COMMUNICATING RESEARCH RESULTS IN WILDLIFE SCIENCE AND MANAGEMENT: AN EVALUATION

PATRICK F. SCANLON, Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg. 24061

ROY L. KIRKPATRICK, Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg. 24061

GERALD H. CROSS, Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg. 24061

Abstract: Problems in communicating research results by means of professional meetings and conferences in the field of wildlife science and management are discussed. Emphasis of discussion is placed on purpose and organization of meetings, facilitation of more rapid communication and use of research results, and alternate means of conducting meetings.

Proc. Ann. Conf. S.E. Assoc. Fish & Wildl. Agencies 31: 654-657

An editorial in CHANGE Magazine (Anon. 1974) posed the question, "What purpose conferences?" The then energy crisis prompted the editor to question whether the benefits of a conference are worthy of the human and fossil energies expended in attending it. A further question asked was whether anyone ever canvassed a membership of an academic organization as to whether meetings might be dispensed with for a year or two while substituting more imaginative services. The answer to such a question, the writer speculated, might surprise both the conference-planners and conference-goers alike.

Our purpose here is not to question the value of wildlife conferences, rather we would like to examine how they might be improved as a means of communicating research results. We recognize that a variety of people with different responsibilities and interests attend wildlife meetings. Table 1 identifies and classifies the more typical interactions between groups.

At this point it may be best to clarify the difference between a meeting and a conference. A meeting can be defined as the act of coming together while a conference is a meeting for consideration and discussion. However, the 2 terms are often used synonymously. Reinhart (1975) defined the purpose of a scientific meeting "to enable and encourage a balanced cross-section of specialists in their field to formally and informally present and discuss new scientific and technical information and to enable the society (or organization) to transact business and to assess itself and its goals." In Reinhart's view societies should strive to achieve these goals by appropriate arrangement of meetings.

Despite criticisms of conferences by the editorialist in CHANGE (Anon. 1974) we feel that scientific conferences are extremely valuable to the research scientist and those who actively participate and utilize results. Abelson (1976) in commenting on communication by scientists was critical of the poor communication techniques of many of them. He recognized that effective researchers are totally convinced of the great importance of truth, new knowledge and new understanding, and that such a commitment is fostered by association and discussion with their equals. Dedicated scientists seek such opportunities and scientific conferences provide appropriate environments.

Leonard (1949) provided an articulate insight into the problem faced by the natural resource researcher which is for the most part valid today. He noted that researchers value opinions of colleagues including their criticisms and that the publication route was the only means through which critical evaluation by peers could be achieved. However, scientific conferences can also serve as forums for criticism and exchange of ideas among researchers and offer certain advantages over publications.

From the point of view of the researcher probably the greatest advantages of scientific conferences are 1) the opportunity to report research results directly to peers, 2) to report results relatively soon after generating them, 3) to benefit from criticism of his work by his audience, 4) circumvent a major disadvantage of publication, viz. report promising research findings which are not necessarily final results, and 5) benefit from

informal discussion of topics of mutual interest with others who work on the same general topics. The nature of wildlife conferences is such that the audience is seldom homogeneous so the researcher also has an opportunity to interact with management biologists and administrators. The researcher has the opportunity to transmit results directly to those who can implement them into a management strategy.

In our opinion current wildlife conferences restrict the dissemination of research results and thus limit their value for a number of reasons. First, many conferences are devoted to single species therefore attracting only those directly working on that species. Researchers with peripheral interests in the species seldom bother to attend. Additionally results presented at such meetings are frequently published in proceedings which are difficult to obtain and often not cited in frequently used abstracts. Because of restrictions or cost of travel those attending "single species" meetings may not get to, nor benefit from more broadly oriented meetings.

Some conferences place restrictions on subject matter areas thereby effectively excluding other areas. Significant portions of conferences may be devoted to non-research matters thus limiting the number of research papers presented.

The custom of having invited papers only at certain conferences does not necessarily add to the stature of the meeting. An open call for papers ensures that the best research results will be presented and discussed.

The demand for a finished product before inclusion in the program and the long lead time for submission prior to the meeting can often cause long delays in presenting research results. A further delay is encountered before conference proceedings are printed and made available to everyone.

The cost of attending a conference due to location and/or type of meeting facility limits those who can attend. Unfortunately the most adversely affected are usually graduate students and junior researchers who need the experience to grow professionally. Location ought to be chosen with some regard for the cost of access for the majority of a society's membership. Conference costs can be reduced by holding meetings on University campuses.

The value of wildlife conferences is often limited by the lack of interaction after a paper is presented. This situation is often brought about by scheduling insufficient time for discussion or the inability of the moderator to stimulate questions.

Meetings could be improved from the point of view of research reporting in the following ways:

1) Establishing areas of interest and requesting submissions in these sessions annually. These areas of interest should be maintained while well supported so that scientists and others can expect them to be available in future years;
2) Have concurrent sessions so that maximum amounts of presentations can be made;
3) Have standardized time allocations for presentations with time for discussion. This will facilitate those who wish to hear papers in more than one session;
4) Publish abstracts only — these could be requested at time of submission of papers and could be printed prior to the meeting. They are adequate for choosing papers for programs. Abstracts serve to allow citation of the scientists' work but their publication would not preclude future publication of full-length papers. Abstracts could be published in an appropriate journal (Journal of Wildlife Management or Wildlife Society Bulletin) or as supplements to either journal. Page charges for such would be minimal as authors would only have to pay for fractions of pages;
5) Minimizing amount of time devoted to position statements and state of the art reporting;
6) Paying particular attention to the choice of meeting site and facilities;
7) Intensively examining all alternative means of presenting results. For instance "poster sessions" may prove very satisfactory as a means of presenting results — many societies are using them effectively (Maugh 1974, Anon. 1976). They require minimum time for presentations but considerable space and planning;
8) Accept only papers dealing with significant problems;
9) Select session moderators who are competent in the subject matter presented and who can stimulate discussion.

Finally, to some extent some wildlife meetings may be falling between 2 stools in trying to achieve too much without paying attention to the structures of meetings necessary to achieve different objectives. Etzioni (1976) provided an adequate grasp of this type of problem and divided meetings into 2 types. These are *collegial* i.e. to facilitate the exchange of research findings or techniques and *positional* i.e. designed to develop positions etc. He points out that the structure and management required to best achieve both is entirely different. Management of collegial meetings can be readily satisfied by a laissez faire approach and can be left to session chairmen. Collegial meetings should devote a majority of time to presentations. Positional meetings ought to have fewer presentations and considerable dialogue with strong chairmen to keep discussion on track, to promote concensus, provide clairification, and stimulate resolution. Most wildlife meetings could benefit by recognizing differences in these two types of meetings and allocate time accordingly while providing the appropriate management for the different types of meetings held.

Table 1. Types of exchange of a scientific meeting.

Interactors	*Exchange*	*Some Benefits*
Researcher-Researcher	Research, findings presented, discussion, challenge and questioning of ideas.	Quality control on research. New ideas.
Researcher-Manager	Discussion of practical considerations and application. Feedback re new research needs.	New ideas, practical dimension identified and stressed. New projects stimulated.
Researcher-Administrator	Discussion of and judgments on ability and program.	New funds generated. New respect/disrespect generated. Scientist hired or fired.
Researcher-Student	Aspects of program and research discussed.	Student's choice of program for pursuit of studied facilitated.
Manager-Manager	Mutual problems discussed.	New ideas and new solutions.
Manager-Administrator	Discussion of practical problems especially between those not working for same organization.	Identification of scientists who can help solve problems. Select new employees. Practical problem discussions and resolutions.
Manager-Student	Getting acquainted.	Student hired. Students research horizon widened.
Administrator-Administrator	Mutual problem discussion.	Program cooperation. Hiring decisions facilitated. Funding decisions facilitated.
Administrator-Student	Interview. Casual.	Student hired. Contact made.
Student-Student	Mutual problem discussion	Choice of school facilitated

LITERATURE CITED

Abelson, P. H. 1976. Communicating with the publics. Science 194(4265):565.

Anonymous. 1974. What purposes conferences? Change. 6(1):12.

Anonymous. 1976. Western Division Poster display. Fisheries 1(4):13-17.

Etzioni, A. 1976. Scientists' meetings: Collegial versus positional. Science 193(4251):361.

Leonard, J. W. 1949. Research man vs. administrator — the research man's viewpoint. J. Wildl. Manage. 13(3):237-244.

Maugh, T. H., II. 1974. Poster sessions: a new look at scientific meetings. Science 184(4144):1361.

Reinhart, J. M. 1975. Let's improve annual meetings. Newsletter Am. Fish. Soc. 19(92):2.