

## Editorial



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*Proceedings B* 2019: the year in review.

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The publishing environment for scientific research is changing dramatically after years of relative stasis. For academic journals like *Proceedings B*, the current turbulence presents both challenges and opportunities. I am pleased to report in this year-end editorial that the journal is up to the task. We have introduced several initiatives that are enabling us to evolve, adapt and diversify, thus maintaining our reputation as the world's leading and most prestigious journal in organismal biology. Our editors and support staff in London have continued to work hard to improve publication metrics, while seeking new avenues to achieve the Royal Society's mission of 'recognizing, promoting and supporting excellent in science'. This requires us to be nimble but highly selective in what we publish, giving preference to articles that present novel research findings and syntheses of broad general interest to our readership. Given the increasing number of journals competing for exciting new articles in the biological sciences, this represents a major challenge. Making *Proceedings B* the most attractive option for authors is one of our major goals, and we have tried to do this by diversifying our editorial board, decreasing decision times and providing various opportunities for authors to promote their findings more broadly via social media and through blogs.

From 1 January to 31 October 2019, we received 2444 submissions, a small increase (74) in comparison with 2018. Of these submissions 78% were rejected and 22% accepted. Articles took on average 27 days from the date of submission to first decision, 70 days to final acceptance, 90 days to online publication; and 20 days from the final decision to online publication, a reduction of 7 days compared with 2018. Total submissions to the journal in 2019 were slightly higher compared with the same time period in 2018, and our current projections are approximately 2933 by the end of the year. The number of open access articles so far this year is 104, an identical number compared with last year, making up 20% of all accepted manuscripts. *Proceedings B* is a truly international journal and we receive articles from numerous geographical regions, with the largest number of submissions to date this year coming from the USA (622), UK (334), China (187), Australia (145), Germany (139), Canada (134), France (95), Japan (79) and Switzerland (63). We are hopeful that the recent recruitments to the editorial board from South America and Africa will raise the profile of the journal in these regions. Citation metrics for *Proceedings B* remain competitive and similar to last year, with an Impact Factor of 4.304, and the journal is ranked 11th out of 87 journals in the Journal Citation Reports category for 'Biology'.

Review articles are among the most popular content in *Proceedings B*, are free to read and are published in every issue. They provide novel syntheses of emerging topics in biology and are aimed at being highly accessible to a broad readership. The reviews are frequently well cited and many have played an important role in setting future research agendas for particular fields. Our review editor Innes Cuthill has continued to maintain high standards and attract a wide range of topics. So far in 2019, we have accepted 51 proposals, of which 36 have been submitted, and 18 reviews had been published by the end of October.

Each year, *Proceedings B* also publishes annual contributions from the Canadian Society for Ecology and Evolution (CSEE), alternating between the Presidential Address and an article by the recipient of the society's President's Award. This year former CSEE President Jeremy Kerr (University of Ottawa) will shortly submit an article about improving prospects for species conservation through an understanding of their dispersal dynamics. The article addresses the problem that many models predicting species distributions are incomplete

because they fail to take into account that environments are not static as assumed but are dynamic as a result of rapid environmental change.

The annual Darwin Review will appear shortly in *Proceedings B* and this year features ‘The deteriorating soma and the indispensable germline: germline senescence and offspring fitness’ [1] by Pat Monaghan and Neil Metcalfe (University of Glasgow); it addresses the fundamental question of whether the germline and soma are separate, as often assumed. Monaghan and Metcalfe examine age-related deterioration in the soma and consider the diverse mechanisms responsible for senescence of the germline. Their review clearly illustrates that the ‘Weismann barrier’ [2,3] is not as impenetrable as was originally thought, and that information transfer between the soma and germline can have important ecological and evolutionary consequences, particularly with respect to life-history evolution and mate choice.

Each year *Proceedings B* publishes a Special Feature on a timely topic in the biological sciences, with all content freely available on publication. In 2019, our Special Feature ‘Natural and synthetic gene drive systems’, guest edited by Nina Wedell (University of Exeter), Anna Lindholm (University of Zurich) and Tom Price (University of Liverpool), comprised 14 articles plus an introduction [4]. Gene drive, in which selfish genetic elements manipulate the reproduction of their hosts, occurs as a natural phenomenon; however, it is currently being exploited using synthetic systems to control pests and disease vectors such as dengue and Zika virus in mosquitoes in Australia and southeast Asia. There is controversy surrounding the implementation of these synthetic gene drive systems, particularly the concern that the insertion of novel DNA into wild species may have unintended ecological and evolutionary consequences. This Special Feature covers the current ‘state of the art’ on this fascinating topic and will be of considerable interest to researchers, regulators and policy makers.

A major current goal of *Proceedings B* is to broaden our scope and diversify content in order to make the journal more attractive to a wider readership and to fulfil our mandate as the flagship journal of the Royal Society in the biological sciences. We recently extended our portfolio of article categories with the introduction of ‘evidence synthesis’ papers, with editor Gary Carvalho handling submissions in this category. These articles involve a synthesis of published information relevant to specific policy questions and are aimed at being comprehensible to non-specialists and policy makers, thus enabling them to make informed decisions (see <https://blogs.royalsociety.org/publishing/evidence-synthesis-articles/>). Since the launch of the evidence synthesis article type in May 2018, we have received 19 submissions and published four articles covering diverse topics including the relationships between genetic diversity and parasite success [5] and host nutrition and pathogen virulence [6], the importance of migratory connectivity for global ocean policy [7] and the effects of endocrine disrupting chemicals on wildlife [8]. We look forward to receiving more submissions of this article type and are hopeful that they will aid in rigorously linking science to pressing environmental and societal issues.

As I write this editorial in early November, we are in the process of introducing a second new article type—‘Biological Science Practices’—with associate editor Stephanie Meirmans (University of Amsterdam) handling submissions. This new article type is a response to the increasing interest and volume of articles being published in diverse journals about

the ‘science of scientific practices’. We are interested in receiving articles concerned with scientific practices within biology that influence the quality of research, scientific community health and the public understanding of science. Topics could include, but are not limited to, practices involved with publication, including peer review and open science, the evaluation and meaning of quality in science, the use and abuse of bibliometric indices, career pathways and training, diversity issues, research ethics, data storage and sharing, and public outreach. Submissions of this new article type should address specific questions and hypotheses about Biological Science Practices, and present original data analyses and novel syntheses. Essays on best practices are acceptable if they are clearly evidence based. An editorial by Stephanie Meirmans provides more details on the motivation for introducing Biological Science Practices articles [9] as well as submission guidelines. The first article [10], ‘Games academics play and their consequences: how authorship, *h*-index, and journal impact factors are shaping the future of academia’, by Colin Chapman (George Washington University) and a large group of colleagues from diverse geographical regions, will appear shortly in *Proceedings B*. This article concerns the incentive structure of science, how it varies among regions and how it can be ‘gamed’, with damaging effects for academics, particularly young scientists.

The most significant development in the review process at *Proceedings B* during 2019 was the introduction of mandatory publication of peer review reports (editor and reviewer reports, author responses and decision letters). The reviews are published as a PDF in the electronic supplementary material. Reviewers and editors have the option of signing their names to their comments but it is important to emphasize that this is not a requirement. Despite largely anecdotal concerns expressed by some naysayers, this new level of transparency has had no significant influence on our ability to obtain reviewers and has also had no influence on reviewing times. Only a handful of potential reviewers have declined to review for us because of our new policy. On the other hand, we have received positive feedback on the introduction of this practice, especially from young scientists who appreciate the opportunity to learn something about the details of the reviewing process. More information on mandatory open peer review is available at the Royal Society Publishing Blog (<https://blogs.royalsociety.org/publishing/publication-of-open-peer-review>).

To conclude, I would like to thank all members of the editorial board for their hard work in maintaining the high quality of articles that are published in *Proceedings B*. From time to time I need advice on a variety of issues and I always appreciate the sound judgement that I receive from editors. A special thank you is in order to all board members who will retire at the end of this year. Thanks also to our editorial office team at the Royal Society in London, consisting of editorial coordinators Jennifer Kren, Buchi Okereafor and Callum Shoosmith, and production editor Simon Clackson, for their dedication to making sure that *Proceedings B* runs smoothly and efficiently. I am especially grateful to Shalene Singh-Shepherd, publishing editor of *Proceedings B*, for her wise counsel and promptness in dealing with the diverse issues that arise in a journal of this size and scope. E-mails to Shalene always get a response within 24 h and sometimes within a few minutes! Her efforts are much appreciated by editors and office staff.

Finally, 2019 has been a very sad year for all us connected with *Proceedings B* owing to the passing away of Victoria A. Braithwaite (Pennsylvania State University) on 30 September due to pancreatic cancer. Victoria was carrying out her editing duties until very close to her untimely end without any complaints; naturally the news of her death came as a great shock to all of us. Victoria was born in the UK and received her BSc and PhD degrees from the University of Oxford, and after serving on the faculty of Edinburgh University for 12 years, she was appointed at Penn State in 2007 where she held the Dorothy and Lloyd Huck Chair in Behavioural Biology. She joined the editorial board of *Proceedings B* in 2012 as an associate editor and became an editor in 2017. Victoria had broad interests and was an excellent natural

historian and biologist. Her research specialization was fish cognition and neurobiology, and her book [11] *Do Fish Feel Pain?* although not well received by anglers and the fishing community, was influential in efforts to improve conditions for fish in scientific studies and also in commercial fisheries in Europe and Canada. Subsequent studies have largely validated Victoria's early research first published in *Proceedings B* [12] that fish do indeed feel pain. For all of us at the journal, we offer our sincere condolences to Victoria's children, family members and friends.

**Data accessibility.** This article has no additional data.

**Competing interests.** I declare I have no competing interests.

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