THE NEED FOR CENSUSES IN POLICY MAKING

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We of the Fish and Wildlife Service of the U.S. Department of the Interior are proud to be one of the primary sponsors of this Symposium. This Symposium was supported by funds from both the Migratory Birds and the Endangered Species Programs of the Service. We're especially proud to be sponsoring and participating in this Symposium. We feel that these proceedings have the potential of being an event of singular importance in the conservation of terrestrial birds, with important implications for future research on avian biology and ecology. We're delighted in the interest and participation in the Symposium.

Although Dr. Scott requested that I address the need for bird censuses in policy making, from what I know about the subject, we'd better withhold judgment. As you know, policy-making has evolved into a rather exact science, particularly in Washington.

Rather than discuss policy, we should talk about counting birds, because that's what the Symposium was all about. One of the key uses of population data is to make predictions about various biological responses to environmental phenomena. Without making too many unwarranted assumptions, I predict that if you all spend five days focused on this topic, there will be a lot of unstandard deviations by mid-week and a lot of multiple regression by the end of the week.

In my opening remarks, I was asked to give you a clear and concise statement of what policy makers need from those who are estimating bird numbers. At first blush, this represented a formidable challenge to me because, I'm not a policy maker. If I were a policy maker, however, I would want the most relevant and accurate information available for consideration, along with an objective assessment of what were the assumptions, limitations, alternatives, and implications of the data collected and actions recommended. This would be the ideal. Unfortunately, few policy makers have this luxury, primarily because the data and the expertise are generally not availble for this type of review and analysis.

I come to this subject and to the Symposium from a slightly different background and perspective than Dr. Callaham, yet I appreciate and share some of his skepticisms and concerns. If we all don't know it by now, we will by the end of the week. Bird censuses, that is, total counts of birds in a predescribed area of natural habitat, are probably impossible at the present state of the art.

The complexities and intricacies of avian biology and ecology in combination with the vagaries and dynamics of environmental factors in their spatial and temporal dimensions pose formidable obstacles for students of bird populations, to say nothing of the influences of the human factors (ability, experience, perception, and persistence) in relation to the design and conduct of experiments or surveys which may or may not have had review and analysis by a competent statistician.

In the last decade of the 20th Century, wild life and wild places are under massive, escalating and accelerating assaults from a multiplicity of human agents and activities. Exploitation and extirpation of many wildlife populations as a result of, and in combination with, the deterioration and destruction of habitats throughout the world are matters of grave concern with all biologists and conservationists. Several bird species are already in serious jeopardy; many more are becoming threatened or endangered at alarming rates. Extinction overshadows the future of many species. Correspondingly, administrators of natural resource agencies are under increasing pressure to defend their actions in the protection and preservation of species and habitats in the highly political milieu of competing and conflicting societal values and goals. At all professional levels, there is need for accurate and reliable census methodology for management and conservation of avian populations. Biologists need accepted and standardized methodology for conducting studies and analyzing data, contributing to the information on which management decisions can be based. Managers need to have the confidence that the information they have for prescribing practices and evaluating actions to influence environmental factors regulating or enhancing populations is scientifically sound. Administrators need reliable information for developing policies and implementing programs to direct the management of populations and protection of habitats. In our relationships with the private sector, natural resource researchers, managers, and administrators must strive to establish and maintain the highest levels of professionalism,

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confidence, and credibility to generate and perpetuate the level of public support and involvement essential to achieving our conservation goals.

We are here to participate in an international symposium on a subject of critical importance for providing the basis to develop, implement, enforce, and evaluate a myriad of public policies affecting the management of avian populations and conservation of natural habitats. I want to commend all of those, especially Drs. J. Michael Scott and C. J. Ralph, as well as all the sponsors, the Forest Service, and all of you who have come great distances and who have played a role in making this Symposium happen. I challenge all of you to build on the knowledge presented in the proceedings.