Navigating the Publication Process

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Peer reviewed papers

Why publish in peer reviewed journals:

- Peer reviewed papers are the standard by which many careers are judged
- We get taxpayer money to perform our research – we must publish it
- It's important for us to advance science – that's why we do research

Topics

1. Co-authorship guidelines
2. Choosing a journal
3. Journal editorial process
4. Cover letter
5. Response to reviews
6. Marketing your paper
7. Peer-reviewing a paper

1. Co-authorship guidelines

Potential for problems in co-authorship:

- Peer-reviewed papers are the currency in academia
- The field of conservation research is becoming more competitive (there is great incentive to increase publication totals)
- Synthetic, interdisciplinary, and large-scale studies are becoming more common
- Multi-author papers have become the norm in ecology
  - Studies with >5 authors are now common
- *All of the above mean that you need to pay attention to co-authorship issues*

General rules of co-authorship

There is no universally-accepted rule. In general, an author should make a substantial contribution to **at least** one of following:

- conception and design of the project
- analysis and interpretation of research data
- drafting significant parts of the work or critically revising it so as to contribute to the interpretation.

An author should contribute to editing the paper, and approve of the published version

Common problems, and some suggested solutions

- 'Gift' authorship
  - *This is unethical and against the rules*
- Intellectual contributions going unacknowledged (often unintentionally)
  - *Keep good meeting records*
- Roles changing as project evolves
  - *As above, keep good records and revisit authorship as necessary*
- Someone agrees to make a contribution and then doesn't
  - *Ask the person if s(he) still wants to be an author and give a reasonable deadline; if (s)he doesn't come through, politely say you had to go ahead without him/her*
- Quid pro quo authorship on multiple papers, with very little contribution in each others' papers
  - *This is unethical and against the rules*
- A paper evolves such that co-authors disagree with conclusions
  - *Can get very difficult; ideally paper can be written so the author can live with conclusions, otherwise dissenting authors may want to refuse authorship*

More common problems, and suggestions for action

- Technical contributions can be intellectual contributions as well (e.g. statistical analysis)
  - *If it is at all both, the person deserves to be an author*
- Students sometimes underestimate intellectual contributions of supervisor
  - *Keeping good records of meetings can help out; note that development of ideas via meetings/conversations is important*
- Handing over a lot of data – the data collector may (or may not) be sacrificing a future paper
  - *See if it is possible to ask the person to contribute in some other way to meet authorship criteria*
- Sometimes contributions get revised out of a paper
  - *If the contribution was substantial enough to merit authorship (on the old version), then the person should be credited*

Checklist to determine if you should be a co-author

- If your contribution was included as a byline in the paper, how would it look?
- Would you feel comfortable presenting the work?
- Do you agree with the work?
  - *Sometimes is may be better to decline authorship*

General author order

- First author: person who wrote the first decent draft; person who put in the most work
  - *PhD students are typically first author on any thesis chapters published*
- Middle authors: listed in order of diminishing effort
- Last author: typically, the overall project coordinator

General ways to avoid co-authorship conflict

- Agree early on contributions and co-authorship
- Get authorship agreements in writing if possible (e.g. send an email to confirm), and keep good notes of meetings
- Re-visit peoples' contributions from time-to-time
- Pay careful attention to the flow and exchange of ideas
- If someone provides a tonne of data, you can invite the person to make an intellectual contribution (e.g. interpretation, paper revision)
- Do not add or delete an author without that person's consent (unless the person has not done the promised work)
- If a situation is ambiguous, err on the side of generosity
- Make sure everyone signs off on final version before submission

2. Journal Choice - considerations

- Journal audience
- Impact factor and other impact measures
- The strength of your paper, and your timelines (are you willing to aim high with higher risk of rejection?)
- Average review time and reputation
- How often your paper cited the journal

Impact factor and other measures

- Impact factor: mean number of citations per paper in 2 preceding years
  - Can be skewed (some journals have a few highly-cited papers)
  - Is field-dependent
- Important considerations before picking based in impact factor:
  - Are the highly-cited papers in your field?
  - Do the papers you read (and cite) often cite this journal?
- There are other measures

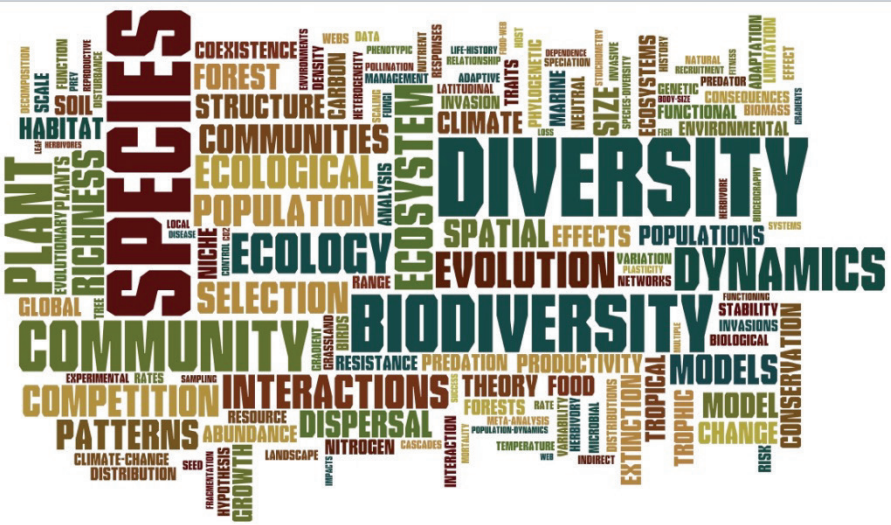
2. Journal Choice - considerations

- Geographic location (Aus. vs. European vs. NA regional journals)
- Page charges, open access policies
  - Make sure you read these carefully (e.g. re. colour images)
- Manuscript size restrictions
- Editorial board
- Diversity of your publications, and your career goals
  - Impact factor is great but a more specialized journal may garner more citations

Key words - Theoretical Journals

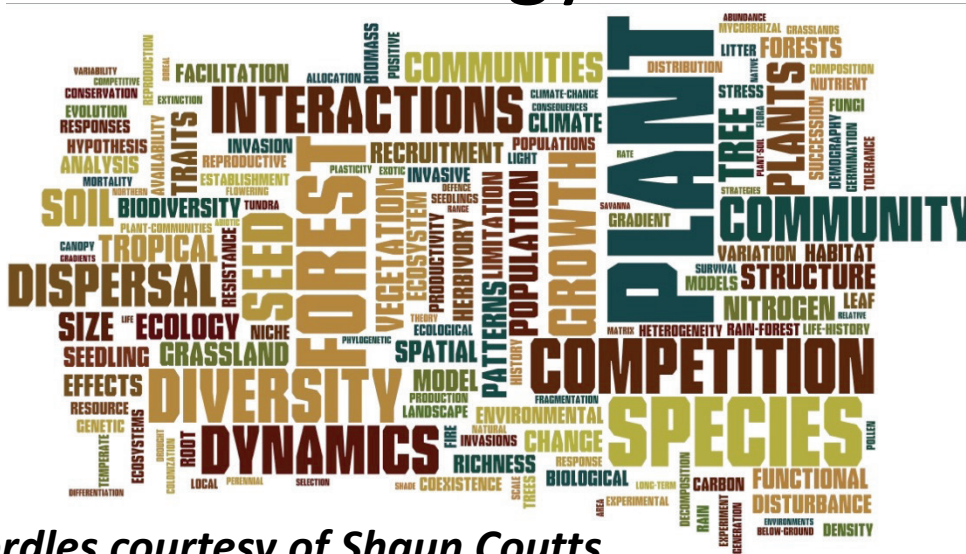
Ecology

Ecol. Letters



Am Nat

J. Ecology



Wordles courtesy of Shaun Coutts

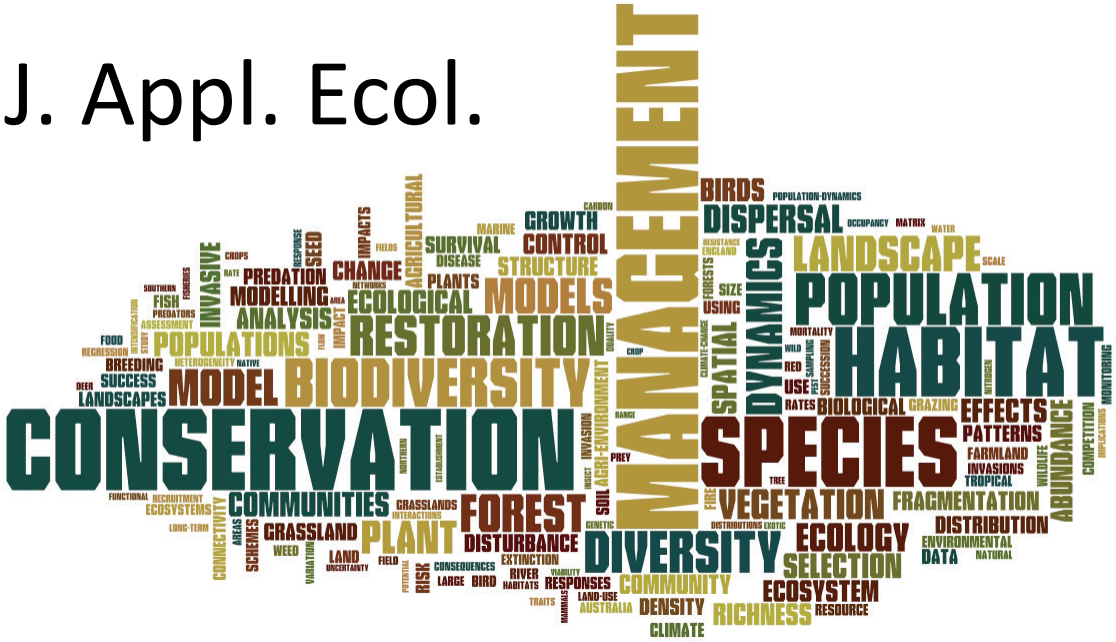
Applied Journals

Cons. Biol.

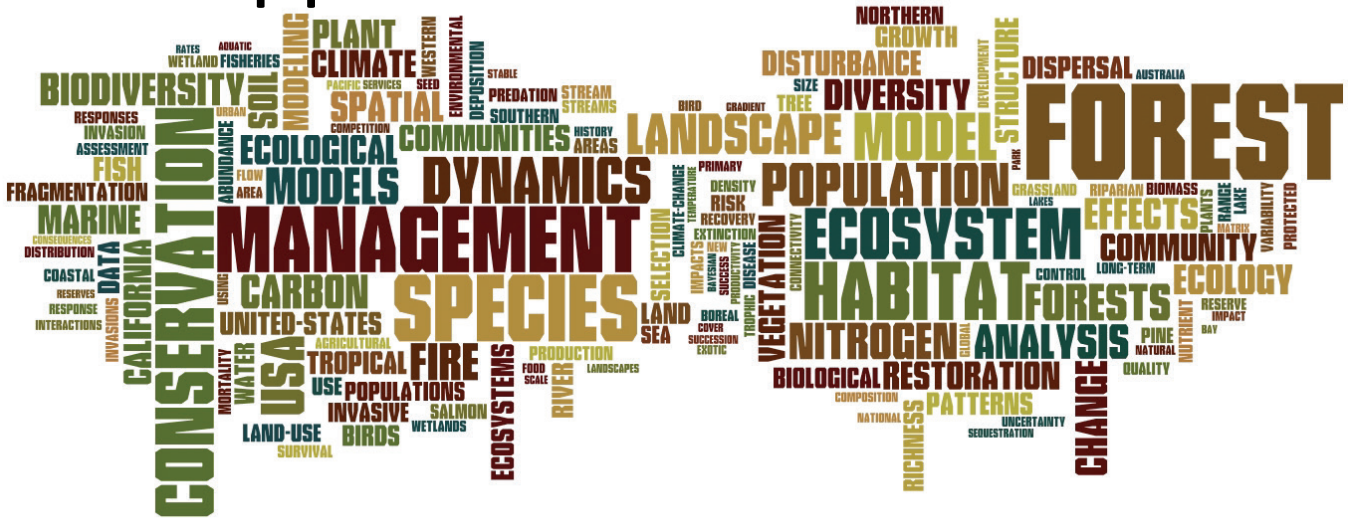
Biol. Cons.

Applied Journals

J. Appl. Ecol.



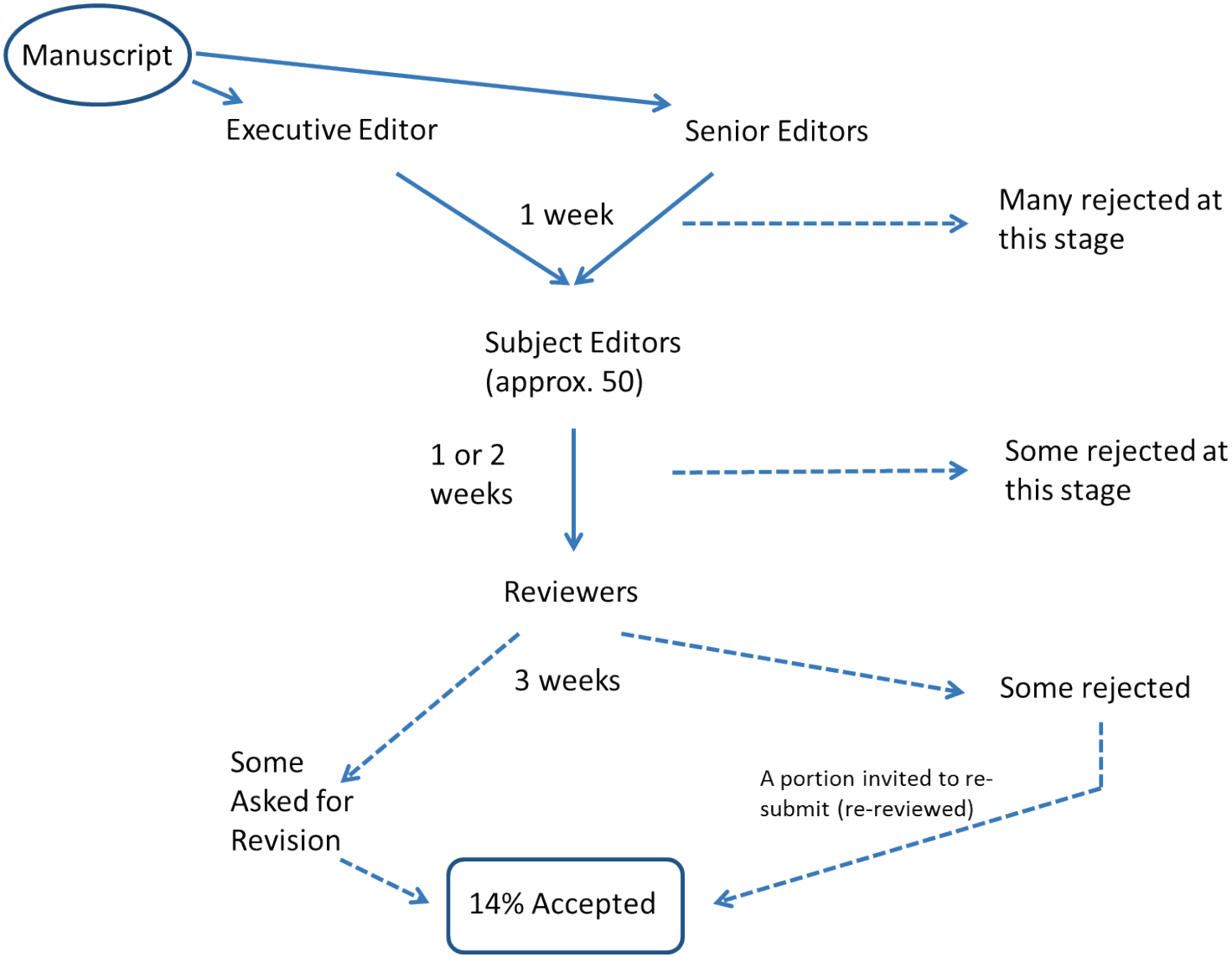
Ecol. Appl.



3. Journal Editorial Process

- 3 types of editors: Senior, Associate (subject), and managing
- Senior editors: usually 1-5; may get paid; may see hundreds of papers a year
- Associate editors: 10-50; see about 15-20 papers per year
- Typically 2-3 reviewers per paper; I aim for a mix of recommended/not, early/mid/later career, gender balance, and most importantly complementary skills

Editorial Process at an applied ecology journal



4. Initial Cover Letter

- Letter to editor - explains relevance of paper
- Opinions vary re. its importance
- Clearly states main result and its significance
  - *Shouldn't just repeat abstract*
- May discuss extenuating circumstances (e.g. word length)
- Journals may require specific content

Cover letter – a simple, general format

- ~1 page
- Clearly 'sells' paper as important
- Make sure to include all journal-specific info

Dear [Chief editor's name],

First couple of sentences outline general issue, why it's important. Third sentence talks about the key gap in current research/understanding.

First sentence talks about how your study fills the gap in a unique way ("In our manuscript, entitled '…', we do this and this"). Second sentence – your key finding(s), in stark and simple terms. Third, clearly state the unique contribution represented by these findings. Fourth, state again why this all matters.

First sentence, note why you chose this particular journal, and why you expect your paper to be highly read/cited. Next sentence(s) – extenuating circumstances and journal-specific information (e.g., word length, conflict of interest statement, reviewer suggestions, etc.).

Polite statement about how you look forward to the editor's response.

Sincerely,
Corresponding author, institution
Author 2, institution
Author 3, institution

Paragraph 1

- First couple of sentences outline general issue, why it's important.
- Third sentence talks about the key gap in current research/understanding.

Paragraph 2

- First sentence talks about how your study fills the gap in a unique way (“In our manuscript, entitled ‘…’, we do this and this”).
- Second – your key finding(s), in stark and simple terms.
- Third, clearly state the unique contribution represented by these findings.
- Fourth, state again why this all matters.

Paragraph 3

- First sentence, note why you chose this particular journal, and why you expect your paper to be highly read/cited.
- Next sentence(s) – extenuating circumstances and journal-specific information (e.g., word length, conflict of interest statement, reviewer suggestions, etc.).

Additional tips

- Include editor's name
- Include names of co-authors (especially if you're relatively unknown)
- Check the letter over carefully if re-submitting a rejected paper to another journal!
- Science/Nature have specific formats
- I will provide examples for different styles and tones of cover letters

A few words on reviewer choice

- Choosing top scientists only – may be too busy
- Top scientists – tend to focus on novelty, overall message
- Early-career – tend to focus on methodology
- Do a bit of research on them (e.g., ask your co-authors, look carefully at their publications)
- *Ethical considerations, and reviewer exclusions:*
  - *Follow journal guidelines carefully, and pick people at arm's length*

5. Response to Reviews

- Letter plus line-by-line references to how you dealt with the reviewer comments (sometimes separate, sometimes together)
- Often takes more time than the changes to the paper
- Can be very important

First Paragraph

- Establishes that you are grateful and that the paper survives the first acid test – it is novel.
- Here, and throughout, **you refer to the reviews, NOT the referees or reviewers**. This depersonalises any conflict.
- May wish to quote a bit from where a review says the work is exciting/novel/interesting.
- Complement the comments ("the comments were very helpful in improving the manuscript")

Re: Manuscript ID DDI-2009-0056 entitled ”The impact of genetics on conservation practice is negligible”.

We thank you for your interest in our paper. We thank (The handling editor/Dr A and the X other reviewers/the reviewers) for providing (ideas and corrections/thoughts and comments) that will improve this manuscript. (One/Two/All) of the reviews (indicated/believed) that the paper contained novel/exciting material that was worthy of publication. We are grateful for the opportunity to resubmit the manuscript.

Second Paragraph

- Identifies the 1-5 really big issues that stopped your paper getting the thumbs up
- These need to be summarised and answered in the one or two pages of the cover letter. The cover letter itself should not go to three pages.
- **This is the most important and difficult paragraph to write**. If you can tackle concerns head on, the paper may not go for further review.

“The reviews contained many useful comments and corrections. Overall there were Y major concerns. The first main concern (reviews 1 and 2) is that … . This is a good point and we have reanalysed the data accordingly. The second main concern (reviews 2 and 3) is that we have ignored a critical issue in our model – namely … . The way we have addressed this issue is detailed below. It is true that our model does not include all factors. While the reviews raise an important issue, we feel that this extension of our work is best left to another paper. Our critical point is that … . This new discovery/idea is robust to variation in …/is insensitive to the concerns raised by … .

Comments from reviewers are dealt with in detail (including line references) in the attached Response to Reviews document.”

Last Paragraph

“We hope that this significantly revised manuscript answers all the concerns contained in the reviews and we are grateful for the thought and effort the reviewers have put into these reviews. We feel that the revised manuscript is a great improvement.

Yours sincerely

Insert your signature”

Response Document

- Often (but not always) separate from cover letter
  - Have a look at format guidelines
- Address reviewer comments point-by-point
  - Quote the comments, then put your reply right underneath
- Try to do SOMETHING to address every comment
- Be as positive as possible
  - E.g. if reviewer is plain wrong, you can reply with "This comment may have arising because our original statement lacked clarity. We have clarified by adding X,Y,Z."

6. Marketing your paper

Hugh Possingham (The Nature Conservancy / U Queensland) Advice (via email):

1 once you have a nice pdf, make a list of 20-40 active researchers who you would like to read it

(some you will have referenced)

2 Find a recent relevant paper by them

3 write them a nice note that says:

"Dear Alex, I really enjoyed reading your paper in the sex lives of barnacles. I was particularly interested to see that they you can produce a quantitative prediction of which neighbour they are most likely to hook up with.

We have just written a paper about mussel mating behaviour (attached). We found that mussels …

[Option The next time I am in the USA/UK/Kenya is … - maybe you are going to the shellfish sexpo in Fiji in …

Yvonne Buckley (TC Dublin) Advice

- If you go to a conference and see a talk by someone on a relevant topic tell them about your paper and send it to them by email afterwards (important to follow up with an email as most conference conversations get forgotten as soon as you head home!).
- Tweet about it (directed at interested/influential tweeters in the hope they'll re-tweet), put it on facebook
- Some journals have marketing strategies – you might be able to plug into their machinery if it's a media-worthy story

A few additional tips

- ask co-authors to send the paper to one or two people (though try to avoid overlap)
- put it on your website/blog
- write a popular media article about it
- use university media coordinators
- use journal marketing tools
- use the internet to your advantage…

How success of your paper is measured

1) Citations

- Prestigious journals can lead to more exposure/citations
- Impact factor = one measure of journal prestige (average citations per paper over 2 years)
- H-index = number of YOUR papers with a given # of citations (i.e., H-index of 3 means 3 of your papers cited at least 3 times)

How success of your paper is measured

2) Other metrics

- Altmetrics = measure of 'informal' impact (mostly via social media)
  - Has not been convincingly linked to 'real' impact (e.g. scientific uptake, policy change, etc.)
- Media exposure
- 'Real' impact (e.g. in conservation management)
  - This is arguably the most important goal, but can be hard to measure.

7. Conducting a peer review

It seems like you are torturing the data until the model converges.

Reviewer #1: 'The project can hardly be described as high risk/high gain'
Reviewer #3: 'The project is clearly high risk/high gain

The paper descends into nonsense, never to return, on line 44.

The first problem in the 'Theoretical Analysis' section is trivial and requires no analysis, as any sensible schoolkid can identify its solution.

The manuscript is too long for what the authors have to say. However, additional text is required as outlined below

The paper is definitely exploratory, but probably not of interest to people other than the author.

7. Conducting a peer review

General advice:

- Treat others as you want to be treated
- If you can’t do a good job then don’t do it at all
- Be honest
- Try to be constructive, if it is bad say why
- Argue your case (accept or reject) in your comments to the editor
- Don’t directly indicate to authors whether you think paper should be accepted/rejected

Specific advice: When to say no to a review request

You have no time, or you are unlikely to be able to re-review the revised paper (e.g. you have an extended field season coming up).

You have no idea of the subject matter

- You will not know all the specifics of every paper, but this can be ok depending on the journal. Part of the author's job is to explain things to non-specialists.

General outline of a paper review

Para 1:
Main message/finding of paper.
Is this novel/interesting/useful. Good place to say something nice, or to say why you really don't like the paper.

General outline (continued)

Para 2 (3 and 4):

- Major issues, any unified theme to the issues.
- One paragraph per issue.
- Be as clear as possible in outlining the major issues, the authors (and editor) may not immediately understand why something is a problem.
- Any show stoppers should be clearly indicated **(BUT don't indicate you think the paper should be rejected/accepted)**
- Try to be constructive, if there are big problems give at least some suggestion of how they might be fixed.

Specific: General outline

Last bit:
Minor problems

Line by line for any minor things (some journals also let you do track changes).

Grounds for rejection

- Seriously broken stats/model
- Major logical flaw in the main argument
- A boring or trivial question (or the authors inability to convince you the question is exciting/useful)
- Not novel/compelling enough for journal (though be careful with this)

Additional advice

- Some detail is good, but don't write a tome – editors are busy and long-winded reviews can be counter-productive
- If there are lots of grammatical errors, note this (and some examples), but don't copy-edit the paper
- Read the paper twice – once to get an overview and once to correct the details. The first read may detect a fundamental flaw in arguments etc. and save time.

Additional advice

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Case Study: Joe's most recent paper

Timeline:

- Sept. 2014 – the idea: "De-extinction is being touted as a conservation tool. We can test its cost-effectiveness."
- Dec. 2014 – results from initial analyses – look very interesting
- Jan. 2015 – asked another co-author to come on

Case Study: Joe's most recent paper

Timeline:

- Jan. –March 2015 – waiting for data
- March 2015 – Cecil is born! Life intervenes
- May 2015 – Move from Australia – still waiting for data
- Aug. 2015 – Have data – new analyses started

Case Study: Joe's most recent paper

Timeline:

- Dec. 2015 – first draft – ask government partners to get permissions to publish (DO THIS EARLY!)
- Jan.-May 2016 - delays hearing back from co-authors… busy people
- June. 2016 – Draft done – shoot for Nature!
  - We were most worried about 1) Choice of analogue species, and 2) conveying uncertainty in prioritization and costs; 3) a reviewer who says we're being one-sided
- …agonizing wait…
- July 2016 – Nature: "Son, you're dreaming… BUT we have subordinate journals."

Case Study: Joe's most recent paper

Timeline:

- July 2016 – submit to new journal *Nature Ecology and Evolution*
- Sept. 2016 – hear back – revisions only
  - Their concerns: NOTHING we feared, want our arguments strengthened, not weakened (three reviewers with same viewpoint on de-extinction)
- Oct. 2016 – Government contact working to secure permission to publish

Case Study: Joe's most recent paper

Timeline:

- Nov. 2016 – government contact secures permission to publish
- Dec. 2016 – re-submitted
- Dec. 2016 – accepted
- Dec. 26, 2016 – proofs ("return within 24 hours") arrive
- Jan. 2017 – planning media with CU newsroom

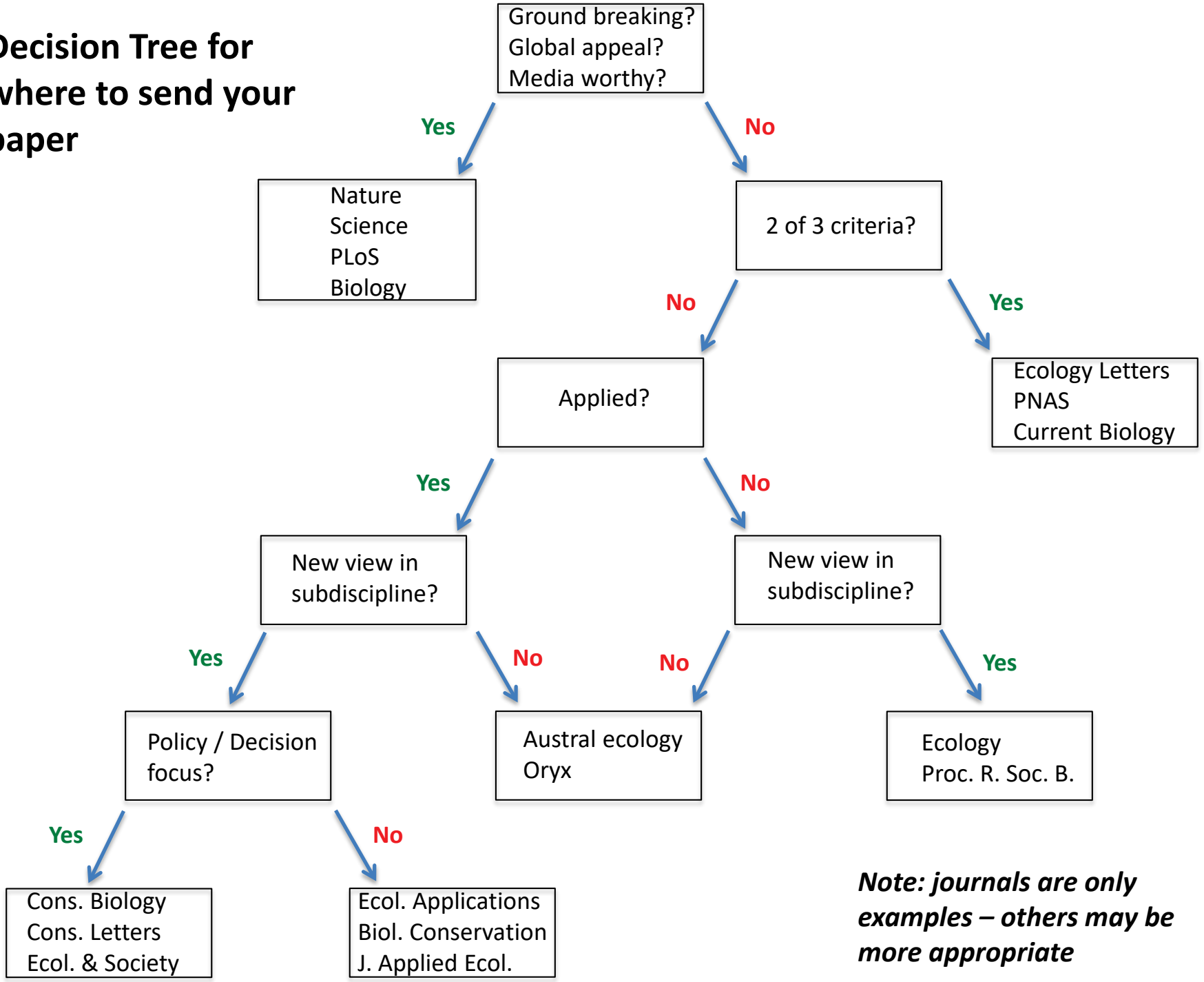
Helpful links

- Council of Science Editors: http://www.councilscienceeditors.org/
- BES guide to peer review: http://www.britishecologicalsociety.org/wp-content/uploads/Publ_Peer-Review-Booklet.pdf
- BES guide to getting published: http://www.britishecologicalsociety.org/wp-content/uploads/BES-Guide-to-Getting-Published.pdf




Appendix – journal choice

Decision Tree for where to send your paper



Note: journals are only examples – others may be more appropriate

Writing for a specific journal

- Ideally this starts at the planning (pre-writing) phase (esp. for Science/Nature paper)
- Good idea to cite the journal of choice at least a couple of times
  - Reviewers may be drawn from recent papers published in the journal
- Focus and style:
  - The more general the journal, the more general the framework you need for your paper
  - Have a look at recent issues of the journal for hints on style/tone
- Have a look at common key-words – they can help with both journal choice and writing for a journal