

EDITORIAL

ON SKEPTICISM AND CRITICISM IN ORNITHOLOGY

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Skepticism was once the hallmark of the scientist. Recently, however, it seems that uncritical acceptance of prevailing notions has become more fashionable. This is perhaps most clearly evidenced by the seeming reverence in which a good deal of published work is held. We tend to regard published research or ideas as having been certified as “true,” or at least substantially correct. There is, indeed, a certain sense of security in believing that the rigors of peer review and editorial scrutiny assure that only quality papers, in which the data, analyses, and interpretations can be implicitly trusted, will be published. The work that is published can then be taken to represent the foundation of established facts, verified theories, and logically correct ideas upon which subsequent work can be built. It is infrequently subjected to close critical evaluation, especially if it is consistent with established beliefs, supports neat ideas, or agrees with (and thus certifies as also “true”) one’s own findings.

But this sense of security is false. Every study has its limitations—honest mistakes in the methods that are used, the observations that are made, or the analyses employed; biases in the interpretation of the data or in the logic that is followed; or deception in the way in which findings are presented. Some studies suffer from such failings more than others, and the more blatant mistakes are presumably detected during peer review of manuscripts that are submitted for publication. But reviewers are not infallible or unbiased, and errors or inconsistencies do pass by their scrutiny, more often than we might wish.

Published work is thus not perfect. Much of the time it is not even close to it. Readers who turn to the scientific journals for knowledge therefore cannot simply accept what is printed as correct. One must read critically, with a skeptical attitude, continually evaluating the methods, the data, the analyses, and the interpretations. Because the reviewing and editorial processes generally (but not always) filter out the absurdities, the errors or misinterpretations that do emerge in print are often subtle or carefully hidden. The need for careful, critical reading and evaluation is thus all the more important.

But it is not sufficient to read critically and, with an inner feeling of satisfaction, note the flaws in a published paper. If the problems are serious, they should be noted in print. This seems not to happen very often. In part, this is a consequence of the structure of our journals, which do not readily offer the opportunity for open dialogue on the points raised by a critical evaluation of previously published work. But it also reflects the general politeness with which we approach science. We often seem to regard published criticism as a personal attack on an author rather than an objective evaluation of the work itself and, as a consequence, tend to avoid such unseemly behavior. Science does not progress much, however, if fair, open discussion of published work is shunned because it might be taken personally. Authors who would view objective criticism in this way are guilty of taking their work too seriously, of investing too much of their egos in it. The purpose of publication is to present our work and ideas in a manner that makes them available for the close, critical scrutiny of our peers, and we should be gratified when our work is so evaluated, even if the outcome is negative. After all, a published paper that induces critical thinking on an issue, even if it is not completely correct, is important. Science progresses as much from the challenge of wrong ideas or incorrect observations as it does by the accumulation of “basic truths,” but this requires continual skepticism and criticism.

My points, then, are these. Authors have an obligation to present their findings and interpretations in a clear, careful, nondefensive manner. Despite the best of intentions, however,

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such work will probably be flawed, and not all of the errors will be detected during the review process. Published work is thus not certified as necessarily correct, and it should therefore be subjected to critical evaluation, undertaken from a stance of skepticism. When basic flaws are detected, they should not pass unchallenged. Journals should be structured in a way that fosters open, responsible, impersonal dialogue on the issues that are thus raised. Only in this way, I believe, can we resist the seductiveness of neat but illogical ideas, or of observations that are consistent with some favored view but that are flawed, and approach science as a challenging intellectual activity rather than a system of shared beliefs.