

Response: In the Eye of the Beholder

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I welcome this opportunity to reply to the commentary by Austin et al. Included among the signees are names I have admired all my professional life. Thus I am especially gratified to see my work cited above; if one fails to stimulate his peers he will be left severely alone. My gratification is dampened somewhat, however, by careful reading. It appears the commentary isn't about my work at all; rather, it's a revelation of the disciplinary and philosophical predilections of the authors. Hence I will respond to comments on my own work in the briefest terms and then proceed to what I believe to be the real substance of the commentary, and thus of this reply.

Concerning my latitudinal gradients paper (1974, *Condor* 76: 123), the literature citations are obviously skewed toward the authors whose works bear on the main issues at hand. As I am not sure what the other objections of Austin et al. are, I can only conclude that I failed to write the paper they would have written had they been me. Surely I need not provide a discussion of what is, or is not ecology. Most readers of *The Auk* already know, and for those in doubt the past 10 years have seen a proliferation of excellent textbooks on the subject.

Austin et al. "suspect" I misidentified "about 20% . . . in part or in whole" of the species listed in my paper on migrants in Yucatan (1974, *Condor* 76: 460). I suspect I didn't.

But the main issue here is one of appreciating the value of *all* the diverse approaches that contribute to Ornithology, or, for that matter, to any field of scientific inquiry. Ornithologists have much to gain from one another. To feel threatened by the growth of a new discipline is to miss an opportunity. The dependence of population ecologists on the work of taxonomists is obvious; one reason birds have been so attractive to ecologists is that avian systematics and distribution are so well known (although the "true" distributions, migrations, and ecology of birds are constantly changing as avian habitats are altered). The fruits of ecological inquiry also offer opportunities to those in other disciplines. For example, the work of Crowell, Grant, Selander, and others has revealed morphological differences that accompany diversity variations between island and mainland avifaunas. It is not clear whether these morphological changes result from a relaxation of interspecific competition on islands, in part because we understand so little about functional morphology. For example, no one is sure whether a higher population variance in some beak dimension really allows that population to capture a wider array of food items—we cannot interpret these morphological features in a way that clarifies their adaptive significance to the birds. Here is a fertile area for an anatomist with a flair for mechanics!

In sum, what is interesting Science is in the eye of the beholder. What is good Science spans a far broader spectrum.

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Response: Ornithology as Science

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I would like to thank Austin et al. for including me with such notable company as Tramer and MacMahon in their tirade on "modern ecology," and for calling attention to two of my papers on the multivariate analysis of bird communities in the Virgin River Valley. Owing to the highly regarded status of some of the commentary signers, I feel obliged to answer their criticisms.

At no time, in either paper, did I state or imply that all of the birds for which habitat data were collected were breeding birds. On the contrary, I did acknowledge that Audubon's (Yellow-rumped) Warblers were known to migrate through the area, as were several of the other species. The birds did sing full songs (not chip notes), however, showed intense intraspecific aggression, and remained in specific areas for days at a time. Based on these criteria, I felt justified in taking vegetation measurements in their habitats. The problem with studying desert birds is that they tend to be early breeders and to get an early enough start on data collection one must be in the area while migrants are still going through.

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