





# How to include and recognize the work of ornithologists based in the Neotropics: Fourteen actions for *Ornithological Applications, Ornithology,* and other global-scope journals

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#### **ABSTRACT**

Global-scope scientific journals have played an important role in upholding a colonial legacy of north-south inequities in ornithology, and they now have a key role to play in increasing equity in scientific publishing. We explore common barriers faced by ornithologists in the Neotropics (Latin America and the Caribbean) and suggest priority actions that Ornithological Applications, Ornithology, and other global-scope ornithological journals can take to increase equity in publication and research uptake. Among the most important problems, we identified (1) restrictive (and north-biased) criteria for assessing research "importance" and "novelty," (2) the high publication costs of the Author Pay (Gold) Open Access model, (3) language hegemony, (4) under-representation of ornithologists from the Neotropics on editorial boards and as lead authors on invited articles, and (5) lack of attention to ethics of collaboration and citation. We recommend that Ornithological Applications, Ornithology, and other global-scope ornithological journals (1) adjust their criteria for publication with the aim to publish all scientifically robust and ethically rigorous ornithology research submitted by first authors based in the Neotropics, including negative results and articles on basic biology; (2) maintain or create options for free or low-cost publication; (3) offer the option of a submission and review process in Spanish (and possibly other languages in the future); (4) increase the representation of ornithologists based in the Neotropics (especially women and those belonging to other marginalized groups) in core editorial teams and on editorial boards; and (5) introduce structured reflexivity statements, in which authors declare how local scientists were involved in the research and how equity was promoted in the collaboration that resulted in the manuscript. For these changes to be broadly effective in the long term, ornithologists across the Global South, and Indigenous, Brown, and Black ornithologists globally, should play lead roles in designing, implementing, and assessing the effectiveness of journal policies and programs. Spanish and Portuguese translations are available in the supplementary material.

Keywords: academic publishing, editorial practice, equity, novelty, open access, peer review

#### **How to Cite**

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#### LAY SUMMARY

- For ornithologists based in the Neotropics, the most important barriers to publication are restrictive and north-biased criteria regarding the "importance" and "novelty" of research, the high cost of publication, and English language hegemony.
- We recommend that *Ornithological Applications, Ornithology*, and other ornithological journals aim to publish all scientifically robust and ethically rigorous ornithology research from first authors based in the Neotropics.
- Journals should maintain or create options for free or low-cost publication.
- We encourage journals to offer the option of a submission and review process in Spanish.
- Journals should introduce structured reflexivity statements to encourage authors and reviewers to reflect on the ethics of collaboration and citation.
- Journals should increase participation of Global South ornithologists on editorial boards and in core editorial teams.

Cómo incluir y reconocer el trabajo de los ornitólogos que viven en el Neotrópico: catorce acciones para *Ornithological Applications, Ornithology* y otras publicaciones ornitológicas de enfoque global

#### **RESUMEN**

Las revistas de enfoque global han jugado un papel importante en sostener el legado colonial de inequidades norte-sur en la ornitología y ahora pueden jugar un papel clave en incrementar la equidad en la publicación científica. Exploramos barreras clave para la publicación que enfrentan los ornitólogos del Neotrópico (América Latina y el Caribe) y sugerimos acciones prioritarias que pueden ser atendidas por revistas de la AOS y otras publicaciones ornitológicas de enfoque global para incrementar la equidad e incorporar sus contribuciones de investigación. Entre los problemas más importantes, identificamos (1) criterios estrechos (y sesgados hacia el norte) para determinar la "importancia" y la "novedad" de las investigaciones, (2) el alto costo de publicación del sistema de pago por autores en publicaciones Open Access, (3) hegemonía del lenguaje, (4) sub-representación de ornitólogos del Neotrópico en consejos editoriales y como autores principales en artículos invitados y (5) falta de atención a la ética de colaboraciones y citación. Recomendamos a Ornithological Applications, Ornithology y otras revistas ornitológicas de enfoque global: (1) ajustar los criterios para la publicación, con la meta de publicar todos los artículos científicamente robustos y éticamente rigurosos sometidos por primeros autores que viven en el Neotrópico, incluidos resultados negativos y artículos sobre biología básica; (2) mantener o crear opciones para publicación gratuita o de bajo costo; (3) ofrecer la opción de envío de manuscritos y proceso de revisión en español (y posiblemente en otras lenguas en el futuro); (4) incrementar la representación de ornitólogos basados en el Neotrópico (en especial mujeres y aquellos que pertenecen a otros grupos sub-representados) en el núcleo de los equipos editoriales; y (5) incluir declaraciones estructuradas de reflexividad, en las cuales los autores declaren cómo fueron involucrados científicos locales en la investigación y cómo se promovió la equidad en la colaboración que resultó en el manuscrito. Para que estos cambios sean ampliamente efectivos a largo plazo, los ornitólogos del Sur Global —y los Pueblos Indígenas, mestizos y afrodescendientes globalmente— deben ser incluidos en el diseño de políticas y jugar papeles de liderazgo en el desarrollo, implementación y evaluación de la efectividad de estas políticas y programas. Hay traducciones al español y al portugués en el material suplementario.

Palabras clave: equidad, novedad, práctica editorial, publicación académica, revisión por pares

#### INTRODUCTION

Like all scientific disciplines, ornithology is burdened by historic and on-going colonialism, and its legacy of systemic barriers (e.g., Gibbs 1995, Campos-Arceiz et al. 2018, Nuñez et al. 2021. Kamath et al. 2022. Nobles et al. 2022). Acting synergistically and cumulatively across multiple stages of research, these barriers disproportionately exclude ornithologists based in the Neotropics—and the knowledge they produce—which slows and biases ornithology toward the views and priorities of the Global North (Soares et al. 2023). Although not perfect, the terms "Global North" (Canada, USA, Europe, New Zealand, and Australia) and "Global South" (rest of the world) avoid the negative and paternalistic connotations of other alternatives (e.g., developed vs. developing; Khan et al. 2022). For people of the Neotropics (and across the Global South), many important barriers remain around publication, authorship, and uptake in Ornithological Applications, Ornithology, and other global-scope ornithological journals.

To include Neotropical ornithologists and their work, journals need to take action to increase equity across multiple stages of the publication process. A principle of equity, embraced in the diversity and inclusion statements at many academic institutions, "acknowledges that there are historically underserved and underrepresented populations and that fairness regarding these unbalanced conditions is needed to assist equality in the provision of effective opportunities to all groups" (University of California-Davis 2022). We think this principle should permeate ornithological publications.

Here, we propose actions that can be undertaken by Ornithological Applications, Ornithology, and other globalscope ornithological journals, to reduce systemic barriers and increase the recognition and impact of knowledge produced by ornithologists based in the Neotropics. Over the course of three meetings and circulation of draft documents, we identified key problems, brainstormed possible actions to address them, and selected the actions that we consider likely to be both impactful and feasible. Our approach was akin to the "nominal group" method—a qualitative process of listing, merging, and ranking proposed actions through open discussions (Delbecq and Van de Ven 1971, Fink et al. 1984). The two corresponding authors (and Ornithological Applications' EIC, in the early stages of this project) acted as moderators and secretaries. We then checked the assignment of priorities prior to publication, by asking each author to list the three problems and solutions they considered highest priority, and ensuring that the two processes yielded similar results.

In inviting contributors, we aimed for a manageable group size while including a diversity of perspectives from the Neotropics. The initial group consisted of EICs of regional scope journals invited by the EIC of *Ornithological Applications*. Because they were mostly cis men from a limited number of Neotropical countries, we sought to increase representation of other genders (mainly cis women) and nationals of under-represented countries. Our final list of contributors includes career stages from Ph.D. student to senior professor (Supplementary Material Table S1). To center the perspectives of Latin American ornithologists, and to accommodate those with imperfect English language abilities, we circulated drafts in Spanish and English, and held meetings in Spanish with simultaneous translation.

In evaluating possible actions, we experienced some tension between shorter-term individual needs and longer-term collective goals. While many Neotropical ornithologists have an immediate need to insert their work into Global North science (the current standard), they may simultaneously wish to change the rules of academia to support and reward other ways of doing science (Anderson et al. 2015, Davies et al. 2021). For example, to attain our personal career goals, we may need to publish our work in the highest impact factor journals, which may run counter to our long-term collective goal of strengthening the free Open Access regional journals that currently have lower impact factors. As both authors and editors of regional journals, we have to operate within this tension and seek solutions that can improve the status quo, even if they are imperfect.

In our experience, academics from dominant groups sometimes view policies to include those from marginalized groups as lowering the bar on scientific rigor (e.g., Klinsky et al. 2017); however, ornithology is not rigorous if it is geographically and socioculturally biased. We ask critics to consider scaling up the definition of scientific rigor from the individual research article to the level of the journal or the discipline. At these larger scales, scientific rigor is not simply the sum of individually rigorous research articles; it becomes an emergent property of a collection of complementary studies from a diversity of regions and perspectives. By promoting equity in publications, journals can take a critical and influential step to reduce biases at multiple stages of the research process, from study design to eventual uptake, to increase scientific rigor at the disciplinary scale (Posselt 2020). Although many of our recommendations are applicable beyond academic publishing, we direct our recommendations to journals because their policies directly affect the work that gets published and the extent to which it is taken up, and indirectly impact institutional policies and decisions at the funding stage, as well as criteria for hiring and promotions. Our proposals aim to reduce geographical and sociocultural biases, raising the bar for both ethics and scientific rigor in ornithology.

#### **KEY PROBLEMS AND BARRIERS**

Critical Problems

Restricted view of research topics and novelty.

Novelty and "quality" of papers are evaluated almost exclusively through a northern lens. As evaluators, we all aim for fairness, but we tend toward homophily (an appreciation for work similar to our own), and our definitions of excellence are rooted in our networks of colleagues and ideas (Lamont 2009). For example, basic biology (e.g., breeding biology, diet, and behavior) was once a major focus of journals published by ornithological societies in the USA, Europe, and Australia, encouraging ornithologists of the 20th century to fill gaps in knowledge of basic biology for the ~2,000 bird species inhabiting these regions. As these gaps have been mostly filled, editors and reviewers of these journals have increasingly come to dismiss such basic biology studies as "descriptive," "narrow," or "devoid of an analytical framework," regardless of their scientific rigor, the size of the knowledge gaps addressed, or the authors' use of the results to construct ideas and hypotheses. Although one-third of all extant bird species live in the Neotropics, large gaps in knowledge of their basic biology limit their inclusion in

studies of ecology, biogeography, systematics, conservation, etc., perpetuating geographical biases in scientific knowledge and theory (Newton 2003, Hughes et al. 2021, Santangeli et al. 2022, Theuerkauf et al. 2022). Basic biology research is frequently ineligible for funding, while institutional decisions about funding and promotion of ornithologists prioritize publications in high-impact journals, creating a vicious cycle that perpetuates gaps in knowledge about the basic biology of Neotropical birds.

#### Cost of publication.

Open Access allows authors to disseminate their work widely. However, the Author Pay (Gold) Open Access model widely used in the Global North imposes a disproportionate, often impossible, financial burden on author teams from the Neotropics and across the Global South, restricting the outlets for their work (Fontúrbel and Vizentin-Bugoni 2021). Although free access to scientific content is a welcomed advance, directing costs to authors creates an additional barrier to underfunded research for the vast majority of research groups in the Neotropical region. The cost of publishing one global-scope Open Access article is often equivalent to a year's worth of research funding for a scientist in the Neotropics. The Gold Open Access model implies the diversion of funding from salaries, field work, and conservation in the Neotropics toward private editorial corporations and ornithological societies in the Global North. Moreover, publication policies (e.g., cost schedules and payment mechanisms) are set by editors, publishing companies, and ornithological society leadership located overwhelmingly in the Global North, without participation from scientists of the Global South. Researchers from most countries of Latin America face logistical barriers to paying Article Processing Charges and even society membership fees (e.g., institutional and personal credit cards in some countries cannot be used internationally, governments restrict international money transfers and financial institutions charge additional transaction fees). Gold Open Access offers a swift and relatively easy path to publication, with increased citations, for authors who can pay (primarily scholars affiliated with institutions in the Global North and their collaborators). Unless full waivers are assured for accepted manuscripts from the Global South, Gold Open Access perpetuates and exacerbates the dominance of Global North institutions in the dissemination of knowledge.

#### Language hegemony.

While a common language is useful for communicating research, an English monopoly on science is neither inevitable nor beneficial (Steigerwald et al. 2022). Hamel (2013) highlights three good reasons to oppose monolingualism in science: (1) theoretical and epistemological risks to creativity, (2) increasing power asymmetries, and (3) negative consequences of anglophone monolingualism for international cooperation. From a Latin American perspective, non-fluent English speakers (and teams that include non-English speakers) face a heavy and costly burden of translation at every step of the writing, review, and revision process, up to a paper's eventual acceptance (Ramírez-Castañeda et al. 2020, Valenzuela-Toro and Viglino 2021). Whereas ~38% of the European Union speaks English as a second language, only a privileged minority can afford to learn English in most countries of the Neotropics (e.g., ~5% of the population of Bolivia, Brazil, or Ecuador; European Commission 2006, British Council 2015,

Sevy-Biloon et al. 2020). Authors from working class backgrounds are especially burdened, as are those who studied at universities outside the wealthiest cities of Latin America and the Caribbean, and those who learned Spanish or Portuguese as a second language (e.g., native speakers of Indigenous languages, such as Guaraní, an official language of Paraguay). Even when authors obtain translation help, reviewers can be negatively biased against papers that do not have the American or British syntax to which they are accustomed (e.g., Lee et al. 2013). Based on our experience, some editors and peer-reviewers opt for rejection to avoid the heavy workload of reading imperfect translations, failing to evaluate the science on its own merit. The current instructions to authors at American Ornithological Society (AOS) journals (and many other global-scope journals) ask authors "whose first language is not English" to have their manuscript edited by an English-speaking colleague or pay for expensive copyediting before submission.

#### Other Important Problems

Under-representation on editorial boards and as lead authors on invited articles (e.g., special issues, invited reviews).

Scientists from the Neotropics, particularly women and gender minorities, are under-represented on editorial boards of global-scope journals and in authorship of invited/special feature articles (Bugoni 2014, Espin et al. 2017, Dada et al. 2022, Kamath et al. 2022), which may contribute to the burdensome technical and analytical expectations mentioned below (Smith et al. 2014). The under-representation of Neotropical ornithologists on editorial boards and in special features at Global North journals may contribute to the frequent dismissal of knowledge produced in the Neotropics as "of regional importance," which leads to rejection.

#### Lack of attention to ethics of collaboration and citation.

Historical and current power imbalances disproportionately exclude ornithologists from marginalized groups (this includes ornithologists in the Global South, and especially those marginalized within the Global South because of their gender, race, written English proficiency, geographic location away from major academic centers, etc.). "Helicopter" or "parachute" research occurs in the context of power imbalances among regions, when scientists from a more dominant or wealthy country or region use data from a subordinate or impoverished country or study region, without fully including local collaborators. Helicopter research most often presents as scientists from the Global North extracting (data, samples) from the Global South, while contributing little to local scientific development and local objectives. Nevertheless, we can also recognize helicopter research among and within countries and regions of the Global South, where there can be a strong imbalance of power between scientists from major centers and those local to a study region. Even in Brazil, where foreign scientists now require an in-country collaborator to obtain research permits, these local collaborators are not always fully involved in the research or included in authorship of publications. Helicopter research is increasingly considered unethical and exploitative (Minasny et al. 2020, Cisneros et al. 2022). It damages the credibility of other ornithologists and institutions and can lead governments in the Global South to step up restrictions (e.g., around biopiracy) increasing the regulatory burden on researchers (Minasny et al. 2020).

Citations (or evidence of literature searches) in non-English languages are not frequent in AOS publications or other global-scope ornithological journals, which contributes to the lack of recognition, communication, and collaboration between northern and southern ornithologists, and undermines work by those who choose to disseminate their results in local languages. In addition, authors from the Global South are more inclined to cite well-known authors and theory from the Global North than vice versa, increasing citation bias (e.g., MacGregor-Fors et al. 2020). Last, the names of authors from Latin America are frequently cited improperly (e.g., mixing given and family names, missing diacritical marks such as tildes, cedillas, or mutilating patronymics or matronymics), leading to missed citations (Qiu 2008, Ruelas Inzunza 2009, Goves Vallejos 2021).

#### Burdensome technical and analytical expectations.

Rigorous methods and sample sizes are necessary to support inference, but reviewers and editors often ask for expensive techniques (such as DNA analyses of avian parasites) when lower-cost techniques (e.g., microscopy) are sufficient. Reviewers and editors often under-appreciate the novelty and value of Neotropical contributions, and rarely consider or understand the financial and logistical circumstances of ornithologists based in the Neotropics (e.g., Valenzuela-Toro and Viglino 2021, Soares et al. 2023). Therefore, they may suggest analyses that require regionally unavailable computational power, laboratory equipment, or set expectations on ideal sample sizes even when the object of study is a rare species or remote system that can only be accessed through complex logistics.

#### Limited means to evaluate equity in publishing.

When making decisions about journal policies, editors and society leaders tend to focus on measurable impacts. Journal Impact Factors are readily available, but only reflect one aspect of the journal's and the society's aims in publishing (i.e., citation rate). Few, if any, global-scope ornithological journals collect data on authors' demographics or their experiences in publication and citation, which makes it difficult for editors to evaluate, quantify, or report on equity in publications. If measures of equity are not included in evaluations of the journal and editor success, there is little incentive for editors to adopt equity-promoting policies.

#### Difficulty maintaining free Open Access regional journals.

Latin America produces more than 5,000 scientific journals. and most of them follow a non-commercial Diamond Open Access model (no fees to authors or readers; Fischman and Alperin 2015). These journals often include papers in multiple languages and represent an important, collective alternative to the monolingual Gold Open Access or paywalled models that dominate in the Global North (Cabrera and Saraiva 2022). However, in a context of global financial inequality, the system of Impact Factors strengthens wellfunded journals from countries at the center of power (USA and Europe), while marginalizing Latin American journals on the periphery of international citation networks (Cabrera and Saraiva 2022). Without endowments and with limited income from membership dues, society-supported ornithology journals in Latin America and the Caribbean are excluded from the costly membership-based schemes used for manuscript management, publication visibility, author and reviewer tracking, and citations for journals of the Global North (e.g., the Editorial Manager manuscript management system, the interlinking of citations via CrossRef, the tracking of peerreview contributions via Publons, and the use of unique-code author identifiers such as ORCID, free to authors but costly for journal publishers). Regional journals must rely on (often non-optimal) free software and volunteer labor, which can slow the peer-review system and exacerbate reviewer fatigue (e.g., Allen et al. 2022). Publishers, editors, and reviewers of global-scope journals, generally unfamiliar with the (less visible, unadvertised) journals of the Global South, encourage citations of the (more visible) work published in the Global North, while overlooking similar studies published in the Global South, especially work that is not in English (Soares et al. 2023). While journals from the Neotropics face these many barriers to citation (restricting their impact factors), individual scientists are evaluated primarily based on their contributions to journals with higher impact factors. As a result, much of the research funded by Global South governments ends up behind paywalls in the Global North, rather than contributing to strengthen the Diamond Open Access regional journals (Fischman and Alperin 2015).

## Disparate access to knowledge about the publication and peer-review process among research groups.

When evaluating their peers' work, many academics consider the quality of writing to reflect competence, clarity of thinking, and effort invested in revisions (Lamont 2009). However, research groups within and beyond the Neotropics vary widely in terms of access to examples, instruction, and feedback on preparation of manuscripts, such that some students are poorly prepared for writing and navigating the peerreview process. In many journals, papers are generally rejected if the writing style and overall presentation are considered poor, regardless of scientific merit (e.g., Primack 2009). For many Neotropical students, English-language hegemony exacerbates the barrier imposed by restricted access to learning about the publication process. First, writing in one's second or third language can interrupt the cyclical writing process (constructing arguments, rethinking ideas, revising) that produces clear, coherent, "well-written," and "elegant" papers. Second, students not fluent in English have few opportunities to read and emulate high-quality primary research articles, because most authors publish their best work only in English.

#### RECOMMENDED ACTIONS FOR GLOBAL-SCOPE JOURNALS

**Highest Priority Actions** 

1. Aim to publish all scientifically robust and ethically rigorous ornithology research from first authors based in the Neotropics.

Include negative results and articles on basic biology. Several Gold Open Access journals, such as *Scientific Reports*, *PeerJ*, and *PLOS ONE* maintain impact factors above those of ornithology journals while aiming to publish all scientifically valid, technically sound, and ethically rigorous research. They are a frequent outlet for ornithology papers from the Global North; however, they are inaccessible to most Neotropical scientists because of their high Article Processing Charges (despite some waivers).

AOS publications and other global-scope journals could adopt similar criteria (publish all scientifically robust, technically sound, and ethically rigorous research) for papers with a lead author affiliated in the Neotropics. They could ask editors and reviewers to focus their evaluation on the validity of the science, rather than their perception of the importance, significance, or impact of the work (e.g., see Criteria for Publication at Scientific Reports), because these judgments are often based on "taste" and strongly associated with the self-identity of the evaluator (Lamont 2009). Reviewers and Associate Editors should be reminded that AOS (or the relevant ornithological society for the journal in question) aims to reduce the northern geographical bias in ornithological knowledge and north-south inequity in publishing opportunities. Editors may develop a special section for basic biology research from the Neotropics or the Global South, and adopt a supportive review process, to encourage high-quality submissions and positive reviews.

#### Problems addressed:

Burdensome expectations; restricted view of research topics and novelty.

#### Expected impact:

This action will directly reduce barriers to publication for ornithologists based in the Neotropics. It will increase the autonomy of ornithologists based in the Neotropics to fill the gaps in knowledge that they identify in their region. It will also clearly communicate to the scientific community that the journal values research and ideas from a diversity of perspectives.

#### Necessary steps:

Editors must understand that basic biology from the Neotropics is research that the ornithological society needs, values, and wants to publish. Editors will need to update the instructions to authors and reviewers, to remove language that discourages non-fluent English speakers and those with limited funding, and to clearly indicate an acceptance-prone review process and prioritization of basic biology research from the Neotropics.

Funding required:

None.

#### 2. Maintain options for free or low-cost publications.

Global-scope journals could adopt Diamond Open Access (free to readers and free to authors) following the model of many regional journals in Latin America, by which institutions invest directly in journals, rather than paying expensive author fees to publishing companies (Alperin 2022, Cabrera and Saraiva 2022, Ross-Hellauer 2022). As a less-preferred option, journals could maintain a hybrid system (e.g., with waivers for authors without funds to publish Gold Open Access).

Problem addressed:

Cost of publication.

#### Expected impact:

This action will maintain and increase dissemination and uptake of work about Neotropical birds by authors from the Neotropics.

#### Necessary steps:

Explore options for Diamond Open Access or develop a program through which authors can apply for waivers for Gold Open Access.

#### Funding required:

None for maintaining a hybrid publication system; funding to cover Open Access for all papers (Diamond) or selected papers (Gold with waivers).

#### 3. Offer a submission and review process in Spanish.

Manuscripts would be reviewed in Spanish, and translated to English for final publication in both languages. If the program is successful, it could be expanded to include Portuguese. Steigerwald et al. (2022) suggest Spanish as a secondary hub (i.e., secondary to English, which is the only hub currently), that can temporarily facilitate machine translation to Portuguese and Indigenous languages, as a step on the path to a multi-lingual future for science.

#### Problems addressed:

Language hegemony; under-representation on editorial boards.

#### Expected impact:

This action will vastly reduce the time, energy, and funding that Spanish-speaking Neotropical authors currently invest in multiple rounds of translation, allowing them to focus their energy and funding on the science. Papers submitted in the authors' native language will be better written, with fewer ambiguities, will be easier to review by more potential reviewers, and be more likely to have a positive outcome (acceptance).

#### Necessary steps:

Diversify Spanish-speaking associate editors to ensure thematic coverage. Editors or authors may use DeepL (https://www.deepl.com/) or other software for translation from Spanish to English once a manuscript is near acceptance (software-translated manuscripts require relatively little editing). Journals will need to speak to their publishers about whether the complete Spanish, Portuguese, or version in a second language can be included at the end of the paper (ideal), or as Supplementary Material. Future expansion to other languages could follow suit.

#### Funding required:

An inexpensive monthly subscription to DeepL or similar software available to editors would be helpful. Additional funding may be required to edit software-translated material.

## 4. Increase participation of a diversity of Global South ornithologists on editorial boards and core editorial teams.

We stress that this effort should focus especially on increasing the participation of minoritized genders (i.e., cis women and trans people), Indigenous, Black, and Brown (mestizo) ornithologists located in the Global South, particularly those committed to increasing inclusivity in scientific publishing (e.g., through editorial policies, by mentoring graduate students in remote regions).

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#### Problem addressed:

Under-representation on editorial boards; restricted view of research topics and novelty.

#### Expected impact:

This action is expected to increase the capacity to review and edit articles from the Neotropics, and the decision-making power of Neotropical ornithologists and others from the Global South about what kinds of research are important to publish. Neotropical editors may be more likely to suggest, when needed, relevant citations from non-English literature, and point to sources of missing data and collaborations with Neotropical ornithologists. Increasing representation and diversity of Neotropical editors is not just important because of their knowledge of Neotropical birds; it is important because we need editors who are sensitive to the circumstances and conditions of other researchers based in the Global South, including researchers from groups historically and persistently excluded from science within the Global South.

#### Consideration:

Unpaid work on editorial boards of global-scope journals takes time away from ornithologists' own publications, mentoring, rest, caregiving duties, and editorial duties at regional journals.

#### Necessary steps:

Seek associate editors from the Neotropics, with particular attention to the inclusion of cis women and trans people, Indigenous, Black, and Brown ornithologists, and people from under-represented regions. We suggest starting with these groups, then adding other editors from the Neotropics to fill in thematic needs.

#### Funding required:

Consider compensating editors from marginalized groups affiliated with Neotropical institutions, for example, by offering direct payment for work, fee waivers for membership and annual meeting registration, or perhaps caregiver grants that subsidize the care of children and the elderly to free up time for editorial duties (as offered at AOS meetings). Nevertheless, lack of compensation should not prevent journals from inviting editors from the Neotropics; give these individuals the opportunity to accept or decline the invitation.

## 5. Ensure that special features and special sections of journals include a diversity of authors with geographic representation in the Global South.

Researchers proposing ideas for special features should be required to explain how they will ensure the gender and geographic representation of lead authors at the time of invitation. Editors should prioritize topics with potential for contributions (and especially international collaborations) from the Global South, and ensure that barriers to publication are addressed, in order to maintain this representation throughout the publication process.

#### Problems addressed:

Under-representation of Global South scientists as lead authors in special issues; restricted view of research topics.

#### Expected impact:

This action would increase the visibility of research led by ornithologists from the Neotropics and other regions of the Global South and reduce northern bias in ornithological theory and case studies.

#### Necessary steps:

Ask authors of special feature proposals to address specific questions, along the lines of those in Box 1.

#### Funding required:

None.

#### Other Priority Actions

#### 6. Introduce structured reflexivity statements.

Reflexivity means that a "researcher should constantly take stock of their actions and their role in the research process and subject these to the same critical scrutiny as the rest of their data" (Mason 2002:7). Reflexivity extends beyond obtaining permits or approvals from ethical research practice boards (Guillemin and Gillam 2004). Authors are encouraged to reflect on the collaborations and citation practices that resulted in their manuscripts. Structured reflexivity statements are based on a set of questions asked during the submission process (see Box 1 for an example) and intend to assess equity on a case-by-case basis (Morton et al. 2022). Editors and reviewers should use the submitted information in the review process, and the statement could be published in the manuscript, for transparency, alongside the authors' contributions.

#### Problems addressed:

Lack of attention to ethics of collaboration and citation; restricted view of research topics.

#### Expected impact:

This action is expected to promote better research ethics over the long term, including practices that redistribute decision-making power and recognition from groups that have historically dominated ornithology, to groups that have been marginalized. In the short term, it will increase transparency about how teams were formed and how decisions were made throughout the collaborative research process. This action will indicate to the research community that the journal in question prioritizes equity and ethics in collaborations, and position the journal as a leader in promoting and normalizing ethical practices in international research. Reflecting on equity should lead authors and readers to seek and adopt measures that assure the inclusion of local ornithologists in the leadership of projects.

#### *Necessary steps:*

In consultation with members of the marginalized communities in question, editors could develop a series of questions to be included in the article submission process (see non-exhaustive ideas in Box 1). Editors will need to decide whether such questions will be required for all manuscripts, or only for a subset of manuscripts (such as those using data from the Global South, with a first or last author affiliated in the Global North). Editors will need to consider how they will evaluate reflexivity statements.

Box 1. Structured reflexivity statements on equity and citation ethics could be included during manuscript and special feature proposal submission to AOS's and other ornithological journals, especially those with a global scope. Journals will need to develop simple questions, formats, and assessment criteria that reflect their goals for increasing equity, and this development process should include the leadership of people from historically and persistently marginalized groups. Structured reflexivity statements could be made optional for most manuscripts but required for manuscripts with a geographic focus on the Global South (including Latin America and the Caribbean, Africa, and Asia), when the first or corresponding author is affiliated in a High Income Country (see https://datahelpdesk.worldbank.org/ knowledgebase/articles/906519-world-bank-country-and-lending-groups) outside the country where the data or samples were collected. The guestions are not intended to circumscribe the research that will be accepted at the journal, but to encourage reflection on ethics of collaboration and citation, and to communicate best practices. All research teams, including those led from within the Neotropics, can benefit from reflecting on the process of collaboration, and reflexivity statements could be encouraged for all. We recognize that not all questions will be relevant to all manuscripts or journals, but we offer the following sample questions, adapted from Morton et al. (2022), as a place to start. Journals should also recognize that early career researchers from the Neotropics may find themselves temporarily affiliated at an institution in the Global North (e.g., while studying for a doctoral degree or conducting post-doctoral work). Questions should be structured to encourage reflection while recognizing that equity is nuanced and involves more than a north-south dichotomy. While reflexivity statements will initially be unfamiliar to many ornithologists and represent some additional work at the manuscript submission stage, we expect that over time they will move into the mainstream of ornithological research, as has occurred with statements around compliance with legal permitting, animal ethics, and author contributions (e.g., CRediT; https://credit.niso.org/).

Aspect of research	Question	Potential answers
Authorship and inclusion	Were local/in-country researchers or community members involved in the study design?	Yes (please describe)/ No
	2 . How will research products be shared to address local needs?	(a) Local language version of manuscript, (b) Reports to local governments, (c) Press release for local media, (d) Other (please describe)
	3. Are researchers within the region (particularly women, gender minorities, and early career researchers) included as authors?	Yes (please describe in terms of author- ship position and role in the paper)/ No (please describe why not)
Citation ethics	4. Did the authors search for relevant publications in regional journals, including those in languages other than English?	Yes (please describe)/ No
Training (consider making this section optional for authors)	5. Has the project developed the capacity <sup>1</sup> of the researchers from high income countries to work collaboratively and equitably with colleagues within the region of study?	Please describe
	6. Has the project influenced the means and ability <sup>1</sup> of the researchers from within the region to implement their research agenda?	Please describe

Journal editors and reviewers can assess reflexivity statements using the following questions, again adapted from Morton et al. (2022): 1. Has the research team engaged constructively with the reflexivity statement? 2. Have the research partners co-developed the study? 3. Is the first or last author affiliated in the Global South? If not, what is the explanation? 4. How have women and gender minorities, from the study region, been included in the work and incorporated as authors? 5. Have the authors engaged with non-English and regional literature where the research was conducted?

'We highly recommend reading Yua et al. (2022) for well-considered strategies to attain equity in research relationships. While their article focuses on co-production of knowledge between Global North researchers and Indigenous communities in the Arctic, their lens offers important insights for ornithology in the Neotropics and across the Global South.

Funding required:

None.

## 7. Remind reviewers and authors to cite relevant literature in regional journals.

Authors of investigations taking place in the Neotropics should be asked during the submission process whether they have made literature searches that include regional-scope journals and in languages different than English.

Problem addressed:

Ethics of citation; language hegemony.

#### Expected impact:

This action will clearly indicate to authors and reviewers that the journal values ornithology published in regional journals, including work published in languages other than English. It is expected to result in increased citations of papers in non-English languages, and therefore more citations of Neotropical journals and authors from marginalized groups.

#### *Necessary steps:*

Modify instructions to authors and provide instructions to reviewers, relax word count limits to allow the inclusion of such citations as needed, educate editors and reviewers on proper use of names of Latin American and Caribbean authors, and add one question to the submission process.

Funding required:

None.

## 8. Develop measures to evaluate the impact of initiatives toward equity.

Publish the results in editorials within the journal and/or blog posts, and use them to adjust policies and practices in an iterative process.

#### Problem addressed:

Limited means to evaluate equity in publishing.

#### Expected impact:

This action will give editors and society leadership the necessary tools to evaluate and report on internal measures of equity, so that they can adjust policies accordingly. Equity and ethics will be valued as important components of journal (and editor) success. The journal will demonstrate commitment to diversity and inclusion and could inspire others to adopt similar approaches.

#### *Necessary steps:*

Find examples of internal evaluation of measures toward equity and develop processes to collect and analyze the necessary data.

#### Funding required:

This action might require a budget for consulting or training.

## 9. Hire a "manuscript development editor" and provide editorial assistance to authors.

Assistance should focus on revising writing to improve communication of the science, particularly at early stages of the submission process. Additionally, global-scope journals could work with the Association of Field Ornithologists to strengthen their existing editorial assistance program (English only; https://journal.afonet.org/policies/), with a view to assisting submissions for all ornithological journals.

#### *Problems addressed:*

Language hegemony; disparate access to knowledge about the process of publication and peer review.

#### Expected impact:

This action would not reduce language hegemony (unless combined with a submission process in Spanish), but it would reduce bias against authors who are not proficient in written English during the review process and help reviewers focus on the science.

#### Necessary steps:

Recruit a manuscript development editor. A manuscript development editor fluent in English and Spanish would be ideal to help with implementation of both English- and Spanishlanguage submissions. The manuscript development editor and EICs would need to devise a system for working with authors.

Funding required:

Manuscript development editor salary.

### 10. Publish full articles in a second language as supplemental material.

Problems addressed:

Language hegemony; disparate access to knowledge about the publication and peer-review process.

#### Expected impact:

This action will increase the regional and local impact of articles. It would not replace the option of submitting articles directly in Spanish, because it does not address the burden of translation that Neotropical teams face during the collaboration, writing, submission, and review process. However, this action would allow authors to publish a version of their article in languages other than English and Spanish (e.g., Portuguese, French, or Indigenous languages). Authors who wish to share their work in another language would have extra work, but this work could be facilitated with machine translation (e.g., DeepL).

#### Necessary steps:

AOS's and other ornithological journals would need to discuss options with their publisher and develop a procedure for authors (see Steigerwald et al. 2022 for possible roadmaps).

#### Funding required:

An inexpensive subscription to DeepL would be helpful; other derived costs may be minimal.

## 11. Highlight articles of interest from Neotropical regional journals in editorials, blog posts, and social media.

The goal is to increase readership and citations of these journals among ornithologists worldwide.

#### Problem addressed:

Ethics of citation; difficulty maintaining Diamond Open Access regional journals.

#### Expected impact:

This action would bring global attention to work by Neotropical authors published in regional Neotropical journals.

#### Necessary steps:

Editors-in-Chief would need to identify articles of interest in regional journals and identify colleagues to write about them.

Funding required:

None.

## 12. Offer workshops to help students navigate manuscript preparation and peer-review processes.

#### Problem addressed:

Disparate access to knowledge about the publication and peer-review process.

#### Expected impact:

This action would aim to prepare students and early career ornithologists for the peer-review process so that they submit their best work and develop constructive peer-review skills, smoothing the path to publication. Workshops (preferably bilingual) can be offered at annual meetings but should also be offered online to include Neotropical students without access to funds for travel.

#### Necessary steps:

Instructors would need to develop and implement workshops. Workshops could be prepared in partnership between global-scope and regional journals, to achieve a broad perspective on the issues of writing for different audiences. Instructors might draw on materials from the writing and reviewing workshops offered by the editorial team of *The Condor* (The Condor Editorial Team 2011).

#### Funding required:

Modest funding or possibly none.

## 13. Strengthen connections with editorial teams of regional journals of the Neotropics.

Streamline transfer of manuscripts and reviewer comments from one journal to another (manuscript referrals). Promote mutual assistance through sharing of resources, online platforms, etc.

#### Problem addressed:

Difficulty maintaining regional journals.

#### Expected impact:

Manuscript referrals are expected to expedite the publication process and reduce the burden placed on peerreviewers. A collaborative environment would generate opportunities for sharing of resources and expertise in multiple directions.

#### Necessary steps:

Increase communications among ornithological peer-reviewed journals, develop a system to expedite transfer of manuscripts and reviews among journals, develop a process for collective leadership that includes editors from the Neotropics, discuss needs and opportunities for collaboration.

#### Funding required:

Possibly none.

## 14. Offer an annual award for the most promising or impactful article by a Neotropical team.

Problem addressed:

Ethics of citation.

#### Expected impact:

This action would bring attention to work in the Neotropics by authors based in the Neotropics, with the goal of increasing readership and citations of this work.

#### *Necessary steps:*

AOS would need to create a process for evaluation of articles and coordinate with the Centralized Awards Committee. The selection committee should be composed primarily of researchers based in the Neotropics.

#### Funding required:

A small cash prize or funds to attend an AOS conference would be welcomed.

#### CONCLUSIONS

We created these recommendations as a starting point for Ornithological Applications, Ornithology, and other global-scope ornithological journals to improve the inclusion of researchers based in the Neotropics and their work. Our proposed solutions may also affect other actors involved in the scientific process, including government agencies, policy makers, academic employers, grant funders, and non-Neotropical researchers. We especially encourage journals to consult with researchers across the Global South, and Black, Brown, and Indigenous researchers globally, to ensure that their policies will address scientific colonialism and increase equity across a broad spectrum of persistently marginalized groups. In future endeavors, we suggest a more structured process of consensus or priority-setting exercises, when possible, to promote transparency and inclusion.

Although most of our highest priority actions can be undertaken without extra funding, they require a willingness to reconsider widely held assumptions. Basic biology research is not narrow, unimportant, or devoid of an analytical framework. Discounted fees and general calls for contributions are not sufficient to ensure equitable access to publication. Money, language, and power structures (historic and current) play key roles in determining whose work is cited and whose work is overlooked. Most importantly, scientists from the Global North are neither entitled nor the best positioned to set the research and conservation agendas for the rest of the world. Our recommendations ask journals to replace procedures that may have been used for decades and create new policies that prioritize equity. Critically, for change to be effective, members of the communities in question (in our case, ornithologists from the Neotropics), should not just create a list of recommended actions, but take lead roles in developing, implementing, and assessing the effectiveness of new policies and programs.

#### Supplementary material

Supplementary material and full translations of this article in Spanish and Portuguese are available at *Ornithological Applications* online.

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All authors declare that they have no conflicts of interest.

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