

Tread Lightly or Carry a Big Stick?

Now that the *Journal* and *Bulletin* are merged, it is time to explore opportunities rarely visited in the past. In our opinion, the *Journal* is the foremost wildlife biology and management journal in the world. But does that mean there is not room for improvement? Of course not! We suggest here some places to go where we rarely venture. Some of these topics are controversial; others are uncomfortable. In doing so, we recognize the need to use the *Journal* as a venue for addressing immediate needs while having the vision of providing for the future.

ROLE OF SCIENCE AND SCIENTISTS IN GUIDING AND SHAPING WILDLIFE MANAGEMENT

There is continuing debate regarding the role that scientists should play in guiding management decisions. Do these perspectives always agree? When they do not, how to proceed? Should scientists be advocates, based on their science or should they just report the information and let the decision makers do with it as they may? Should scientists be directly involved with shaping policy, or simply sources of information? How can managers access and apply science appropriately? In this journal we have a great opportunity to evaluate application of research results to contemporary natural resource management issues. As such, viewpoints of researchers, managers, and policymakers can be shared and contrasted so we can better understand and evaluate the full research cycle, from study conception to shaping of policy and application. Such treatment would lend itself nicely to a special section. Anyone interested in organizing such a section should contact either one of us. Publication of well-supported and well-written articles in this journal would certainly help focus the debate of the role of scientists in decision making.

PRIORITARY DIRECTIONS FOR RESEARCH

Undoubtedly, the majority of papers published in this journal provide suggestions for future research on topics not fully addressed in those papers. Certainly, those recommendations are appropriate as they recognize information gaps and help to focus new research. But these 'do more in the future' statements seem obligatory, as a way to justify a weakly designed and implemented study, and reflect an opportunistic and piecemeal approach. Further, it tends to represent the opinion of the authors with perhaps some input from reviewers and associate editors. Perhaps a more synthetic and over-arching approach would be for a group of researchers and managers to evaluate what is known, what is

not known, and what needs to be known about a general research topic. Such a synthesis would help focus future research such that priority information needs can be addressed. Here again, we would welcome submission of synthesis articles that review the state of knowledge of a subject area, and present specific recommendations for priority research. We are particularly interested in articles that represent collaborations between folks we might classify as researchers and managers and those subject areas that have broad national or international appeal. For example, an article focused on deer (*Odocoileus* spp.) would have broader appeal than one, say, focused on white-tailed deer (*O. virginianus*) in the southeastern United States.

BASIC VERSUS APPLIED RESEARCH

Throughout our professional work we continue to hear the terms "basic" and "applied" research being used in the context of different approaches to science. What is the appropriate balance? Is there a true difference between basic and applied? We include management implications in all of our research articles and notes, which is a major feature of this journal that separates it from other journals focused on animal ecology. We ask each author to explain how their research directly *applies* to management. But what of our more basic research where we describe basic biology or ecological relations of the species we study? Certainly, that information adds to our body of knowledge, but implications to management are not always readily apparent. That should not dissuade authors from submitting solid papers reporting basic research. Indeed, wildlife management must be based on the best available science and the best science should be published here. And, in fact, we think that all research conducted in a rigorous manner can be applied to the real world of the manager. The key for an author is to present these applications in a manner that is readily apparent to the reader, no matter how focused or seemingly minimal those applications might be. All research is interesting; our goal is to publish papers that also highlight how one might use the work.

OBSERVATIONAL STUDIES VERSUS EXPERIMENTS

Both observational studies and experiments have a role in wildlife science and management, and both approaches provide critical information that allows us to understand and to describe ecological systems under study. Often, we are interested in factors that cause a particular outcome. In such situations, observational studies are limited. But how far can inferences be made and how defensible are those inferences? Clearly, the need for experiments in determining cause-effect relationships is apparent. But, in what situations are

experiments needed, when will quasi-experiments suffice, and when are observational studies acceptable? Perhaps the crux of this debate is on providing reliable information, and it is a debate worth continuing as a special section. Previous issues of this journal played host to debates on reliable knowledge and research approaches. Those debates continue to be replayed in university classrooms throughout the world. We think it is time to revisit the issues of rigor, reliability, and research approaches. Again, we encourage submission of articles that care to reinvigorate this debate.

ANALYSIS PARALYSIS

Are complicated, sophisticated, "in vogue" statistics always necessary, or will a simple, parsimonious approach suffice? That is, do we always need a sledge hammer to push in a tack? Now that we have Akaike's information criterion, Bayesian information criterion, lambda, and so on, have we lost the need for simple summaries of what we observe and what it means? We certainly do not denigrate or belittle the advances we have made in data analysis. Many advances in wildlife biology and management have been made through the application of sound statistics. Analysis is critical, but we must remember that it is a tool to help describe and evaluate our data and not an end in itself: that is, the biology should lead and the statistics should play a supporting role. All too often we receive papers that relate the importance of a variable to a species when, in fact, they are relating importance of a variable to a model. What it all comes down to is this: is the magnitude of the effect you witnessed relevant to the species being studied? This is a tough decision to make, and actually leads us back to our previous discussion of observational versus experimental approaches. Here again, this journal has hosted many insightful articles on the topic of the role of analytical approaches in ecological studies. We welcome a reinvigoration of this debate.

IN THIS ISSUE

This issue includes a broad sampling of the research being conducted on a wide variety of animals in a wide array of places. We have seen an increase in submissions of fire-related papers concomitant with fire becoming a bigger management concern. Here we have 3 research articles, 2 evaluating effects of prescribed fire on gopher tortoises (*Gopherus polyphemus*) and northern bobwhite (*Colinus virginianus*), and the other examining effects of wildfire on riparian birds. A number of papers examine wildlife diseases, including chytridiomycosis and anurans, West Nile virus and black bears (*Ursus americanus*), and keratocon-

junctivitis and bighorn sheep (*Ovis canadensis*). As we transition into the new journal, we have more papers characteristic of the *Bulletin-which*, of course, was the intent of The Wildlife Society (TWS) in merging the journals. Some of these articles focus on human dimensions (elephant [*Loxodonta* and *Elaphas* spp.] ivory sales, hunter attitudes towards nontoxic shot), techniques (implanted transmitters on sage grouse chicks [*Centrocercus* spp.], immunocontraception of wild horses [*Equus caballus*], landscape habitat suitability index software), and management and conservation (history of the Yellowstone elk herd [*Cervus elaphus*], population risks to black bears). As the new journal moves forward we expect to see an increasing blend of what we might call the management-oriented with the research-oriented papers. Here again we see where the debate between applied versus basic research will come to the forefront. As editors our role is to implement the vision of the officers of TWS; their vision is strong science that allows for reliable management.

MEMBERSHIP REMINDER

As we do in every issue, we remind you to please become a member of TWS if you are not already. Many authors of papers in the *Journal Of Wildlife Management* are not members. If we are to continue to publish a high-quality journal, we need a strong and active membership. There are many ways you can contribute as a member: publish in the journal, serve as a reviewer or associate editor, or be active as a member or officer in your local Chapter or Section. If you mentor undergraduate or graduate students, encourage them to join. No matter how you are involved, just be involved and be a member.

THANKS

Our staff is led by Carly Johnson with capable assistance provided by Anna Knipps, Angela Hollock, Dawn Hanseder, and, most recently, Kathryn Socie. These folks do the bulk of the work and are largely responsible for keeping the editorial process moving forward. Things would be a mess without them. We also want to recognize the staff of Alliance Communications Group (ACG) for moving papers through copy editing, composition, printing, binding, and for getting the *Journal* to you. Production of the *Journal Of Wildlife Management* is on schedule thanks to ACG.

-William M. Block and Michael L. Morrison
Editors-in-Chief