SIGNIFICANT WILDERNESS QUALITIES:
CAN THEY BE IDENTIFIED AND MONITORED?

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Colloquium
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INTRODUCTION

The third Research Colloquium, sponsored by the National Outdoor Leadership School (NOLS), convened the week of August 10-15 in the Popo Agie Wilderness, Shoshone National Forest, Wyoming. The purpose of these colloquia is to facilitate interaction and discussion between wilderness managers, researchers, and NOLS personnel in a wilderness setting. At each colloquium, discussion centers around a selected theme. For the third colloquium, participants were asked to write a short paper on the theme. This report is a compilation of those papers, along with a synopsis of discussions held during the colloquium.

The theme was formulated in the following manner: Given that the goal of wilderness management is to avoid the impairment of significant conditions, features and qualities of the wilderness resource, 1) what are the most significant of these conditions, features, qualities? and 2) how can they be monitored to ascertain whether or not they are preserved?

This theme was selected because it is fundamental to all wilderness management. Management should be focused on problems that threaten the most significant qualities of wilderness. And research that addresses these threats, problems and potential mitigation measures should be given a high priority.

A more specific reason for selecting this theme relates to interest in several recently developed management planning systems, such as Limits of Acceptable Change and Visitor Impact Management. These systems link management objectives and monitoring by proposing that management be driven by monitoring of key indicators—to determine whether or not management objectives are being met. These systems are being widely embraced because they provide for objective, generally agreed upon judgments about where wilderness qualities have been or are being lost; however, their value hinges entirely upon the significance of the indicators that are selected. Indicators must be indicative of the most significant wilderness qualities (or impacts on those qualities) and it must be feasible to accurately monitor those indicators. Otherwise, wilderness qualities can erode away, despite monitoring data that indicates objectives are being met.

Many of the most significant wilderness qualities are relatively intangible. Congress wrestled with wilderness definitions for eight years before passing the Wilderness Act, leaving definitions poetic and rather general. General and intangible qualities are particularly difficult to monitor. Can they be monitored or can meaningful surrogates be developed? Further wrestling with this difficult theme seemed an appropriate task for a collection of managers and researchers some 23 years after passage of the Wilderness Act.

We gathered a diverse group of people for the colloquium. We attempted to include people from as many parts of the country, as many affiliations and as many backgrounds as possible. Colloquium participants were:


Jim Currivan--Wilderness Program Leader, Bureau of Land Management, Arizona.

Tim Easley--Research Advisor, NOLS, and Chairman, Department of Forest Resources, University of New Brunswick, New Jersey.

Bill Hammitt--Professor, Department of Forestry, Wildlife, and Fisheries, University of Tennessee.

Drew Leemon--Program Planner, Wyoming Branch, NOLS.

Bob Manning--Associate Professor, School of Natural Resources, University of Vermont.

Jeff Marion--Research Scientist, National Park Service, Mid-Atlantic Region, Pennsylvania.

Steve McCool--Professor, School of Forestry, University of Montana.

Dave Neary--Director, Wyoming Branch, NOLS.

Debbie Overton--Graduate Student, College of Forestry and Natural Resources, Colorado State University.

Dave Parker--Board of Directors, NOLS, Washington, D.C.

Sukey Richard--Assistant Marketing Director, NOLS, Wyoming.

Toivo Sober--Wilderness Specialist, U.S. Forest Service, Kawishiwi Ranger District, Superior National Forest, Minnesota.

Dick Spray--Wilderness Staffer, U.S. Forest Service, Southwest Region, New Mexico.

The diversity of ideas and perspectives in the papers that follow, all inspired by the same theme, reflect the range of backgrounds and interests of colloquium participants.
WILDERNESS QUALITY, IMPACT CONDITIONS AND THEIR MONITORING
by William E. Hammitt

We were asked to comment on the quality of wilderness, use impact conditions and how they might be monitored. After thinking about this task and after hearing trip participants struggle with it, I feel my best contribution to the topic might be to share some of my thoughts in clarifying the topic.

Quality of the Wilderness Experience: Although user impacts to the wilderness resource and wilderness experience detract from the natural and solitude conditions of wilderness, I am not convinced that user impacts are major deterrents of the wilderness experience. Even with higher levels of visitor encounters and campsite trampling, the majority of wilderness users are able to find enough remoteness, naturalness, and privacy when the entire trip is considered to realize a “satisfying” wilderness experience. I feel the issue at stake is, “are we to provide the ‘most satisfying’ wilderness experience we can, or only satisfying experiences?” What degree of quality are we to provide? There is no doubt that user impacts detract from the quality of wilderness, but it may not be significant.

User impacts: Ecological vs. Recreational Significance: It is generally agreed that wilderness should be managed on an ecosystem basis. If this is so, then do user impacts affect the conditions of wilderness on an ecosystem basis? Are campsite impacts and trail encounters significant factors at affecting the processes of wilderness ecosystems and the quality of wilderness ecosystems? The answer is probably no for most impacts. For example, campsite trampling and trail encounters affect a minimal portion of the total acreage in wilderness ecosystems. However, trail erosion might contribute considerable sediment to small streams and significantly affect those restricted aquatic ecosystems within wilderness. Wildlife disturbance may be another ecosystem level impact.

While use impacts may not be significant factors in destroying the quality of wilderness ecosystems, they are significant factors in detracting from the quality of wilderness recreation experiences. In other words, user impacts, even when called “ecological impacts” may not be significant factors in affecting wilderness ecosystems but can be significant factors affecting wilderness recreation and experiences. User impacts in wilderness have recreation significance, while probably little ecosystem importance.

Monitoring conditions: Two systems or levels of monitoring are called for, one for recreation quality impact conditions and a second for ecosystem quality impact conditions. Both have significance but they are probably mutually exclusive with most wilderness user impacts.
SUMMARY OF DISCUSSIONS

As was true at the two previous NOLS research colloquia, discussions among participants were intense and wide-reaching. Group discussions, using the presentations by each person as a springboard, were the setting for most of the exchange of ideas, and the source for the summary which follows.

The main benefits of the colloquia, however, probably do not come directly from the scheduled programs. Repeatedly one hears that the most useful outcomes of typical research conferences occur in hallways and lobbies, not from the formal presentations-- the conference is almost an excuse to get scientists together so they can interact professionally. That observation is even more true of the NOLS colloquia, but the interaction is in the wilderness, on the trail (I could usually count three separate conversations going on, 95 per cent of them of a professional nature), in camp, out fishing, and even while trying to fall asleep, and it involves more than just scientists. Networks are formed, and ideas are tested and expanded in a way that goes well beyond what happens in the usual conference setting in a hotel.

All participants are together for most of five days with never a telephone call. Some sort of special chemistry has worked on each of the first three colloquia that has resulted in the development of a strong sense of community. Everyone has ample time to express their ideas and all comments seem to be heard and considered thoughtfully and respectfully, even the occasional far out brainstorm. The posturing and status-seeking that is found too often at formal conferences blessedly seems totally absent in the wilderness setting.

The group discussions started with comments about what participants hoped to gain from the session. A wide range of goals emerged: learn about research with practical applications, further development of NOLS research mission, prioritize the qualities that really define wilderness, open up the key issues, explore ways NOLS can provide a service helping with monitoring, the down-to-earth details of how to monitor (hands-and-knees, tape rule procedures,) testing ideas developed in isolation, the functions wilderness serves (what do people take away from it?), the respective roles of managers and researchers and their interaction, identification of research needs, sharpening basic wilderness definitions and especially how to monitor social conditions.

The discussion of colloquium goals was followed by the round-robin responses of every participant to the question about the important qualities of wilderness and how they can be monitored. Written versions of most of these were submitted and included in this report.

Wednesday evening the group developed a list of issues and questions related to the overall theme of the colloquium, with the hope that these could help structure some of our later discussions. The list is difficult to categorize on any single logical dimension or level of generality, but it included the following:

1. The role of zoning wilderness, especially standards for conditions.

2. How to monitor impacts to the wilderness resource.

3. The concept of wilderness as a combination of many conditions.

4. Wilderness as a state of mind (cultural definitions of wilderness).
5. Do wilderness experiences require truly natural conditions, or would a reasonable appearance of naturalness suffice?

6. The need to balance concern for terrestrial ecosystems with more attention to aquatic ecosystems.

7. The need to monitor “wilderness manners” exhibited by visitors.

8. How significant ecologically are many of the aspects frequently monitored?

9. How can NOLS best serve as a laboratory for wilderness questions?

10. The balance between biocentric and anthropocentric wilderness concepts.

11. How can education best serve wilderness visitors and managers?

12. How can wilderness researchers, managers, and visitors relate most productively?

13. Can we reduce the most important qualities of wilderness to things we can measure?

We returned to many of these topics in our discussions, although we decided not to try to focus on one or two specifically.

Thursday we reviewed the results of our minimum impact camping above Cloverleaf Lake. Our group campfire the night before on a fire-resistant “blanket” was undetectable. We could find almost no signs of our two nights of use. One tent group challenged the rest to discover where they had cooked. They won; we could not find their kitchen.

A friendly, hungry Wind River bear persuaded us to move camp. Along the way we gathered on a large, rather impacted campsite on Middle Lake -- a site with about 2,500 square feet of devegetated area. This served as a case example for a discussion of acceptability of campsite impacts, and appropriate low impact camping practices, and management actions. The pros and cons of encouraging dispersal or concentration of wilderness were explored. The practice of managers developing tent sites was discussed, without any consensus.

The potential use of wilderness management zones to structure minimum impact messages was considered, with a general feeling that this could be effective.

We returned to our basic theme and finally agreed that we had not been very successful defining wilderness conditions in the abstract. We agreed that it is an extremely difficult question, although critically important. It reminded one of us of trying to define pornography--“I can’t define it, but I know it when I see it!” The idea of a standard, agency-wide set of specific wilderness indicators with standards for each, which the Forest Service was considering, was considered a poor approach.

Our last structured discussion centered on future colloquia. A number of ideas were proposed, including:

1. Have each participant come with a problem they are concerned about and a possible solution.

2. Focus on a case study, for example, the new wilderness management plan for Grand Teton National Park.

3. Examine the involvement of the public in wilderness management planning, perhaps using the recent experience in LAC planning.
for the Bob Marshall Wilderness complex as a case study.

The NOLS representatives pointed out that future colloquia do not need to be conducted in the Wind River range. NOLS could support a colloquium just about anywhere. NOLS plans to continue sponsoring the colloquia. A volunteer to organize the next one has yet to step forward. We all hope someone will rise to the challenge. Our experience indicates it is some work, but not overwhelming, and very rewarding. We recommend it!

NOLS deserves a great deal of credit for conceiving the colloquia and following through effectively and persistently, and being so tolerant of researchers. The colloquia provide uniquely valuable opportunities for wilderness users, educators, managers and researchers to become well acquainted and to learn from one another.