

Law Enforcement Trends Affecting Georgia's Conservation Rangers

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Abstract: Conservation Rangers in the Georgia Department of Natural Resources (DNR) face new challenges that have resulted from social and ecological changes caused by urbanization during the past 10–20 years. As the type of natural resource user in Georgia has changed, so has the role and responsibility of the conservation ranger. These changes include increased numbers of boaters, decreased numbers of hunters, an increased emphasis on education of the public by law enforcement personnel, and new laws (some of which are not game and fish laws) to enforce. As a result of these trends, conservation rangers in the future will be required to assume more diverse responsibilities than that of the traditional game warden. To meet the challenges associated with these trends, DNR will need more and differently trained conservation rangers in the future to serve the increasingly urbanized public in Georgia.

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At its inception in 1972 the Georgia Department of Natural Resources (DNR) became responsible for protecting a variety of resources throughout the state. Within the Georgia DNR, the Wildlife Resources Division (WRD) is responsible for managing and protecting the state's fish and wildlife resources. As is the case in most state fish and wildlife agencies, Georgia's WRD's Law Enforcement Section is the administrative arm primarily responsible for enforcement of the state's fish and wildlife laws. Whereas in the past conservation rangers primarily enforced fish and wildlife laws, today they face a public that originates from an increasingly urbanized environment. These changes may well alter the very job description of Georgia WRD's approximately 250 conservation rangers. Morse (1973) foresaw additional burdens on

state conservation offices. He suggested that the conservation officer would be transformed from a “multipurpose fish, wildlife, and enforcement manager” into a “recreation law enforcement specialist enforcing a broad list of laws and regulations relating to outdoor recreation in all non-urban areas” (Morse 1973:42).

The state of Georgia has become increasingly urbanized since the early 1900s. Today, most Georgians live in urban and suburban areas. The percentage of Georgia’s population that lives in urban metropolitan areas grew from 15.6% in 1900 to 63.2% in 1990 (<http://www.census.gov/population/censusdata>). Georgia’s overall population has also increased dramatically, growing from 2.2 million in 1900 to 6.5 million in 1990 (<http://www.census.gov/population/censusdata>). The U.S. Census Bureau has projected that by the year 2025 Georgia will be the 9th most populous state in the U.S. with an estimated 9.9 million residents, most of whom will reside in urban metropolitan areas (<http://www.census.gov/population/projections>).

In law enforcement training there is a maxim that action is quicker than reaction. This statement essentially means that a law enforcement officer is usually at a disadvantage when reacting to a physical threat, because he or she did not initiate the escalation of force. In this context, only training can prepare the officer to properly react to such an encounter. Taken in a different context, this idea can be applied to describe Georgia’s conservation rangers as they face an increasingly urbanized public. Wildlife agencies and their personnel must learn to anticipate the changes brought about by urbanization, and thus help to counteract its effects.

The objectives of our study were to examine law enforcement trends in Georgia since 1985 and to infer which of these trends might reflect the effects of urbanization on the natural resource user. In addition, we discuss how the role and responsibility of the conservation ranger has evolved as a result of these forces. By extension then, we hope to infer how these changes might affect the budgetary and training requirements for conservation rangers in the future.

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Methods

We obtained data from various published and unpublished sources. Published sources included national census reports (<http://www.census.gov/population/censusdata>) and surveys published by the U.S. Fish and Wildlife Service (U.S. Dep. Int. and U.S. Dep. Comm. 1997). Unpublished sources included interviews with Georgia DNR personnel, data contained in files of Georgia DNR-WRD, and data from the Georgia DNR-WRD’s Enforcement Section. Most of the Georgia DNR-WRD dataset covered the years of 1980–1998.

We examined the following Georgia DNR-WRD law enforcement data (expressed as number recorded per year): 1) dollars from fines for violating hunting,

fishing, trapping, boating, or environmental laws; 2) hunting and fishing licenses checked; 3) boats checked; 4) hunting violations prosecuted; 5) warnings for hunting violations issued; 6) hunting accidents; 7) hunting fatalities; 8) drownings; 9) trapping violations prosecuted; 10) warnings for trapping violations issued; 11 arrests for firearm possession by a convicted felon; 12) fishing violations prosecuted; 13) warnings for fishing violations issued; 14) arrests for driving under the influence (DUI); 15) boating violations prosecuted; 16) warnings for boating violations issued; 17) total cases and warnings related to possession of controlled substances; 18) resident hunting licenses; 19) resident archery permits; 20) individuals enrolled in hunter safety courses; 21) hours spent teaching hunter safety courses; 22) presentations given at hunter safety courses; 23) individuals enrolled in boating safety courses; 24) hours spent teaching boating safety courses; 25) presentations given at boating safety courses; 26) boats registered; 27) boating accidents; 28) arrests for boating under the influence (BUI); and 29) presentations given for Information and Education (I&E) programs. These data were summarized in Microsoft Excel 97 spreadsheets and plotted on graphs to determine apparent trends. Interviews with DNR personnel helped to explain anomalies or false trends in the data files. These anomalies were the result of incomplete reporting by regional districts or fluctuations in personnel numbers due to events such as the extensive statewide flooding in 1994 or the 1996 Olympic Games in Atlanta. Interviews also helped to clarify sudden fluctuations that resulted from administrative decisions to emphasize particular law enforcement issues. For some Georgia DNR-WRD data, the manner in which they were reported changed during the years 1980–1998. In these instances, we were unable to compare long-term trends.

Results

For all variables listed above numbered between 1 and 17, there were either no trends apparent in the dataset or the trends could be accounted for by reporting errors. There were trends apparent for all other variables (18 through 29).

In Georgia, both the number of resident hunting licenses issued and the number of hunters certified annually in hunter safety courses have declined. Georgia law requires every person born on or after 1 January 1961 to have successfully completed a state-run hunter education program in order to purchase a hunting license (Ga. Statute 27–2–5). According to Georgia WRD records, the number of resident hunting licenses declined from 345,922 in 1979–1980 to 300,354 in 1997–1998 (N. Nicholson, DNR-WRD, pers. commun.). However, during the same period the sale of resident archery permits more than doubled (N. Nicholson, DNR-WRD, pers. commun.). The number of hunters who attended hunter safety courses in 1990 was 23,285, but dropped to 18,639 in 1998 (Fig. 1). During this same period, the number of hours of instruction needed to obtain a hunter safety permit increased from 6 hours to 8 hours of classroom instruction. As a result, the hours spent by all of Georgia's conservation rangers conducting hunter safety education increased from 7,575 in 1990 to 13,268 in 1998. The increase in hours spent instructing occurred despite the

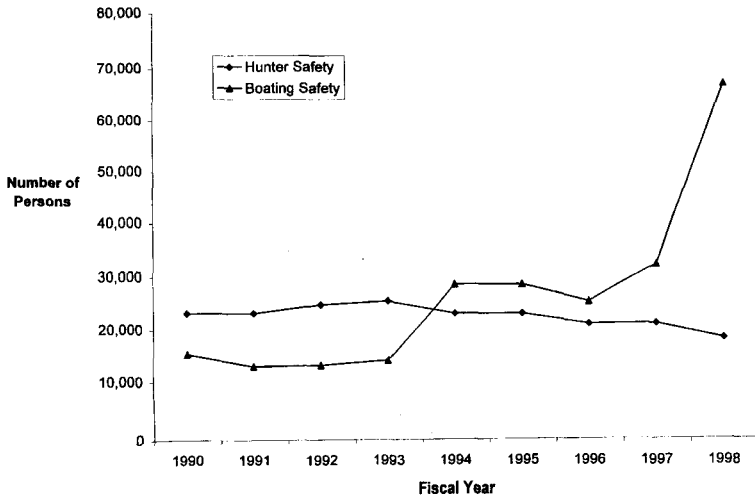


Figure 1. Number of persons attending hunter safety and boating safety classes in Georgia from 1990 to 1998.

fact that more presentations were given in 1990 ($N=708$) than in 1998 ($N=634$). The average number of hours per presentation was 10.7 in 1990 compared to 20.9 in 1998.

In contrast to the decreasing trend in hunting-related work for conservation rangers in Georgia, their work on boating-related activities has increased dramatically. The number of presentations on boating safety given by conservation rangers increased from 328 in 1989–1990 to 1,052 in 1997–1998. The number of hours spent by conservation rangers teaching boating education classes in 1990 was 986 compared to 2,117 hours in 1998. The number of persons attending these presentations in 1990 was 15,286 compared to 66,975 in 1998 (Fig. 1). The number of boats registered in Georgia increased from 245,949 in 1985 to 305,367 in 1998 (Fig. 2). Despite the significant increase in the number of boats registered in Georgia, the number of boating accidents during the same period of time has not increased (Fig. 2). The lower rate of accidents considering the significantly greater number of boats in Georgia may be related to increased enforcement activity. The number of arrests for BUI also increased dramatically, from 85 in 1985–1986 to 242 in 1996–1997 (Carpenter 1997); and has since increased to more than 415 for 1998–1999 (DNR-WRD, unpubl. data).

During the past decade, conservation rangers spent more time educating the public than they did previously. Not only have the number of boating safety presentations and hunter safety presentations increased, but similarly the number of I&E presentations has also increased substantially. Georgia's conservation rangers conducted 1,345 I&E presentations in 1990, compared to 3,080 in 1998. The number of persons attending these presentations increased from 43,501 in 1990 to 124,811 in 1998.

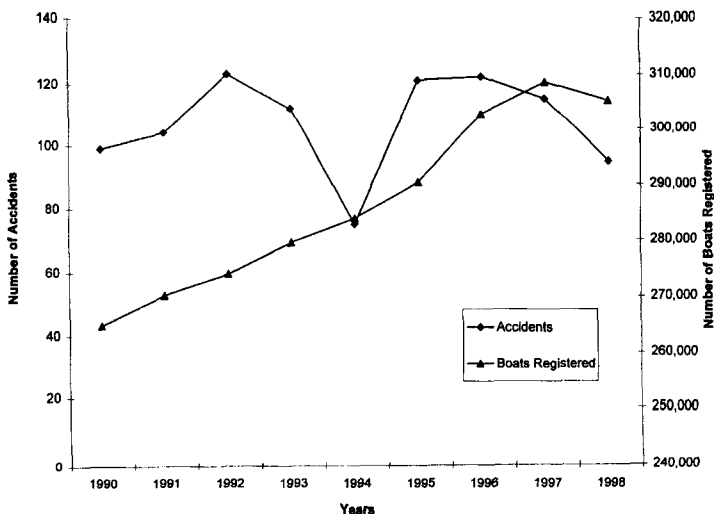


Figure 2. Number of boats registered and number of boating accidents in Georgia from 1990 to 1998.

Discussion

New laws pertaining to Georgia’s natural resources are indicative of the effect of urbanization on public attitudes. The Hunter Harassment Laws, passed in 1986, make it a misdemeanor offense to interfere with lawful hunting. Other laws passed more recently include the stricter BUI laws to combat increasing use of alcohol by boaters (Ga. Statute 52-7-12). Laws specifically written to put restrictions on personal watercraft operators have also been put into effect (Ga. Statute 52-7-8.2). New laws prohibiting the discharge of marine toilets into fresh waters were also passed by the Georgia General Assembly as a result of the “increasing numbers of vessels having marine toilets which are operated or moored” on Georgia’s lakes and reservoirs (Ga. Statute 52-7-8.1).

The Law Enforcement Section of DNR continues to enforce all laws related to the state’s fish and wildlife resources. While the agency’s role as protector of fish and wildlife has not diminished, its conservation rangers have acquired additional duties over the past 10-20 years. Georgia DNR’s conservation rangers are increasingly being called upon to enforce non-game and environmental legislation. For example, enforcement of the Georgia Boat Safety Act of 1973 and Waste Control Act of 1993 has enabled conservation rangers to prosecute serious violations as either aggravated misdemeanors or as felonies (Carpenter 1993). This law has allowed conservation rangers to pursue criminal prosecution of offenses formerly restricted to civil action (Carpenter 1993).

The job description of the conservation ranger has evolved considerably since 1972. New laws such as the DUI and BUI legislation have intensified enforcement efforts of the DNR. However, these laws have also necessitated additional training,

equipment, and working hours spent on tasks that are not related to traditional wildlife enforcement. The trends in boating and hunting are especially significant, because they are representative of the larger trend towards urbanization. Increased emphasis on educating a largely suburban populace has resulted in additional hunting and boating safety courses, in addition to I&E presentations for civic and school groups. The additional boating safety courses were necessary in part to help clarify the new BUI legislation. However, the increased interest in boating has also necessitated more classes. Increased numbers of hours were spent teaching hunter safety courses despite fewer participants because the hunter certification classes were lengthened from 6 to 8 hours, plus an additional 2 hours of "home study." This is an example of how legislative efforts to attempt to improve safety and education have also increased hours spent educating the public by conservation rangers.

The director of Georgia DNR-WRD has heavily emphasized time spent on educating the public (Waller 1992). Education by conservation rangers is vital to increasing hunting and boating safety and to the future of wildlife conservation in the state. Their teaching at schools and at facilities such as the Charlie Elliot Wildlife Center in Georgia serves to teach a land ethic that few urban dwellers instill in their children at home. The education aspect goes beyond mere science into the realm of values. However, this could also have the unintended effect of weakening enforcement efforts (and perhaps morale) when law enforcement personnel spend less time actually enforcing laws in the woods or on the water. As one conservation ranger explained, "if you are not making contact with the public in the field, you have missed an opportunity to educate."

As Morse (1973) predicted 28 years ago, the traditional role of the game warden, while vital, has become much more complex. Expertise in hunting, fishing and other wildlife matters are still important skills for conservation rangers to possess. However, they must also keep current on the new criminal code sections as well as the investigative techniques needed to collect evidence to prosecute wildlife offenses. This is true whether the offender is hunting over bait or under the influence of alcohol or drugs. As a result, the number of hours of training needed to effectively enforce the laws has increased. Examples of this training include certification in Horizontal Gaze Nystagmus as well as field sobriety exercises in order to enforce DUI, BUI, and HUI laws (Carpenter 1997). Test kits for field testing marijuana and cocaine are also necessary but are costly and the training takes time.

Better legislation has both improved public safety and empowered the conservation rangers, but these changes have greatly increased their enforcement responsibilities. The trend towards urbanization must be considered as one of the most important changes affecting Georgians today. The lifestyle changes concomitant with urbanization contribute to all of the current trends. Increased use of area reservoirs for boating recreation can best be explained by this trend. Reservoirs such as Lake Lanier, for example, owe much of their recreational use to their proximity to large urban areas (Atlanta). These reservoirs provide recreation in the form of wide-open spaces that can be enjoyed without the requirement of any special skills. The proliferation of personal watercraft which have no utility other than speed is another example

of this trend. The sheer numbers and gregarious nature of urban boaters often develop into virtual floating cities that create unique enforcement challenges for DNR conservation rangers. In some instances, rangers are required to even enforce noise ordinances. These additional tasks represent major logistical challenges. The current proposals to build new reservoirs near urban areas will increase the need for additional conservation rangers and DNR boats on the state's waters.

The relatively constant number of boating accidents in Georgia, during a time that the numbers of boaters on the waterways are becoming more crowded by recreational boaters is considered (Fig. 2), suggests that the combined boating and education efforts are effective. The increased penalties for boating under the influence of alcohol may be one reason for this result. While the chances of being caught may have declined slightly, the risks of heavy fines imposed and loss of boating privileges serve as a deterrent.

Although urbanization has contributed to the popularity of boating, it seems to be contributing to a decline in hunting, as well as other changes that may affect the future programs of state fish and wildlife agencies. The most obvious reason for this is the lack of land available for hunting near urban areas. Moreover, hunting requires more skill than boating, and at least some knowledge of forests, wildlife, and weapons. It requires more patience and effort than many people, especially urbanites, are willing to expend in order to "relax." Few people who do not grow up with an appreciation for hunting are likely to become hunters (Brown et al. 1998). Attitudes toward wildlife and its uses have changed during the past century, and first-hand knowledge of fish and game through fishing, hunting, and trapping has decreased significantly (Kellert 1976). As the public served by the state fish and wildlife agencies has changed, so too should the agency's programs change. We have several recommendations that may help state fish and wildlife agencies better adapt to the changing public in the future. (Some of the programs may include "educating" the public [e.g., Outdoor Women, Take a Kid Hunting, etc. . . .] We do not wish to advocate a de-emphasis in traditional hunting-based programs, but rather a diversification (broadening) of agency programs.)

The increasing number of I&E programs demonstrates a genuine interest by non-hunting citizens in Georgia in nongame wildlife and also nonconsumptive forms of outdoor recreation (U.S. Dep. Int. and U.S. Dep. Comm. 1998). These include hikers, birdwatchers, and other groups who could have a large impact if an excise tax on goods related to these activities, like Pittman-Robertson for hunting or Dingle-Johnson (Wallop-Breaux) for fishing, were passed. These users are often well educated albeit with less hands-on wildlife experience than hunters and fishermen. The Georgia DNR and other state wildlife agencies have been working towards legislation such as Teaming With Wildlife to get these users to pay their way as hunters and fisherman have done in the past and continue to do. However, this need has become more urgent as revenue from hunting license sales has diminished. The Conservation and Reinvestment Act (CARA) is the most recent attempt to secure necessary funding from alternative sources. Funding from CARA set aside for education could be used to pay conservation rangers for the additional hours they spend teaching.

Alternatively, this money could be used to fund additional conservation ranger positions in Georgia or equivalent jobs in other states where wildlife law enforcement officers educate the public.

Recommendations

The trends we identified that are linked to urbanization have many future implications for the conservation ranger and for the natural resource user in Georgia. The Law Enforcement Section of Georgia DNR-WRD faces many new challenges as it enters the new century. Much of the funding for conservation ranger positions in Georgia, as in many state fish and wildlife agencies, is derived from revenues raised from the sale of hunting and fishing licenses or excise taxes on hunting and fishing equipment and supplies. These funds go directly to the fish and wildlife agencies. In the future, as participation in hunting-related activities decreases, Georgia DNR-WRD may lose funding derived from these sources. Yet, ironically Georgia DNR-WRD conservation rangers are spending more hours educating the public. They are increasingly enforcing laws of a much broader scope than laws pertaining only to wildlife. The annual summaries also demonstrate that these law enforcement officers in the 1990s have dealt with increasing numbers of alcohol and illegal drug-related incidents. Paradoxically, they have less time each year to perform boat and hunting license checks, even as each ranger needs more training in areas like field sobriety exercises and field drug identification techniques in order to perform his or her job.

Alternative sources of additional funding are needed for additional conservation ranger positions to adequately serve the public, given the changing trends we have documented in this paper. Georgia DNR receives excise tax funding from Wallup-Breaux legislation, which includes boats and fuel purchased by recreational boaters. It may be appropriate to conduct an in-depth study to determine if the increased revenue from this source and from the growing number of boats and personal watercraft in Georgia adequately reimburse the DNR for its increased enforcement responsibilities.

Other additional sources of revenues should also be investigated. For example, 2 bills were introduced into the 1998 Georgia Legislative Assembly to provide funding for at least 20 new conservation ranger positions to increase the agency's efforts in hunter and boater safety activities, as well as a pilot program on Lake Lanier for enhanced boating patrols and enforcement. As another example, our survey indicated a positive benefit from the increased number of boating safety classes taught by conservation rangers (i.e., no increase in boating accidents despite dramatic increases in the number of boats registered). Boating safety classes are becoming mandatory in many states, and at least one state in the Southeast (Alabama) has licensing requirements. We recommend that similar requirements be considered for Georgia and other states.

In addition to increased funding for more positions, increased salaries are justified considering the greater diversity of responsibilities required of conservation rangers today. Along with the greater responsibilities and salaries, we also recommend that higher standards be established for future conservation rangers. A college degree in a related field or equivalent experience should be required. Such a requirement would

be beneficial, because educating the public will continue to play a more prominent role in the routine duties of conservation rangers. Conservation rangers need to be well versed in ecological concepts and should be able to relate these to their audiences.

The Georgia Bureau of Investigation now requires a college degree for its special agents. A similar requirement by the Georgia DNR would encourage professionalism and enable the DNR to justify higher salaries to attract the highest quality ranger candidates. Additional specialized law enforcement training will also be important for conservation rangers in the future. They are more likely to encounter more and better armed criminals as the interface between rural and urban areas becomes less well defined. The state of Idaho already requires their conservation rangers to have at least an undergraduate degree, and they encourage their personnel to seek a Master's degree (<http://www2.state.id.us/fishgame/fishgame.html>). DeMillo et al. (1998) discussed the appropriateness of a non-thesis Master's degree for wildlife professionals interested in law enforcement.

At present, Georgia's conservation rangers are dedicated to providing an invaluable service to the state of Georgia. Georgia's conservation rangers do so much more for the state than merely enforcing game and fish laws. The trends we discussed here will continue to have an impact on them and their job performance. Georgia DNR must seek ways to adequately reward their conservation rangers, given the importance of their service to the safety of so many Georgians, most of whom now originate from urban metropolitan areas.

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