

feedback

(Letters may be slightly edited to fit space requirements.)

To the Editor:

I very much enjoyed the article by Jim Thompson in the Fall issue of *Park Science*, and it stirred me to rummage around for some thoughts I had been moved to write on the same subject. I began to set down these thoughts about the time the National Environmental Policy Act (NEPA) presented science and management with a whole new set of demands. My ideas may be encapsulated by the title "From Wildlife to Ecosystem Management."

New interests and new knowledge require that managers respond to new pressures and new kinds of problems, previously unsuspected and not readily solvable by old methods (viz., encroaching exotic species, changing habitats due to low level pollutants, the effects of global pollutants, the need to better understand the processes of natural change, natural succession, and so forth.) In the interests of continuing Jim Thompson's proposal that we maintain a science/management dialogue, here are my observations.

Five subject areas bear directly upon our understanding of preserved land management. They are 1) parks as preserves, with the attendant question as to whether a park can be treated as an isolated preserve; 2) the maintenance of species diversity; 3) the required representation and classification of preserve lands; 4) the protection of humankind and its environment (What is the acceptable management blend of socio-economic and biological concerns?); and 5) the employment of ecosystem management – the integrated approach to management or non-management of the total park environment.

Many of the crucial issues are only partially understood, given today's state of knowledge. Such questions as habitat requirements for rare and endangered or unique species, control of nuisance and destructive exotics, indicator species, habitat degradation or modification, the effects of air and water pollution (both short- and long-term), resources carrying capacity, boundary pressures, visitor pressures – the fact that we are even aware of these **questions** is due to research. If we want **answers**, then we must do **more** research.

The performance of resource management functions requires some minimal data base, usually acquired with very limited funding and on extremely short notice. A helter skelter response to unheeded problems that are suddenly presenting overdue bills does not meet the requirements placed upon us as a Service to protect the System with which we have been entrusted. Constraints placed on researchers by time, budget and an emphasis that urgency dictates shall be mostly management-oriented, is not conducive to the kind of professional research that our mission re-

quires. Solutions that are predetermined by the hurry-up nature of the research are too-often the outcome.

The independence needed by research personnel is not well understood by management, probably because managers and scientists have such inherently different functions, operations, and goals. The qualities that go into making for excellence in an inquiring scientist are almost diametrically opposed to those that make for a successful manager. The association of these two fields could almost be viewed as a pre-ordained arena for conflict. The scientist, doggedly determined to do his job, often comes through as uncompromising, arrogant, apolitical, dogmatic – attributes not generally admired by management.

So what can we do to solve this dilemma? Probably facing up to it is the most important first step. Beyond that, there are a number of solutions we might try. I agree with Jim Thompson that regular communication between research and management is a must. I suggest regularly scheduled meetings for the presentation of research results, discussion of current problems, and the developing and planning of cooperative efforts for acquiring the information that both management and science can agree is needed.

Out of such meetings should come 1) a management commitment to acquiring the best quality data, through research, to serve operational and planning needs; 2) the development of a research program commitment to provide timely management alternatives and the data for solution of chronic problems; 3) the capability to respond to emergency requests; 4) the development of a long-term research program aimed at solving future problematic needs before they become present crises; and 5) a mutually acceptable process for evaluating and updating ongoing resources management activities relative to data supplied by the research program.

Today's ecosystem managers are called upon to deal with complex and esoteric questions, the answers to which, in truth, may not be available. We have just begun to work on the Gordian Knot. Ambiguities resulting from natural systems studies often contribute to complicated problems for managers of preserved lands. Social, technological, physical, and biological variables, when viewed as interacting, have cause and effect relationships which influence the rationale of natural resource studies, and which have ramifications for new possibilities for planning and programming. Complicated solutions often are indicated, and the preserve manager is the integrator.

I hope that what I am saying is a recognition that management's job is not an easy one. I have admitted to the qualities of scientists that tend to make it an even more prickly affair. But I see great benefits if we can come to recognize each other's necessary input into the preservation of our resource base, and I see great hope that such recognition is dawning – on both sides.

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