

High Visibility Versus Low Visibility Vehicles in Wildlife Law Enforcement

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Abstract: During the study period of 1 May 1981 through 30 April 1982, compliance rates (game arrests/100 hunters checked) for individual hunting cases were computed for 2 groups of Tennessee wildlife officers. One group of 35 officers was driving high visibility, state-owned vehicles. The other group of 35 officers was driving low visibility, personally-owned vehicles. No significant difference was found between the compliance rates of the 2 groups.

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In 1980 Tennessee began high visibility marking of vehicles at the request of the Tennessee Wildlife Resources Agency (TWRA). This action was brought about by the sportsman's common complaint that they never saw their wildlife officer. This policy was met by opposition from most wildlife officers in the state. The officers who opposed the idea of high visibility marking of vehicles saw these vehicles as a warning to violators of their presence. A few officers welcomed the idea of high visibility vehicles. These officers saw high visibility as a good method of deterring violations of wildlife laws. Today these highly visible state vehicles are still a source of discontent among many officers. These officers feel low visibility vehicles are better suited to their particular law enforcement needs.

High visibility vehicles are used in most southeastern states for patrol by uniformed wildlife officers. A survey of most wildlife agencies in the Southeast was made to determine their policy concerning the visibility of vehicles. Two states (Louisiana and Mississippi) were found to have high visibility vehicles required by law for their uniformed wildlife officers. Eight states were found to have high visibility vehicles required by policy. These states were: Tennessee, Alabama, Arkansas, Florida, Maryland, South Carolina, Texas,

and Virginia. Missouri issued state vehicles to wildlife officers, but the amount of visibility of these vehicles was determined by individual wildlife officers. The remaining state surveyed, Kentucky, had most wildlife officers driving personally-owned, low visibility vehicles. Kentucky was in the process of changing to high visibility, state-owned vehicles for uniformed officers. All the states surveyed had some provisions for low visibility vehicles when they were needed. Georgia, Oklahoma, North Carolina, West Virginia and Puerto Rico were not surveyed.

The TWRA presents a unique opportunity to study the effectiveness of high visibility versus low visibility patrol vehicles. While policy dictates that patrol vehicles be of high visibility, 26% of Tennessee's wildlife officers still operate out of their own personal, unmarked vehicles. Special thanks are extended to Mr. Clifton J. Whitehead and to Dr. B. L. Ridley for their expert assistance in the statistical analysis used in this paper.

Methods

The study area included the entire State of Tennessee. The counties in Law Enforcement Areas 11 and 43 were excluded. Area 11 is situated in upper west Tennessee. Area 43 is located in upper east Tennessee. These areas were excluded because all wildlife officers were driving highly visible, state-owned vehicles.

During the study period from 1 May 1981 through 30 April 1982, the TWRA had 134 wildlife officers. Area supervisors and assistant supervisors were excluded from the study. Ninety-nine officers drove high visibility, state-owned vehicles. Thirty-five officers drove low visibility, personally-owned vehicles. A random sample of 35 officers driving high visibility vehicles was taken for comparison to the officers driving low visibility vehicles. Individual hunting arrests were used to compute compliance rates (game arrests/100 hunters checked). The authors assumed that these arrests were made while the officers were patrolling out of their own work vehicles. The paired t-test was used to test for difference between the 2 groups of officers (Snedecor and Cochran 1966).

Results

The officers driving high visibility, state-owned vehicles were found to have checked 19,519 hunters during the study period. These same officers made 277 unassisted game arrests for a mean compliance rate of 1.63 (Table 1). The officers driving low visibility, personally-owned vehicles checked 17,934 hunters. These officers made 194 unassisted game arrests for a mean compliance rate of 1.28. There was no significant difference

Table 1. Mean Number of Hunters Checked, Number of Arrests, and Compliance Rates^a for Tennessee Wildlife Officers in Marked and Unmarked Vehicles, 1 May 1981 through 30 April 1982

Vehicle Type	Sample Size (officers)	Hunters Checked	Arrests	Compliance Rates
Marked	35	557.7	7.9	1.63
Unmarked	35	512.4	5.5	1.28

^a Unassisted game arrests/100 hunters checked.

($P > 0.05$) found between the mean compliance rates for officers driving marked or unmarked vehicles.

Discussion

Wildlife law enforcement is one tool of management used to attain the goals of the Wildlife Agency. The duties of enforcement are:

- 1) Deterrence of game and fish law violations,
- 2) Apprehension and prosecution of violators,
- 3) General law enforcement services not pertaining to wildlife, and
- 4) General non-law enforcement services pertaining to wildlife.

Deterrence and apprehension are considered to be the 2 most important goals of enforcement personnel. These goals of wildlife law enforcement are applicable to the patrol activities of enforcement personnel. The patrol force marks the point in the police organization where planning, strategy, and policy are translated into actions (Szynkowski 1981). From the results of this study, what may be implied about high and low visibility vehicles and their use in wildlife law enforcement?

In a study of patrol units, the Institute for Human Resources Research found plainclothes projects (low visibility) were more effective in arrest effectiveness, while highly visible tactical patrol units performed better in crime reduction than in arrests (Webb cited in Szynkowski 1981). In Tennessee these results were not found. There was no significant difference found in arrest effectiveness (compliance rates). While the effects of high visibility or low visibility patrol can be measured on the apprehension of violators, the deterrence of violations is much more difficult to ascertain. Deterrence can not be measured reliably at this time since a lack of crime or nonevents can not be measured (Szynkowski 1981). Since no significant difference was found to exist between compliance rates for officers driving high and low visibility vehicles, we conclude that both high and low visibility vehicles have their own specialized purposes in the protection of wildlife. High visibility

would be best utilized when dealing with the majority of sportsmen. Here, deterrence would have more value than apprehension. Most southeastern states surveyed patrolled out of highly visible state vehicles, but these same states all had provisions for the use of low visibility vehicles. These low visibility vehicles would best be utilized in problem areas where hardcore wildlife criminals were in operation. These violators would not be deterred by high visibility patrol. High visibility patrol, while letting these violators know where wildlife officers are, also tells them where the officers are not.

High and low visibility vehicles complement each other in the enforcement of wildlife laws. There is no 1 answer for all states in the Southeast. Each county, district and state must evaluate its own enforcement problems and use high or low visibility vehicles as they are needed. Each problem will have its own unique solution in the use of high or low visibility vehicles.

Literature Cited

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