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Habitat Classification—Assessments For Wildlife and Fish

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Opening Remarks

William B. Krohn and Hal Salwasser

Comprehensive planning and management of natural resources require the assessment of existing and future conditions of fish and wildlife. Fish and wildlife, hereafter referred to as wildlife resources, can be inventoried and assessed either in terms of animals or habitats. Both approaches are useful given certain management objectives. For example, population inventories in concert with other data, are often used to assess the impacts of hunting. In contrast, habitat inventories are used to evaluate the impacts of grazing, or other land and water uses, on wildlife resources. Our objective is not to compare or contrast the two approaches, but to focus on habitat assessments and the growing need for wildlife resource managers to more effectively influence the planning and management of land and water (i.e., habitats).

There is increasing recognition in the wildlife resource profession of the need to more fully understand and quantify the relationships between species and their habitats. For example, a review of wildlife research needs by Sanderson et al. (1979:167) stated that "The basic goal in wildlife research is an information base on animals and their habitats that will allow prediction of the effects of changes in animal-habitat relationships." Concurrent with this basic goal is the recognition that ". . . knowledge on relationships among habitat, wildlife abundance and land use is poorly developed . . ." (New England Research Inc. 1980:65) and that ". . . Research is needed to provide data for verifying functional curves and correlating biotic and abiotic variables to habitat quality" (U.S. Army Corps of Engineers 1980:81).

There is a growing consensus that classification, as such, is only a part of habitat assessment. There is also a growing recognition that user needs, when translated

into specific analyses, should drive habitat evaluation systems.¹ Thus, this session emphasizes habitat assessment over habitat classification and is designed to address four questions: (1) What must a habitat evaluation accomplish? (2) What methods are being developed and used? (3) How are the methods related? and (4) What is needed to improve the art and science of habitat assessment?

To address these four questions, the session has been organized into an introduction, three panels, and closing remarks. After these introductory remarks, the first paper will discuss the needs for and approaches to habitat assessment. Next, the three panels will cover the following topics: (1) species-habitat modeling, (2) model application and testing, and (3) habitat evaluation programs. A discussion period will follow each panel. Finally, the closing remarks will summarize the session.

We are pleased that you are here today to help us take a look at specific habitat assessment methods, to evaluate how far we have come towards a common assessment approach, and to help us chart a course for future improvements.

Literature Cited

- New England Research, Inc. 1980. Investigation of the relationship between land use and wildlife abundance. Vol. I: literature survey. Contract rep. 80-C2. U.S. Army Corps of Engineers, Fort Belvoir, Va. 146 pp.
- Sanderson, G. C., E. D. Ables, R. D. Sparrowe, J. R. Grieb, L. D. Harris, and A. N. Moen. 1979. Research needs in wildlife. Trans. N. Amer. Wildl. and Natur. Resour. Conf. 44: 166-175.
- U.S. Army Corps of Engineers. 1980. A habitat evaluation system for water resources planning. U.S. Army Corps of Engineers, Vicksburg, Ms. 89 pp.

¹For a supporting rationale, see: Coulombe, H. N., J. D. Buffington, and W. B. Krohn. 1982 (In press). Relationships between classification, mapping, inventory, analysis, and information systems. Proceedings of In-Place Resource Inventories: Principles and Practices. University of Maine, Orono.