

EDUCATING STUDENTS ABOUT WILDLIFE DAMAGE MANAGEMENT: A COOPERATIVE VENTURE BETWEEN ACADEMICS AND EXTENSION AT A LAND GRANT UNIVERSITY

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Abstract: The discipline of wildlife damage management, under the broader umbrella of wildlife management, is an evolving field; techniques change and the social and political atmosphere that influences our actions is shifting constantly. As time/money constraints pinch tighter into the education system, it is imperative that we pool resources and expertise. Many schools are doing that already and this paper provides a synopsis of those efforts and addresses some of the concerns about not having a wildlife damage course. I sent out an email questionnaire to all state wildlife specialists and received responses from 24. The questionnaire focused on their involvement with education in WDM for students at the undergraduate and graduate levels. Results indicate that courses in WDM can serve as a paradigm for team teaching by using teaching faculty, extension specialists and Wildlife Services biologists.

Key words: cooperative extension, education, wildlife damage management

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INTRODUCTION

It has been over 10 years since the panel discussion about wildlife damage education was held at the 5th Eastern Wildlife Damage Control Conference in Ithaca, NY. A lot of changes have occurred within the profession since that time and I am glad to see the topic being readdressed. The discipline of wildlife damage management (WDM), under the broader umbrella of wildlife management, is an evolving field; techniques change and the social and political atmosphere that influences our actions is shifting constantly. Even the terminology we use to refer to the discipline has changed; we've shifted from Animal Damage Control to the more accurate term of Wildlife Damage Management.

The title of this paper forces the reader to make two assumptions: 1) students

should be educated about WDM and 2) that wildlife specialists employed primarily under the cooperative extension system (CES) should be involved in teaching students at the undergraduate and graduate levels. I realize that not everyone shares these views.

I spent several years as a state wildlife technician/biologist prior to returning to school. Since completing this last educational tour, I have worked as an extension wildlife specialist with appointments ranging from 75% extension/ 25% research to 10% teaching/ 65% extension/ 25% research. These experiences have given me the opportunity to work with a variety of clientele, ranging from the general public to college students. Two things that I can absolutely attest to, based on this experience, is that the public needs

help in dealing with wildlife damage problems and that, unless educated in WDM, the wildlife biologists we are graduating today are not equipped to help them. Regardless of our specific field of interests, the public views us all as "the wildlife agency" and they expect us to have the answers. Hands-on education of future (and current) wildlife professionals, regardless of their main area of work, can help them be better public servants.

It is amazing to me that we, as wildlife educators, preach the need for classes in statistics and research design but drop courses in wildlife damage management when curriculum loads get tight. How many of you have ever had a call from a county agent or a citizen wanting to know how to do linear regression? Lest I be tarred and feathered as a pseudo-scientist and heretic, let me clarify that I am a strong advocate of sound research design and analysis. My point is that we need to prepare students for both aspects of the profession. The wildlife profession is becoming more complex (Leopold 2000) and the wildlife professional can no longer exist on "a pair of hip boots and binoculars" (as noted by one unsuccessful administrative candidate). This complexity places greater demands on a curriculum timetable that is already too tight and fitting another mandatory class in to the schedule is not practical. As time constraints increase, we must integrate "theory" and "technique" into our classes. Regardless of how the WDM curricula is implemented, I concur with the basic philosophy of Holler (1991) that wildlife damage management is an important course for those majoring in wildlife science.

The Cooperative Extension Service (CES), established by the Smith-Lever Act in 1914, remains an educational tool for reaching the citizens. While the mission has not changed, the techniques and technology

associated with information dissemination have changed. Extension specialists provide a critical, and often missing, link between "applied" wildlife research and its actual application. Byford (1985) noted that CES should serve to teach environmentally sound wildlife damage control. One mechanism for achieving this goal is to involve extension specialists in educating undergraduates and graduate students. In educating future wildlife professionals, extension specialists often provide a dose of reality because they spend significant amounts of time dealing with the public. Extension specialists are aware of the needs of the public for technical assistance in wildlife management. A big portion of that assistance is WDM, ranging from bats in the attic to coyote depredation, from deer eating ornamentals to beaver flooding timber, from snakes in the house to armadillos rooting up yards.

Over the years, a working partnership has formed between many teaching faculty within wildlife departments and the extension specialist (who may or may not have a teaching appointment). Working in conjunction, these teams have provided many wildlife students with a "hands-on" education in WDM. It should be noted that there is often a third player in the team – USDA Wildlife Services. If a three-way partnership is used, the student receives the benefit of an even broader view of the theory and technique of WDM. As time/money constraints pinch tighter into the education system, it is imperative that we pool resources and expertise. Many schools are doing that already and this paper provides a synopsis of those efforts and addresses some of the concerns about not having a course in wildlife damage management.

METHODS

I sent out an email questionnaire to all state wildlife specialists and received responses from 24. Items were either forced choice (yes/no) or open-ended. The questionnaire focused on their involvement with WDM education for students at the undergraduate and graduate levels. The questionnaire was not designed to collect information on WDM programs for the general public. I make no claims that the results herein represent all that is being done related to teaching students about WDM.

RESULTS AND DISCUSSION

It appears that students in many institutions have the opportunity to be exposed to WDM even though, as one might expect, the specific nature of the WDM courses/presentations varied. The availability of courses varied from a yearly offering to every 3-4 years. Respondents indicated that they either had a dedicated WDM course in their curricula or participated as guest lecturers about the topic in other courses. In the instances of a dedicated course, the specialists either served as the principle instructor or as co-instructor. Courses taught by extension specialist were dedicated primarily to WDM and were taught at the senior/graduate level. Another option that surfaced was the WDM class via a Special Topics/Independent Study format with the extension specialists serving as the professor of record. Schools that had coursework related to field techniques for wildlife management often covered WDM in those courses. Despite the fact that most schools provided students with some exposure to WDM, there were a few schools that offered no WDM classes nor addressed it in other classes.

The titles for the WDM-related classes varied (e.g. Wildlife Damage Management, Wildlife-Human Conflicts, Vertebrate Pest Control). The primary texts

were *Prevention and Control of Wildlife Damage* edited by Hygnstrom, Timm and Larson and *Resolving Human-Wildlife Conflicts: The Science of Wildlife Damage Management* by Conover. The *Prevention and Control* text has been available for a longer period of time and seemed the more used of the two. It has been my experience that it provides an invaluable desk reference for practicing wildlife biologists. The Conover book provides an excellent theoretical/conceptual framework for the practice of WDM.

The presence of a course devoted to WDM did not seem to influence whether or not the topic was addressed in other wildlife science courses. Thus, students may receive multiple exposure to the field. Most of the extension specialists indicated that they had been invited to serve as guest lecturers about WDM in those courses.

Many of the schools had graduate students working on WDM projects. In almost all of these cases, the extension specialist either chaired or served on these committees.

The WDM courses seemed to have an emphasis on a hands-on approach to learning (e.g., trapping, firearms use, pyrotechnics). These courses relied either on regular lab days or weekend field trips. The weekend field trips had the advantage of allowing students more concentrated time to see some actual effects of their efforts (e.g., time to actually set and check traps).

In instances where no WDM course per se was taught, the emphasis on WDM was highly variable. Some lectures/labs were very "operational" and addressed such topics as trapping, urban wildlife damage, deer damage and damage identification. Other courses took a more philosophical approach, focusing on the pros and cons of WDM within the bigger picture of wildlife science. Philosophical perspectives of WDM were in courses ranging from

Conservation Biology to Wildlife Policy. In these cases, as might be expected, the involvement of the wildlife specialist was minimal. In a similar vein, some wildlife specialists have experience and expertise that is not being utilized, which emphasizes the need for communication between all faculty.

CONCLUSIONS

Maybe a better title is "Maximizing partnerships in wildlife science" because the WDM course seems a paradigm for team teaching by using teaching faculty, extension specialists and Wildlife Services biologists. The utility of these partnerships is compounded because of the broad array of potential WDM problems and the diversity of management techniques employed.

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