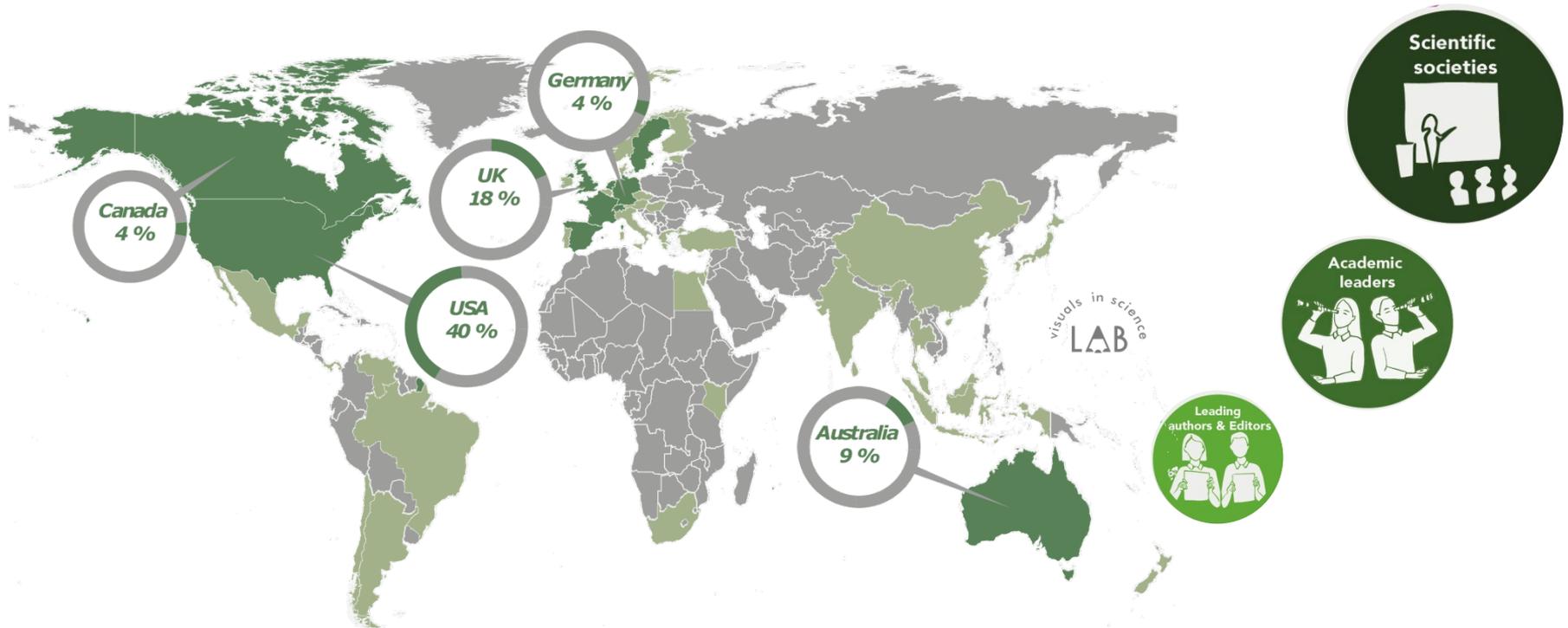


Overcoming implicit bias in ecology and conservation publishing



ATBC 2022 – Columbia
12 July 2022

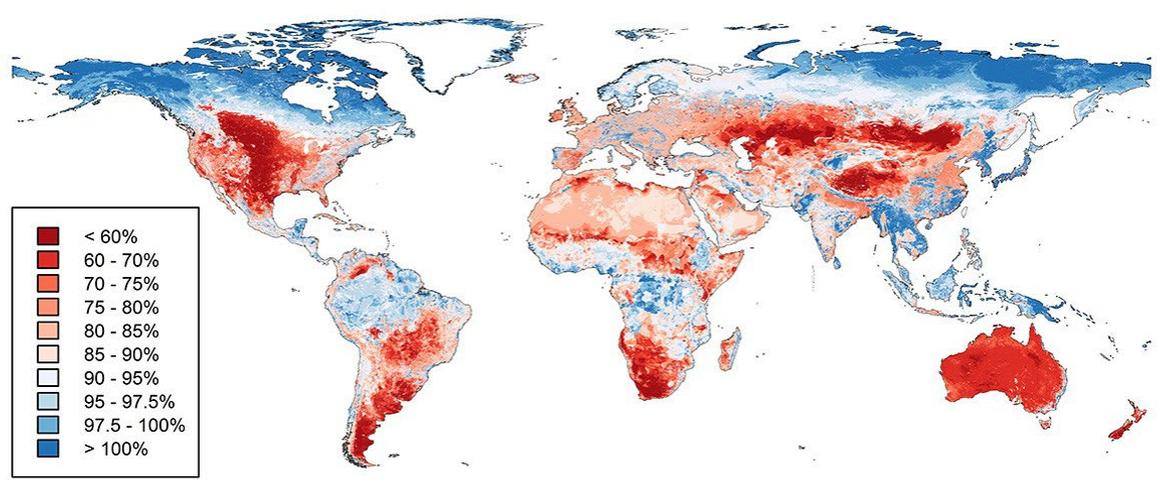
Dr. Bea Maas
Dpt. of Botany & Biodiversity Research
University of Vienna - Austria

DIVERSITY

The backbone of resilient ecosystems

Species diversity loss has reached unsafe levels across 58% of the world's land surface

*Newbold et al.
2016/Science*



Reconciling requires diversity

*e.g., Maas et al.
2019/BiolCons;
2020/Nature EvoEvo*



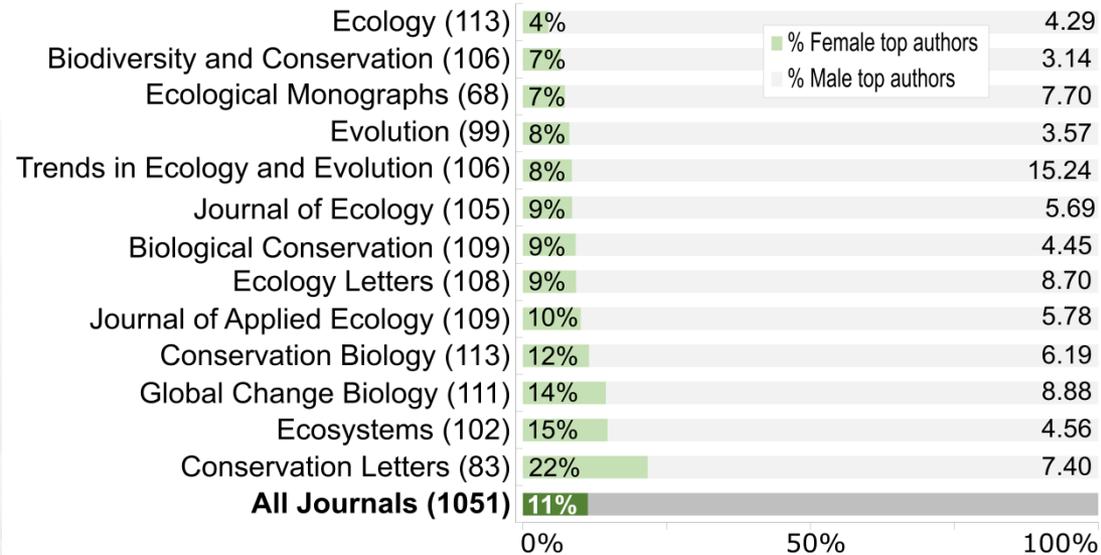
How diverse is the author- and leadership in ecology?

DIVERSITY IN ECOLOGY

Who are the top publishing authors?

METHODS:

- ✓ Selected 13 leading ecology journals (IF-based)
- ✓ Identified top publishing authors (~100/journal; WoS)
- ✓ Analysed ratios and trends (1945-2019)



**excluded some journals due to focus on original research/papers*

Maas et al, 2021 – Conservation Letters

DATA: 1051 top publishing authors
+ binary gender + country/affiliation
+ author position + citations + GDP/capita/country-pop.size

Total list of top authors: 11% women; > 75% from only 5 countries!

RESULTS

Gender and geographic bias among top authors

Lack of diversity among top-publishing ecologists

The study examined the gender and affiliations of 1051 top-authors, those scientists with the most publications in 13 leading ecology and conservation journals [1945 - 2019].



Reasons for and changes of biases over time?

RESULTS

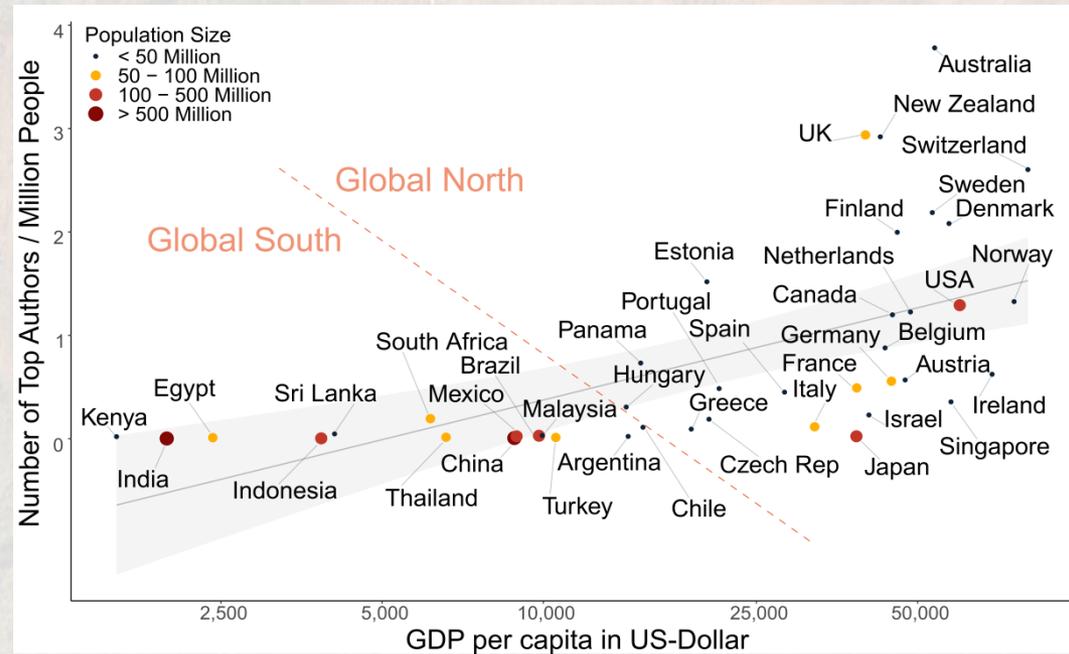
How does bias change?

OVER TIME: Women & minority countries (<2% TPA)

	♀	🌍
1945-1959	3%	3%
1960-1974	2%	3%
1975-1989	7%	8%
1990-2004	13%	20%
2005-2019	18%	25%
1945-2019	11%	17%

Significant changes in color (Chi2)

GDP/capita ~ no. of TPA (standardized by country pop. size)



- ❖ *Proportions of groups NOT related to journal identity or journal age*
- ❖ *Male TPA published more papers in more journals, more single-authors*

Biases seem to be related to more factors...

RECOMMENDATIONS

Promoting diversity & inclusion in ecology

Towards a Diverse and Inclusive Scientific Leadership

10 Key actions

1. Increase diversity and inclusion among collaborators and co-authors

2. Recommend new editors from under-represented groups (e.g. women) and under-represented countries



3. Promote team's ethnic and geographic diversity

4. Use alternative metrics in recruitment and promotions

5. Support scientist on parental leave

6. Identify, create and evaluate measures for enhancing and safeguarding inclusive scientific communities



7. Commit to current ethical guidelines

8. Increase editors from diverse backgrounds and under-represented groups and guidance on inclusive behaviour

9. Editorial boards should promote diversity, equity and inclusion

10. Increase transparency of publishing process (i.e. editor and reviewer assignment)



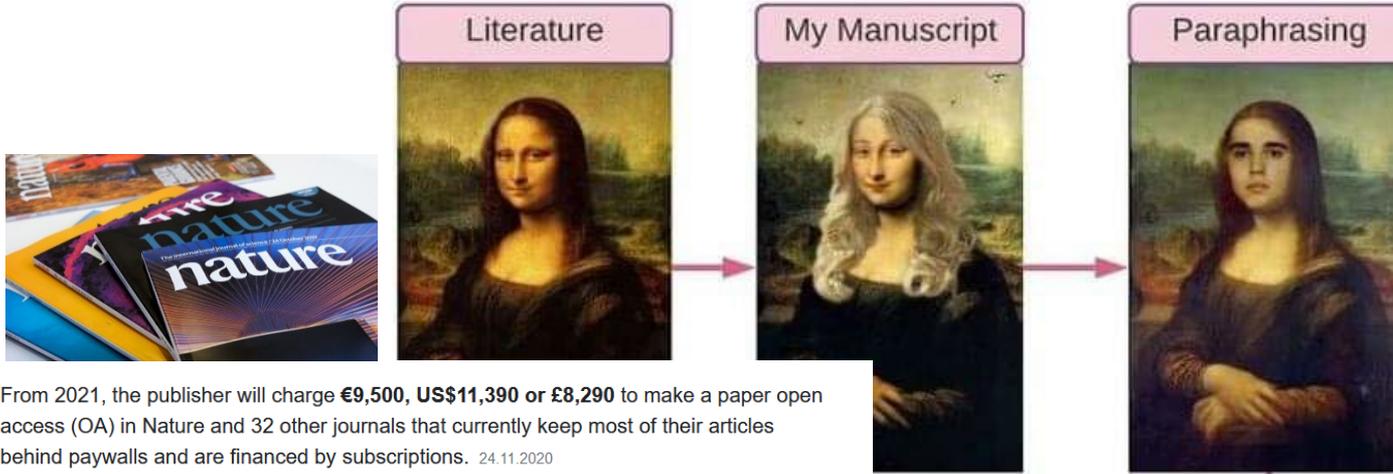
Academic leaders are assigned based on high publication rates

Leadership in academic societies is related to high publication rates

Maas et al. 2021 - "Women and Global South strikingly underrepresented among top-publishing ecologists" - Conserv. Lett

... and should be implemented immediately in scientific best practice

PUBLISHING FILTER?!



From 2021, the publisher will charge **€9,500, US\$11,390 or £8,290** to make a paper open access (OA) in Nature and 32 other journals that currently keep most of their articles behind paywalls and are financed by subscriptions. 24.11.2020

<https://www.nature.com/news>

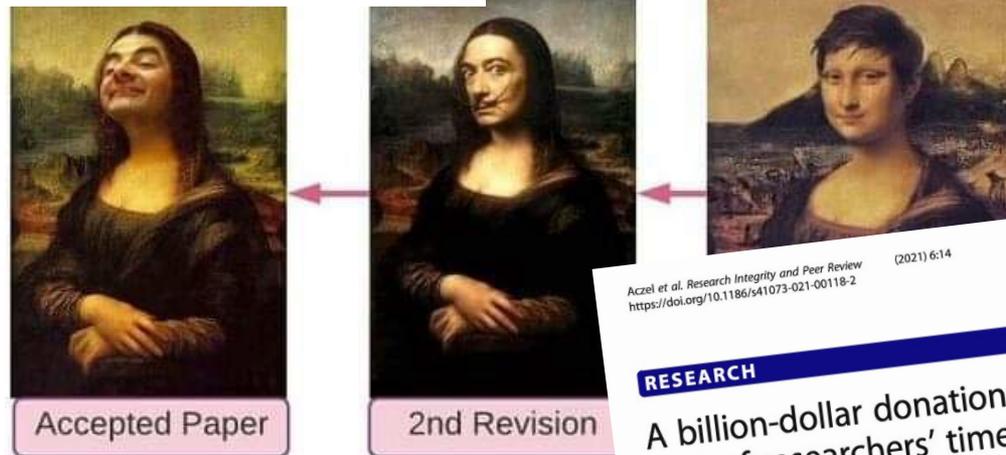
Nature journals reveal terms of landmark open-access option

Dr. Glaucomflecken
@DGlaucomflecken
Nature does open access



3,6M Mal angesehen

19-10-21 Jan. 22 · Twitter Web App



Aczel et al. Research Integrity and Peer Review
<https://doi.org/10.1186/s41073-021-00118-2>

(2021) 6:14

RESEARCH **Open Access**

A billion-dollar donation: estimating the cost of researchers' time spent on peer review

Balazs Aczel^{1*}, Barnabas Szasz^{1*} and Alex O. Holcombe²



Nic DiPalma @NicD... · 05. Sept. 20
Antwort an @iamscicomm
So hard to choose...
- Diversity, **inclusion**, equality
- Kill '**publish** or perish'
- Greater funding [accessibility]
- End **paywall** journals
- Bigger budget for communication
- Free donuts

Jade Barclay 🌈 · 04. Dez. 20
"How can I tell a tuberculosis patient... that I will pay more than 100 times her/his treatment to **publish** the study results?"

Nature's commitment to diversity & **inclusion**.. of those who can afford it??
Hmm

(Funny seeing this behind Forbes' new **paywall**)
forbes.com/sites/madhukar...

Research Integrity and Peer Review

ASSESSMENT & EVALUATION

How diverse is (y)our community?

❖ **Self-Assessment** – e.g.,

- Check author ratios
- Check hiring ratios
- Take Tests (Harvard IAT)
- Take Trainings (Services)

❖ **Key tasks** – e.g.,

- Alternative metrics
- Equal opportunities
- Transparency
- Climate Surveys

4. Evaluate

1. Self-Assess



2. Develop

e.g.,
double or
triple blind
reviews;
boards;
roles

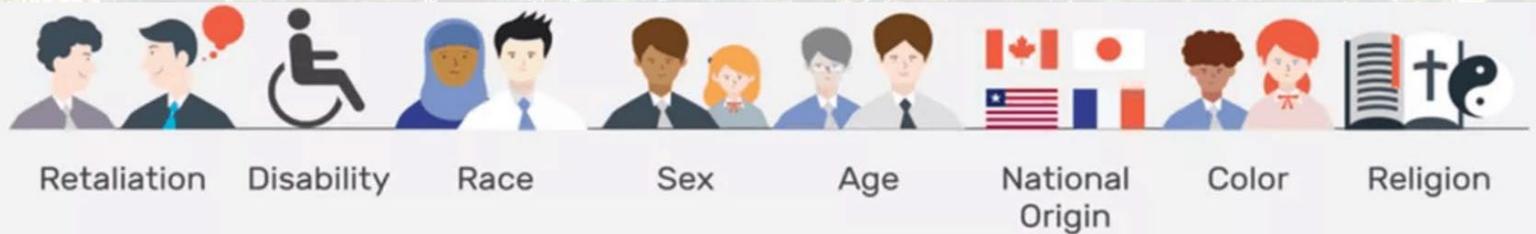
3. Implement

New practices should be accompanied by measures and evaluation

DIVERSITY ACROSS ALL LEVELS

Giving credit where credit is due

- ❖ **More diverse teams are more productive, innovative and impactful**
(e.g., Jimenez et al. 2019/Nature Eco Evo; Maas et al. 2020/NatureEcoEvo)
- ❖ **Biased top authorship may lead to biased leadership**
(e.g., Moher et al. 2018/PlosBiology; Potvin et al. 2018/PlosOne)
- ❖ **We are missing essential perspectives!**
(e.g., Maas et al. 2019/BiolCons; Nuñez et al. 2019/J.Appl.Ecol)



→ **Interdependency of SDG's** (e.g., Nash et al. 2020 - One Earth)

SNEAK PEEK – upcoming articles



Overcoming biased editorial boards in ecology

Hayat Mahdjoub*,
Rassim Khelifa, Martin
A. Nuñez & Bea Maas

→ Submitted article demonstrating gender and geographic **biases in editorial boards** across leading ecology journals – suggesting reforms to overcome biases and promote DEI in ecology and conservation publishing



GLOBAL SOUTH LEADERSHIP TOWARDS INCLUSIVE TROPICAL ECOLOGY AND CONSERVATION

Carolina Ocampo-Ariza et al.

- Suggestions for improving inclusion are mostly directed at Global North
- Global South faces unique challenges for diversity, equity and inclusion (DEI)
- We propose ten key actions for Global South leadership in improvements for DEI
- Manuscript is also available in other languages in the supplementary material.

WHAT DO YOU THINK?



**SOCIAL EVENT ON DEI:
ROOM 302**

12:30-13:45 pm

Social Event: Making
science in tropical
biology and
conservation more
inclusive and accessible

PART 2: Barahona 2

14:30-16:00 pm

**OPEN DISCUSSION ON
THIS SESSION!**

THANK YOU!

Looking forward to your questions

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- Mentor for Women in Ecology
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