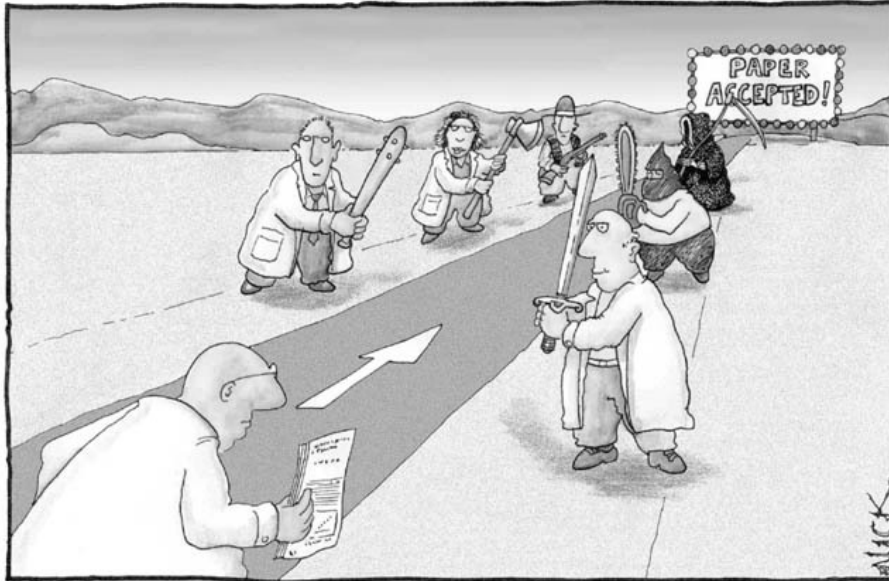


**Southwestern Association of Naturalists  
2009 Student Workshop:  
How to Write & Publish a Scientific Paper**  
(with emphasis on *The Southwestern Naturalist*)



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

**Guest Speakers:**

Dr. Michael Kennedy (Managing Editor, *The Southwestern Naturalist*)  
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Dr. Troy Best (Editor, *The Southwestern Naturalist*)  
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Dra. Celia López González (Associate Editor, *The Southwestern Naturalist*)  
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**Student Advisory Committee:**

*Please feel free contact us regarding any student-related concerns.*

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- I. Getting Started (*How to Write & Publish a Scientific Paper*, see Day 2006)
  - A. What kind of paper do you want to write?
    1. Research (observational, experimental, theoretical)
    2. Literature Review
    3. Letters & Responses
    4. Notes (natural history observations, species descriptions)
    5. Other: book reviews, opinion pieces, editorials
  - B. What is the scope, what is the purpose, who is your intended audience?
  - C. The peer-review process: How it works
    1. Editor receives manuscript and decides whether it is appropriate for publication in the journal and whether the authors followed the appropriate submission guidelines.
    2. Editor sends article to 2-3 referees who are experts in the area of study
    3. Referees provide an evaluation of the manuscript, including strengths, weaknesses and suggestions for improvement.
    4. The editor then evaluates:
      - a. referee comments
      - b. his or her own opinion of the manuscript
      - c. how well manuscript fits context and scope of the journal
      - d. passes decision to authors:
        - i. reject without review
        - ii. reject manuscript, but advise revision and resubmission
        - iii. reject manuscript outright after review
        - iv. accept manuscript with suggested revisions
        - v. accept manuscript unconditionally (rare)

## II. Authorship:

- A. Who deserves authorship on your paper? When do you deserve authorship?
- B. Which is more important for your career: single-author, first-authorship on multiple-author papers?
  1. ECOLOG listserv 2003 dialogue. ESA has a Code of Professional Ethics “Publications” section (here is a relevant excerpt):
    - a. Researchers will claim authorship of a paper only if they have made a substantial contribution. Authorship may legitimately be claimed if researchers
      - i. conceived the ideas or experimental design;
      - ii. participated actively in execution of the study;
      - iii. analyzed and interpreted the data; or
      - iv. wrote the manuscript.
- C. Discuss authorship with all parties at the beginning of a project, when someone joins your project, or when you join someone else’s project. The more up-front discussion about authorship, the better.
  1. Could all authors present a poster or talk and answer questions regarding the research project?

### III. Choosing a Journal

#### A. Rank your top 5 journals.

1. Read *recent* issues of relevant journals
2. Determine the mission, audience, scope and types of contributions accepted for each journal that seems appropriate.
3. Make a list of pros/cons for each journal. Where does your paper fit best?

#### B. What about 'prestige', citation frequency and relative circulation statistics?

1. Impact factors: a measure of citation in scholarly journals (Garfield 2006, Aarssen et al. 2008, Olden 2007)
  - a. Calculated as the number of times articles published in 2007-8 were cited in indexed journals during 2009 /# citable items in 2007-8
  - b. The frequency with which an "average" article is cited in a given period of time
  - c. Should be used as a journal descriptor, *not* for evaluating individual articles
  - d. Bias against taxonomic and natural history journals
    - i. Lively debate in *Nature* regarding the impact factor vs. taxonomy and biodiversity research (Valdecasas 2000, Krell 2000, Garfield 2001, van der Veld 2001, Krell 2002, Werner 2006)
    - ii. Current method of species description citations (species name and author) are not indexed by ISI
    - iii. many natural history and museum journals are not indexed in ISI or are not scanned/online.

#### C. Publication Costs

1. Research page charges and any figure/table charges associated with publishing in a specific journal.
  - a. It often costs extra to publish figures in color.
  - b. Many journals have fee waivers for students or authors with little or no funding for publication costs.

#### D. Online Material

1. Many journals now offer associated online content to accompany published articles online. See if this applies and decide how you might benefit from publishing additional material online.

### IV. Preparing Manuscripts:

#### A. There are many excellent resources for scientific writing, but that is beyond the scope of this workshop (Day 2006 - english, Day 1990 - spanish).

1. If publishing in a journal that is not in your native language, consult style manuals and writing resources for commonly misused phrases and spellings.

- B. Make it as easy as possible for the editor(s) and referees to process and evaluate your manuscript!
  - 1. Carefully follow the *Instructions to Authors* of your selected journal. Journals have *very* specific formatting, style and citation requirements, follow them *exactly!* Read current issues to see examples of journal style.
- C. Solicit feedback
  - 1. Start a peer-review group with fellow students, have your paper read at a lab meeting or reading group.
    - a. How to review a paper (Benos et al. 2006, Seals & Tanaka 2000)
  - 2. Have your advisor and other professors give you feedback.

## V. Submitting Manuscripts

- A. Follow Instructions to Authors *very* carefully
  - 1. Do not give editors and referees any reason to reject your manuscript on the basis of having NOT followed their instructions for submission
- B. Cover Letter: always include a cover letter with the manuscript that includes
  - 1. To which journal the manuscript is being submitted
  - 2. Is it a new manuscript, or a requested revision (to which editor)?
  - 3. If multi-author which is the author of correspondence, and their current address?
  - 4. Suggestions for editors and possible reviewers (or which reviewers NOT to include because of conflicts-of-interest).
  - 5. Why are you submitting the manuscript? Why to this journal?
- C. Packing and Mailing
  - 1. Many journals allow electronic submission
  - 2. If mailed, be sure to package the manuscript carefully
    - a. use a strong, protective envelope
    - b. do not staple your manuscript
    - c. request delivery confirmation or use registered mail from the post office
- D. The Editor: The job of the editor is to make scientific decision about what to publish in his/her journal.
  - 1. Always interact with the editor respectfully, and defend your work scientifically (not emotionally or antagonistically).
  - 2. The editor is a mediator between you and the reviewers, but he/she makes the final decision on whether to accept or reject your paper
- E. The Decision:
  - 1. What to do if your manuscript is rejected? (Curran-Everett 1999a-b, Kelner 2007). There are different categories of rejection:
    - a. Returned without review
      - i. The editor has decided your article is not within the scope of the journal. *OR*

- ii. The manuscript was poorly prepared and/or the author did not adequately follow the instructions to authors. Revise and resubmit, if allowed (though hopefully you will submit a well prepared paper).
  - b. Revise and Resubmit ☺
    - i. This means that with substantial revisions the editor will allow you to re-submit your article to the journal for peer-review. Carefully address the reviewers and editor's comments before re-submitting.
  - c. Rejected Outright
    - i. If the article is rejected outright, begin the revision process for submitting to an alternate journal from your list.
- 2. What to do if your manuscript is accepted? ☺ There are several types of acceptance:
  - a. Accepted unconditionally: Your article has been accepted as submitted; this only happens to about 5% of submitted articles
  - b. Accepted with modifications:
    - i. minor revisions: make them promptly and return to editor
    - ii. major revisions: evaluate each carefully
      - i. make all revisions you can reasonably accept
      - ii. for those you cannot reasonably accept, provide editor with point-by-point statements of how you have addressed each of the reviewer comments
- 3. What if I disagree with a reviewer comment or reason for rejection?
  - a. Address all such concerns to the editor
    - i. Write a point-by-point rebuttal to the reviewer(s) in a manner that is not antagonistic. OR
    - ii. If major, consider submitting to another journal
      - i. *always* revise and consider reviewer comments when resubmitting, even to another journal. Use comments as a way to improve your paper.
      - ii. Even if your manuscript remains rejected, the editor may provide you with additional explanation for your rejection and how to improve your paper, which can be used to successfully revise your manuscript for another journal.

## VI. Revising and Proofing Manuscripts:

### A. Revising:

1. Use reviewer comments as constructive criticism. These comments contain valuable information you can use to improve your paper!

### B. Proofing:

1. Authors are sent a proof of the manuscript as it will be published
2. It is YOUR responsibility to thoroughly check for errors in spelling, results (#'s), figures, etc.

## VII. The Southwestern Naturalist

### A. History of *The Southwestern Naturalist*

B. Aims & Scope: *The Southwestern Naturalist*, a publication of the Southwestern Association of Naturalists since 1953, is an international journal that promotes conservation and biodiversity of the southwestern United States, Mexico, and Central America. Published quarterly, it reports original and significant research in any field of natural history.

### C. Types of Publications

1. Feature articles: scientific investigations
2. Notes: short communications (e.g., behavioral observations, range extensions, and other important findings that do not in themselves constitute a comprehensive study)

### D. Requirements for submission:

1. Publication is in English.
2. All manuscripts (feature articles and notes) require an abstract in both English and Spanish.
3. Guidelines for preparation of manuscripts are available on the web at: <http://www.biosurvey.ou.edu/swan/swnat.html>

### E. Page Charges:

1. Pages charges for publication in *The Southwestern Naturalist* currently are US\$80 per page.
2. Authors with little or no publication support may request a waiver of any or all page charges for up to eight pages per publication if one author is a member of the Southwestern Association of Naturalists from the time of submission to publication.

### F. Advice from editors

1. General advice for novice writers.
2. Common mistakes or reasons for rejection

### Useful Links:

*Science Careers* Magazine by the journal *Science*: <http://sciencecareers.sciencemag.org/>

Publishing: Advice & Information on About.com's Graduate School Forum:

[http://gradschool.about.com/od/publishing/Publishing\\_Advice\\_and\\_Information.htm](http://gradschool.about.com/od/publishing/Publishing_Advice_and_Information.htm)

The Southwestern Naturalist: <http://www.biosurvey.ou.edu/swan/swnat.html>

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