Peerage of Science

Janne-Tuomas Seppänen
ASERL webinar October 23rd
Do we need better peer review?

@peeragescience, @JanneSeppanen
Do we need better peer review?

It’s slow, inefficient, wasteful...

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Do we need better peer review?

It’s slow, inefficient, wasteful...
...but that’s nowhere near the worst of it.

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<table>
<thead>
<tr>
<th>Scenario</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A reviewer was incompetent</td>
<td>61.8%</td>
</tr>
<tr>
<td>A reviewer was biased</td>
<td>50.5%</td>
</tr>
<tr>
<td>A reviewer required you to include unnecessary references to his/her publication(s)</td>
<td></td>
</tr>
<tr>
<td>Comments from reviewers included personal attacks</td>
<td></td>
</tr>
<tr>
<td>A reviewer delayed the review so that he/she could publish</td>
<td></td>
</tr>
</tbody>
</table>
Fang et al 2011 – Infect. Immun. 79: 3855-3859

Impact factor vs Retraction index graph showing the relationship between the impact factor and retraction index for various journals.
Retractions / 100k articles

Year

2014: 60.4
Do we need better peer review?

YES, WE DO!

@peeragescience, @JanneSeppanen
Why does peer review fail?

@peeragescience, @JanneSeppanen
Why does peer review fail?
Why does peer review fail?
Can you fail as a peer reviewer?

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Why does peer review fail?

Can you fail as a peer reviewer?

If you do fail... so what!

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We need

• Motivated reviewers
We need

- Motivated reviewers
- Meaningful academic recognition: reward the best, punish the worst

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https://submit.peerageofscience.org
Onymous...

Deadlines...

Triple blind...

Author
Peers

original manuscript

Author
Open Engagement!
#OE

Peers

original
manuscript

Author
Open Engagement!
#OE

Peers

Author

original manuscript
Open Engagement!
#OE
Cross-evaluation!
peer-review-of-peer-review
Cross-evaluation! peer-review-of-peer-review

Peers

reviews

original manuscript

Author

PEQ=4.6

PEQ=1.2

PEQ=3.0

PEQ=3.7

&*#α!
Author reviews Peers original manuscript

Editors revised manuscript

PEQ=4.6
PEQ=3.0
PEQ=1.2
PEQ=3.7
Author

PEQ=4.6
PEQ=1.2
PEQ=3.0
PEQ=3.7

Peers

reviews

Publishing offer

Editors

revised manuscript

revised manuscript
Concurrent consideration!

Peers

Author

PEQ=4.6
PEQ=3.7
PEQ=3.0
PEQ=1.2

Publishing offer

revised manuscript

Editors
Does Open Engagement work?

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Number of peer reviews for manuscript:

- 1: 75
- 2: 50
- 3: 25
- 4: 12.5
- 5: 5
- 6: 2.5
- 7: 1
- 8: 0.5

Average number of peer reviews: 2.4
Does Cross-evaluation work?

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THE GRAVEYARD OF PAST DEADLINES

A.S.A.P.
LIKE, YESTERDAY
NOON-ISH
FIRST THING IN THE MORNING
FRIDAY AT 7 A.M.
NO LATER THAN TUESDAY 6:15 P.M. E.S.T.
Authors give reviewers 7.86 days to complete peer-review-of-peer-review

@peeragescience, @JanneSeppanen
Authors give reviewers 7.86 days to complete peer-review-of-peer-review

A review is evaluated in 2.96 days

@peeragescience, @JanneSeppanen
Authors give reviewers *7.86* days to complete peer-review-of-peer-review

A review is evaluated in *2.96* days

Stage completed in *4.53* days

@peeragescience, @JanneSeppanen
Authors give reviewers **7.86** days to complete peer-review-of-peer-review

A review is evaluated in **2.96** days

Stage completed in **4.53** days

28% on last day

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Peer review on manuscript
"Patterns of Genetic Variation in the endangered Harper's Beauty, Harperocallis flava"
by Peer 1156

Introduction

This study [1] addresses the characterization of the genetic diversity of an endemic and endangered plant species from Florida (USA). Authors combine classical markers, such as microsatellites, with data generated with new high throughput sequencing technologies. The results are interpreted in the light of the reproductive system (partially clonal species) and their implications for conservation management.

Merits

Results on the genetic diversity of populations and their connectivity may play an important role in the development of appropriate conservation plans for an endangered species. The authors used state of the art molecular technologies.

Critique

1) Sampling and molecular methodology lack a clear design and needs to be clearly explained.

Data presented in [1] comes from a mixture of collection years, extraction years and protocols, populations combinations, microsatellite loci sets, sequencing technologies and quality of biological material (some leaves decayed between collection and extraction). It is difficult to

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Peer review on manuscript

"Patterns of Genetic Variation in the endangered Harper\'s Beauty, Harpacticus flama" by Peer 1156

Introduction

This study [11] addresses the characterization of the genetic diversity of an endemic and endangered plant species from Florida (USA). Authors examine genetic markers, such as microsatellites, for conservation purposes. Questions: What is the reason for choosing these markers, and what are the implications for conservation management?

Methods

Results on the genetic diversity of populations and their connectivity may play an important role in the development of appropriate conservation plans for an endangered species. The authors used some of the new sequencing technologies.

Criticisms

1. Sampling and molecular technology lack a clear design and need to be clearly explained.

Data presented in this manuscript are subsampled from a mixture of collection years, extraction years, and protocols. Population combinations, microsatellite loci used, sequencing technologies, and quality of biogeographic material (some leaves) were compared between collection and extraction. It is difficult to understand the analysis without clear information on the combinations of these being used and how it can affect the analysis. Overall, there seems to be no logic on the methodology design used.

2. It appears that this data pool is unique to the authors, but the need exists to describe clearly how the data was generated in full detail with no ambiguities.

For instance, lack of replication and replication within the 2013 collection is mentioned in DNA degradation (i.e., 1451 DNA from individuals of 2011 collection was extracted from 3121 DNA individuals) and 2014 (no information is given about how many come from 2011 sampling). Forty-four individuals have 98% from 2013 extraction year and 55 from 2014 extraction year (1451). It could be from 2013 extraction year. These combinations are possible, and they were typed for microsatellites. So the question is what kind of DNA degradation are the talking about? Degradation within the biogeographic material? Degradation in the DNA extract from 2011? How was the RNA extraction stored? How did the leaves decay if they were stored at 4°C? It must be noted that a high prevalence of clonal reproduction will invalidate the effective population size estimates presented in the work, since they are based on expectations from models of random mating populations.

from linkage disequilibrium should be included in to corroborate this hypothesis.

It must be noted that a high prevalence of clonal reproduction will invalidate the effective population size estimates presented in the work, since they are based on expectations from models of random mating populations.

References


Additional comments for authors:

Line 239: The aim of the manuscript is clearly stated: "The aim is to contribute towards understanding the genetic diversity of the Harper\'s Beauty, Harpacticus flama.

Line 242: The significance of the study is well described: "The Harper\'s Beauty, Harpacticus flama, is an endangered species with a limited geographical distribution."

Line 245: The methodology is clearly presented: "The samples were collected from different populations in Florida, USA. DNA was extracted from fresh leaves using the QIAamp DNA Micro Kit (QIAGEN)."

Line 248: The results are well supported by the data: "The genetic diversity was assessed using microsatellite markers."

Line 251: The conclusions are well supported by the results: "The Harper\'s Beauty, Harpacticus flama, is genetically diverse and shows extensive genetic variation within populations."

Line 254: The limitations of the study are acknowledged: "However, the sample size for each population is limited, which may affect the accuracy of the results."

Line 257: The implications of the study are clearly stated: "The results of this study will be useful for conservation planning and management of the Harper\'s Beauty, Harpacticus flama."
Peerage of Science Essays

• Standardized structure (each section scored separately)
• max 1000 words
• Scientific writing standards!
Jan Engler

My work covers three main areas: dispersal ecology, population genetics and niche modeling. The general goal is to bring the different fields together in synergy to better answer questions in the field of evolutionary and conservation biology.

Publications profile
Professional Homepage
Google Scholar profile

Affiliations
- Alexander Koenig Zoological Research Museum, Germany
- University of Göttingen, Germany

Performance
53.1 / 70
show performance by field

Popularity
2 × 16.4
recommended by (show people)

Catalyst
0.0 / 0
reviewers (show people)

External
--- / ---
show evaluations by field

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Does Concurrent Consideration work?

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Does Concurrent Consideration work?

The Select

learn more...
Does Concurrent Consideration work?
Does Concurrent Consideration work?

3000+ journals
Open Engagement

Cross-Evaluation

Concurrent Consideration

BETTER PEER REVIEW
Peerage of Science

Thank you!

Janne-Tuomas Seppänen

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