11.3



Percentages of hunters admitting duck over-limit violations in 1989-90 season

Miss.	53.0	Minn.	15.6
Ark.	34.6	Ill.	15.6
La.	33.4	Ia.	14.6
Tenn.	31.3	Mo.	14.0
Mich.	18.0	KY.	12.6
Ind.	17.0	Wis.	6.4



Percentages of hunters admitting hunting ducks over bait in 1989-90 season

Miss.	11.9	Minn.	4.7
Tenn.	10.5	Ark.	4.1
Mich.	7.8	La.	3.4
Ill.	9.7	Wis.	3.3
Ind.	8.9	Ia.	2.8
KY.	8.4	Mo.	4.2

