

Obligations and expectations of your peers: manuscript review at the *Journal of Range Management*

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It has been said that the principal virtue of the peer review system is that it assures your paper will be read by at least 2 people. However, we have all occasionally wished that 1 particular reader had been otherwise engaged. Let me paraphrase a review I once received. The referee told me, in essence, that my paper showed a unique capability for turning a sow's ear into a sow's nose. If that wasn't enough, he went on to say that never before had he seen a young man who could transform a valuable commodity like paper into something thoroughly worthless merely by adding ink. It would seem that scientific publishing is not for the faint of heart.

Why do we put ourselves through this painful, time consuming business? We do it because we want to be believed. Credibility ultimately determines the effectiveness of a scientist, particularly the effectiveness of an applied scientist who must answer to practitioners as well as to other researchers. To the extent that we value our trustworthiness, we will invest in enhancing and protecting the credibility of our profession. Peer review is one such investment. What we gain from it collectively is worth some individual inconvenience.

An effective system of peer review should avoid 2 classes of errors. Errors of commission are the ones that come to mind first:

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we wish to avoid publishing unsound information. The consequence of that mistake, if it is made frequently enough, is the erosion of the credibility of range scientists. On the other hand, we don't want to mistakenly exclude worthwhile papers. The consequences of errors of omission include a loss of innovation in research and its application, as well as a general unraveling of the peer review process, a process that fundamentally requires a perception of fair treatment by its participants. So, we need a equitable system that assures a high level of quality.

The Current System

Our current system includes editor-in-chief Pat Smith, 12 associate editors, and many referees (usually 200+ each year). Associate editors are nominated by the membership of the Society for Range Management, are elected to the editorial board by a vote of the board's current members, are recommended by the editor-in-chief, and are appointed by the president of the Society. They are chosen to represent several subject areas including plant and animal physiology, grazing systems, plant and animal ecology, soils, hydrology, economics, wildlife management, and range improvements. Once selected, associate editors serve a 2-year term with a possible renewal for 2 additional years.

The function of the system is illustrated in the following example (Fig. 1). A manuscript is submitted to the editor-in-chief, who

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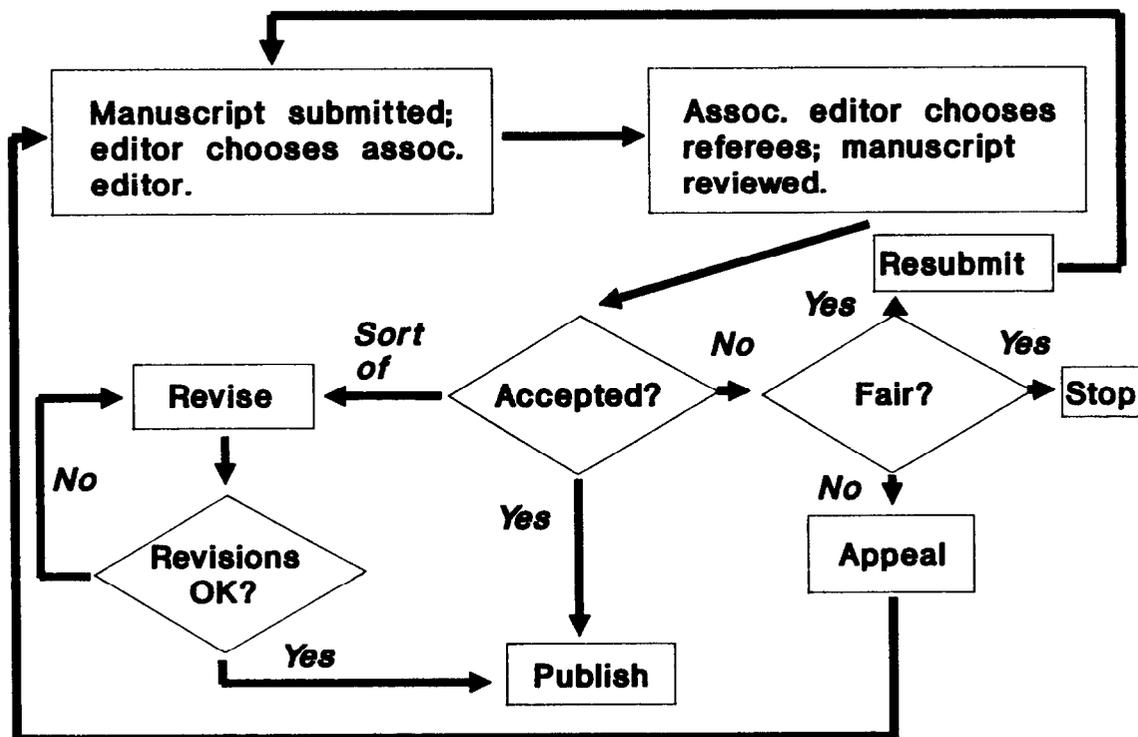


Fig. 1. Flow diagram of peer review at the *Journal of Range Management*.

chooses an associate editor with expertise appropriate for its topic. Upon receiving the paper, the associate editor selects 2 or 3 referees to review it, usually allowing them 2 weeks to a month to get the job done. Most referees are persons whose work the associate editor knows, although citations in the paper, suggestions of colleagues, or recommendations of the author may also point out appropriate reviewers.

When the reviews are returned, the associate editor decides the fate of the manuscript based on the comments of the referees and his or her own evaluation. If the referees are thorough, then most associate editors will simply pass their recommendations on to the author, adding only minor comments as needed. However, if 1 or both of the reviews are weak, then the opinions of the associate editor take on greater weight. If the reviews are inadequate, the associate editor may seek others.

When the paper is returned to the author, he or she has several choices. If the paper is accepted without revision, then it is simply a matter of choosing the correct champagne. (Given the salaries of scientists, it is perhaps fortunate that this occurs rarely.) If revisions are required, then the author can choose to make the changes as asked, or can provide a detailed rebuttal explaining why they should not be made. The associate editor will evaluate the revisions and rebuttal, and at that point may proceed with publication, may ask for additional changes, or, in some cases, may require further review. Finally, if the paper is rejected, the author can decide to submit it elsewhere, can revise and resubmit it to *JRM*, or can appeal the decision of the associate editor. In the case of resubmissions, the process starts over. In the case of appeals, the paper will be reviewed by a different associate editor and different referees. On appeal, the second editor considers all reviews, rebuttals, and correspondence, and arrives at a final decision on publishing the paper. About half of appealed decisions are decided in favor of the author. On average, the review process requires 7.5 months from submission to acceptance; accepted papers are usually published within 5 months.

What Can You Expect?

As an author, what can you expect from the process of peer review at the *Journal of Range Management*? You can anticipate a rigorous evaluation of the quality of your product. Your manuscript must treat a topic that is appropriate and interesting, and in so doing, must offer original, reliable information, clearly presented. Roughly half of the papers submitted meet these criteria. Papers are rejected most frequently because referees and the associate editor believe they fail to meet standards for reliability, particularly in experimental design and execution. These problems frequently include inadequate replication of experimental material, confounding of treatments, and inappropriate procedures for measuring responses. Topics are judged uninteresting if they merely echo a well-established literature, if they are excessively parochial, or if they are largely irrelevant to important issues in range management.

Opaque writing rarely causes outright rejection, but often leads to major revisions. Although some editors and referees are willing to polish dull prose, authors are ultimately responsible for the clarity of their work. If good writing demands inordinate effort, get professional help—I am often surprised that scientists who actively seek statistical guidance in designing and analyzing their experiments wouldn't think of obtaining help in reporting them. If you believe working to improve your writing isn't a worthwhile investment, consider that most referees are far more forgiving of flaws in a clear paper than in a murky one.

In addition to rigor, you can expect fairness. You are entitled to a review that is unbiased, that evaluates your work solely on its merit. You are due a review that responds to your perception of the message implicit in your paper. For example, if you think the editor and referees have asked for a revision that is uncalled for or misleading, then you have every right to tell them so. I know of no

editors who will persist in requiring a change that an author can refute in a well-documented rebuttal. After all, the editors and reviewers are, by definition, your peers, not your superiors. In the end it is *your* paper, and within reason, should reflect your values and interpretations. Finally, you can expect a review that is as expedient as is consistent with thoroughness and reliability.

Everyone's Share

As a professional, what are you obliged to contribute to peer review? If you want to publish in refereed journals, you then are obliged to actively participate in the peer review process by providing a reasonable number of critiques of manuscripts. Your obligations are not limited to triage; you should strive to improve the quality of manuscripts, not merely sort them according to their quality. To that end, your comments need to be thorough, scholarly, and constructive. Even when rejecting a paper, you must clearly explain your objections, and suggest approaches that might remedy them. If nothing else, rejected authors should learn something from the reviewers. Finally, I emphasize that you must be prompt. If you are unduly burdened with requests for reviews, or have occasional scheduling conflicts, there is nothing wrong with begging-off and returning a manuscript to the associate editor. However, there is no excuse for a tardy failure to review. If you commit to reviewing by not promptly returning the paper, then get with it. As one of my colleagues said, it won't take any less time next week than this one.

The process of peer review belongs to all of us, and as such, should respond to individuals who believe that it isn't working properly. Evaluation of manuscripts at the *JRM* has drawn fire for several reasons, but the complaint I hear most frequently is that the process is inconsistent; that standards for acceptance vary among editors, and this variation leads to widely varying rates of acceptance. All of this is true. However, I think it comes with the territory of a diverse endeavor like range science and a subjective, pluralistic process like peer review. Any system that relies on many opinions to achieve judgments will be somewhat inconsistent in its outcomes. The only way to assure homogeneity of standards is to reduce the number of people making decisions, thereby distilling the variety of opinion they represent. Alternatively, rules for acceptance or rejection can be imposed from above. In the end, I think such efforts will lead to elitism, inflexibility, and the loss of a sense of collective responsibility for peer review. It is true that consistency is not far removed from fairness, but the appeal system should assure equitable treatment of authors who believe their work has been held up to unfairly inconsistent standards.

Honors for Review

This is not to say the system is perfect. However, I believe that the quality of the review system, as measured by its fairness, as measured by the quality of products that appear in the *Journal of Range Management*, is more or less directly proportional to the time and imagination that referees are willing to invest in their reviews. If we wish to improve the peer review system, if we wish to improve our *Journal*, if we wish to enhance the credibility of our profession, then we can do so by rewarding high quality participation in peer review. I think these objectives are sufficiently valuable to require that evidence of high quality reviewing become one of the criteria for promotion of range scientists. Such evidence should not be limited to a list of the journals one has reviewed for, but should include an evaluation of the thoroughness and scholarship of the reviews themselves. Promotion folders should contain reprints. They should also contain contributions to peer review.

Peer review at the *Journal of Range Management* is a system for enhancing the credibility of our profession by assuring that our products meet standards for quality. In this process, we should be able to expect fair and thorough treatment. We are professionally obliged to provide it.