

A SUPERINTENDENT'S EXPECTATIONS OF SCIENCE AND SCIENTISTS

by

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Perhaps we should place this in perspective as my personal interest in, and/or reason for, utilizing natural science research at Mount Rainier National Park. First and primarily, I view it as a management tool needed to provide information, techniques or systems to manage the natural resources. More simply stated, I am looking for a problem solver.

This means a problem must be identified by management and then in cooperation with a scientist, defined in language that is mutually understood. Following definition of the problem comes a negotiated understanding of:

1. Does the problem warrant study, i.e., are there existing studies and recommended problem solutions?
2. If the study is warranted:
 - a. for how long?
 - b. at what cost?
 - c. by whom?
 - d. what will be the end product?

These elements are probably understood by all, but I will add a little clarification.

- A. How long should a study run? This is extremely important as the problems may not permit an "all the time in the world approach."
- B. At what cost? A simple matter of budget and money to pay bills. Our most recent experience has been that money is in short supply throughout the National Park Service. As a consequence, competition for available funds is keen and a theme of the day is "trade off." This means if I must do research, what can I leave undone to pay the bill?
- C. By whom? I am interested in placing my research with a scientist of integrity, with good standing in the professional community. He must be willing to stand by his conclusions should they generate controversy and must understand that he may be subject to management's call should expert testimony be required in matters of litigation.
- D. What will be the end product? The answer to this is very much the WHAT I expect of science and scientists. There should be a written report identifying the problem studied; the method or methods of study utilized; results of the study; conclusions; and recommended management actions.

I am not interested in a treatise written in professional terms prepared solely for publication in scientific journals. The resultant professional criticism is a welcome by-product, but my needs are for lay language, illustrations and recommendations that show me how to implement them.

Please note that I said recommendations; that is what I mean. In management there is a frequent need to explore several solutions to a problem and to give consideration to political realities, both in-service and out-of-service. In such an arena I prefer receiving a display of possible solutions arrayed in a best to least desirable format with a brief rationale for each one.

Now, what do I expect from scientists as they work within the Park? I expect scientists to be cooperative guests when they come to the Park to pursue their study. They are expected to comply with the rules and regulations to the fullest practicable extent. Should their study require taking of specimens or engaging in other activities outside the realm of usual public use, the where and how must be arranged with management. I feel researchers within the Park should exchange information among themselves as to what their study is; where and how it will be conducted. We are expending public monies. As members of the public we are all entitled to the best possible return on the dollar. There isn't room for duplication of effort.

This approach may not please some of you, I realize. I have talked with research scientists across the country during the past year and am well aware that there are scientists dedicated to the proposition that pure research is to satisfy man's curiosity. But, directed research designed and intended to solve a problem is an ethical compromise. These researchers have aptly illustrated that undirected research does, on occasion, add knowledge of Park resources and provide potential for application to management strategy. Operating in today's economic crunch, however, precludes such research in my Park and, I believe, anywhere within the National Park Service.*

All of the foregoing has been intended to say a science program in a park must be a program that serves the needs of management. In conclusion, I would like to present a couple of ideas picked up as we task forced the science issue last summer.

1. Regional Offices have a responsibility to annually review and evaluate both on-going and proposed research to determine the quality of research, qualifications of researchers, and to assure that research results are being applied within management programs.
2. The Regional Science Program should include provisions for extension work assistance to parks. This should take the form of diagnostic service for current problems and also helping the park predict problem areas.
3. The National Park Service must establish a program wherein its scientific personnel are provided advanced training and retraining. I personally feel such a program is necessary to maintain professional skills and to enhance National Park Service credibility within the academic world.

This speech was presented at the third annual Science/Management Conference of the Pacific Northwest Region, National Park Service, held at Klamath Falls, Oregon, April 27-29, 1976. The author, Daniel J. (Jim) Tobin is Superintendent of Mt. Rainier National Park.