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On Forming an Ornithological Council

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It has begun to bother me that the ornithological societies seem to be playing an extremely minor role in anything to do with conserving, preserving, or salvaging the environment. We realize—or we tell each other that we do—that birds are an important part of the world's ecosystems, that they can often serve as indicator species of environmental problems, that what affects bird populations can and will eventually affect the human population. But as organizations, we lack a mechanism to tell anyone other than ourselves about our concerns or how the knowledge our study produces can be used to help efforts to protect either the birds themselves or the environment of which they and we are parts. We can, and some do, share our concerns and knowledge individually, but we have no effective way to say that 5,000 ornithologists think that "Plan A is a good idea" or "Plan B could lead to declines in bird populations" or even that "Plan C would have a very bad (or good) effect on the scientific study of birds that is needed to know whether Plans A and B are good." Our current mechanism for action is pretty much restricted to adopting resolutions saying, in effect, "We think you shouldn't have done that" or "We wish you would do something." Even the timing of this mechanism

leaves much to be desired if we really intend to have any effect.

To be sure, the AOU has a Committee on Public Responsibility whose functions include attempting to find someone with the appropriate ornithological expertise to use that expertise or to express an opinion based on it in an advisory capacity in a given situation. But as with all our committees, that one depends on people who are deeply involved in their own activities. The ability of that committee to fulfill its functions depends on the ability of the chair and the members to find the time in an otherwise full day to remain apprised of situations where scientific ornithological input might prove to be useful and to find the right person to provide it. I chaired that committee for the first few years of its existence, and I can attest that it could be a full-time job. With due respect to the current chair and committee, it cannot as presently established have much effect in providing a voice for the AOU, let alone for scientific ornithology.

I believe that the scientific study of birds is relevant to many present environmental concerns. Some of our studies indicate that degrading the environment affects bird populations, or that some changes in bird populations may be a result of actions that superficially seem totally unrelated. Other actions may have a detrimental effect on our ability to study some ornithological problems. There may be studies that we are not conducting that would provide information

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that is needed to guide decisions. I believe that we, as an ornithological society and as an ornithological community, need a means both to have what we now know taken into account as decisions are made, and to find out what kinds of knowledge we can and should provide that will be important in future decisions.

I propose the formation of an Ornithological Council to serve as a voice for the science of ornithology wherever and whenever the voice of ornithology should be heard in the making of policy decisions. This Council should be sponsored and supported by the scientific and professional ornithological societies in North America. The Council should be made up of representatives of each participating society and should employ a person who is both knowledgeable in scientific ornithology and able to communicate that knowledge effectively. The Council would serve as a two-way conduit between those who have or can produce, and those who need or should have, important and accurate knowledge about birds as they affect or are affected by environmental and political decisions. The Council should be available—more importantly, should make its presence known—to federal and state agencies at both executive and legislative levels, to corporate organizations, to private or public conservation groups, and to citizens' groups. It should re-

spond when asked, and it should demand to be heard when it has something worth saying. But its actions and input should always have a basis in scientific ornithology.

Adopting this proposal would represent an area of activism that the scientific ornithological societies have traditionally avoided. It might involve a considerable financial outlay. There may always be different interpretations of scientific findings and how they affect environmental decisions. I think that none of these problems is insurmountable. On the other hand, if we do not become actively involved in applying our science in the world we will be relegated to having no effective role in its future.

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Postscript.—This essay was drafted in April 1990. An early version was submitted to the executive bodies of the four societies that form OSNA for consideration at their 1990 annual meetings. Each society agreed to appoint two members to a joint committee to study the feasibility of establishing an Ornithological Council and its possible functions. Suggestions or ideas that you would like that committee to consider may be sent to the author.

The Interspecific Relationship Between Egg Size and Clutch Size in Wildfowl

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Individual birds will be selected to rear broods that maximize their lifetime reproductive success (Lack 1954). For most species this optimum clutch size will not be simply the maximum number that an individual is capable of laying. Among other things, there may be a trade-off between the number of offspring produced and the quantity of resources invested in each (Smith and Fretwell 1974, Sibly and Calow 1986). Lack (1968) suggested that the ability of parents to feed offspring should limit the number of offspring in a clutch. Individuals attempting to rear too large a clutch would produce undernourished offspring, which would suffer higher mortality, and hence leave fewer descendants.

If parents do not have to feed their brood (e.g. in highly precocial taxa), then this trade-off will be different. Clutch size will no longer be constrained by the capabilities of the parents to feed the offspring, but instead by the relationship between the availability of resources to the female around the time of

laying and the size of the egg (Lack 1967). Lack hypothesized that individuals could allocate their finite resources to a few relatively large eggs, or to increasing numbers of relatively smaller eggs. He tested this using data from wildfowl (Anatidae), which are highly precocial and lay relatively large clutches for which nutrients are likely to be limiting. He found that there was indeed a trade-off between clutch size and egg size (Lack 1967, 1968).

More recently, this finding has been called into question. Rohwer (1988) argued that Lack had used inappropriate statistical techniques to control for the confounding effects of body size on egg size, had made arbitrary categorizations of egg size, and had used questionable data for some of the wildfowl species. Rohwer repeated the analysis using different statistical tests and more reliable, recently available data. He found that once female size had been controlled for, clutch size accounted for only 11% of the remaining interspecific variance in egg size. Additionally controlling for taxonomy, this proportion rose to 13%. Rohwer considered that this was too small a part of the residual variance in egg size for the trade-off with clutch size to be biologically important.

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