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## Frontiers of Biogeography

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Introduction, Establishment, Invasion, Accommodation: innovation and disruption in biogeographic publishing

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## Introduction, Establishment, Invasion, Accommodation: innovation and disruption in biogeographic publishing

### Introduction

This journal launched eight years ago, merging the missions of a newsletter and a book, to deliver a series of integrative and interdisciplinary volumes to a diverse community of biogeographers at the ‘frontiers of biogeography’. The journal purposefully was pitched as a “magazine”—with a nod toward the formats of *Current Biology*, *Nature*, *Science*, and *Trends in Ecology and Evolution*—aiming “to distinguish itself from existing biogeography journals by providing an eminent forum for syntheses and perspectives that will push forward the boundaries of biogeography philosophy and practice” (Hortal and Dawson 2009:1).

### Establishment

For three years, 2009–2011, the journal was published ‘in house’, for the most-part literally—manuscripts were received, edited, reviewed, and compiled into issues after hours, outside of any regular jobs—and each issue was released as a single PDF on the *International Biogeography Society (IBS)* website. During this period, the journal went from two to four issues per year, developed many of the article types we still publish today, and received contributions from early, mid, and late career biogeographers alike. Little information on usage is available from those early days, though one article (Triantis 2011) remains among the journal’s ten most-viewed articles (in records beginning five years ago), and the promising start encouraged further development. After a year of planning, the journal transitioned to being published using eScholarship in 2012, becoming the only society-owned, fully open access journal for biogeography.

### Innovation

Full gold libre open access has been a distinctive characteristic of the journal from its very beginning, and was only the first of several innovations in biogeographic publishing. In the same year, *Frontiers of Biogeography* sponsored the MacArthur & Wilson Award together with the *IBS*<sup>1</sup>, the first award offered by a biogeography journal for early career researchers; something mimicked by *Ecography* in 2015<sup>2</sup>. In 2014 we introduced our first short-form research “Correspondence”<sup>3</sup> (*Ecography* introduced “Brevia” later the same year<sup>4</sup>), and we struck out at the other end of the spectrum introducing “Monographs” in the subsequent issue (Lomolino and Field 2014). The introduction of “Monographs,” particularly, signals the flexibility we have as a fully online society owned and run journal with an open-access model to innovate beyond the bounds of traditional subscription-based or publishing house-based journals. This flexibility has allowed us to differentiate rather than compete even as we added more traditional research article types (Dawson et al. 2014). During this period, the readership of *Frontiers* tripled (Fig. 1), copy increased (Fig. 2), and since 2016 the journal is listed with *Scopus*, confirming establishment of the journal in the publishing landscape.

### Invasion or accommodation

The question before us is what does the future hold for *Frontiers of Biogeography*? Has it reached its stable state, as might be interpreted from Fig. 1? Or has the past biennial concluded a period of consolidation before further growth (Fig. 2)? For sure, they have been interesting times, as *Frontiers of Biogeography* has emerged during a time of massive reorganization of the publishing land-

1 <http://escholarship.org/uc/item/3d40x5qp>

2 <http://www.ecography.org/news/e4-award>

3 <http://escholarship.org/uc/item/1br0s6cv>

4 <http://www.ecography.org/news/new-paper-categories-commentary-and-brevia>

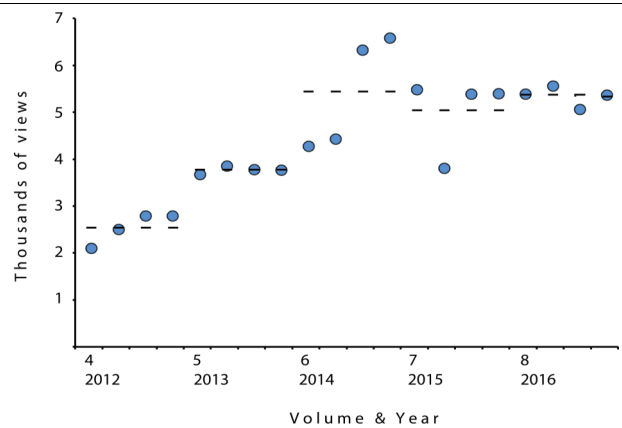
scape, including the introduction and growth of open access publishing.

The expansion of open access publishing is epitomized by *PLoS ONE* from 2006 through 2013, and mirrored by many other journals, including instant successes building on the *Nature* brand. Unfortunately an increasing number of “predatory” open access journals, which are blurring the line between authentic and inauthentic scientific publishing (Carey 2016), are becoming harder to identify (Straumsheim 2017a); those ‘predatory’ practices highlight the value of journals run by scientific societies of known integrity, such as *Frontiers of Biogeography* by the *IBS*. With increasing competition, metrics-driven publishing behavior, and increases in pay-to-publish fees, *PLoS ONE* has suffered a considerable decline in submissions and publications in recent years (Straumsheim 2017b). The declining trend is visible also in biogeography papers in *PLoS ONE* (Fig. 2a).

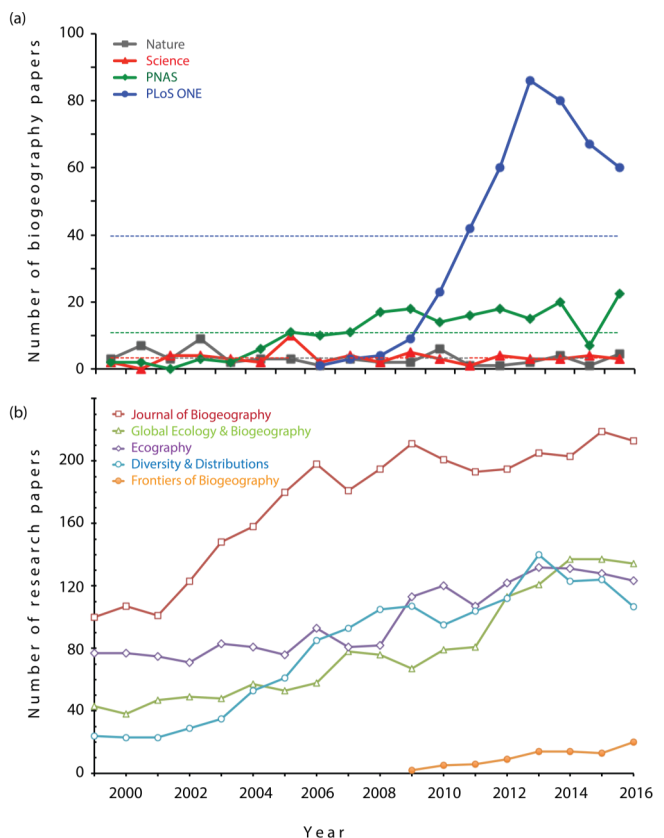
Amid this dynamic landscape, *Frontiers of Biogeography* has hewed to its initial philosophical and moral underpinnings to provide a quality publishing option for all biogeographers, combining “the benefits of an established ... journal and those of Open Access ... [at] low or no cost to the author and zero cost for readers” (Dawson et al. 2012:1). *Frontiers of Biogeography* has grown steadily doing so, which (in addition to flexibility in article types, and a supportive process [Dawson & Hortal 2014]) may be another luxury for society journals run by the community for the community. The longer-term picture of publishing in *Frontiers of Biogeography* shows continued growth, and one can easily imagine extrapolating from the current state to the kinds of growth of the four main biogeography journals over the past four decades (Fig. 2b). But the question remains open as to whether *Frontiers of Biogeography* will grow and displace or grow and be accommodated.

### Disruption

Although it might seem a peculiar claim, we suggest that commitment to our core philosophy of quality affordable open access biogeography delivered by the *IBS* is a strategy that bucks current



**Figure 1.** Numbers of views (in thousands) of *Frontiers* articles during the 3-month period following publication of each issue, since moving to eScholarship in March 2012. Horizontal dashed lines indicate the mean for each volume.



**Figure 2.** Publishing trends in biogeography. **(a)** Number of biogeography papers published in four of the most recognized “multidisciplinary sciences” publications, as categorized by Thomson Reuters, annually since 1999, per the Web of Knowledge database (solid lines). Horizontal dashed lines show the long-term mean number of articles per year per journal for the 17-year period analyzed. Articles were identified by the topic word search “biogeography” in the Science Citations Index–Expanded; figure updated from Dawson et al. (2016) in January 2017. **(b)** Number of articles published since 1999 in five journals with emphases in biogeographic research. A sixth journal, *Molecular Phylogenetics & Evolution*, shows a trend for articles on phylogenetic (historical) biogeography that largely overlays the overall trend for *Journal of Biogeography* (data not shown).



**Figure 3.** The metamorphosis of the *Frontiers of Biogeography* logo. The original logo, coming from the *Frontiers of Biogeography* book (Lomolino & Heaney 2004), was an artist's rendering of Bernard Cahill's 1909 "butterfly map" of the world, one of many projects to transform Earth's sphere into a planar surface. *Frontiers'* new logo feeds on the theme created for the new *IBS* corporate image, and represents four overlapping hypervolumes in the form of a butterfly's wings, flying over four niche response curves in the form of hills, mountains and the sea. This change is a metaphor for the substantial transformation that biogeography has undergone from over a century of growth, from describing geographical patterns to studying the shifting balance of processes that shape aspects of biodiversity in different realms, such as species niches, dispersal, ecological interactions, and evolutionary processes.

publishing trends. As noted above, this is different from the predominant model of for-profit publishing, whether it is pay-to-view or pay-to-publish, and runs counter to the recent shift towards partnerships between societies and for-profit publishers (e.g., Ecological Society of America, Society for the Study of Evolution). So we are pleased to introduce a suite of new initiatives, on which we have been working with the *IBS* for the past year and which will be rolled out in the coming months.

The first, and representing the journal's next transformation, is the metamorphosis of our butterfly logo with this first issue of volume 9 (see cover; Fig. 3); the landscape over which it now flies emphasizes the journal's connection with the *IBS*. Another change at the head of the journal is the addition of Alycia Stigall to the chief editorial team, bringing strengths in paleobiology and marine biogeography, two areas that we are enthusiastic to grow alongside our more established areas. Among the Section Editors, we welcome Sal Keith as the new book reviews editor; she will take over from Markus Eichhorn mid-year. Carsten Meyer and Cascade Sorte join our growing roster

of outstanding Associate Editors.

The expanded team will enact further changes to facilitate publication and reduce time-consuming redundant steps in the publication process. As one example, *Frontiers of Biogeography* encourages continuity in editorial process even across journals by welcoming prior reviews with modified manuscripts following rejection elsewhere, thus maintaining a continuous chain of constructive feedback and review. Similar mechanisms exist at other journals, for example referral from Wiley's flagship biogeography journals to Wiley's pay-to-publish open-access journals; however, *Frontiers of Biogeography* has comparable impact and far lower costs—an attractive alternative. We also encourage submission of manuscripts recommended by Peerage of Science<sup>5</sup> and PCI Evolutionary Biology<sup>6</sup>. And in the cases when post-submission review is required, we try to balance timely with rigorous review, routinely offering our peers a month to review but allowing more time when needed.

Other changes to look forward to include sponsorship for workshops including publication of special issues in *Frontiers of Biogeography*; we

5 <https://www.peerageofscience.org/>

6 <https://evolbiol.peercommunityin.org/>

7 <https://editoria.pub/>; <http://coko.foundation/>

8 <https://d3js.org>; <https://developers.google.com/chart/interactive/docs/gallery>; <http://www.nextstrain.org>

tried this 5 years ago with great success (Castilho et al. 2013) and look forward to its return. We also will build the editorial office—hopefully providing more behind-the-scenes publishing experiences for early-career *IBS* members as editorial office staff, copyeditors, and layout specialists, in addition to reviewers and guest editors. For both sponsorship and vacancies, check our *Announcements* section in the current and upcoming issues.

Looking farther ahead, in 2018, we plan to transition to an HTML-based journal format, which will increase visibility of published articles to web crawlers and scrapers. A full-fledged journal article authoring and document management submission system, with similarities to Editoria™<sup>7</sup>, also is in the works. This is part of a collaborative partnership between eScholarship and Coko<sup>7</sup> to reimagine scholarly publishing in the digital era. The project anticipates a streamlined and flexible publication process that eases production of more interactive, rich, publications. *Frontiers of Biogeography* is enthusiastic about these developments and bringing to bear a wider range of graphics, hooks, and media for communicating your science; we imagine, for example, post-publication online commentary via blogs and twitter that complements pre-publication review, streaming video and audio (e.g., for soundscapes; Lomolino et al. 2015), and interactive annotated graphics that can be reconfigured and zoomed.

### The future of biogeography publishing: you

*IBS* President Dov Sax outlined a vision for *Frontiers of Biogeography* during his inaugural address in Tucson, January 2017, and we look forward to working with the *IBS* and other members of an expanded team to realize that vision in the coming year. Among the most important members of this team is *you*, the biogeography author, whom we encourage to submit work for publication: our goal is to provide you with service that enhances your publication opportunities, including for works that may not fit into the top-tier biogeogra-

phy journals. Through flexible categories of publication, an editorial team that cares about you because it is like you, and adoption of the most favorable innovations in publishing, we aim to make publishing your research in your journal easier.

Indeed, it is *your involvement* as authors that will really ensure that the next stage of *Frontiers of Biogeography* is not merely accommodation in its existing place, but rather a creative invasion of the publishing landscape—a rising profile that directly or indirectly continues to encourage innovation and change in related journals too. The future of *Frontiers of Biogeography* also lies in your hands—as reviewers, readers, citers, and members of the editorial team—for which roles we again call on all biogeographers early-, mid-, and late-career alike. Considering that *Frontiers of Biogeography* wishes primarily to be a vehicle for your success, we are delighted to showcase again, in this issue, more of the new generation of biogeography researchers emerging at the most recent meeting of the *IBS* (Bishop 2017, Gerstner 2017, Kennedy 2017)<sup>9</sup>.

### Afterword: current journal statistics (as of 20 March 2017)

*Frontiers of Biogeography* is indexed by Scopus, EBSCO, the Directory of Open Access Journals (DOAJ)<sup>10</sup>, and of course GoogleScholar. The total number of views since moving to eScholarship is now >85,000. *Frontiers'* top 10 articles have been viewed >23,500 times; the next 10 most-popular articles have been viewed over 7,500 times. Estimated impact (mean citations per paper, by the end of 2016, for articles published in 2014 & 2015): 2.03. The mean time taken by each reviewer is ~25 days; the mean time between submission and first decision for articles published in 2016 was 92 days (median 73 days); the mean time from submission to publication is 121 days (median 105 days). Pay to publish costs are  $\frac{1}{10}$ <sup>th</sup> of most open access journals. Waivers are granted on request.

<sup>9</sup> See also thesis abstracts by T.M. Smiley, M. Somveille, W.S. de Araujo, C. Meyer, L. Sabela, S.D.H. Irl, T. Matthews, A. Stein, P. Weigelt, and T.H. Lavery in issues 7.2-8.4; for full details, see References section.

<sup>10</sup> <http://www.doaj.org/>

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