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How to Publish Your Research: Tips for Junior Researchers

The publication process can be especially daunting for new authors who must navigate the intricate submission steps and the "mystery" of peer-review. Early career authors are also under substantial pressure to publish to develop their professional portfolio. Is there anything that new authors can do to maximize the chance that their article will be accepted? The answer is, "Yes!" The following tips and suggestions are based on a workshop held by a panel of editors and reviewers at the BOTANY 2018 meeting in Rochester, Minnesota, on July 22, 2018.

The Editorial Perspective

In order for your manuscript to be accepted and published, you, the author, must first understand what editors are looking for. Because more manuscripts are submitted to journals than can be published, editors have to carefully discriminate among submitted manuscripts to identify those of high quality that also match the scope and audience of the journal. Understanding what editors are looking for will greatly increase your chances of having your manuscript selected for peer review and possibly publication.

Upon receiving a manuscript, an editor immediately asks two questions. Your goal is to convince the editor that the answer to these two questions is *yes*.

1. Is the paper appropriate for the journal?

- As an author, you need to do your background research on the journal to make sure it is a good match for your manuscript.
- Know your target journal: Does your manuscript align with its aims and scope?

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- What types of papers have already been published there? Are they similar to yours?
- How are existing papers framed? What is the context of their work?
- Who is the audience of your paper? Is this journal one where your work would be read and cited?
- Look at the editorial board; is there a member with the necessary expertise to handle your paper?

2. Should the manuscript go out for review? To answer this question, the editor will look at the Title, Abstract, and Cover Letter.

- The title should be succinct and descriptive (approximately 16 or so words).
- The abstract must justify the study and explain why it is needed and interesting; often this is the only text that the editor will review (and not the entire manuscript).
- Is the abstract, and the paper itself, in comprehensible English? Is it evident that the author has worked hard to polish the writing?
- The cover letter is critical to communicate the importance of the study to the editor, who may not have expertise in your particular field of study. Its purpose is to (1) tell the editor *why* your paper is suitable for the journal, and (2) explain how the work *advances* the field. It should not merely reiterate the abstract, but must answer the following questions regarding your manuscript:

  What are the questions addressed or hypotheses tested?
  What is the major contribution of your paper to your discipline?
  How is this contribution of interest to the readership of the journal?

Tips for the Editorial Process

Based on our combined experiences of over 160 years serving as editors, authors, and reviewers for a variety of journals, we developed the following tips to maximize the possibility of acceptance of a manuscript in a peer-reviewed scientific journal.

A. Pre-Publication

- **Wait until you have generated a substantial data set** with a thorough analysis before submitting to a high-impact journal. Although there may be lots of pressure to publish, resist the urge to publish several small, frivolous papers (sometimes known as "least publishable units") just to increase your publication rate. At the same time, you do not need to include everything in a single paper; reviewers will not want to read an entire thesis with an abundance of supplemental tables. Instead, editors and reviewers want to see a big "take-home" message condensed within a cohesive, concise paper.
- **Take ownership of your research and consider how it will appeal to the general public,** even while you are still doing the study. If appropriate, take video and photos and keep a detailed journal of your research; this is especially valuable if your article will eventually be promoted on social media.

B. Finding the Right Journal

- **Submit to the right journal**: Carefully review the aims and scope of the journal, and look at other examples of what has been recently published. Is the journal the right "home" for your paper? Will it reach your intended audience? What is the average turnaround time? How is the journal perceived in your field? You can aim high for a specific journal, but always have

a back-up plan of other journals to consider if your manuscript is not sent for peer review or not accepted at the journal of your first choice.

- **If you are unsure if the journal is the right "fit", ask!** Contact the editorial office with any questions about whether your manuscript is appropriate, providing a compelling argument of why you think it is, and including at least the title and abstract. The editors may be able to offer advice for submitting a successful manuscript—or offer suggestions for alternative outlets for your work. This could save you time and trouble.
- **Avoid predatory journals**. In the search for an ideal journal, be aware of and avoid for-profit, online-only journals that promise rapid publication but have low quality. The purpose of these journals is solely for their own financial benefit, often charging either very low ($50-$60 US) or very high ($2000-$5000) fees. In addition, predatory journals typically advertise rapid publication, but their peer review is often a sham; such journals are not indexed in major services such as Web of Science. Predatory journals devalue science and can be detrimental to individual professional advancement; hiring and promotion committees are increasingly not accepting articles in predatory journals. Similarly, authors now need to think about whether articles they cite are from these sham journals. Predatory journals can be identified using Beall's List (https://beallslist.weebly.com) or Cabell's Blacklist (https://www2.cabells.com). Authors can also identify predatory journals using common red flags (see Culley, 2018). One caveat is that some new journals (especially in developing countries) may be unfairly identified as predatory, so you need to carefully research your choice of a journal.

C. Preparing Your Paper for Submission

- **Follow directions in the Instructions for Authors** for your chosen journal and prepare your paper as carefully as possible, especially if there are word limits, required formats to follow for particular article types, or other requirements (e.g., structured abstracts, minimum number of key words, data accessibility statements, author contribution paragraphs). Manuscripts may be returned without review if there are too many deviations from the author guidelines.
- **Seek feedback from others.** Make sure that your paper has been thoroughly vetted by other readers (such as fellow members of your laboratory) for content as well as for presentation. Typos, misspellings, and grammatical and punctuation errors signal to editors and reviewers that the paper is sloppy, and they may be disinclined to rate it highly (or in some cases, may even refuse to review it). A well-prepared and carefully written paper will keep editors and reviewers more favorably disposed toward your paper so they can focus on the paper's content; this can speed up the review process.
- **If you have any questions, contact the editorial office.** They are there to help you. The editorial staff works with all other individuals in the process (reviewers, editors, readers, the production team that will compose your article for publication, etc.), and they are a good resource for helping you succeed in the publication process.
- **Know your audience**. In particular, write the paper with your reviewers and readers already in mind. What would you think if you were reviewing this paper? As a reader, what information would you really like to know?
- **Tell a good story to hook readers and persuade them to read further.** Make the paper interesting to non-specialists in your field or those who work with different taxa. This may require that you think broadly beyond your own study system. Write your paper in such a way that people outside of your immediate area can appreciate it and apply what they have learned to other

systems. Address a consequential question in plant biology, evolution, ecology, or conservation that is relevant *beyond* your study taxon. This is where hard work on the introduction and discussion, with strong literature references, will pay off. How do your specific findings illuminate a broader set of questions or ongoing intellectual debates?

- **Use the most up-to-date and appropriate analytical procedures.** Some papers may be rejected simply because the analysis is perceived as not being as rigorous as it could have been. Reviewers will expect you to justify your choices of analytical methods and statistical tests, and provide a detailed description of each. Be sure to look at similar papers in your target journal to see how the data were analyzed.
- **Generate great figures!** A carefully constructed and effective figure can often communicate a difficult concept or result more easily and concisely than text. Figures make papers aesthetically interesting and appealing to reviewers and readers alike.
- **Make sure your data are archived and publicly accessible.** This is increasingly being required by many peer-reviewed journals and serves to advance your field (see Culley, 2017).

D. Submitting Your Paper

- **Prepare your cover letter with care.** If you have never done this before, ask other researchers for examples of cover letters from their accepted papers, especially for the journal that you are targeting. See above for more information.
- **Suggest five appropriate reviewers** and not just the obvious ones in your references, if the journal allows reviewer suggestions. This helps the editor find reviewers in a timely manner to speed the review process. Be sure that none of your suggested reviewers have conflicts of interest (e.g., a former or current mentor or advisor). If you are unsure, do not hesitate to ask an editor.
- **Look at the Associate Editors of the journal and suggest someone** who might be appropriate to handle for your paper—that also helps facilitate the process.
- **Once you have submitted your paper—congratulations!** Now the wait begins. Be patient, but also do not be afraid to "check in" with the editorial office if the review process seems to be taking a long time.

E. After Peer Review

- After receiving your reviews, take a deep breath, and wait at least a day before responding if they are negative (and longer is probably better). In some cases, you may understandably be upset, but wait until you can consider the reviewers' comments objectively. Immediate responses in the heat of the moment do not generally fare well with the editorial staff and the reviewers. Once you have completed your revision, construct a careful cover letter that provides a detailed description of how you responded to each point raised in the reviews. If you disagree with a reviewer's request or criticism and choose not to make a change to the manuscript, carefully explain your reasoning (see next bullet point). Point-by-point responses, even when you do not wish to make a change in an area, make the evaluation of your revision more efficient.
- The reviewer is always right (even if they are not actually right). If your paper was not accepted but revisions are requested, look carefully at the reviewer comments. If you disagree with any comment, provide a constructive and polite response; remember that the original reviewer may be asked by the editor for his or her assessment of your response. Even if you disagree with a comment, try to understand what the reviewer's issue might be to determine what effort is needed (i.e., put yourself in the reviewer's shoes); make at least some effort to address it. One effective response is to modify the text for

clarity if there appears to have been some confusion. Remember that the review process allows you to benefit from the expertise of your reviewers, who have typically invested significant time and effort to help you publish the best possible version of your research.

- Revise with the fewest number of changes. A drastic change to one part on the manuscript may inadvertently affect the flow and comprehension of the rest of the paper. Thus, always be sure to read your paper from start to finish after you have completed your revisions to make sure that everything still flows and makes sense. Also, double-check tables and figures to make sure they agree with the revised text.

F. Post Publication

- Put together a press package using information you gathered earlier. This could include a layman's summary of your study, as well as suitable, non-stock images and graphics. Journalists often choose to write about papers because of great pictures!
- Promote on social media. Don't be afraid to tweet an announcement about your new paper! Ask the journal staff what they might do to also help promote your article.

If you carefully follow these tips, you'll soon be on your way to a strong publication record. Although the process of publishing your work can be arduous, the combination of your efforts along with the those of the reviewers and the editors will ensure that the final article is of high quality and high impact. Thus, our overall message here is: Don't Give Up. Even if your paper is rejected from a journal, think carefully and objectively about why, make appropriate modifications, and submit to another journal. Also, there is considerable stochasticity in the review process, so remember the old adage "Try, Try Again." The experience publishing your work will not only build your skills as a communicator, but will strengthen your science, which benefits the entire community.

Literature Cited

Culley, T. 2017. The frontier of data discoverability: Why we need to share our data. *Applications in Plant Sciences* 5(10): 1700111. https://onlinelibrary.wiley.com/doi/abs/10.3732/apps.1700111

Culley, T. 2018. How to Avoid Predatory Journals When Publishing Your Work. *Plant Science Bulletin* 64(2): 96-111.

https://cms.botany.org/file.php?file=SiteAssets/publications/psb/issues/PSB-2018-64-2.pdf