CONTENTS

NOMINATIONS FOR THE 2024 ISBE ELECTION

In 2024, ISBE will have an election for four new Executive Council members: a president, secretary and two councillors. The ISBE Nominations Committee invites the ISBE membership to submit expressions of interest (or self-nominations) to be considered for the upcoming election.

The duties of these officers are:
President: The President will preside at society business meetings and Council meetings. The President will appoint committees as directed by the Constitution and Bylaws, and as decided by the Council. In consultation with Council, the President will organise a process to solicit expressions-of-interest and select hosts for future scientific meetings. In consultation with the Council, and in particular with the Editor-in-Chief and Treasurer, the President will be responsible for negotiation of business terms with Oxford University Press concerning the publication of the Journal. Individuals elected as president serve for 6 years: two each as President elect, Current President and Past President. The President is expected to attend the ISBE conference in order to lead the executive meetings and reimbursement for travel is provided.

Secretary: The Secretary facilitates the maintenance of The Society's records, including the minutes of Society business meetings and Council meetings. The Secretary will coordinate Council meetings, including the distribution of meeting agendas, and facilitate timely communication of periodic meetings, elections and other Society business to the membership. The Secretary serves for a four-year term and may be re-elected.The Secretary is expected to attend the ISBE conference in order to lead the executive meetings and reimbursement for travel is provided.

Councillors: Two Councillors are elected every two years and serve a four-year term. Councillors join the ISBE Executive Council and assist in governing the society by attending council meetings and participating in other society activities and initiatives. Councillors are expected, as much as possible, to attend the ISBE conference in order to lead the executive meetings and reimbursement for travel is provided.

For more information see: www.behavecol.com/history

Members who wish to express interest in being considered for nomination should email the following information to the current ISBE president, Suzanne Alonzo: shalonzo@ucsc.edu by Oct 31, 2023

1) Include in the email's subject line: ISBE election-Expression of Interest
2) In the message, give your name and state the position or positions for which you would like to be considered (e.g. President, Councillor, Secretary).
3) A brief (less than 250-word) explanation of why you are interested in serving in this role, description of relevant experience, and history of involvement with the ISBE.
4) Attach a current CV.

The Nominations Committee will consider all expressions of interest, along with additional nominations from the membership and executive council. Candidates selected for the election will be contacted by the Current President, at which time a statement for the ballot will be needed.

Thank you for considering serving our field and professional society in this way.

The ISBE Nominations Committee
Suzanne Alonzo   Current ISBE President
Rebecca Kilner   Past ISBE President
Mariella Herberstein   ISBE President Elect

THE ISBE EXECUTIVE COUNCIL

FROM THE NEWSLETTER EDITOR

Academic freedom in the age of trolls.
How many outside science care about my research? I would typically answer: not that many. I have over the years put much effort into "outreach", i.e. trying get the public to care at all about what I do. As long as I studied fish this was the case. But then I helped a colleague to analyse statistics on *fatal dog attacks*. It gave me a brutal introduction to what it can be like to study something that (parts of) the public find controversial. I was warned beforehand, friendly advice such as "beware of the pitbull lobby", but I was not prepared for what was to come. The paper received some media attention, and instantly my phone started to ring and my in-box fill up with emails with various levels of vitriol. Our paper's conclusions and methods were scrutinized by "google researchers" in a way that I've never seen before. Public interest is of course a good thing and, by all means, scrutinize my science – but on sensible grounds. Our paper became a weapon for both sides in heated online debates about dog breeds, despite the paper not being about that. Our focus were on the human victims, not the dogs.

This experience made me think of all behavioural ecologists that regularly have to deal with - for a lack of a better term - internet trolls. Perhaps you study a hated invasive species (and won't reccomend big eradication programmes), or a behaviour that is seen by some as "unnatural" or a challenge to cultural norms? Perhaps you get attacked just for experimenting on animals?

Recently a Swedish University course called "Intercultural studies: race and whiteness" was completely derailed by a right wing extremist who filmed the teacher-student interactions in order to create critical "internet content". Such overt attacks on academic freedom are perhaps uncommon in Behavioral Ecology, but many of us do study potentially contro-versial topics. I think we need to be better at acknowledging, and supporting, our colleagues who end up in the line of fire, so that they are not silenced by the trolls.

P. Andreas Svensson
ISBE Newsletter editor
Linnaeus University, Sweden
andreas.svensson@lnu.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 suggestions 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. 29, 2024**
> **Please email andreas.svensson@lnu.se**

CONFERENCE CALENDAR

Australasian Ornithological Conference
28-30 Nov 2023 in Brisbane (Meaanjin), Queensland, Australia
https://2023aoc.com/

ASAB Winter conference
Animal cognition: pure to applied
13-14 Dec 2023 in Edinburgh UK
https://asabwinter2023.org/

51st Annual Meeting of the Pacific Seabird Group
21-23 Feb 2024 in Seattle, WA, USA
https://pacificseabirdgroup.org/

European Human Behaviour and Evolution
16-19 Apr. 2024 in Montpellier, France
www.cambridge.org/core/membership/ehbea/events

ASAB Spring conference
23-25 Apr 2024 at the University of Exeter; UK
www.asab.org/conferences-events

The International Society of Applied Ethology
22-26 July 2024 in Curitiba, Brazil.
www.applied-ethology.org/Events.html

Third Joint Congress on Evolutionary Biology
ESEB, ASN, SSB, SSE
26-30 July 2024 in in Montreal, Canada
www.evolutionsociety.org/news

Joint orthithology meeting
Wilson Ornithological Society, Association of Field Ornithologists, and Society of Canadian Ornithologists
29 Jul – 1 Aug 2024 in Peoria, IL, USA.
https://afoscowos2024.org/

Congress of Herpetology
August 2024, in Kuching, Malaysia
www.worldcongressofherpetology.org/

Cultural Evolution Society
9-11 Sep 2024, Durham (UK) hosted by Durham Cultural Evolution Research Centre (DCERC).
https://culturalevolutionsociety.org/story/Conferences

ISBE 2024
29 Sep - 4 Oct, 2024 in Melbourne, Australia
www.isbe2024.com   see also next pages

European Society for Evolutionary Biology
18-22 Aug 2025, Barcelona, Spain,
https://eseb2025.com/

International Society for Behavioral Ecology Congress 2024

29 September – 4 October 2024

MELBOURNE AUSTRALIA

After a few unavoidable postponements (and the longest lead time in ISBE history), we are pleased to finally welcome you to join us in Melbourne Australia from Sunday 29 September to Friday 4 October 2024 for the 19th International Society for Behavioral Ecology Congress!

Now is the time to start (re)planning your trip 'Down Under' and to participate in an exciting and engaging conference program, make valuable professional connections, and discover all that Melbourne and Australia has to offer.

To ensure you receive updates about the Congress, register your interest by visiting the ISBE2024 Congress Website: www.isbe2024.com

Discover Melbourne

The Congress has been timed to showcase the very best of Melbourne – and Australasia more generally.

Late September to early October is Spring in Melbourne, which is an exciting time to visit. The city comes alive with food festivals, art shows, theatre, markets, sport and lots more.

Melbourne is widely regarded as the cultural and sporting capital of Australia. The city and surrounds are a haven for foodies, wine lovers, and coffee connoisseurs, with some of the best restaurants, wineries and cafes in the country. Melbourne is also home to world class museums and art galleries, botanical gardens, zoos, and parklands. It is famous for its laneways, with plenty of street art and hidden bars for you to explore. Sports fans might consider visiting the Melbourne Cricket Ground, walk the Australian Grand Prix race track at Albert Park, or soak up the atmosphere of the Australian Rules Football League grand final, which will be taking place just prior to the start of the conference.

Those interested in nature will also have plenty to discover nearby, from cool temperate rainforests and some of the world's tallest trees (mountain ash forests) to alpine grasslands and spectacular coastlines. These environments are home to some of Australia's most iconic native animals, including koalas, kangaroos, wombats, emus, lyrebirds, parrots and platypus. There is even a resident penguin colony at St Kilda Pier, which is a short tram ride from the Melbourne Convention and Exhibition Centre.

For further information and ideas on what to see and do in Melbourne and Victoria, see: www.visitvictoria.com

The Congress Venue

ISBE2024 will be held in the modern Melbourne Convention and Exhibition Centre (MCEC) located in the heart of the city and adjacent to the Yarra River. The MCEC is easily accessible by foot, public transport, bike and car and is surrounded by cafes, restaurants and bars – the nearest only 40 seconds walk from the MCEC's entrance. A wide range of accommodation is within easy walking distance.

Setting new world benchmarks, the MCEC was the first convention centre awarded a '6 Star Green Star' environmental rating by the Green Building Council of Australia.

Scientific Program

We have an outstanding scientific program planned and have already secured an amazing line up of plenary speakers from around the world:

- Prof Ashleigh Griffin, Oxford University, UK
- Prof Shinichi Nakagawa, University of New South Wales, Australia
- Prof Florian Schiestl, University of Zurich, Switzerland
- Prof Claire Spottiswoode, University of Capetown, South Africa
- Prof Roxana Torres, Universidad Nacional Autónoma de México, Mexico
- Dr Maren Vitousek, Cornell University, USA

Due to the cancellation of the 2020 Congress, the Melbourne conference will host two Hamilton Lectures, ISBE's highest Honour. While the 2024 recipient has yet to be announced by the ISBE Executive Council, we can confirm that the 2020 recipient, Prof John Endler F.R.S., Deakin University, Australia, will be coming to Melbourne to deliver his much-anticipated lecture.

For further information, please visit the ISBE2024 Congress Website

Call for Abstracts

The Call for Abstracts will open in October. Don't miss this chance to make your contribution to the Congress dialogue. To ensure you receive details about the call for abstract opportunity, please visit the ISBE2024 Congress Website to register your expression of interest.

Diversity and Inclusion

We are committed to delivering an inclusive experience for our delegates.

Child care options will be available for those delegates who require additional support to participate. Further details will be provided as they are available.

The International Society for Behavioral Ecology will be offering travel grants to support attendance by students and early career researchers, as well as delegates from developing nations.

We will also be adopting several key initiatives introduced at the ISBE 2018 Congress, including mentoring, diversity in STEM, and networking opportunities. Further information will be provided on the ISBE 2024 website.

Commitment to Sustainability

ISBE 2024 is exploring a range of initiatives to support our commitment to sustainability and more information will be made available on the website as it becomes available.

Key dates

Call for abstracts opens:	October 2023
Registration opens:	February 2024
Call for abstracts closes:	March 2024
Early bird registration deadline:	June 2024

Local Organising Committee, ISBE2024

Bob Wong
Devi Stuart-Fox
Andy Bennett

@ISBE2024

STAFFAN ULFSTRAND OBITUARY

Staffan Ulfstrand, professor emeritus at Uppsala University in Sweden, passed away in September at the age of 89.

From 1978-1998 he was the professor in the department of Animal Ecology at Uppsala, where he established a wonderful collaborative spirit and helped to shape the then-new field of Behavioral Ecology. He was full of knowledge, curiosity and enthusiasm for the natural world, which he conveyed to students and the general public, as well as his colleagues. In 1990 he enjoyed hosting the third ISBE Conference in Uppsala. He was also one of the founding coeditors for the Behavioral Ecology journal.

Many generations of behavioral ecologists all over the world appreciated Staffan's contributions and friendly support. He will be sorely missed.

Charlotta Kvarnemo,
Marlene Zuk,
Gunilla Rosenqvist &
Ingrid Ahnesjö

SPOTLIGHT ON... A YOUNG SCIENTIST

Name: Ambre Salis

Education: PhD in behavioural ecology at the Laboratoire des Hydrosystèmes Naturels et Anthropisés (LEHNA), Université Claude Bernard Lyon 1, France

Address: Institut Jean Nicod, Département d'études cognitive, 29 rue d'ulm, Paris.
Email: salis.ambre87@gmail.com
Website: https://ambresalis.wordpress.com/

Research Interests: My main academic interests are in the evolution and complexity of animal communication. I recently defended my thesis about the importance of syntax in Parids' mobbing calls and how this influences heterospecific communication. I am currently working at the intersection of behavioural ecology and linguistics to understand the syntax and semantics of birds' alarm calls.

Selected papers:
Salis, A., Léna, J-P., Lengagne, T. 2023. Both learning and syntax recognition are used by great tits when answering to mobbing calls. *Behavioral Ecology arad06*.
Salis, A., Léna, J-P., Lengagne, T 2021. Great tits (*Parus major*) adequately respond to both allopatric combinatorial mobbing calls and their isolated parts. *Ethology*, 127(3), 213-222.
Salis, A., Léna, J-P., Lengagne, T. 2023. Acoustic cues and season affect mobbing responses in a bird community. *PCI Ecology* (Review accessible at https://doi.org/10.24072/pci.ecology.100420)

Date	Speaker / Topic
24-Oct	**O. Berger-Tal, D. T. Blumstein, A. Greggor and J. Swaddle** Panel Discussion on: Animal Behavior and Conservation
31-Oct	**Damien Farine, Australia National University, Australia** Uncovering the hidden social lives of birds
7-Nov	**Liz Lange. State University of New York at Oswego, USA** Setting the foundations for life: long-term effects of early life environments
14-Nov	**Janet Mann, Georgetown University, USA** Social bonds, reproduction and survival in wild bottlenose dolphins
21-Nov	**Thanks Giving** No Seminar
28-Nov	**Simone Pika, University of Osnabrück, Germany** Animal cognition: from corvids and chimpanzees
5-Dec	**Annemarie van der Marel, Pontificia Universidad Católica de Chile, Chile** Socioecological environment of group-living species
12-Dec	**Vincent Viblanc, IPHC-DEPE, CNRS, Strasbourg, France** Social stress and its adaptive value in colonial mammals and birds

www.socialevolutionseminar.com
www.youtube.com/@seminaronfrontiersinsocial1478

P A R T I C I P A T E   I N   S U R V E Y

Survey:

Perceptions about the quality and utility of Behavioural (Eco)Toxicology to protect human and ecosystem health

Behavioural data is not widely used in regulation of chemical contaminants and has rarely been used in risk assessment. This survey is intended to inform the wider scientific community about the perceptions and barriers to using behavioural endpoints in ecotoxicology, environmental regulation and risk assessments.

For further information and to take the survey: https://forms.gle/kHtXj4i3K4fiENG98

This project is done in collaboration with:

-Prof Bryan Brooks, Baylor University, USA
-Dr Marlene Ågerstand, Stockholm University, Sweden
-Dr Gerd Maack, German Environment Agency (UBA)
-Dr Jim Lazorchak, Environmental Protection Agency, USA
-Dr Minna Saaristo, Environmental Protection Agency, Australia
-Prof Bob Wong, Monash University, Australia
-Prof Tomas Brodin, University of Agricultural Sciences, Sweden

SEXUAL SELECTION WORKSHOP

We would like to announce our upcoming workshop on **Sexual Selection in a Changing World** in the beautiful Erice, Sicily (Italy), 17-21 May 2024.

The onset of the Anthropocene presents natural populations with novel challenges at a hyper-accelerated rate. How do sexual selection, sexual competition, and mate choice help or hinder adaptation to environmental change? How can we make generalizations and predictions about these effects from information we can easily measure? How can we apply this knowledge to best practices in conservation? These urgent questions center around the fitness dynamics of sexual selection, a topic of contention for decades. For this workshop, we bring together internationally renowned theoreticians and empiricists from fields ranging from evolutionary genomics to behavioral ecology, population biology and cognitive ecology. Through talks, round tables, and structured discussions, we bring experts and students together to find areas of consensus, debate, and collaboration.

*Top line-up of speakers: Aneil Agrawal, Alex Aguilar, Suzanne Alonzo, Francesca Cagnacci, Ulrika Candolin, Costantino Macias Garcia, Tim Janicke, Jan Komdeur, Loeske Kruuk, Andrea Pilastro, Noa Pinter-Wollman, Gil Rosenthal, Ryan Schacht, Rhonda Snook, Tamás Székely, Claus Wedekind, Franjo Weissing.

Registration and abstract submission deadline: 30th November 2023

*Participation fees: ALL-INCLUSIVE, comprehensive of registration to the workshop, lodging, meals, coffee breaks and transport to and from the airport (Palermo or Trapani).

For more details and how to apply, please visit: https://centromajorana.it/sexualselection2024/

For any questions, please contact: sexualselection2024@centromajorana.it
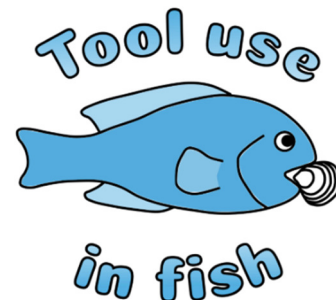
On behalf of the workshop organizers,
Chiara Morosinotto,
chiara.morosinotto.1@unipd.it

TOOL USE IN FISH

Have you seen fish using tools? Let us know!

We are conducted a research project on fish tool use and your sightings are useful. www.fishtooluse.com/

Juliette Tariel-Adam
Claude Bernard Lyon 1 University, France

Fish using an anvil

Desert Navigator -
## The Journey of an Ant

By Rüdiger Wehner

Belknap press / Harvard University Press, 400p
ISBN: 0674045882, 978-0674045880

Nest building insects leave their nest, find food or other resources, and bring these back home. Tiny bodies with tiny brains navigate successfully across vast distances. What kind of mind can exist within these tiny brains, and how does it represent the world? I think it is safe to say that no-one has spent more time than Rüdiger Wehner thinking about how ants solve this problem and with *Desert Navigator: The Journey of an Ant*, he gives us the answers he has found over the course of his very long career studying the desert ants, primarily, in the genus *Cataglyphis*, on their way to and from their nests.

Desert Navigator is in the genre of discovery books that scientists write towards the end of a long career, or after closing the chapter on a particular topic of investigation. The nature of these kind of books means that they will never be fully comprehensive, but at their best they can offer a glimpse into how the views of a particular scientist developed over time as new evidence was compiled. This book is no exception, it is a cohesive summary of a life spent looking downwards, while thinking critically about how ants can find their way through some of the most inhospitable places this world has to offer.

In the insect navigation literature, the idea of cognitive maps, a map-like internal representation of the outside world that animals can use to find their way in their world, was in vogue in the 70s and 80s, and there was a large debate about whether honey bees used cognitive maps to find their way. Though many experiments were conducted, and several papers were written, the research program eventually died off, as a consequence of a lack of conclusive evidence and an increasing body of work studying ants that showed that navigation could be accomplished using simpler mechanisms. In the last decade, however, perhaps fuelled by the discovery of grid cells in mammals with their map-like representation, it has become increasingly difficult to imagine how navigation can work without a cognitive map.

Because we humans ourselves constantly use digital maps to navigate the idea is incredibly intuitive. Reading Wehner with this in mind, gives us an interesting perspective. He does not dwell or speculate on maps at all. What counts to Wehner is mechanisms and how they affect behaviour. The simpler the explanation the better. He does not present an overarching theory that explains all there is to now about insect navigation, but he gives us a deep understanding of each of the mechanisms he has investigated over the course of his career.
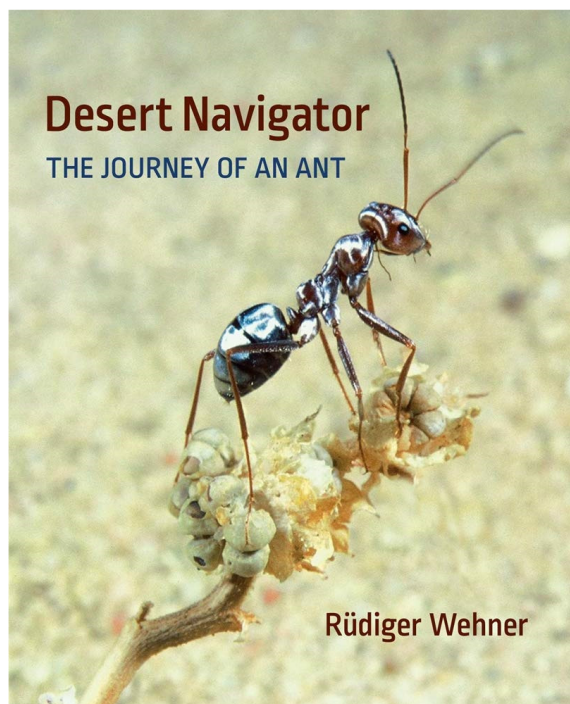
Naturally, we also gain some insight into the ants themselves and the lives they live. *Cataglyphis* live in the deserts of the world and only venture out during the warmest parts of the day. This is a very particular lifestyle, and consequently a very large part of the book is devoted to explaining how such a life is possible. The book is very systematically laid out, and as the reader starts asking themselves, e.g., "but wouldn't that require some sort of odometer?", Wehner dutifully follows up within a couple of pages and explains how his own thinking would necessitate some kind of odometer and eventually the experiments that demonstrates how an ant odometer is possible fill the pages. Apart from some very specific physical aspects of desert dwelling, the writing style makes for a journey of a discovery alongside Wehner.

The notes, in particular, is an interesting place to spend one's time when reading this book. I found it necessary to have a bookmark placed there at all times, so it was possible to flick back and forth between the main text and the notes. Often, when the text refers to research done by others than Wehner, I was left with the question "but how can we know that?", a quick flick to the notes and sure enough, a full explanation ensues. In a world of notes containing little but a single citation, this is heart-warming. Here Wehner explains, comes with counter examples, or is quick to point out how this first was studied in other organisms before also being discovered in *Cataglyphis*.

The book ends with an exciting roadmap, where Wehner turns the table on the relationship between insect and mammalian navigation research. Where findings in mammals have inspired bee researchers to look for cognitive maps, Wehner argues forcefully for how taking the role of behaviour in understanding navigation seriously, should inspire us to use to apply the findings from *Cataglyphis* to rats. Having neuronal processes

that imply a function in navigation is not evidence that they are necessary for navigation. What is needed is behavioural experiments, where necessity of function can be demonstrated. To achieve this end, perhaps the way forward is for rat researcher to go to the rat's natural environment and see what role the simple mechanisms discovered in *Cataglyphis* play there in the actual navigational behaviour in rats, and gradually link these simple processes to the more complex map-like patterns we see in the mammalian brain.

There is something comforting in Wehner's approach. It is endlessly meticulous without grand theories (or simple answers). For every process a solid foundation is built by eliminating every possible alternative explanation. If you read the book and someone asks you how ants navigate, I am not sure you can give a coherent answer. But you will be able to say what makes the ant behave as it does as it is finding its way through the desert. This approach, of piecing together very simple mechanisms by dissecting them to pieces will perhaps never yield a simple or coherent answer, but there is something appealing in the certainty it generates.

Eirik Søvik
Volda University College, Norway

TENURE–TRACK POSITION

Assistant Professor - Behavioral Biologist at the Dept. of Biology at Miami University, Oxford Ohio, USA

Job Title: Assistant Professor - Behavioral Biologist

Job Summary:
Assistant Professor of Biology (tenure-track) to teach courses in Animal Behavior and additional biology courses; develop an active research program leading to external funding and publications; advise undergraduate and graduate students; provide service to the department and university. Appointment begins August 2024.

The Department of Biology http://miamioh.edu/biology has over 30 faculty committed to diversity and inclusive excellence in teaching and research. The department offers undergraduate degrees in the biological sciences, as well as M.S. and Ph.D. degrees. Biology is also an integral part of interdepartmental graduate degree programs in Ecology, Evolution, and Environmental Biology (http://miamioh.edu/eeeb) and Cell, Molecular, and Structural Biology (http://miamioh.edu/cmsb). Research and teaching are supported by outstanding core facilities, including the Ecology Research Center, the Center for Bioinformatics and Functional Genomics and the Center for Advanced Microscopy and Imaging.

Minimum Qualifications:
Ph.D. in Biology, Behavioral Biology, or closely related field by date of appointment.

Special Instructions to Applicants:
Submit a cover letter, curriculum vitae, statement of research plans, a teaching philosophy, and evidence of effective teaching. Inquiries may be directed to:
Dr. Douglas Meikle
biology@miamioh.edu

Applied Statistics with R:
## A Practical Guide for the Life Sciences

By Justin C. Touchon

I came across this book when I was looking for materials to help my students in their thesis projects to analyse their data with which they had little or no experience. In short, if you have never used R, need a refresher, are intimidated by coding, or need a practical approach to quickly start analysing your data, this book may be for you. On the other hand, if you are looking for an in-depth introduction to R, want to master base R, or want a book that you can use as an encyclopaedia later, you will need to look elsewhere.

But let's not get ahead of ourselves and take a closer look. I will start by highlighting some of the things that I think set this book apart from others I am familiar with (both the good and the bad), and then go on to outline the content of each chapter in more detail.

What I think this book excels at is taking away the fear of coding that seems to be an epidemic among students. It is written in a very conversational tone and the author explains every line of code, avoiding any technical language. Compared to your standard coding book, it has none of the usual dryness. Also, the statistical tests and models, model output and diagnostics are explained in sufficient depth to be understood by someone with no previous knowledge. On the other hand, you may find all this frustrating if all you want is a brief explanation, as the book refuses to be short. In addition, some topics are explained in detail at a much later point than where they first appear. This makes it almost impossible to look things up quickly and you might lose the overview.

The second strong point is the use of an interesting ecological dataset, which it analyses from the beginning (chapter 3 to be precise), from data wrangling to mixed effects models. In this way, it acts as a course book that you can work through on your own, teaching you all the basics along the way. The online resources provide the solutions to the exercises (including different ways of solving them and some troubleshooting). You will clean the data and prepare datasets for use in the later chapters. Although the book tells you in which chapter the data you need for the current chapter was created, the chapters are long and if you skip some sections you may find it difficult to find the place where the dataset you need was created. In addition, the chapters are not always clearly delineated, with the content of some chapters sometimes spilling over into others. As a result, the book makes most sense if you work through it from the beginning, and taking individual chapters can be a bit tricky, though not impossible.
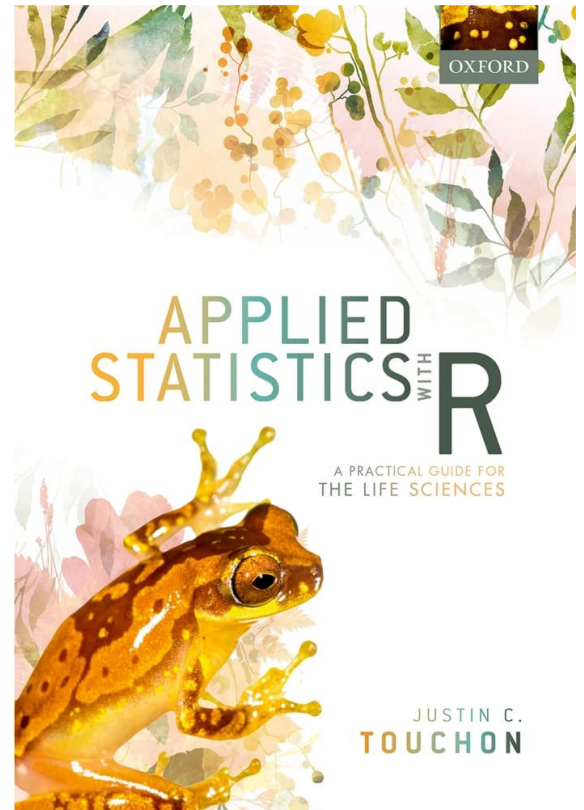
Third, in this book you will start using some packages like those in the tidyverse family from the very beginning. When I think back to the university courses that first taught me R and where we did all the data wrangling operations in base R, I don't really see the point of doing that anymore. Packages are an integral part of R and should not be avoided, especially when they can make your life a lot easier. The book sometimes gives base R code, but I for one like the functionality of not ignoring the existence of simpler solutions just because they are not part of base R. If you are using this book to learn R for the first time, you will probably save yourself some time later by already being familiar with the tidyverse syntax. However, beginners may find it confusing to learn different ways of doing things at the same time.

The following is a short summary of each chapter.

Chapters 1 and 2 serve as an introduction to coding and data analysis in R. Chapter 1 provides a brief overview of R, what it is, and how it works. It explains best practices for coding, such as the importance of annotations, breaking your code into chunks, and using meaningful names for your objects. You will create your first basic histogram and learn about the different object types. There is even a section on how to prepare a clean dataset. This is probably my favourite section of the book, given the problems students often have with cleaning their data, and the worst practice example really hits the nail on the head. Chapter 2 continues with the essentials, covering some basic principles of experimental design and data analysis.

Chapter 3 introduces you to the dataset used in this book and how to import it into R. The author gives some examples of common mistakes made at this stage and

examines the structure of the dataset. He guides you through the process of identifying extreme values (and discusses whether you can justify excluding data points), subsetting your data, computing summary statistics, and visualising your data. We are also introduced to the dplyr package and some of its basic functions such as filter, aggregate and group_by in conjunction with summarize and mutate. By this point, the book has already covered a number of useful functions.

Chapter 4 covers all the basic plots and gives examples of some pretty professional plots using the qplot function from the ggplot2 package. It covers the basics of changing the appearance of your plots and shows how to plot multiple plots side by side using faceting and plot_grid. The creation of bar graphs is covered in detail as a learning opportunity for the functionality of ggplot2 and also base-R.

Chapters 5 to 8 contain all the statistical tests presented in the book, from the basic analyses in Chapter 5 to general linear models and mixed effects models.

Chapter 5 takes you from examining the error distribution of your data to performing some basic types of analysis. After explaining the normal distribution, it covers the examination of histograms and normality tests. The error distribution is then explored in more detail and the AIC score is introduced. Finally, you perform your first non-parametric tests, the t-test and an ANOVA, complete with diagnostic plots and post-hoc comparisons. You also learn how to read and interpret output from the R console.

Chapter 6 is a direct continuation of Chapter 5, building on what we have learned about linear models and ANOVAs. We are introduced to ANOVAs with multiple predictors, ANCOVAs and linear regressions. We start to plot using ggplot instead of qplot, and calculate the curves for the regression lines. As before, a lot of time is spent looking at the model outputs and interpreting them.

Chapter 7 moves away from normally distributed data and begins analysis with generalised linear models. First, you learn about different error distributions and how to use them to model the data. You then learn to evaluate the models using diagnostic plots to see which error distribution best fits the data. Model reduction and model selection are introduced as techniques that can help to identify the minimally adequate model or the most appropriate combination of predictors. Finally, you learn an easy way to plot your GLM using ggplot.

Chapter 8 is all about mixed effects models. You rerun some of the models from the previous two chapters, but this time with random effects, and learn to determine whether these models fit the data better. You learn how to get the p-values for your fixed effects and how to decide which factors to use. The book mostly uses the lme4 package, but also introduces some other packages that might be able to run the model if lme4 can't. You then learn a method to estimate the marginal means of your model.

Chapter 9, the longest chapter at 50 pages, is a good reference for more advanced data wrangling, repeating some of the operations you already know, but adding more in-depth knowledge of how they work, and introducing more functions you are likely to need when working with your own data. First, you learn more about grouping and summarising data, which you have been using since Chapter 3, but this time with some more detail on how to include or exclude data using filter and select. You then learn how to align data frames by variable and how to transform your data into long and short formats, which is quite intuitive using tidyverse functions. This is also where data wrangling gets more advanced, as the final topic is how to apply statistical analysis to multiple variables at once, using linear models as an example, with the do function.
The second part of the chapter (I told you it was a long one) covers the grammar of ggplot, also including some things we have already seen before. You learn different ways of plotting data side by side and how to customise every detail of your figure. Finally, you learn how to combine this with the previous section by piping your restructured data directly to ggplot and produce a faceted plot, all in one command.

Chapter 10 explains the basic principles of writing loops and functions, and why it's good practice to do so. Although the chapter is really very basic, one cool thing is that an example function you write is for simulating how large your sample size needs to be to detect a statistical difference if you already have an idea of how large the difference between your treatments is.

Chapter 11 wraps up the book with some final advice: understand your data structure, know how to get help with R, be clear about your analysis from the start, and present your data with good figures.

Julia Balogh
Goethe-Universität Frankfurt am Main, Germany

Scientific Papers Made Easy -
How to write with clarity and impact in the life sciences

By Stuart West & Lindsay Turnbull

Why read it?
As researchers or students in ecology, plenty of opportunities are offered to join courses on novel molecular methods, data analysis, and advanced statistics. But after collecting and analysing data, we all face the same, for most, daunting task: summarise the data and present the key findings. While often being buried in large amounts of data, it is important to be reminded that a manuscript which a reader fails to understand has missed its goal. A logical structure of the text combined with a clear visualisation of the study and the results can help with this. Not only is this difficult when mainly trained in analytical thinking, it is also incredibly time consuming. In their recent book "Scientific papers made easy", the authors West and Turnbull provide the reader with guidance and examples on how to make your scientific text clearer and more appealing for a general audience.

Who should read the book?
Anyone active in life sciences and involved in science communication will benefit from reading this book. Students will likely benefit the most by being relatively new to writing manuscripts.

Instead of reading the book on our own, we used the book in a Swedish "study circle" of fellow students in different fields within ecology. At each meeting, we discussed one or two chapters of the book, often drawing parallels to examples from our own manuscripts and ongoing work. Together, these meetings helped us scrutinise figures, abstracts, and titles while using guidelines from the book. It happened regularly that we had mixed opinions when, for example, discussing titles or colour schemes before quickly realising this emphasised the golden rule of the book: you can ignore all tips, as long as what you do helps your reader. It did not take long for us to experience the value of the book in practice when implementing a suggestion from the book on having a methodology figure and receiving compliments from reviewers on explaining the study design. In general it helped us to structure our text, make our manuscripts more appealing to a wide audience, and helped in an argument with supervisors deciding the title of a manuscript. Some of us even testified that the writing process became more fun! After finishing the study circle, many of us have continued by having the book at our office desks as a valuable reference during writing.
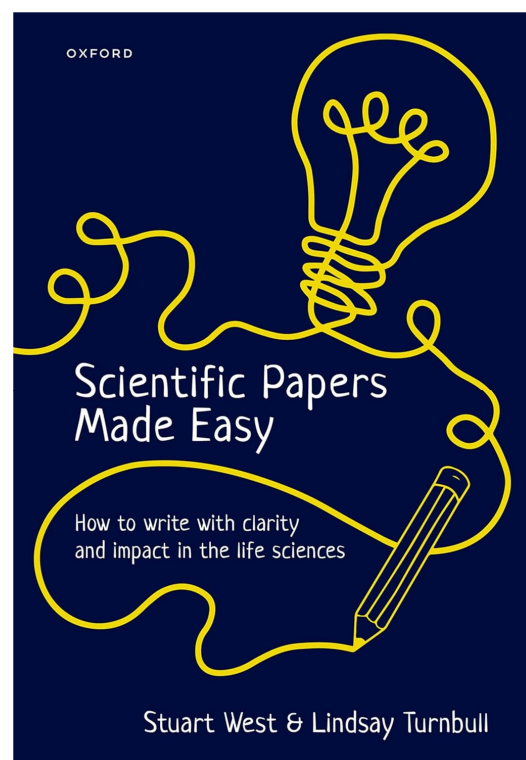
It is however not necessary to read the book as a study circle, although we strongly recommend doing so. The book includes several quizzes that one can do alone which are a great way of reflecting on writing and preferences for different wording. Moving beyond the classical structure of a scientific paper, the book also provides examples and tips of how to present your results and study design in figures, how to edit your text, and write convincing cover letters.

Take home message
Although preferably read cover to cover, each chapter can be read independently. One will also benefit by having the book as a reference while writing to consult suggestions on a specific topic, such as deciding on a title or structuring the abstract. While some of the suggestions are a matter of personal taste, some are not and will simply improve the readability of the text. For example, suggestions as to choose and follow a passive or active voice, to avoid jargon, or to discuss one major topic per paragraph.

We believe that anyone scared of a blank page when starting writing a manuscript will benefit from reading this book, as it helps you get started writing and pass this common obstacle. Reading and re-reading this book helps with the writing process and quite possibly will result in better-structured and more appealing manuscripts. Eventually, it also saves you time and who knows, it might just make the writing more pleasurable!

Hanna M. Bensch
George Westmeijer
Linnaeus University , Sweden

B O O K S   F O R   R E V I E W

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 deadline for all contributions for the next edition of the Newsletter is Feb. 29, 2024.

Available from Oxford University Press
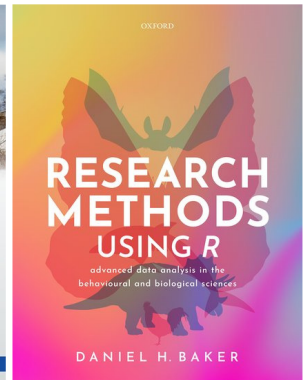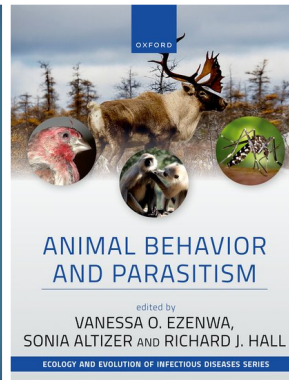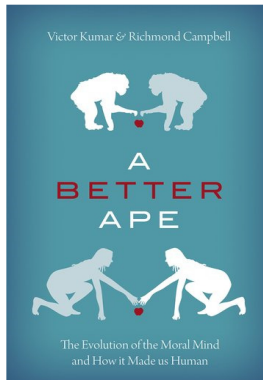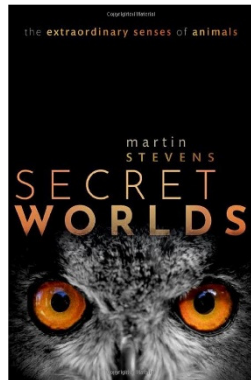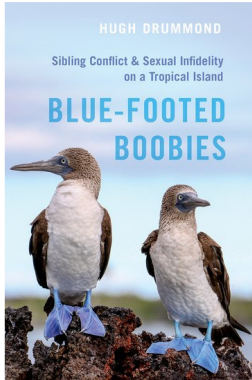
Book title	by
Animal Behavior XE, 12th Edition (2023)	Rubenstein
Blue-Footed Boobies - Sibling Conflict and Sexual Infidelity on a Tropical Island (2023)	Drummond
Secret Worlds - The extraordinary senses of animals paperback (2023)	Stevens
A Better Ape - The Evolution of the Moral Mind and How it Made 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

Available from Cambridge University Press

Book title	by
Evolutionary Game Theory (2023)	Alexander
Experimental Design and Data Analysis for Biologists (2023)	Quinn & Keough
Zoo Studies: Living Collections, Their Animals and Visitors (2023)	Rees
Gibbon Conservation in the Anthropocene (2023)	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

Mixed-species groups and aggregations: shaping ecological and behavioural patterns and processes, (2023) Ed. by Carlson *et al*.

Half a century of evolutionary games: a synthesis of theory, application, and future directions (2023) Ed. by Richter & Lehtonen*.*

Evolutionary ecology of inequality (2023) Ed. by Smith et al.

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

Intergroup conflict across taxa (2022) Carsten *& al.*

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

Collective behaviour through time. (2022) Ed. by Ioannou and Laskowski