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ISBE Newsletter

Supplement to *Behavioral Ecology*
www.behavecol.com

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FROM THE NEWSLETTER EDITOR

Time flies and the leaves are now falling in Sweden. Still, this summer's ISBE conference feels like it was yesterday. John Fitzpatrick and his team did an awesome job organizing ISBE 2022 in Stockholm. Personally, I had not realized how much I had missed in-person meetings and it was really great to finally meet fellow behavioural ecologists again. The science presented there was truly inspiring!

This Newsletter is full of information about the Stockholm conference. see the reviews on pages 13 and 20. There is also an interesting piece on collaboration and career progression, a book review, job postings and much more. Our journal *Behavioral Ecology* is of course central to our society, and you can read the report from our outgoing editor-in-chief Leigh Simmons on pages 6-11.

My sincere thanks to all that have contributed to this issue!

I do hope it reaches all of our members. We have had some problems keeping track of you, and I would like to thank you all for your persistence and patience in dealing with the multiple problems many of you have encountered while trying to join the society or renew your memberships. The ISBE executive council has begun work to improve the administration of the membership, including membership renewal reminders and up-to-date email lists (see page 5).

P. Andreas Svensson
ISBE Newsletter editor
andreas.svensson@lnu.se

President

Professor Suzanne Alonzo

University of California, Santa Cruz, USA
 Email: shalonzo@ucsc.edu

Past president

Professor Rebecca Kilner

University of Cambridge, UK
 Email: rmk1002@cam.ac.uk

President-elect

Professor Mariella Herberstein

Macquarie University, Australia
 Email: marie.herberstein@mq.edu.au

Secretary

Professor Bob Wong

Monash University, Australia
 Email: bob.wong@monash.edu

Treasurer

Professor Mark Hauber

University of Illinois Urbana-Champaign, USA
 Email: mhauber@illinois.edu

Councillors

Professor Shinichi Nakagawa

University of New South Wales, Australia
 Email: s.nakagawa@unsw.edu.au

Professor Eileen Hebets

University of Nebraska-Lincoln, USA
 Email: ehebets2@unl.edu

Dr. Kavita Isvaran

Indian Institute of Science Bangalore, India
 Email: kavita@iisc.ac.in

Dr. Susan Cunningham

University of Cape Town, South Africa
 Email: susan.cunningham@uct.ac.za

Behavioral Ecology Editor-in-chief

Dr Louise Barrett

University of Lethbridge, Alberta, Canada
 Email: louise.barrett@uleth.ca

Present ISBE conference organiser

Professor Bob Wong

Monash University, Australia
 Email: bob.wong@monash.edu

Past ISBE conference organiser

Assoc. Prof. John Fitzpatrick

Stockholm University, Sweden
 Email: john.fitzpatrick@zoologi.su.se

CONTRIBUTE TO THE NEWSLETTER!

Your contribution is important!

The ISBE Newsletter publishes Book Reviews, Conference/Workshop Reviews, Job postings and other advertisements, as well as Commentary Articles of interest to the International Society for Behavioral Ecology and Obituaries for recently deceased colleagues. The ISBE Newsletter will only consider work that is not already published or intended to be submitted for publication elsewhere.

Book Reviews: Persons involved in the publishing of books who would like these to be considered for review in the Newsletter should contact the editor so that they can be added in the books-for-review list. Authors may submit a list of possible reviewers. Members who wish to review a particular book should contact the editor. The editor will provide reviewers with instructions. Reviews are typically 1500-2000 words. For a list of books currently available for review, see the end of this Newsletter.

Workshop/Conference Reviews: Workshop and/or Conference reviews can be prepared in one of the following formats: *Brief synopses* (around 1500 words) and *Longer reports* (around 3000 words). Graduate students and postdocs are strongly encouraged to consider contributing to writing these reports.

Cartoons: Cartoonists and other artists are encouraged to submit artwork, either in hardcopy, or as TIFF or high resolution (>300 dpi) gif or jpg files. All cartoons published in the Newsletter will be credited to the illustrator.

Spotlight on young scientists: Early career members (PhDs/ postdocs) are encouraged to participate in the section "Spotlight on"; please provide name, education, current address, research interests and selected papers in an email to the editor.

Upcoming conferences and events: Please submit information about events that are relevant to the Society. Do this by emailing the Newsletter editor so that it can be included in the "Conference calendar"

The deadline for contributions to the next issue is Feb 28, 2023

CONFERENCE CALENDAR

Joint Entomological Society of America (ESA), Entomological Society of Canada (ESC), and the Entomological Society of British Columbia (ESBC) Annual Meeting

Nov 13 – 16, 2023, Vancouver, BC, Canada.
<https://entsoc.org/event-calendar/entomological-society-america-esa-entomological-society-canada-esc-and-entomological>

International Congress on Subterranean Termite Management and Control

Nov 24-25, 2022, Teide National Park, Tenerife, Spain
<https://congreso.infotermitastf.com/index.php/en/>

National Wildlife Rehabilitators Association Symposium

Feb 28 – March 4 2023, Wilmington, Delaware, USA
www.nwrawildlife.org/mpage/Symposium_Home

Animal Behaviour Twitter Conference 2023

Jan 18-19, 2023. The second global animal behaviour Twitter conference, organised by ASAB, ABS, and animal behaviour researchers around the world.
animbehav2023.com #AnimBehav2023. Follow @asab_tweets and @AnimBehSociety to participate

National Wildlife Rehabilitators Association Symposium

Feb 28 – March 4 2023, Wilmington, Delaware, USA
www.nwrawildlife.org/mpage/Symposium_Home

International Conference on Animal Ecology and Behavior (ICAEB)

April 3-4, 2023, Venice, Italy
<https://waset.org/animal-ecology-and-behavior-conference-in-april-2023-in-venice>

Conference for the European Human Behaviour and Evolution Association

April 18-21 2023, University College, London
<https://ehbea2023.wixsite.com/ehbea-2023>

Human Behavior & Evolution Society

May 31-June 3, Palm Springs, California.
www.hbes.com/conference

2023 International Conference on Pollinator Biology, Health and Policy

June 3-6, 2023 Penn State

<https://web.cvent.com/event/c21acf50-b587-4d7c-b0bc-55cbeed97098/summary>

Evolution 2023 (ASN/SSB/SSE)

June 21-25, 2023 Albuquerque, New Mexico
www.evolutionmeetings.org

The International Conference "Defense Strategies in Early Human Evolution"

23-26 June 2023, Tbilisi, Georgia
If you have questions, please contact the organizers:
Joseph Jordania: josephjordania@yahoo.com.au
David Lordkipanidze: dlordkipanidze@gmail.com

The Animal Behavior Society (ABS) conference

July 11-15, 2023 Portland, Oregon
www.animalbehaviorsociety.org

ESEB, ASN, SSE & SSB joint conference.

July 26 – 30 July, 2024, in Montreal, CA.
<https://eseb.org/congresses/>

The American Ornithological Society (AOS) and the Society of Canadian Ornithologists (SCO-SOC).

7–12 August 2023 in London, Ontario, Canada.
<https://americanornithology.org/meetings/annual-meeting>

Behaviour 2023

Aug 14-20 2023, Bielefeld Germany
<https://www.uni-bielefeld.de/fakultaeten/biologie/forschung/veranstaltungen/behaviour2023>

14th European Ornithologists' Union Congress

Aug 21-25 2023 in Lund, Sweden
The biennial congress of the European Ornithologist Union, EOU, will be hosted by Lund University 21-25 August 2023. Everyone who is interested in ornithology is most welcome. The conference website with more information can be found at: www.eou2023.event.lu.se and the EOU website at: [EOU - European Ornithologists' Union \(eouunion.org\)](http://EOU-EuropeanOrnithologistsUnion(eouunion.org)).

For the organizers, Anders Brodin

WCH10 10th World Congress of Herpetology

August 2024, in Kuching, Malaysia
www.worldcongressofherpetology.org/

ISBE+

In a first for an ISBE meeting, the in-person ISBE 2022 meeting in Stockholm was accompanied by the virtual platform ISBE+. The ISBE+ platform allowed delegates to upload presentations to an online archive and gave people who couldn't attend the meeting in person the opportunity to virtually participate in ISBE 2022. With ISBE+ being available for 3 months after the conference ended, delegates could catch up on all the fantastic science being done by the ISBE community.



Wominjeka: Welcome to Melbourne!

We are very excited to announce that the long anticipated Melbourne Congress will now take place from 29 September to 4 October, 2024.

Marvellous Melbourne

Melbourne is the State capital of Victoria and is situated on the traditional lands of the Wurundjeri and Boonwurrung peoples of the Kulin Nation. Set along the shores of Port Phillip Bay, Melbourne is consistently ranked as one of the most liveable cities in the world. And it’s not hard to see why.

Melbourne’s creative culture is expressed in its food, arts and music scene. It is home to world class museums, beautiful parklands, and a labyrinth of laneways with plenty of street art and hidden bars to explore. Melbourne is a haven for food lovers and coffee connoisseurs, and the wineries of the Yarra Valley are only a short drive from the city.

Nature lovers will be spoilt by the unique natural beauty of Victoria, ranging from cool temperate rainforest to coastal heathland. These environments are home to some of Australia’s most iconic native animals, including wombats, koalas, kangaroos, platypus – and superb fairy wrens. There is even a penguin colony in the city (at St Kilda Pier), a mere 20 minutes tram ride from the conference venue.

The conference has been specially timed to coincide with the Australian Spring to showcase the very best that Melbourne, and Australia more generally, has to offer.

Conference venue

The ISBE Congress will be held in the state-of-the-art Melbourne Convention and Exhibition Centre (MCEC). The MCEC is located in the South Wharf Precinct in the city and is within short walking distance to plenty of cafes, restaurants, bars and pubs (the nearest is only a 40 second walk from the MCEC’s entrance). There are also plenty of accommodation options in close proximity

to the venue, from youth hostels to 5 star hotels. Indeed, there are over 4,300 hotel rooms within a 10 minute walk of the MCEC (not to mention the many serviced apartments and Airbnb listings).

Support for the conference

The local organising committee has secured funding from the Victorian State Government to support the event, a portion of which will go towards onsite child care services to encourage attendance by those with young families and carer responsibilities. This support is in addition to the very generous grants that the Society already offers to delegates through its student and developing nations travel awards.

Coming to Melbourne and getting around

For those of you who haven’t been to Melbourne before, the city is easily accessible for delegates from all parts of the world. Melbourne Airport operates around the clock and is 20-minutes by road to the city centre.

In terms of getting around, Melbourne is the perfect walking city with a grid layout that is easy to navigate. With the Yarra River running through the city and a bay next door, Melbourne is a great city to experience by boat. There are ample public transport options for groups to explore the city. Melbourne has the largest tram network in the world and free year-round tram travel is provided within the city centre including to and from the MCEC.

Final comments (for now)

Melbourne will be an ideal setting for ISBE’s scientific program and, on behalf of the behavioural ecology community of Australasia, we look forward to (finally) hosting you in our region.

Remember to mark those key dates into your diary. See you in 2024!

**Bob Wong
Devi Stuart-Fox
Andy Bennett**

Organizing Committee of the 19th ISBE Congress



2022 ISBE GENERAL MEETING

The ISBE General Meeting in 2022 was held in the main auditorium of the Waterfront Conference Centre in Stockholm, Sweden, on Sunday 31 July during the lunch break. Nineteen people attended. The new ISBE president Suzanne Alonzo chaired the meeting, following the transfer of presidency from Rebecca Kilner, who now takes on the role of past-president.

Suzanne began by welcoming those in attendance, before reiterating the main activities of the Society, which is to publish the journal *Behavioral Ecology* and to organise the ISBE Congresses. Suzanne also discussed the importance of the ISBE in not only promoting the field, but also advancing opportunities for researchers through travel grants, awards and prizes.

Suzanne then provided an overview of recent changes to the membership of the Executive Council, including the retirement of Trish Schwagmeyer and Leigh Simmons in their roles as Treasurer and Editor-in-Chief (EIC) of *Behavioral Ecology*, respectively. Trish, who has served as Treasurer since 2016, will be remembered for her sharp wit and attention to detail, which have served the ISBE well across all aspects of the Society's activities. In his role as EIC, Leigh Simmons introduced numerous initiatives (e.g. Editor's choice, virtual issues, promotion of content through social media platforms) and oversaw significant changes to the journal (e.g. transition to a fully online journal) that have had a transformational impact on the success of *Behavioral Ecology*. Leigh's energy will be greatly missed. Suzanne thanked both Trish and Leigh on their commitment and service to the Society, and welcomed Mark Hauber as incoming Treasurer, Louise Barrett as incoming Editor-in-Chief and Niels Dingemanse as incoming Reviews Editor. Suzanne also welcomed new Councillors Kavita Isvaran and Susie Cunningham, and thanked past President Andrew Cockburn and outgoing Councillors Claire Spottiswoode and Dan Blumstein for their service.

As the incoming and outgoing EICs and Treasurers were unable to attend the conference, Suzanne gave a summary of both the EIC and Treasurer reports (please see page 6 and 12 in this issue).

Andreas Svensson, in his role as newsletter editor, reiterated the aims and scope of the newsletter, which is published twice a year. Andreas provided an overview of the newsletter's content, which include book reviews, conference reviews, advertisements (jobs, positions, workshops etc), spotlights on early career researchers, and a conference calendar. Andreas made a call to the membership to contribute content to the newsletter and, in particular, invited more senior academics to contribute their perspectives and reflections on the discipline.

Suzanne then gave a summary of some key discussion points that came up at the Executive Council Meeting that was held on 28 July, including the decision to create a membership officer position on Council as well as a membership committee to improve communication between the Society and its members. Suzanne also conveyed Council's desire to introduce new awards targeted at early career researchers. Finally, Suzanne reiterated the Society's commitment to promoting greater diversity, equity and inclusion (DEI) across all aspects of the Society's activities, from publication of the journal to delivery of the conferences. To this end, Suzanne invited the membership to share any thoughts and concerns via email (shalonzo@ucsc.edu or bob.wong@monash.edu using the subject line "ISBE DEI").

Bob Wong
Secretary, ISBE
Monash University, Australia



Past President Becky, Current President Suzanne and President-elect Mariella

2022 Report from the Editor-in-Chief

The COVID pandemic has made the last 2 years a challenging period for many, and the journal is no exception. Submissions declined over the period, although this did not affect our ability to meet our target page budget and maintain our acceptance rate. Despite a dip in the journals impact factor in 2018, experienced by most journals in ecology and evolution, the journal has retained its long-term Q1 status in Zoology, ranked 22nd of 175. It has a cited half-life of over 10 years, evidence of its enduring impact in the field. *Behavioral Ecology* currently enjoys 2,697 Institutional subscriptions with access to the journal via the OUP Collection. *Behavioral Ecology* remains, therefore, a premier journal in our field.

1. Editorial Team

There have been a number of changes to the Editorial team since my last report in 2020. Jenny Fulford remains our Editorial assistant but there has been some instability in publishing at Oxford University Press. After working with the journal for 5 years, Cailin Deery took on a new role at OUP and was replaced by Gemma Cannon in March 2021. I would like to thank Cailin for all of her efforts over the 5 years in which she served *Behavioral Ecology*. Unfortunately Gemma was with us for just 3 months before going on maternity leave in June 2021. Jude Roberts, a member of OUP's open access team was seconded to cover the period of maternity leave but left the role shortly thereafter. OUP finally recruited a replacement in November 2021, Oluwatooni Akinkoutu on secondment from the production department. Communications with OUP have improved greatly in 2022 with Oluwatooni's appointment, and it is hoped that stability in communications will be restored.

Some of our Editors have finished their terms of office, including John Quinn, Colette St Mary, Mariella Herberstein and Marc Naguib. I would like to formally thank each of these individuals for their hard work and dedication to the journal. Accordingly, we have recruited 4 new Editors, Mark Briffa, Peter Buston, Diego Gil and Robin Tinghitella. I am extremely grateful to these individuals for agreeing to offer their time and expertise to build upon the strength of our journal over the coming years. And I am particularly grateful to all of our Editors for all they have done in helping me to maintain the momentum of the journal over the last 2 years in the face of COVID-19. Most of our Editors have been working from home, many while caring and schooling young children, and my gratitude for their continued support of our journal and its authors cannot be overstated.

We have also seen changes to our Editorial Board. My thanks go to Terry Ord, Rebecca Kilner, Daniel Sol, Kate Umbers, Oded Berger-Tal, Robin Tinghitella, Dustin Rubenstein, Theodore Stankowich and Christina Painting who have all completed terms on the Editorial Board, and I welcome new members Rachael Shaw, Emily DuVal, Amanda Bretman, Barney Luttbeg, Albrecht Schulte-Hostedde, Simon Chamailé-Jammes, Lysanne Snijders, Orr Spiegel, Diego Gil, Sheng-Feng



Shen, Maria Thaker, Julia Riley, Martin Reichard, Alfredo Sanchez-Tojar, Michael Kasumovic, Geoff While, Liam Dougherty, Anne Hertel, and Yimen Araya-Ajoy. Domhall Jennings is our specialist animal ethics consultant and Julia Riley manages the *Behavioral Ecology* Twitter account. With increasing problems in obtaining timely reviews through the COVID pandemic, the Editorial Board was expanded in 2021 from 17 to 24. Our editorial board have committed to provide rapid reviews on up to 10 manuscripts per year, and serve as adjudicators when necessary. Our editorial structure aims to afford a broad area of expertise in behavioral ecology research, to be gender balanced and to represent the international community. We currently have 20 male and 14 female Editors/Editorial Board members from 17 Countries, that provide a broad coverage of research areas and taxonomic specialities.

2. Manuscript submissions, decisions & production

During 2020 (2021) *Behavioral Ecology* received 517 (475) Original Articles, a reduction of around 20% on the last, pre COVID, reporting period. We also Invited 4 (3) Reviews with associated Commentaries, and 3 (4) Ideas. During the same periods decisions were made on 562 (479) submissions. Of these 73% (67%) were rejected (42% (37%) without review) and 27% (33%) were accepted for publication.

We have managed to keep decision times steady, with the average time from submission to decision for new manuscripts being 54 (56) days and for revisions 20 (22) days. There was an increase in decision times of just 7 days for new submissions, relative to the last, pre-COVID, reporting period.

The time from final acceptance to publication in advance of print was ~4.5 weeks pre-COVID. This rose to as high as ~10 weeks in August 2021 but I am pleased to report that it has now returned to ~4 weeks.

3. Published Volumes

Volumes 31 and 32 of *Behavioral Ecology* appeared in 2020 and 2021 respectively. Volume 31 comprised a total of 1435 pages with 144 original articles and 3 Invited Reviews with associated Invited Commentaries. Volume 32 comprised a total of 1793 pages with 140 original articles and 4 Invited Reviews with associated Invited Commentaries. Collectively these articles have

received 856 citations at the time of writing this report, an average of 2.5 citations per article.

There was one Expression of Concern published in Volume 31(5), of a paper originally published in Volume 25(1):

Keiser, C.N., Pruitt, J.N. 2014. Spider aggressiveness determines the bidirectional consequences of host-inquiline interactions. *Behav. Ecol.*, 25, 142-151.

At the request of the Editor-in-Chief and following COPE guidelines, the authors were asked to investigate the validity of the data upon which the conclusions were drawn. A number of data anomalies were found that resulted in 39 of 138 behavioural observations being excluded from reanalysis. While the conclusions still hold without this subset of the data, the number of anomalies and other data irregularities remain cause for concern. The Expression of Concern was published, and

a request made of the second author who was responsible for the collection and curation of data, to provide supporting evidence of the data integrity in the form of original laboratory notebooks and/or recording sheets. At the time of writing this report such evidence has not been received. Our expression of concern and request for data validation have been lodged at the institution where the research was originally conducted and at the second author's current host institution.

For each issue in Volume 31 and 32, one article was highlighted as Editor's Choice. These articles were made free to view and archived in a collection that can be accessed via the online journal homepage. Editor's Choice articles are also highlighted on the journal's FaceBook page and the online journal home page, with a lay summary outlining their significance to the general public.

Editor's Choice



Effects of chronic and acute predation risk on sexual ornamentation and mating preferences

One of the big questions in behavioral ecology has been how variance in male secondary sexual traits can be maintained in the face of constant selection from choosy females. On pages 7-16 of this issue, Joachim Frommen and colleagues offer a potential solution to this problem in their study of stickleback fishes. When reared under a constant risk of predation, males were found to develop less intense red breeding coloration while increasing their courtship behavior. Female preferences were unaffected by predator exposure during their development, but did relax their preferences for courtship when exposed to predators at the time of mating. Such plasticity in male traits and female preferences can alter the strength and direction of sexual selection and help maintain variation in male secondary sexual traits.

[Read the article here](#)

Image source: http://creationwiki.org/File:Three-spined_stickleback.jpg



Exploring the effects of extreme polyandry on estimates of sexual selection and reproductive success

In a recent Invited Review, David Shuker & Lotta Kvarnemo put forward the case for a change in the definition of sexual selection, from one focused on competition for mates to one focused on competition for gametes. On pages 1055-1063 of this issue, Ginny Greenway and her colleagues show why this matters. Using a species of squash bug, they observed all mating interactions among individuals in semi-natural populations. They found that both males and females mated frequently. More importantly, they found that a measure of the strength of sexual selection acting on males was reduced under a scenario where each male's sperm had to compete to fertilize eggs within multiply mated females, and elevated when it was assumed that the last male to mate fathered all offspring. An emphasis on competition for gametes can change our understanding of the power of sexual selection to affect evolutionary change.

[Read the article here](#)

Image source: Ilona Loser, CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons



Smart mating: the cognitive ability of females influences their preference for male cognitive ability

Do females prefer a clever male? For sticklebacks some females do, but clever females can take them or leave them. Cognitive ability can have important consequences, for example affecting their ability to find food, build nests, and avoid predators. All traits females might want for their offspring. But little work has examined whether female animals prefer males with high cognitive ability as mates. On pages 803-813 of this issue Náyade Álvarez-Quintero and colleagues used a detour-reaching task to measure a fish's cognitive ability before performing mate choice tests. A male's cognitive ability was found to be a strong predictor of his attractiveness to females, even though females had not observed males performing cognitive tasks. However, only females with low cognitive scores showed preference. These novel findings raise many questions concerning the evolution of cognitive ability, a rapidly developing area in behavioral ecology.

[Read the article here](#)

Image source: Gilles San Martin, CC BY-SA 2.0 <<https://creativecommons.org/licenses/by-sa/2.0/>>, via Wikimedia Commons



Increased male mating success in the presence of prey and rivals in a sexually cannibalistic mantis

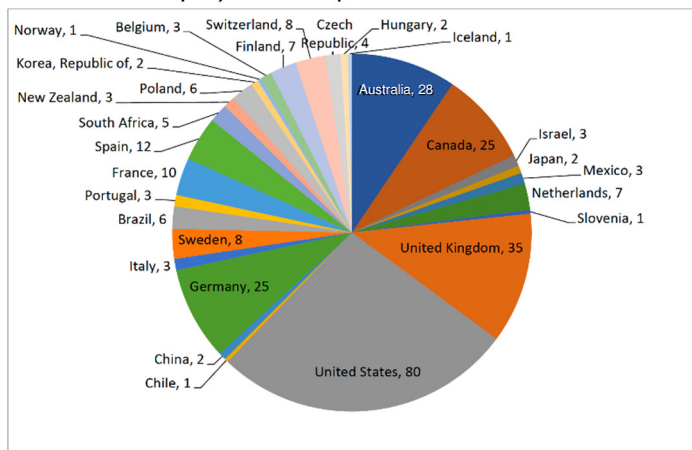
Animal behavior is finely tuned by natural selection to minimize potential risks to survival whilst maximizing reproduction, and variability in the ratio of risks to benefits is expected to favor the evolution plasticity in individual behavior. On pages 574-579 of this issue, Nathan Burke and Gregory Holwell provide evidence for such behavioral plasticity in preying mantises. Male mantises run the extreme risk of being consumed by females before or during mating. The author's show that males engage in mating more often and more rapidly when females are distracted by potential prey items. Moreover, mating occurs even more rapidly in the presence of a potential rival male, with males taking greater risks of being eaten in the face of lost mating opportunities. Reproduction it seems is more critical than survival.

[Read the article here](#)

Image source: Miomantis caffra, <https://www.flickr.com/photos/63394592@N08/>

4. Geographic provenance of authors

Our authors came from 29 countries, with the USA, the UK and Australia the largest represented groups, followed closely by Germany and Canada.



5. Online Journal

Average full text views (HTML and pdf) rose by 13.7% in 2020 (from 66,840 in 2019 to 76,019 in 2020) and then fell by 7.7% (to 70,156) in 2021.

The journal currently has 6,887 email Table of Contents (eTOC) registrants, an increase of 3.1% on my previous report. *Behavioral Ecology* also has a further 1,838

individuals signed up to receive Advanced Access (AA) e-alerts, an increase of 1.2% on my previous report.

6. Journal Impact

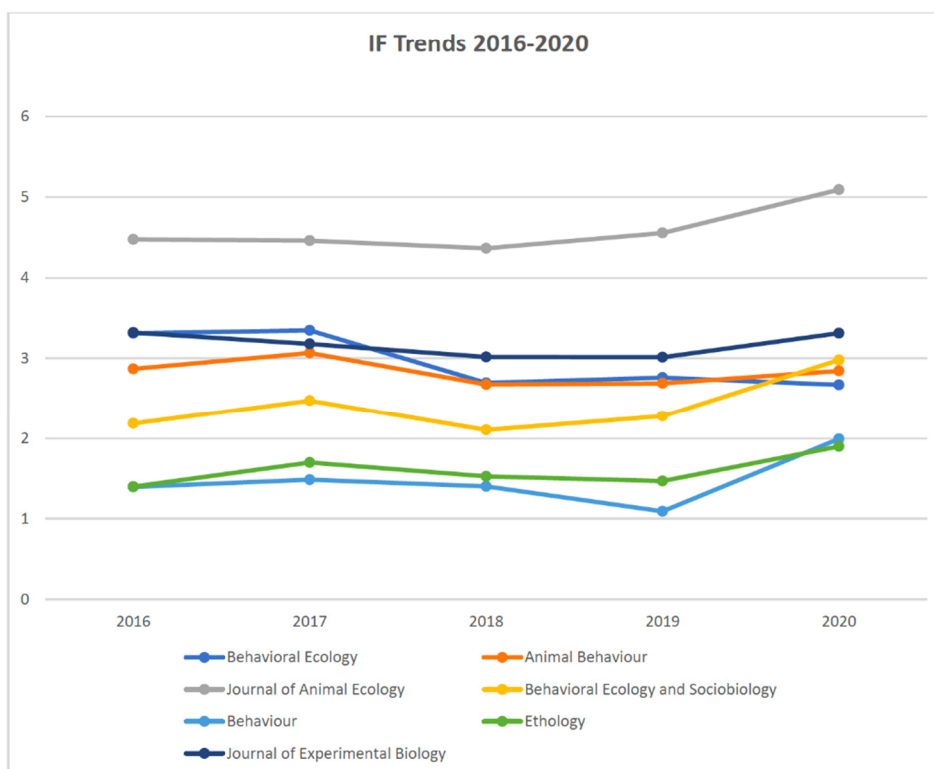
The ISI Impact Factor for *Behavioral Ecology* fell from 2.761 in 2019 to 2.671 in 2020. Despite this slight fall it remains within the top tier of behavioural journals including *Animal Behaviour* and *Behavioral Ecology & Sociobiology*. *Behavioral Ecology* is currently ranked 34/53 in Behavioral Sciences, 84/166 in Ecology and 22/174 (Q1) in Zoology.

The IF is derived from the ratio of citations to papers published in the two years previous divided by the number papers published in the journal in those years. Volatility can arise from one or two highly cited articles that sit in the impact window for two years and then fall out. For example, the fall in IF from 2019 to 2020 can be explained by a single paper by Tom Houslay and Alastair Wilson. "Avoiding the misuse of BLUP in behavioural ecology" that has attracted over 100 citations since it was published in 2017. That paper contributed greatly to the 2019 IF but was not captured in the 2020 IF window. Historically, articles in our discipline tend to take longer to accrue citations than other disciplines, as behavioural ecology is a relatively slow moving field. For us then, an IF in the range of 2.5 to 3.0 based on citations 3 years after publication is the sign of a healthy, high quality journal. The five year impact factor is higher at 3.329.

	2016	2017	2018	2019	2020
Behavioral Ecology	3.311	3.347	2.695	2.761	2.671
Animal Behaviour	2.869	4.459	2.675	2.689	2.844
Journal of Animal Ecology	4.474	4.459	4.364	4.554	5.091
Behavioral Ecology and Sociobiology	2.185	2.473	2.103	2.277	2.980
Behaviour	1.394	1.484	1.401	1.091	1.991
Ethology	1.398	1.697	1.525	1.467	1.897
Journal of Experimental Biology	3.32	3.179	3.017	3.014	3.312

Table 1 shows the Impact Factors for *Behavioral Ecology* and competitor journals over the last 5 JCR years.

Figure 1



Top Cited Articles 2020 Impact Factor
Which articles received the most citations contributing to the 2020 Impact Factor?

Title	First Listed Author	Article Details	IF Citations
Chromatic and achromatic vision: parameter choice and limitations for reliable model predictions	Peter Olsson	Vol:29, Iss:2, Pub Date:2017-10-21	15
Comparing colors using visual models	Rafael Maia	Vol:29, Iss:3, Pub Date:2018-04-09	14
Dear enemies or nasty neighbors? Causes and consequences of variation in the responses of group-living species to territorial intrusions	Charlotte Christensen	Vol:29, Iss:5, Pub Date:2018-02-14	14
Causes and consequences of intraspecific variation in animal responses to anthropogenic noise	Harry R Harding	Vol:30, Iss:6, Pub Date:2019-07-01	13
Effects of experimental anthropogenic noise on avian settlement patterns and reproductive success	Allison S Injaian	Vol:29, Iss:5, Pub Date:2018-07-10	12
Do wild ungulates experience higher stress with humans than with large carnivores?	Adam Zbyryt	Vol:29, Iss:1, Pub Date:2017-11-16	12
Queen pheromones and reproductive division of labor: a meta-analysis	Luke Holman	Vol:29, Iss:6, Pub Date:2018-04-27	11
Indirect genetic effects in behavioral ecology: does behavior play a special role in evolution?	Nathan W Bailey	Vol:29, Iss:1, Pub Date:2017-12-13	11
Behavioral syndromes vary among geographically distinct populations in a reptile	Marcus Michelangeli	Vol:30, Iss:2, Pub Date:2018-12-19	10
Rate of intersexual interactions affects injury likelihood in Tasmanian devil contact networks	David G Hamilton	Vol:30, Iss:4, Pub Date:2019-04-25	9

7. Virtual Issues

Behavioral Ecology also publishes Virtual Issues. In general these are built around one of our Invited Reviews, with a mix of older articles, and articles published within the previous 2 years. They are provided free to view, with the aim that increased usage of the more recent articles will feed through to increased rates of citation with consequences for the journal's impact factor. In 2020 we published Sperm Competition and its Evolutionary Consequences to mark the 50th year since Parker's influential paper on post-mating sexual selection, and Animal Contests built around an Invited Review by Kenneth Chapin and colleagues "Further mismeasures of animal contests: a new framework for assessment strategies". In 2021 we published Anthropogenic Noise and its Effects on Behaviour built around Harry Harding and colleagues review "Causes and consequences of intraspecific variation in animal responses to anthropogenic noise", and Mate Choice Copying, built around Alice Davies and colleagues meta-analytical review of the strength of mate-choice copying in animals.

Our virtual issues are effective in promoting research published in the main journal. For example, relative to the preceding 6 months, the articles featured in Anthropogenic Noise experienced an increase in usage of 15% during the promotional period, while those featured in Animal Contests experienced an increased usage of 87%.

8. Impact

Facebook

The journal's facebook page @behecol serves as a public face, and a mechanism with which to promote our research to the broader public so as to increase the impact of behavioral ecology research. The number of followers is currently 10,081 an increase of 9% over the last 2 years. Followers come largely from the USA (18%), India (8%), Europe (7%), the UK (7%), Mexico (6%) and Brazil (5%). The page is used to highlight new articles in the journal that are particularly newsworthy. When each new issue of the journal is released a lay summary of the Editor's Choice is posted, along with a

"Focus on Issue" post with images accompanied by author provided lay summaries. Shares of second party blogs or news media on *Behavioral Ecology* articles typically reach an audience of ~1500 people. Our own posts, such as the Editor's Choice or announcements of new Virtual Issues generally attract greater attention. For example the post for our Virtual Issue Anthropogenic Noise and its Effects on Behavior reached 5,541 people with 522 engagements through to the articles, and our last 5 Editor's Choice posts have reached between 1,118 to 3,159 people of which 32 to 229 people engaged with the articles. Our "Focus on Issue" posts typically reach ~1000 people generating ~40 engagements. Referrals from Facebook do translate into significant article downloads, 7,397 in 2021.

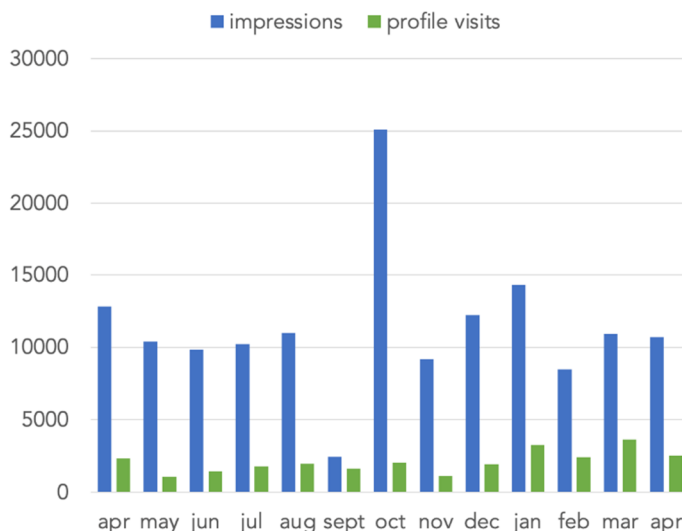
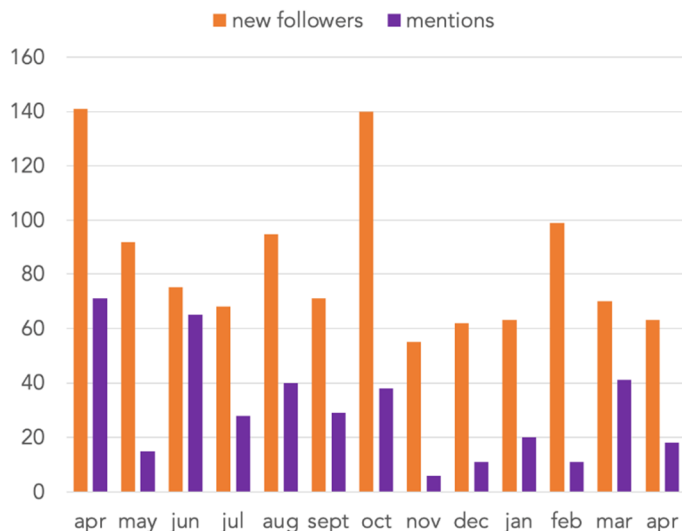
The page is also used to post society information, such as ISBE conference announcements and the Newsletter.

Twitter

The *Behavioral Ecology* twitter account (@BehavEcol) is managed by Julia Riley. Julia began this task in February 2021. Kate Laskowski was also brought on as a back-up in case Julia was too busy during fieldwork to monitor the page, but she has largely been able to manage it in balance with her other responsibilities. As of May 2022, our Twitter feed has 9727 followers, which is up 27% from ~7640 last reporting period. In the past 16 months (Jan 2021 – Apr 2022), the number of new followers has remained mostly stable, with a median of 84 new followers per month (range: 55 – 176). The number of mentions has also remained consistent at 31 per month (range: 6-71), as have the number of profile visits (median 1956, range: 1084 – 3641). The impressions are also quite high: a median of 2140 per tweet (range: 1363 – 3200). In addition to tweets generated in-house, we also re-tweet mentions by authors of our papers which is a win-win because it promotes the researchers as well as the journal, however these do not appear in our analytics. Oxford University Press has been promoting BE papers and mentioning @behecol which we have been retweeting. Similar to previous managers of the account, Julia is still looking into setting up a

twitter bot that automatically tweets publications as they are published online and she would welcome input from members with relevant experience. Currently, Julia is using TweetDeck to minimize the effort of maintaining the page, but a more streamlined system is

desirable. The following graphs depict our analytics over the last 12 months (April 2021 – 2022):



Referrals from twitter translate into significant article downloads, 6,283 in 2021.

Oxford University Press are also actively engaged in promoting our journal material through their own twitter and Facebook channels, and through press releases and features on the OUPblog. Editors identify accepted articles of particular note and direct these to our marketing team who work with authors in preparing blog posts.

Altmetrics

The impact and reach of research reported in *Behavioral Ecology* beyond traditional academic venues is captured by altmetric data. The altmetric score is a measure of the amount of attention an article has received online, in social media and news sites. Our highest scoring article between 2020 and 2021 was Simon Ripperger and colleagues paper, *Tracking sickness effects on*

social encounters via continuous proximity sensing in wild vampire bats which has an altmetric score of 1116. The article was picked up by 82 news outlets, 12 blogs, 515 tweets and 2 Facebook pages. The articles impact is also reflected in traditional academic metrics, with the article receiving 9 citations as of May 2022. The articles impact may have benefited from our general focus on the spread of infectious diseases over the last 2 years! The top 5 articles by altmetric score for 2020 and 2021 can be found below. To put these values into some perspective, altmetric scores of 20 or more are in general receiving significantly greater impact than other papers, being in the top 5% of all research outputs scored by altmetrics.

Altmetric Scores 2020

Score	Title
1116	Tracking sickness effects on social encounters via continuous proximity sensing in wild vampire bats
381	Socially foraging bats discriminate between group members based on search-phase echolocation calls
192	Juvenile social dynamics reflect adult reproductive strategies in bottlenose dolphins
138	Juvenile socio-ecological environment shapes material technology in nest-building birds
113	Sensory ecology of the frog-eating bat, <i>Trachops cirrhosus</i> , from DNA metabarcoding and behavior

Altmetric Scores 2021

Score	Title
432	Anthropogenic noise disrupts mate choice behaviors in female <i>Gryllus bimaculatus</i>
255	Fire-driven behavioral response to smoke in a Mediterranean lizard
160	Offspring desertion with care? Chick mortality and plastic female desertion in Snowy Plovers
144	Wolves choose ambushing locations to counter and capitalize on the sensory abilities of their prey
94	Female-biased sex ratios in urban centers create a "fertility trap" in post-war Finland

9. New initiatives

With Volume 33 issue 1 *Behavioral Ecology* moved to a new online only format. Full colour figures are now encouraged at no charge to authors, and we will see the roll out during 2022 of a fresh and cleaner pdf format that is optimised for on-screen reading, and a new sharper online journal home page. *Behavioral Ecology* is also increasing its support of Open Access publication. Oxford University Press are developing Read and Publish deals with institutions and organisations across the globe which are increasing the availability of open access for many of our authors. You can find out if your institution has Read & Publish agreements here: <https://tinyurl.com/nhkdfc44>. We have subsidised author processing charges for our society members, and fee waivers for authors from developing countries. With these changes *Behavioral Ecology* is enhancing compliance with funder's open access policies.

This will be my final report as Editor-in-Chief of *Behavioral Ecology*. I have served in this role for ten years, since 2012. I would like to take this opportunity to thank all of the editors and members of the editorial board with whom I have worked, our editorial assistant Jenny Fulford, all those at OUP and our hundreds of peer reviewers. Without your efforts and good will the journal

would not be in the position it is today. I can report that the journal remains strong, and that we continue to offer the best possible platform for our authors and readers. *Behavioral Ecology* should be the journal of choice for researchers in our field, and I would like to take this opportunity once again to remind authors of the benefits of publishing with a not-for-profit society journal such as *Behavioral Ecology*. The ISBE and OUP have an equal financial share in the journal and the ISBE returns its share in any surplus revenue to its members in the form of travel grants to attend the biennial ISBE Congress. Thus, unlike non-society journals, any revenue generated is used directly in promoting you our authors, and our scientific discipline. OUP are themselves a department of the University of Oxford, and their share of any surplus revenue is returned to education, research and other philanthropic activities. I hope that our community will continue to support *Behavioral Ecology*, and I wish my successor Louise Barrett every success at the helm.

Leigh W. Simmons

Editor-in-Chief, *Behavioral Ecology* 2012-2022
leigh.simmons@uwa.edu.au

2022 FINANCIAL REPORT

The Society's financial transactions for 2021 and our December 31, 2021 account balances are provided below. ISBE's net worth increased by over \$260,000 last year: we had few expenses and share prices of our Vanguard funds continued to rise.

ISBE's year-end 2021 net worth merits savoring because we're not likely to hit that level again for a while. One reason for this is that stock and bond prices have been declining steeply since last December. A second

(and much nicer) reason is that the resumption of our biennial conferences means that ISBE will be spending money on travel awards. This year we had 182 travel award applicants from 30 countries, and we offered funding to 164 of them.

Patricia "Trish" Schwagmeyer
University of Oklahoma, USA
ISBE Treasurer 2016-2022

2020 Ending Balance		\$1,238,867.54
	2021 Income	2021 Expenses
ISBE URL renewals		\$554.85
USPS postage		\$26.20
D&O Liability Insurance		\$915.00
Legal fees-Melbourne meeting		\$7,840.82
Abstract Awards		\$3,200.00
Tax Return Preparation/Filing		\$41.00
Website Maintenance		\$462.91
OUP 2020 membership fees, 2019 adjustment*	\$15,099.00	
OUP 2020 BE profit share	\$176,632.00	
VG dividend and interest income	\$26,859.57	
VG gains/losses in share prices	\$62,639.85	
<u>Total Income/Expenses</u>	<u>\$281,230.42</u>	<u>\$13,040.78</u>
2021 Ending Balance (transactions)		\$1,507,057.18
BOA checking account		\$27,394.14
VG Federal Money Market		\$211,713.54
VG Tot Int Bond Index		\$191,394.13
VG Int Stock Index		\$229,839.90
VG Tot Bond Market Index		\$445,357.75
VG Tot Stock Market Index		\$401,357.72
2021 Ending Balance (accounts)		\$1,507,057.18

*Our 2021 revenue from OUP reflects an adjustment they made in our member fee payment after discovering errors in their calculations of 2019 and 2020 membership fees. This means that the allocation of OUP income between member fees and profit share in last year's report and this one is inaccurate; the total amount of income ISBE received from OUP in each year is reliable, however.

ISBE CONFERENCE REVIEW

ISBE 2022 conference, the only one you'll ever see with three 2's in its name, took place in the capital of Sweden. Overnight, more than 700 behavioral ecologists, evolutionary biologists, integrative biologists, and others descended upon the streets (and canals) of Stockholm. The conference took place at Stockholm's Waterfront Conference Center in the central part of the city, only a stone's throw from the historic Gamla Stan and other attractions.

It was, for most of us, the first in-person conference after the pandemic. For this reason, it was an emotional gathering. Friends and colleagues from around the world (49 different countries!) were reunited to discuss science while visiting a wonderful city surrounded by deep forests, endless islands, and ubiquitous water.

Eight (!) parallel sessions were held in the center. It was a condensed week of scientific discourse punctuated in fifteen-minute intervals by a beautiful collection of birds songs from the Scandinavian dawn chorus (which brought peace to some and nightmares to others). A total of 456 talks were presented during the conference, while 66 unique presentations were uploaded online, thanks to one of the innovations of this conference, the ISBE+ Virtual. This virtual platform allowed presenters the opportunity to upload a video recording of their talk, or a virtual version of their poster, letting thousands of people to reach out to the amazing research shown at the conference (most of the talks presented at the conference are also present on the platform now). On top of that, 5 plenaries and a breathtaking (yet remotely delivered) Hamilton lecture enriched our experience.

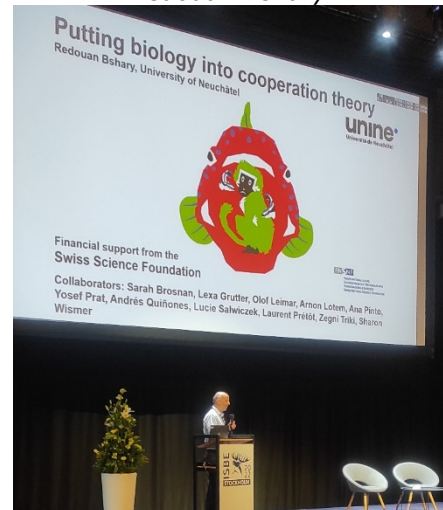
The first day, the one of the registration for most of the attendants, was of great sentimental impact, with a lot of hugs and cheering, helped with a lovely opening ceremony which set the drinking-bar for the rest of the conference. For many the bar was raised over the following days by the Hernö Gin Tasting tour, which brought spirits to another level.



John Fitzpatrick welcoming everyone

The next morning, after the welcoming of the organizing committee, represented by John Fitzpatrick, a greeting by Rebecca Kilner, Suzanne Alonso and Mariella Herberstein (the three presidents of ISBE), and an inspirational speech by Astrid Söderbergh Widding (president of Stockholm University) we had the first plenary lecture, delivered by Redouan Bshary from University of Neuchâtel. He catapulted us into the world of altruism (and the universe around), a field of study that Redouan himself helped to build in the last years. Focusing on fishes, but interesting to researchers working on any life form, Redouan made a call for more realistic models of animal decision-making. Redouan also made a splash when he gave 400 kr to a surprised audience member - this act would have echoes throughout the congress. The rest of the day saw people walking around the congress center while searching the room for the next 100%-super-cool-talk. By the end of the day everyone had the topography of the center in their mental maps.

Redouan Bshary



Jenny Tung

The second day opened with Jenny Tung (Duke University) explaining how behavior, social structure, and genes can get along in non-human primates. Jenny's research combines long-term field work with cutting-edge laboratory techniques, letting her to understand the genomic signatures of social interactions in baboons and rhesus macaques, defining how these signatures determine the role of sociality in primate evolution. She also forged a relationship with

her audience with a gift – this time in euros. After another day of talks, when people were already confidently moving within the center, the first poster session took place. The 167 posters were a highlight of this conference, leading to hours and hours of discussions over delightful hors d'oeuvres. Two bars open reasonably late helped in keeping the ambience relaxed.



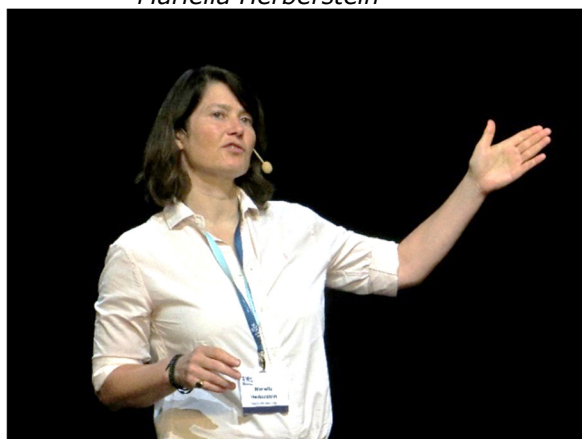
Yossi Yovel

Sunday was divided between great science and great fun. First, Yossi Yovel (Tel Aviv University) gave us an incredibly plenary about bats long and short-range navigation, with a bit of taste of social networks and collective behavior, vocal communication as well as collective behavior and sensory decision-making. Miniaturized technology allows Yossi to GPS-tag small bats, documenting their flying behaviour in the wild over 5 months from birth to adulthood. We now know better how bats make foraging decision in the real world! Audience members who appreciated his work were welcome to leave a donation in his hat, stage right. Delegates had the possibility to spend the afternoon of Sunday, maybe the best day from a weather point of view, in different relaxing activities ranging from boat tours in the archipelago, strolling to Drottningholm Palace, enjoying the Hernö Gin Tasting, or competing in the classic ISBE Football Tournament. Many also enjoyed the beautiful weather walking around the city center on in the old town, Gamla Stan. On this small island, 10 minutes away from the conference center, delegates had the possibility to use a beer discount during all the evenings of the conference. Delegates spontaneously gathered at affiliated pubs, where an LGBT+ party was also organized during one of the evenings. Great fun for everyone!

Refreshed and reinvigorated by our half day off, we got back into the groove on Monday with a plenary by Marie Herberstein of Macquarie University. Marie has done extensive work on arachnids, with a research portfolio that spans a rich range of topics from sexual selection to warning signals to hunting behavior. What struck many of us about Marie's plenary, however, was its motivational messaging to young scientists. The path one should take in science is often hard to see, with many unseen turns and twists that come as often from our own changing priorities as from external sources. But this does not mean a winding road cannot lead to a successful career (and perhaps even to the plenary

stage at ISBE). The closing message of Marie's plenary was one for collective action: we need more data, collected using repeatable, comparable metrics to address some of the most pressing questions in behavioral ecology. In the spirit of such a message, she offered a donation to our society. Monday also featured our second poster session, which was perhaps even livelier than the first! Afterwards, as delegates had the advantage of four days' experience navigating central Stockholm, there was a mad scramble to Stockholm's choicest restaurants, leading to rapid fusion and fission of biologist coalitions.

Mariella Herberstein



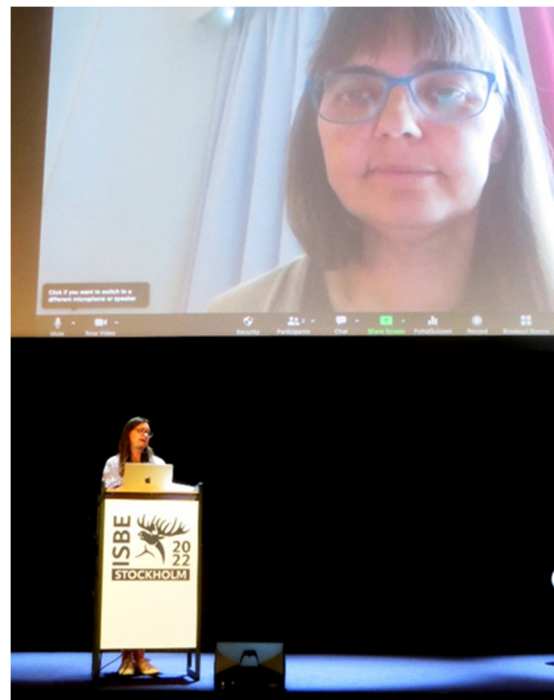
Toshitaka Suzuki

Did you know that birds (Japanese tits, specifically) use specific sounds to encode information about different types of predatory threats? This was the topic of our final plenary, given by Toshitaka Suzuki (Kyoto University). He hypothesized that he could find intermediate and divergent stages of language evolution among nonprimate taxa. His work shows that not only do Japanese tits use specific sounds to signify specific threats, but that arrangements of sounds are also important to their meaning, reminiscent of syntax. Yet it seems Japanese tits have a potentially unique aspect to the evolution of their language – the innate recognition of meaning. Riveting! The 2022 Hamilton lecture was delivered by Hanna Kokko – but virtually, on account of a positive COVID test soon after her arrival in Stockholm. This did nothing to keep her from giving a stellar talk wherein she used a mathematical scalpel to cut through the cognitive biases that keep us from seeing biological problems clearly. Her wise words about listening (rather than holding fast to opinions), using rigorous intellectual constructs to build predictions

(including models!), and making empirically-informed modeling assumptions resonated among the diverse audience. We also wish to call out other successes from the last day – Patrick Green won the Pitelka award, while Erika Fernlund, Marina Garrido-Priego, and Isabel Driscoll were recognized for outstanding student posters. All talks given, all awards handed out, there was only the serious business of the conference banquet to carry out! It was held on a high hill in Skansen, a sort of historical village cum zoo overlooking Stockholm. Traditional Swedish food was supplied, and once darkness settled around us, a magnificent DJ led us in dancing that was only stopped by security.

The coda from this ISBE was one of renewal – of reconnection among colleagues, of a new cohort of students woven into the social fabric of behavioral ecology – after a long pandemic. The pandemic did not quite forget about us, though. Positive COVID tests were frequently reported after the event, often as two colored lines in a photo on Twitter. But how much better this is, with most attendees vaccinated three or four times, than it would have been last year when consequences might have been far more severe. We look forward now to Melbourne in 2024, where ISBE will finally arrive at its long-awaited, long-deferred venue. If you cannot wait until then, you can choose Behaviour 2023 in Bielefeld, Germany, and ABS 2023 in Portland, Oregon, USA!

David Kikuchi
Oregon State University, USA
Alessandro Devigili
University of Padova, Italy



Rebecca Kilner introducing Hanna Kokko



Main hall views



ISBE Newsletter Vol 34 (2)

City view from the venue



Conference dinner at Skansen

JULIE MORAND-FERRON OBITUARY

Julie Morand-Ferron 1977 – 2022



Dr. Julie Morand-Ferron, a rising star in the field of animal cognition, has died prematurely of cancer on 13 February 2022 at the age of 44. She was born in Shawinigan, Québec, and did her undergraduate degree at Laval University, where she worked with Jeremy McNeil. She then went on to do a PhD at McGill with me.

Julie's doctoral work combined field observations, aviary experiments, game theory and phylogenetic comparative methods to look at innovation, kleptoparasitism and producing and scrounging in Carib grackles.

Julie then did a postdoc with Luc-Alain Giraldeau at UQAM, before moving to Oxford to work with John Quinn. There, she developed automated cognitive tests for birds in the wild and collaborated on the doctoral work of Lucy Aplin and Ella Cole. This led to important papers on cultural transmission and the fitness consequences of learning.

Coming back to Canada, Julie was hired by the University of Ottawa and in 2017 was awarded the Research Chair in Cognitive Ecology. She published over 60 papers in her short career and co-edited two thematic issues of the Philosophical Transactions of the Royal Society.

In addition to science, Julie had a parallel career in music. With her musical and life partner Eric Trottier, she sang and wrote for the electro and synth-pop bands *011* and *Violence*. *011* won the MIMI best electronic group award in 2006 and was invited to play at the Osheaga and Francofolies festivals in Montréal. *Violence*

had an international fan base and when Julie traveled to give scientific talks, she and Eric gave shows in places like Tokyo, Berlin and New-York. Julie's ethereal voice can be heard on several songs available on Bandcamp and elsewhere.

<https://violence.bandcamp.com/track/illusions-vives>
https://www.hartzine.com/violence_dernier_cri/



Friends, fans and colleagues all miss her intelligence and joy. Besides her partner Eric, Julie leaves behind a two-year-old daughter, Eulalie.

Louis Lefebvre

McGill University, Montréal, Québec
Photos: University of Ottawa / CULTMTL

References

- Morand-Ferron, J., Giraldeau, L.A., Lefebvre, L. (2007). Wild Carib grackles play a producer-scrounger game. *Behavioral Ecology* 18, 916-921.
- Morand-Ferron, J., Hamblin, S., Cole, E.F., Aplin, L.M., Quinn, J.L. (2015). Taking the operant paradigm into the field: associative learning in wild great tits. *PLoS One* 10, e0133821.
- Aplin, L.M., Farine, D.R., Morand-Ferron, J., Cockburn, A., Thornton, A., Sheldon, B.C. (2015). Experimentally induced innovations lead to persistent culture via conformity in wild birds. *Nature* 518, 538-541.
- Cole, E.F., Morand-Ferron, J., Hinks, A.E., Quinn, J.L. (2012). Cognitive ability influences reproductive life history variation in the wild. *Current Biology* 22, 1808-1812.
- Morand-Ferron, J. (2017). Why learn? The adaptive value of associative learning in wild populations. *Current Opinion in Behavioral Sciences* 16, 73-79.

Do collaborations help our career progression?

For many of us, coping with the health, emotional and physical upheavals of the COVID-19 pandemic depended heavily on our social connections (World Happiness Report 2021). While we were encouraged to keep our distance physically from one another, tech and social media allowed us to keep in touch with family, friends, and colleagues, and our workplaces scrambled to implement and promote platforms to try and maintain a sense of connection. International webinar series proliferated, in theory giving 'anyone' (given constraints of time zones, health, access and workload) to join in and learn about new research and researchers - something which we at least rarely achieved! For many of us though, it was the incidental chats or 'watercooler/coffee/tea room effect' that turned out to be irreplaceable (Koch & Denner 2022). Along with providing a sounding board for dealing with university politics and life's problems (or must-see TV or cat videos), these conversations often help us to overcome brain farts. Or, we move on to discussions about topics that sometimes evolve into hypotheses, predictions and potential studies.

This is exactly the setting that inspired our paper, 'Collaboration enhances career progression in academic science, especially for female researchers' published last year in Proceedings of the Royal Society B and which would not have been possible without the help of ISBE. In 2014, over one of our many Behavioural Ecology Group tea breaks that took place like clockwork in the Zoology Department in Cambridge, a discussion started among a group of early career researchers (ECR) about collaboration. Why had single-author publications changed from being confirmation of our scientific independence to now having potentially negative connotations? Are benefits to collaboration, beyond the obvious increase in our publication list? And if so, could collaborations benefit researchers differently, particularly women caught up in the academic career track 'leaky pipeline'?

We were, of course, not the first to discuss this topic. In fact, there is extensive research investigating the impact of collaborations on scientific impact, including for behavioural ecologists. In 2010, Tom Pike investigated collaboration networks by dredging articles from 3 journals within the scope of our field (Behavioral Ecology, Animal Behaviour, and Behavioral Ecology and Sociobiology) and found that authors with a greater number of co-authors, and in particular a greater number of co-authors that they had published with multiple times, had a higher h-index. However, publishing in 'cliques' of co-authors reduced h-index. This suggested that collaborations might benefit us progressing along the ECR track, but testing this idea would require a cohort-approach. We decided to look more closely at the careers of established behavioural ecologists and assess whether co-authorship network metrics correlated with them becoming a PI and their career longevity.

To build our cohort, we turned to the archives of ISBE to compile a list of attendees at ISBE conferences in 1992 (Princeton, USA), 1994 (Nottingham, UK) and 1996 (ANU, Australia). Our logic here was that three decades should allow sufficient time for attendees who started their careers in the late 1980s/early 1990s to reach PI status (should they have wanted to and been successful in doing so). Unfortunately at this time, the ISBE archives were not yet digitised, but fortunately a less academic collaboration enabled us to begin the project. The archives were held at Université de Sherbrooke, a 'short' (by Canadian standards) drive from Rose's partner's parents' house in Quebec. So on their next visit we were able to photocopy, scan, and then manually digitise the attendance lists. This list needed careful curation, and in particular we checked through attendees sharing surnames, as it was common practice then for attendance lists to include spouses who were not publishing as behavioural ecologists. One of the unexpected benefits of conducting this work was peeking back into ISBE and seeing the changes in culture and research topics - the archives are a real treasure trove with a lot to be explored!

Next we used the Scopus API to dredge publications and build 'ego-networks' for our cohort. For anyone interested in performing similar work, we checked which database (i.e. PubMed, WoS, GoogleScholar) would be most accurate for behavioural ecologists via help from Twitter - thank you to those who replied to our call with their actual number of publications! By this time, our own collaboration was changing. The project took a hiatus due to career moves, parental leaves, and workload but it was re-energised by Jessica van der Wal coming on board. She was looking for a project to get her teeth into between finishing her PhD and starting a postdoc with Claire Spottiswoode, and took on the data wrangling and analyses.

To explore the potential for collaborations to affect careers, we first needed to account for differences among our cohort in publication number. We found that on average, women were less likely to become a principal investigator (estimated from when they published at least three multi-author papers where they were the last-author), did so more slowly, and had shorter academic careers (published fewer papers over fewer years) than men. We then found that women also had fewer collaborators (lower adjusted network size, or degree), published fewer times with each of their co-authors (lower adjusted tie strength), but published more often with the same group of collaborators (higher adjusted clustering coefficient). Regardless of gender, collaborations seemed to help behavioural ecologists become a PI: stronger ties to co-authors correlated with becoming a PI, and those with less clustered networks reached our criterion more quickly. Women, however, seemed to benefit even more than men from having strong ties, and those with larger co-authorship networks had longer careers (time from first to last publication within our time-frame).

Our results suggest then that large and varied collaboration networks are positively correlated with

career progression, especially for women. But by necessity, our analyses were only correlative. We attempted to get at causality by looking at the relationship between collaboration network metrics calculated in the first 10 years with career longevity, and found that the patterns were consistent. As the WHO announces that the end of the COVID-19 global pandemic is now in sight, does this terrible period offer a 'natural experiment'? It is clear that we did not all experience the effects of COVID and remote working equally. Will our resilience in terms of academic career progression vary depending on the collaboration networks we had in place before the pandemic? Or will enthusiasm to reconnect after remote working change the shape of our networks?

Our discussion started with a larger group and changed over time as we tried different approaches; while not co-authors, their contributions and conversations were nevertheless invaluable. This highlights a major limitation of research relying on information derived from publications: it can only tell us so much about how collaborative (or otherwise) a researcher might be. Many forms of collaboration may not end up in the pages of an academic journal where they can be quantified, and much fantastic science is done outside academia. Furthermore, and perhaps even more importantly, access to collaborations is not equal. The ability to find, build and maintain positive and productive collaborations is likely correlated with other unequally distributed factors, such as good internet access, funding, and the local research environment. Our next paper, currently in construction, will explore

how ecologists can contribute to building sustainable collaborations, and how to do this well. In the spirit of the topic, if you have suggestions on what has worked well (or badly) for you to build and maintain collaborations (particularly during remote work), then we'd be delighted to hear, and perhaps have you involved in writing the paper. Please contact Jessica (jessicavanderwal1@gmail.com) if you are interested.

**Rose Thorogood
Nicholas Horrocks
Jessica van der Wal**

References

- van der Wal Jessica E. M., Thorogood Rose and Horrocks Nicholas P. C. 2021. Collaboration enhances career progression in academic science, especially for female researchers. *Proceedings of the Royal Society B*, 288, 20210219. <http://doi.org/10.1098/rspb.2021.0219>
- Helliwell, J. F., Layard, R., Sachs, J. D., & Neve, J. E. D. (2021). *World happiness report 2021*. New York: Sustainable Development Solutions Network. <https://worldhappiness.report/ed/2021/>
- Koch, T. and Denner, N. (2022), Informal communication in organizations: work time wasted at the water-cooler or crucial exchange among co-workers? *Corporate Communications: An International Journal*, 27, 494-508. <https://doi.org/10.1108/CCIJ-08-2021-0087>
- Pike TW. 2010 Collaboration networks and scientific impact among behavioral ecologists. *Behavioral Ecology*, 2, 431-435. <https://doi.org/10.1093/beheco/arp194>

PhD POSITION

Richard Connor & Mike Heithaus at Florida International University in North Miami, FL, are looking for a Ph.D. student to work on foraging behavior and habitat use in male Indo-Pacific bottlenose dolphins in Shark Bay, Western Australia. The student will extend previous work in the eastern gulf showing that male alliances with overlapping ranges forage in different habitats (O'Brien et al. 2000, see also Bizzozzero et al. 2019), quantifying foraging behavior and examining how different foraging tactics influence mate guarding. The student would enter the FIU program in Fall 2023, but field work may begin during the northern summer (southern winter) 2023, pending funding. Candidates with a strong interest in theory and the comparative literature of Behavioral Ecology, field experience and a master's degree preferred. The candidate will need to obtain certification to operate a drone in Western Australia, so drone experience is also valued.

For more information on the site and previous work in Shark Bay visit:
<http://www.sharkbaydolphins.org/publications/>
<https://mikeheithaus.com/research/publications/>

- O'Brien, O; Allen, SA; Krützen, M & RC Connor. 2020. Alliance-specific habitat selection by male dolphins in Shark Bay, Western Australia. *Animal Behaviour* 164: 39-49.
- Bizzozzero, MR, Allen, SJ; Gerber, L; Wild, S.; King, SL; Connor, RC, Friedman, WR; Wittwer, S and M Krützen. 2019. Tool use and alliance partner choice among male bottlenose dolphins. *Proceedings of the Royal Society of London: Biological Sciences*. doi.org/10.1098/rspb.2019.0898

Contact Richard Connor, rconnor@fiu.edu to receive a letter with details about applying

JOB POSTING

Assistant Professor in Animal Behavior

Department of neurobiology, physiology and behavior
University of California, Davis

The Department of Neurobiology, Physiology and Behavior, in the College of Biological Sciences, University of California, Davis, invites applications for an Assistant Professor (tenure-track) in Animal Behavior, broadly defined. Candidates whose research focuses on the behavior of non-human animals at the organismal level, investigated through laboratory and/or field studies, are encouraged to apply. We are particularly interested in candidates whose research incorporates biomechanical, neuromuscular, sensory, and/or hormonal aspects of behavior, and that investigates behavioral adaptations to environmental conditions. We seek candidates who will contribute to diversity and equity in higher education through their teaching, research, and service, and who will create a climate that attracts students of all races, nationalities, and genders. Appointment will be as an academic year (9-month) tenure-track Assistant Professor. Applicants must have earned a PhD or equivalent with significant post-doctoral experience in Animal Behavior or related disciplines. Participation in department, college, and university service as a member of UC Davis Division of the Academic Senate is an expectation under our faculty shared governance model.

Candidates must possess a Ph.D. or equivalent with significant post-doctoral experience in Animal Behavior or related fields.

Additional qualifications

- Excellence in research that complements or extends existing research strengths in the Department and has the potential to attract extramural funding.
- Evidence of commitment to or strong potential for commitment to the advancement of diversity, equity, and inclusion for historically underrepresented and marginalized student communities, and how this commitment integrates with teaching, research, and service.
- Commitment to excellence in teaching. Must demonstrate potential or evidence of ability to perform well at both graduate and undergraduate levels and to develop and teach undergraduate and graduate courses or seminars.

For full consideration, applications must be completed by November 1, 2022; however, the position will remain open until filled through July 1, 2023. Feel free to contact the Search Committee Chair, Dr. Stacey Combes, at sacombes@ucdavis.edu with any questions about the search or position. The administrative contact is Cynthia Roberts, NPBSearch@ucdavis.edu.

<https://recruit.ucdavis.edu/JPF05165>

THE BIOLOGY OF COLOUR

Upcoming meeting Dec 5-7, 2022 in Vairão, Portugal

We are pleased to announce the 11th edition of TiBE, Trends in Biodiversity and Evolution Conferences, an annual meeting organized by BIOPOLIS/CIBIO-InBIO and the University of Montpellier, which aims to bring together researchers, post-graduate and graduate students working on the field of evolutionary biology to present and discuss cutting-edge findings in relevant topics related with speciation, molecular evolution, comparative genomics, ecology, population and conservation genetics research, among others.

TiBE2022 will be devoted to THE BIOLOGY OF COLOUR. Colour is a central aspect of the biology of many living beings, contributing to mediate their relationship with members of their own species and their ecosystem. The biology of coloration has been extensively studied within the context of ecology, physiology, genetics, developmental biology, behavior and evolutionary biology, and is a privileged platform to promote the understanding of evolutionary principles and concepts in biology among the general public. During three days, we will discuss recent trends in the study of the evolutionary and functional significance of colour in nature integrating knowledge from biologists working on these multiple aspects of colouration. Held in an informal but stimulating scientific atmosphere, these conferences provide an excellent opportunity for strong interaction and brainstorming between students and more experienced researchers. The conference will take

place on 5-7 December, 2022 at CIBIO-InBIO facilities in Vairão, Portugal. It will include invited plenary talks, oral communications (to be selected) and poster sessions.

PROGRAM:

The conference will be structured in four sessions, covering different topics. Each session will open with a plenary conference by a leading researcher in the topic, and will be followed by oral communications and poster sessions.

- Session 1 - Genetics and Evolution of Colour
- Session 2 - Mechanisms of Colour Production
- Session 3 - Behavioural Ecology and Signalling
- Session 4 - Colouration Biology in a Changing World

Venue: CIBIO, Research Centre in Biodiversity and Genetic Resources Location: Campus de Vairão
<https://cibio.up.pt/en/about/how-to-get-here>
<https://cibio.up.pt/en/events/tibe-2022-the-biology-of-colour/>

Abstract submission deadline: October 16, 2022
Abstract acceptance: October 31, 2022
Early registration deadline: November 10, 2022
Late registration: November 30, 2022

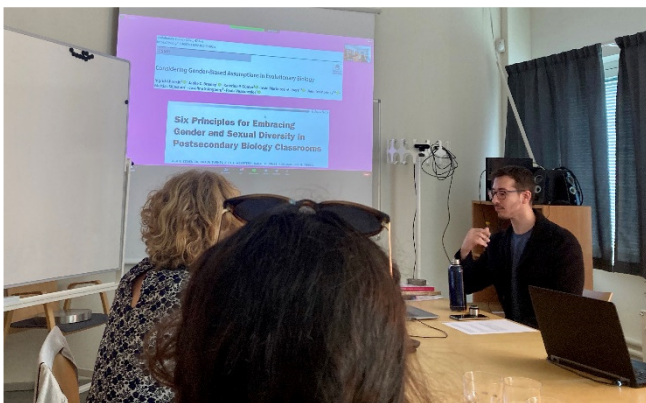
Please share among your colleagues!

Pedro Andrade
pandrade@cibio.up.pt

Review of the workshop: “What is the influence of personal experiences on understandings of sex differences in behavioural ecology research?”

History shows that science is not objective. Who we are as scientists, how we sense the world, what organisms we study, and where in the world we come from affect how we do science. Particularly in the context of research on sexual selection and animal behaviour, there is the temptation to impose human values and characteristics on how we talk about animal sex. Since the start of the field of sexual selection research, Darwin’s own social context affected his views on sex roles and conclusions drawn from animals’ behaviour. If we as scientists seek objective truths, we can only accomplish this by examining our own biases. The post-ISBE conference workshop, “What is the influence of personal experiences on understandings of sex differences in behavioural ecology research?,” organized by Malin Ah-King and Ingrid Ahnesjö, explored perspectives in research on sexual selection and how researchers’ experiences affect the field, and ultimately shed light on social factors that affect research in behavioural ecology.

First, Pietro Pollo, a PhD student from the University of New South Wales, spoke about his work with Michael Kasumovic on the effect of researchers’ experiences on their perceptions of sex roles (Pollo & Kasumovic, 2022). Pollo and Kasumovic conducted a survey of over 1,000 participants, and asked them their views on the frequency that behaviours related to sex roles (promiscuity, intrasexual competition, mate choice, and parental care) occur in each sex, then came up with an overall score, ranging from completely disagreeing with the idea of sex roles, to completely agreeing with sex roles and traditional stereotypes. Next, they asked the researchers what their research experience was, and looked at individual differences (gender and age), social environment (gender inequality index of the country where they spent the most time), taxon studied, and whether the researcher studied a topic conforming to traditional sex roles or not.



Pietro Pollo presenting

Pollo and Kasumovic found that age and gender did not predict sex role views, but researchers who spent the majority of their time in countries with high levels of gender inequality agreed more with traditional sex roles in animals. Researchers who chose non-conformist

topics (e.g., paternal care, male mate choice) agreed less with traditional sex roles. Main study taxon also influenced researchers’ views. For example, people who studied mammals were more likely to believe that maternal care was common across taxa compared to invertebrate researchers. This study is a good example of how views on sex roles and sexual selection aren’t static, and our environment affects how we do science, including the topics we choose to study.

In relation to Pollo’s work, we discussed how sex roles are described in research on sexual selection. “Sex roles” can be defined as sex differences in behaviours related to sexual behaviour, intrasexual competition, mate choice, and parental care (Trivers, 1972). The use of the language of “conventional sex roles” assumes that there are norms of animal behaviour, combining both sexual and parental behaviours (Ah-King & Ahnesjö, 2013). However, “sex typical” and “sex role reversed” species can vary in their behaviours depending on the dominant behavioural patterns within a taxon, for example in mammals and birds, in which maternal care is predominant, compared to fish and amphibians, where paternal care is more common. Social and historical factors affect how scientists view, study, and interpret sex differences. The workshop provided an opportunity to take a critical look at the field of behavioural ecology by integrating perspectives from feminist philosophy and historical analyses.

Next, Malin Ah-King, an evolutionary biologist and associate professor in gender studies at Stockholm University, presented her research on how researchers’ perceptions about females have shifted over time in the field of sexual selection research. She studies science as a cultural and social process, and how and why scientific ideas and perceptions have changed over time. She uses two theoretical concepts in her analysis, epistemology of ignorance, the study of how knowledge is ignored, delayed, or forgotten; and Donna Haraway’s concept of “situated knowledges” meaning that all knowledge is partial, context-dependent and informed by one’s own experiences (Haraway, 1988). In the context of evolutionary biology, Ah-King asked, “What prevented scientists from engaging with female sexual agency? What spurred some scientists to make the female turn?”

Ah-King then highlighted scientists whom she interviewed about the process of studying sexual selection and gave a historical overview of the development of the field of sexual selection. In the 1970s, Sarah Blaffer Hrdy, a sociobiologist, feminist, and primatologist, questioned assumptions about “coy” females and brought focus to females instead of previous emphasis on social hierarchies in males. Her book, *The Woman That Never Evolved*, highlighted behavioural diversity in female primates. Research developed differently around the world depending on cultural context. In contrast to the male-dominated Western field of primatology, Japanese primatology was interested in deeply understanding primate societies through mapping out kinship networks, pedigrees, and cultural transmission. Overturning previous androcentric assumptions that females were forced into multiple matings, Patricia Gowaty’s studies of black-

capped chickadees showed that in fact, females sought out extra-pair copulations in high-ranking males' territories. Katydid's flexible sexual behaviour inspired Darryl Gwynne's ideas about sexual selection.

As a whole, Ah-King reflected that the field of sexual selection advanced to include more complex perspectives on sex roles because of scientists pushing the field forward through a combination of prior knowledge from other fields, feminist scientists questioning prevailing assumptions about passive females and knowledge through experiments on diverse study organisms. Diversifying the field in gender, culture, and study organism of choice led to advances in theory and knowledge. Increased awareness of female animals' agency, aggression, and diverse sexual behaviour depended on social and political context, and critical reception by the scientific community. This shift in the field also depended on the political and social context of feminism and the sexual revolution. Still, many perspectives on female-female aggression, territoriality, cryptic female choice, and female genital morphology are still excluded and understudied compared to studies on males (e.g., Ah-King et al., 2014).

The workshop discussion centered how scientists and the scientific community can deal with the influence of personal experiences on understanding of sex differences. One step could be to incorporate taxonomic diversity into undergraduate teaching, particularly in textbooks and lower-level courses. Classes on sexual selection in undergraduate courses often state rules followed by a few exceptions, rather than portraying the diversity, complexity, and plasticity of sexual and parental behaviours. Effective, inclusive undergraduate teaching in animal behaviour is an important opportunity to challenge harmful preconceptions about what is "natural" and avoid reinforcing stereotypes (see Zemenick et al., 2022 for useful principles). We also discussed two book chapters, from *Sex Itself*, the search for male and female in the human genome by Sarah Richardson and *Science as Social Knowledge* by Helen Longino. Richardson argued that research focuses overwhelmingly on sex differences and ignores interacting variables. Longino wrote that science is social and context dependent, and can reflect and reinforce dominant values. Both authors emphasize that the idea of science as unbiased and value-neutral is misleading. Objectivity can come from being aware of assumptions and interrogating, incorporating criticism from alternative points of view as a collaborative social process.

Moving forward, we need to add more diverse examples and not simplify or generalize based on stereotypical sex roles. Animal behaviours that we view as exceptions to the rule are common and represent variation that should be discussed. It is important to differentiate between sex (self-incompatible mating types differentiated by anisogamy, Lehtonen & Kokko, 2011) and gender (socio-culturally constructed set of characteristics and behaviours). In addition, avoid anthropomorphic and culturally-based gender-biased assumptions carried over into sex differences in animals, such as "choosy" and "caring" females, or "competitive" males, and reliance on dominant narratives assuming

that certain traits are only expressed in one sex (Ahnesjö et al., 2020; Wesner, 2019).

Diverse social factors affect scientists' views on sex roles in animals, and diversity in science will allow us to get a clearer picture of animal behaviour as a whole. The cross-disciplinary nature of the workshop was thought-provoking, combining evolutionary biology with the philosophy of science. These perspectives can be rare in ecology, evolution, and behaviour research, and should be more integrated. In increasing efforts to increase diversity and inclusion in science, it is important not only to increase representation, but also question dominant narratives, power structures, and whose knowledge is valued (Kamath et al., 2022). Such collaborations can change how we view the development of the field, and how we as animal behaviour researchers can go about reducing the impact of these biases.

Monica A. Mowery

Ben-Gurion University of the Negev, Israel

References

- Ah-King, M., & Ahnesjö, I. (2013). The "Sex Role" Concept: An Overview and Evaluation. *Evolutionary Biology*, 40(4), 461–470. <https://doi.org/10.1007/s11692-013-9226-7>
- Ah-King, M., Barron, A. B., & Herberstein, M. E. (2014). Genital evolution: Why are females still understudied? *PLoS Biology*, 12. <https://doi.org/10.1371/journal.pbio.1001851>
- Ahnesjö, I., Brealey, J. C., Günter, K. P., Martinossi-Allibert, I., Morinay, J., Siljestam, M., Stångberg, J., & Vasconcelos, P. (2020). Considering Gender-Biased Assumptions in Evolutionary Biology. *Evolutionary Biology*, 47(1), 1–5. <https://doi.org/10.1007/s11692-020-09492-z>
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14(3), 575–599. <https://doi.org/10.2307/3178066>
- Kamath, A., Velocci, B., Wesner, A., Chen, N., Formica, V., Subramaniam, B., & Rebolledo-Gómez, M. (2022). Nature, Data, and Power: How Hegemonies Shaped This Special Section. *The American Naturalist*, 200(1), 81–88. <https://doi.org/10.1086/720001>
- Lehtonen, J., & Kokko, H. (2011). Two roads to two sexes: Unifying gamete competition and gamete limitation in a single model of anisogamy evolution. *Behavioral Ecology and Sociobiology*, 65(3), 445–459. <https://doi.org/10.1007/s00265-010-1116-8>
- Pollo, P., & Kasumovic, M. M. (2022). Let's talk about sex roles: What affects perceptions of sex differences in animal behaviour? *Animal Behaviour*, 183, 1–12. <https://doi.org/10.1016/j.anbehav.2021.10.016>
- Trivers, R. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual Selection and the Descent of Man* (pp. 136–179). Aldine.
- Wesner, A. (2019). Messing up Mating: Queer Feminist Engagements with Animal Behavior Science. *Women's Studies*, 48(3), 309–345. <https://doi.org/10.1080/00497878.2019.1603987>
- Zemenick, A. T., Turney, S., Webster, A. J., Jones, S. C., & Weber, M. G. (2022). Six Principles for Embracing Gender and Sexual Diversity in Postsecondary Biology Classrooms. *BioScience*, 72(5), 481–492. <https://doi.org/10.1093/biosci/biac013>

The Cambridge Handbook of Animal Cognition

Edited by Kaufman A. B., Call J. and Kaufman J. C.

Cambridge University Press. 2021. 164 pp.
ISBN: 9781108564113

The Cambridge Handbook of Animal Cognition is an edited volume that contains invited chapters covering a diverse array of current topics in the field of Animal Cognition, largely from a Tinbergian perspective. The invited chapters are organized into six sections that cover many of the most popular topics in Animal Cognition. Each chapter provides a review of a more specific sub-topic or covers the topic in a specific species (and often both).

Topics covered

With 36 chapters, this book is a massive tome, and I will just briefly describe what the different parts and chapters generally cover here.

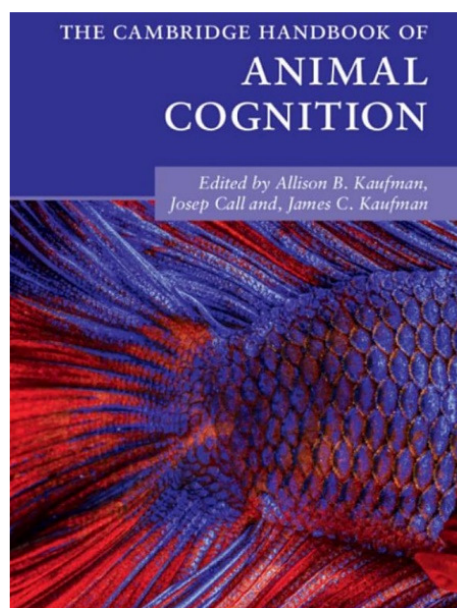
Part I, Communication and Language, covers communication more generally in ants (Ch. 2), dogs & wolves (Ch. 4) and has a specific chapter on symbolic communication in parrots (Ch. 3), and semantic communication in primates (Ch. 5).

Part II, Memory and Recall, has a clear focus on episodic-like memory and reviews aspects of episodic-like memory in fish (Ch. 7), hummingbirds (Ch. 8), laboratory rats (Ch.9) and primates (Ch. 10) in addition to discussion of the mechanisms of memory (Ch. 7) and the cognitive ecology of memory (Ch. 8).

Part III, Social Cognition includes chapters on two specific topics: Animacy (Ch 13) and Mirror-Self Recognition (Ch 18), two chapters on cooperation in fish (Ch 12) and rats (Ch 15), and three chapters reviewing social cognition more generally in ravens (Ch 14), elephants (Ch 16), and dolphins (Ch 17).

Part IV, Social Learning and Teaching reviews social learning quite broadly in both birds (Ch 22) and chimpanzees (Ch 23) and includes two more specific chapters on social learning and collective decision-making in ants (Ch 20) and on the role of social network analyses in the study of social learning, with fish as an example (Ch 21).

Part V, Numerical and Quantitative Abilities, reviews evidence for numerical competences as a fundamental cognitive ability in animals (Ch 24) and fish in particular (Ch 25), highlights the interaction between spatial and numerical abilities (Ch 26), and reviews the cognitive ability for categorization, with pigeons as an example (Ch 27).



Finally, *Part VI, Innovation and Problem-Solving*, reviews innovation in wild bowerbirds (Ch 30), parrots (Ch 31), marine mammals (Ch 32), capuchins (Ch 33), and orangutans (Ch 34) with several more specific chapters on general intelligence in mice (Ch 29), metacognition in primates (Ch 35), and decision-making (Ch 36).

What this book is not

While this book is a welcome addition to the Animal Cognition literature and includes unique and useful information, it should be clarified that the Handbook of Animal Cognition is not a foundational or introductory textbook to the subject matter. It does not include information on basic cognitive processes such as perception or simple learning mechanisms, nor does it cover the vast topic of navigation and spatial cognition (though Chs 8 and 10 use spatial cognition tests as a means of investigating memory). In general, chapters are independent, stand-alone pieces that are loosely grouped into the six parts of the book. While each part does have an Overview chapter which introduces readers more broadly to the topics covered, the overviews do not function to integrate the following chapters and the book itself has no other common theme integrating the topics of each chapter. However, the independence of each chapter is also a strength of this book (see next paragraph).

Who this book is for

This book is a fantastic resource for researchers currently studying animal cognition that already have one or more years of familiarity with the topic of animal cognition and have already been introduced to the field more generally. Each chapter provides a current, up-to-date review of the state of six areas of study within animal cognition; this format is extremely helpful for researchers who are experts on a specific topic (e.g. social cognition) but are less familiar with current research on another topic (e.g. innovation). Each chapter, including the Overview chapters, are also capable of standing alone, most authors include a brief introduction to the topic and the model organism at the start of each chapter. The overview chapters are helpful and do an excellent job of introducing readers to

unfamiliar topics, but not entirely necessary reading prior to reading the following chapters in each part. This means the book does not need to be, and probably should not be, read from front to back. Instead, readers can browse the book in any order based on their own interests and needs.

The book itself includes an impressive list of well-known names in the field of animal cognition, so readers can be assured that each chapter is written by a topic expert. The book also includes a diverse array of species, so not only does the book do a good job of reviewing the current literature, it also includes detailed information about model organisms and the mechanisms used to test cognition in these species. Most chapters end with a discussion of open areas of research and outstanding questions that need to be further explored.

How to test cognition

While there is no single chapter that focuses on the methods for testing animal cognition, readers will come away with a strong sense of all the tools that are presently available for investigating animal cognition in the laboratory and in the field. Many chapters describe the challenges of adapting paradigms from human psychology for use with captive animals or for modifying paradigms used with captive animals to use with wild subjects in the field. These discussions reveal the creativity and critical thinking that researchers have used to attempt to uncover what cognitive abilities animals possess and the precise mechanisms underlying such abilities. As a result, this book is an excellent resource for readers interested in how to go about testing animal cognition.

Mechanism

A recurring theme across chapters is a focus on the mechanisms of specific cognitive abilities; in particular, authors of each chapter question precisely what kind of knowledge and understanding underpin purported abilities. For example, to what degree are memories semantic vs episodic (Ch 6, 7, 9 & 10), do animals actually understand the information contained in signals or do they simply form associations between calls and

behavioral responses of receivers (Ch 1, 3 & 5), what information are animals actually using and understanding in pointing paradigms (Ch 17), and do animals know what they know (Ch 35)? Adaptive function is often discussed as part of chapter introductions or discussions, though a few chapters do have a stronger focus on what animals use their cognitive abilities for in the wild (e.g. Ch 8, 30 & 33).

Fish cognition

The strong representation of fish in this book is also notable. Chapters on fish cognition are present in 4 out of the 6 parts of the book with chapters on memory (Ch 7), cooperation (Ch 12), social networks and social learning (Ch 21), and numerosity in fish (Ch 25) is especially welcome. Historically, the field of animal cognition was heavily focused on so-called 'higher' organisms such as primates that are expected to display sophisticated and intelligent cognitive abilities. However, fish species have proven to be excellent model organisms for testing hypotheses about cognitive mechanisms and the evolution of cognition. Fish are relatively easy to work with in laboratory environments and research has revealed that fish, like many other vertebrates, live in complex social systems with very well-developed cognitive abilities for dealing with challenges in their social and physical environments.

Summary

Overall, this book showcases the fantastic abilities of animals from ants and hummingbirds to gorillas and laboratory rats. The book does a good job of avoiding the human-centric or primate-centric focus of comparative cognition. Each chapter uses some space to discuss why a certain animal makes a good model system for investigating global questions about animal cognition so that readers can get a sense not just of exciting current topics, but also how a diversity of study systems contributes to breakthroughs in these topics.

Lily Johnson-Ulrich
University of Zurich

The International Society for Behavioral Ecology (ISBE) newsletter is a platform for bringing related academic and research news in front of peers. It is undoubtedly the great opportunity for me to elucidate the proceedings of Ethophilia, which is a newly formed autonomous research group, actively participating majorly in behavioural research.

Recent paradigms of research in biological sciences endorse study of behavioural biology as one of the highly multidisciplinary areas, which attracts researchers from numerous fields to contribute. Like many others, I strongly believe that scientific research is beyond barrier. With this motivation, I was determined to initiate a research group, eventually where fellows with diverse working expertise, joined to work on several interesting research projects. Fundamentally, we are engrossed mainly in behavioural research. This is not a personal research group, rather any researcher from any background or age or designation, with strong motivation and fundamental knowledge in biological sciences can join the group. The group is named as Ethophilia.

Ethophilia works as a crew of passionate freelance researchers. We believe that research is not a mechanical process but it is about a perfect blend of intense thinking and organized application of the high-end thought process. Focused and ardent researchers are always motivated to cross the orthodox protocols and implement innovative strategies to contribute to the scientific community. The principal aim of Ethophilia is to expand globally to maintain this viable scientific hub with diverse interdisciplinary fields and desperately targets to keep a good friendly and professional ambience for the peers to work. Though Ethophilia majorly concentrates on the programmes in behavioural biology, however, we are not only restricted to it and members from several fields are regularly approaching with new ideas on different aspects of biology. In a broader view, we have sub-groups working on animal behaviour, human behaviour, behavioural toxicology, public health and food security.

Ethophilia is determined to maintain a learning environment for all the members. Students who are interested in research work from the very beginning of their academic journey, are mostly encouraged to join our group. There are several undergraduate students in Ethophilia who are getting practical training on conducting a research assignment. They also actively participate in our regular proceedings and take part in the managerial activities as well. Three undergraduate students working at Ethophilia got the chance to present their work at 18th International Society for Behavioral Ecology Congress (2022), at Stockholm, Sweden. Ms Mihieka Bose working on camouflage strategies in prawns, presented her poster entitled, "Colouration in semi-transparent prawn; a perplexing strategy of camouflage". Ms Pragya Poddar, working on human behaviour, presented her poster entitled, "Assessment of mental stress in young females". Mr Kalpesh Jas working on abiotic stress in prawns, presented his poster (virtually) entitled, "Prawn behaviour: a reliable marker for evaluating abiotic stress in aquatic environment".

We have initiated online "Journal Club" programme, where we are inviting experts to deliver talks on several contemporary research areas. Regular discussions on the recent advancements in biological sciences help us to be updated and innovative. We are trying to expand the group universally for which we need collaborations. Despite of all the enthusiasms, we are in search for research funds to run the group in a better way. As a founder of Ethophilia, I am appealing to my peers to help us to grow. It is an earnest request to you all to give valuable suggestion and if possible, please join us. Global networking and affiliation from any university or institution will make our hands stronger.

Chayan Munshi
Berlin School of Business and Innovation,
chayanbio@gmail.com

Email: ethophilia.group@gmail.com
Web: <https://sites.google.com/view/ethophilia/home>
Twitter: @ethophilia

BOOKS FOR REVIEW

If you are interested in receiving **and** reviewing any of these books, **or some other book** suitable for this Newsletter, please email the newsletter editor: andreas.svensson@lnu.se. Please include your postal address. The due date for review in the next edition of the Newsletter is Feb 28, 2023.

Available from Oxford University Press

Book title

Secret Worlds - The extraordinary senses of animals paperback (2023)	by Stevens
Domains and Major Transitions of Social Evolution (2022)	Boomsma
A Better Ape - The Evolution of the Moral Mind and How it Made us Human (2022)	Kumar & Campbell
Animal Behavior and Parasitism (2022)	Ezenwa, Altizer & Hall
The Badgers of Wytham Woods - A Model for Behaviour, Ecology, and Evolution (2022)	Macdonald & Newman
Insects: A Very Short Introduction (2022)	Leather
An Introduction to Behavioral Endocrinology, Sixth Edition (2022)	Nelson & Kriegsfeld
Research Methods Using R - Adv. Data Analysis in Behavioural & Biological Sciences	Baker
The Parrot in the Mirror - How evolving to be like birds made us human (2022)	Martinho-Truswell
The Science of Animal Welfare - Understanding What Animals Want (2021)	Stamp Dawkins
Beavers - Ecology, Behaviour, Conservation, and Management (2021)	Rosell & Campbell-Palmer
Animal Behavior - Concepts, Methods, and Applications (2021)	Nordell & Valone
Vagueness and the Evolution of Consciousness - Through the Looking Glass (2021)	Tye
Applied Statistics with R - A Practical Guide for the Life Sciences (2021)	Touchon
The New Statistics with R - An Introduction for Biologists (2021)	Hector
Evolutionary Parasitology - Infections, Immunology, Ecology, & Genetics 2 nd ed (2021)	Schmid-Hempel
Adaptation and the Brain (2021)	Healy
Amphibians: A Very Short Introduction (2021)	Kemp

Available from Cambridge University Press

Book title

Gibbon Conservation in the Anthropocene (2023)	by Susan et al.
Much Like Us - ... Thoughts, Feelings, & Behaviour of Animals (2022)	Sachser & Bilger
Principles of Behavioral Neuroscience (2022)	Horvitz & Jacobs
Primate Cognitive Studies (2022)	Schwartz & Beran
Foundations of Behavior Genetics (2022)	Stoltenberg
The Colobines - Natural History, Behaviour and Ecological Diversity (2022)	Matsuda et al.

Available from CRC Press

Songbird Behavior and Conservation in the Anthropocene (2022), Edited by Proppe

Available from Royal Society publishing

-The centennial of the pecking order: current state and future prospects for the study of dominance hierarchies (2022) Strauss et al.

-Intergroup conflict across taxa (2022) Carsten et al.

-Understanding colour vision: molecular, physiological, neuronal and behavioural studies in Arthropods (2022) Yilmaz et al.