

EDITORIAL

2020 – A year of changes, challenges and opportunities

Craig Franklin

2020 turned out to be an eventful year – and not just because of the huge impact of COVID-19. From a journal perspective, JEB has seen lots of changes too, particularly within the team of editors. We said a sad farewell to both Michael Dickinson and Editor-in-Chief (EiC) Hans Hoppeler – both of whom continue to serve the journal as members of the Editorial Advisory Board – and welcomed new Editors Sanjay Sane and Stuart Egginton. Sheila Patek and Pat Wright expanded their current roles to take up new positions as Deputy EiCs and I took on the new challenge of becoming JEB's ninth EiC. As announced last year (jeb232892), Andy Biewener will be stepping down in April after more than 20 years as a JEB Editor – we will miss his hard work and experience but look forward to welcoming him back briefly next year as one of the scientific organisers of the 2022 JEB Symposium 'Integrating Biomechanics, Energetics and Ecology in Locomotion'. In his place, Monica Daley (University of California, Irvine, USA) will be bringing her expertise in comparative neuromechanics and animal locomotion to the team and, together with Sheila and Sanjay, will be handling papers across the biomechanics field.

The other big change across the scientific publishing industry in 2020 has been the shift to new Open Access (OA) publishing models as a result of a number of funders (under the umbrella of cOAlition S) mandating publication in fully OA (rather than hybrid subscription/OA) journals. Historically, as a hybrid journal, take-up of JEB's Gold OA publishing option has been relatively low (in 2019, only 1% of authors opted to publish their research as OA), probably reflecting the differences in funding in the comparative physiology and biomechanics fields compared with that in other scientific disciplines. It was therefore important for us to ensure that, whatever changes we made to comply with funder mandates, all our authors were still able to publish in JEB. As such, JEB became one of the first three journals to announce its transition to transformative journal status – i.e. a journal that actively promotes the benefits of OA to increase uptake but still maintains the ability for authors with differing financial/funder status to publish under a free Green OA route (see jeb237248). OA is clearly the direction of travel – not least because OA articles generally have higher usage and readership than papers behind a subscription paywall – so we also introduced a new 'Read & Publish' licensing agreement for libraries in 2020. This offers researchers at participating institutions the usual subscription access to journal content, but also gives corresponding authors at the institution free and uncapped publication of Gold OA articles in JEB and its sister journals, *Journal of Cell Science* and *Development*. Over 60 institutions have already signed up for this initiative (<https://www.biologists.com/read-publish/participating-institutions/>) and the percentage of JEB authors publishing their research papers under the OA model increased to 6% in 2020.

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What did remain constant throughout 2020, however, was the dedication of our peer reviewers and Editorial Advisory Board. A list of all the researchers who contributed to the peer review process during 2020 can be found in the supplementary information and I would like to acknowledge their hard work and support during what can only be described as 'challenging' times. Despite the increased workloads foisted upon many of our community as they learnt how to teach and support their students and colleagues in a virtual world while simultaneously juggling childcare, home schooling and keeping their research going, they still found time

Box 1. Some of the articles readers have enjoyed during 2020, compiled using a variety of measures

Most-read research papers

Usherwood, J. R., Cheney, J. A., Song, J., Windsor, S. P., Stevenson, J. P. J., Dierksheide, U., Nila, A. and Bompfrey, R. J. (2020). High aerodynamic lift from the tail reduces drag in gliding raptors. *J. Exp. Biol.* **223**, jeb214809.

Morris, J. S., Link, J., Martin, J. C. and Carrier, D. R. (2020). Sexual dimorphism in human arm power and force: implications for sexual selection on fighting ability. *J. Exp. Biol.* **223**, jeb212365.

Goulet, P., Guinet, C., Campagna, C., Campagna, J., Tyack, P. L. and Johnson, M. (2020). Flash and grab: deep-diving southern elephant seals trigger anti-predator flashes in bioluminescent prey. *J. Exp. Biol.* **223**, jeb222810.

Most-cited research papers

Potier, S., Lieuvin, M., Pfaff, M. and Kelber, A. (2020). How fast can raptors see? *J. Exp. Biol.* **223**, jeb209031.

Ackermans, N. L., Winkler, D. E., Martin, L. F., Kaiser, T. M., Clauss, M. and Hatt, J.-M. (2020). Dust and grit matter: abrasives of different size lead to opposing dental microwear textures in experimentally fed sheep (*Ovis aries*). *J. Exp. Biol.* **223**, jeb220442.

Zimmer, A. M., Shir-Mohammadi, K., Kwong, R. W. M. and Perry, S. F. (2020). Reassessing the contribution of the Na⁺/H⁺ exchanger Nhe3b to Na⁺ uptake in zebrafish (*Danio rerio*) using CRISPR/Cas9 gene editing. *J. Exp. Biol.* **223**, jeb215111.

Most-reported research paper in the media

Winder, L. A., White, S. A., Nord, A., Helm, B. and McCafferty, D. J. (2020). Body surface temperature responses to food restriction in wild and captive great tits. *J. Exp. Biol.* **223**, jeb220046.

Most-read Review

Matthews, B. J. and Vosshall, L. B. (2020). How to turn an organism into a model organism in 10 'easy' steps. *J. Exp. Biol.* **223**, jeb218198.

Most-read Commentary

Olson, K. R. (2020). Reactive oxygen species or reactive sulfur species: why we should consider the latter. *J. Exp. Biol.* **223**, jeb196352.

Most-cited Review/Commentary

Joyce, W. and Wang, T. (2020). What determines systemic blood flow in vertebrates? *J. Exp. Biol.* **223**, jeb215335.

Most talked-about Conversation

In the field: an interview with Sandra Binning and Dominique Roche. (2020) *J. Exp. Biol.* **223**, jeb229534.

to provide critical analysis of the diverse array of fascinating papers submitted to the journal last year. I extend my heartfelt thanks and appreciation.

Moving forward into 2021, look out for our special issue entitled 'Predicting the future: species survival in a changing world', where we will be considering the role of experimental biology in assessing the susceptibility or resilience of species to future, human-induced environmental change. In a series of review articles, experts working across a variety of taxa and environmental drivers will be reflecting on how the field has changed since our last special issue on this topic in 2010 (<https://jeb.biologists.org/content/213/6>). Not only has the field changed over the past decade, but the world has also changed dramatically. Eight of the warmest years on record have been logged since 2010, extreme weather events have increased in frequency, oceans have become more acidic and Arctic sea ice extent continues to decrease. There couldn't be a more important time to illustrate how experimental biology and comparative physiology can provide

critical insight into the impacts of global change on animals and ecosystems and what the future might look like.

Later in the spring, we will be launching a new-look JEB website, in collaboration with our new online partner, Silverchair. In addition to greater options for viewing content, including a split-screen view allowing readers to see figures, references and supplementary material alongside the article text, we are looking forward to offering more flexibility in the services that we can provide to our authors and readers.

2020 has certainly been a year of challenges and opportunities and I would like to finish by highlighting some of the papers that readers have enjoyed during the year (Box 1) and wishing you all a productive and healthy 2021.

Supplementary information

Supplementary information available online at
<https://jeb.biologists.org/lookup/doi/10.1242/jeb.242155.supplemental>