2014 - VOLUME 26 ISSUE 1

ISBE Newsletter

International Society for Behavioral Ecology
www.behavecol.com
Supplement to *Behavioral Ecology*

CONTENTS

FROM THE NEWSLETTER EDITOR

With this issue, I become the new ISBE newsletter editor. First of all I would like to thank Mariella Herberstein for her excellent work as newsletter editor during the last seven years. It will be a challenge trying to fill her shoes!

A short introduction to who I am: After finishing a PhD in Trondheim, Norway, I spent five years in Australia doing postdocs at Bob Wong's lab at Monash and at John Endler's lab at Deakin University. Since 2012, I am a lecturer at Linnaeus University in Sweden, where I teach mainly Behavioural Ecology, Ethology and Evolutionary biology. My research interests center on behavioural strategies in animals, using fishes - such as gobies, guppies and sticklebacks - as model systems. I use these to investigate ornamental pigments, antioxidants, predator evasion, agression, courtship and parasite-induced behavioural changes.

Behavioual ecology has become a passion of mine, so it is a great honour to edit this newsletter.

I look forward hearing from you - the ISBE members. This is ***your*** newsletter, and it will be nothing without contributions from members. I am happy to receive feedback on the content as well as ideas on how the newsletter can be developed. Please email me any suggestions or contributions, or just grab hold of me at the New York meeting in August. This is what I look like:

Last but not least, I would like to extend my thanks to all that have contributed to this issue!

P. Andreas Svensson

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How to contribute to the newsletter

The ISBE Newsletter publishes Book Reviews, Conference and Workshop Reviews and Commentary Articles of interest to the International Society for Behavioral Ecology. The ISBE Newsletter will only consider work that is not already published or intended to be submitted for publication elsewhere.

Book Reviews: Reviews are generally solicited by the Editor as new books arrive at the office, and are deemed to be of interest to the society. Persons involved in the publishing of books who would like these to be considered for review in the Newsletter should contact the Editor and arrange for their publisher to forward a review copy to this office. Authors may submit a list of possible reviewers. Alternately, members who wish to review a particular text should contact the Editor. The Editor will provide reviewers with instructions and a style sheet. Reviews are typically 1500-2000 Words.

Workshop/Conference Reviews: Workshop and/or Conference reviews should be prepared in one of the following two formats. *Brief synopses* (max 1500 words) and *Longer reports* (max 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 files. All cartoons published in the newsletter will be credited to the illustrator, and will appear on the Newsletter's website (www.behavecol.com).

FROM THE PRESIDENT

This will be the last newsletter before I step down as President and hand over to Nina Wedell. It has been an honour and great pleasure to have had the opportunity to lead such an interesting and flourishing Society. Those of us lucky enough to have attended the Lund meeting will be treasuring the memories of a wonderful week. Lund proved to be the perfect venue: a lovely city and we were even luckier with the weather. The conference talks and posters were of a high standard and the large number of graduate students and post-doctoral researchers at the meeting shows that our society is in great hands. Congratulations and thanks to Anders Brodin, Dennis Hasselquist and their team for their marvelous organization of the event! If you missed this meeting, then make sure you make it to NewYork in July/August this year! Nearly 1000 people are already signed up, so we are looking forward to another great meeting. Mark Heubel and his team are working hard behind the scenes to arrange a great event, both scientifically and socially.

In addition to our international conference, the other main activity of the society is to publish our journal, Behavioural Ecology. The journal celebrates its 25th anniversary this year and Leigh Simmons has interesting plans for the celebration. Thanks to him and all the editors for maintaining such a high standard. We are also lucky to have Oxford University Press and their commissioning editor, Cathy Kennedy who has been a super valuable resource for the society for years retired after the Lund meeting and knowing how much she loves her garden, I am sure that is where we can find her now. Cathy has been replaced by Ian Sherman who has prior experience with the journal and I am sure he will take care of our interests in the best possible way. Cathy Kennedy and Kate Lessel have put together a new contract between ISBE and OUP that covers the next five years. All negotiations have been held in a positive atmosphere, and everyone is enthusiastic about our journal and research field.

We also have this excellent ISBE Newsletter as a communication forum, and I would like to take the opportunity to thank Mariella Herberstein for her hard work with the newsletter during the past year. She has put an incredible amount of energy and new ideas into it. Welcome to Andreas Svensson who will be in charge of the newsletter from this issue and onwards. I am sure we can expect some fun and interesting new ideas from Andreas in the near future.

Last but not least I like to thank all our members that make ISBE the best Society. For me the meetings have been, and still are, the most important place to meet and discuss science.

Thanks and hope to see you all in New York!
Gunilla Rosenqvist
President

ISBE ELECTION AND EXECUTIVE

The 2014 elections are completed, and this is the new Executive Council (effective from Aug 2014)

President
Professor Nina Wedell
University of Exeter, UK
Email: N.Wedell@exeter.ac.uk

Past-president
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President-elect
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ISBE 2014 CONFERENCE

ISBE2014: The 15th Congress of the Society, in New York City, July 31 - Aug. 5

With the abstract submission deadline passed, we are happy to report that 975 registrations and nearly as many abstracts, have been received by www.ISBE2014.com Thanks to everyone for watching the news updates and the deadlines announcement on our webpage. If you have submitted an abstract and/or registered, you should have DEFINITELY received an email form us by now—please email contact@isbe2014.com if you have NOT yet heard from us.

Now that the initial numbers have settled, our conference organizing team, including James Higham (New York University), co-chair, and several colleagues from the NYC region (and beyond), are looking forward to working with the extended professional conference team to make this meeting a successful reality against the busy NY Cityscape and hot summer. So, from now on, if you get an ISBE2014 email, it might come from anyone on the team! As always, I am available for personal emails, too (Mark.Hauber@Hunter.CUNY.edu).

We have a great set of speakers lined up, including Nobel-laureate Martin Chalfie (Columbia University) giving the welcoming remarks, Marlene Zuk (University of Minnesota) as the Hamilton Lecturer, and a diverse group of keynote speakers talking about a diverse set of taxa. There are several symposia offered, too, both during the conference, and just the day after the final banquet. Your main registration for the conference covers you for those latter symposia too (but not vice versa). For fun, we have the whole of The City—we will focus on specific spots on specific nights; for example, our poster sessions are both planned for NYU's Greenwich Village campus, so you'll have all of THAT at your fingertips afterwards. And of course, cinema royalty, Isabella Rossellini will introduce us to her Mammas! Short films at the American Museum of Natural History!

Please keep checking our webpage: www.isbe2014.com and Twitter account: https://twitter.com/ISBE2014
see you all in NYC

Mark Hauber, for the ISBE2014 team.

2014 ISBE PHOTO COMPETITION

The deadline for the photo competition has been extended until June 30, 2014. Please send your best photos to isbephotocomp@gmail.com. The winner and runners up will be announced in the next newsletter. Prizes will include books from Oxford University Press for winning entries in each of the three categories. The winning photographs will be published on the ISBE website www.behavecol.com.

Categories

Behavior and interactions: Photos should depict aspects of behavior or behavioral interactions between organisms.
Behavioral Ecology in action: Photos should relate to conducting research in behavioral ecology and could include field work or experiments.
Student Prize: Photos should depict any aspect of behavior and behavioral ecology.

Competition rules

- The competition is open to current (2014) ISBE members only
- Applicants can only submit one photograph per category and the same photo can not be submitted for more than one category
- All photos must be accompanied by an entry form available from www.behavecol.com that describes the species name and a description of the scene.
- Entries must be digital files in TIFF, JPEG or RAW.
- Digital enhancements must be kept to a minimum and must be declared. Both the original and the enhanced image must be submitted.
- All submitted files must include the entrant's surname in the file name.
- A panel of judges appointed by the ISBE executive will judge the entries and their decision is final. Winning entries will be announced in the March ISBE newsletter and displayed on the ISBE website. Winners will be notified by email.
- It is a condition of entry that all submissions are entered under a Creative Commons License (http://creativecommons.org/licenses/by-sa/3.0/deed.en_GB), winners will be displayed on the ISBE website and may be used for noncommercial purposes.
- The ISBE does not accept any responsibility should an entry be lost, damaged or the submission be delayed. Only electronic submissions will be accepted.
- The closing date for entries is June 30, 2014.

C O N F E R E N C E C A L E N D A R

21st Annual International 'Stress and Behavior' Neuroscience and Biopsychiatry Conference
May 16-19, 2014, St Petersburg, Russia
www.stressandbehavior.com/

Genomes To/Aux Biomes Montreal 2014.
May 25-29, 2014. http://genomesbiomes.ca/

The Association of Field Ornithologists and the Wilson Ornithological Society Meeting
May 29 - June 1, 2014. Salve Regina University, USA
http://wos.salvereginablogs.com/afo-wos-meeting/

Evolution 2014
June 20-24, 2014, Raleigh, North Carolina, USA
http://evolution2014.org/

Australasian Society for the Study of Animal Behaviour (ASSAB) 2014 Conference. July 1-4, 2014 in Katoomba, NSW, Australia (less than 2 hours drive from Sydney) http://www.assab.org/

International Society of Chemical Ecology (ISCE) 30th anniversary meeting in conjunction with the **Chemical Signals in Vertebrates 13th triennial meeting**, July 8-12, 2014 at the University of Illinois Urbana-Champaign.
www.life.illinois.edu/isce-csiv

XVII IUSSI International Congress
July 13-18, 2014, Cairns, Australia, www.iussi.org/

4th Canine Science Forum (CSF) and 1st Feline Science Forum (FSF)
14-18 July, 2014 Lincoln, UK
www.csf2014.com
www.fsf2014.com

European Conference on Behavioural Biology (VII **ECBB) 2014**
July 17-20, 2014 Czech University of Life Sciences Prague. Arranged by the Czech and Slovak Ethological Society ECBB
http://ecbb2014.agrobiology.eu/

36th Annual Conference of the Cognitive Science Society
July 23-26, 2014 Quebec City, Canada
http://cognitivesciencesociety.org/conference_next.html

11th International Congress of Neuroethology
July 28 - August 2 2014, Sapporo, Japan
http://icn2014.wordpress.com/

The 2014 Joint Meetings of Ichthyologists & Herpetologists July 30 - August 3 2014 in Chattanooga, Tennessee. This conference involves the American Society of Ichthyologists & Herpetologists, the Herpetologists' League, the Society for the Study of Amphibians & Reptiles, and the American Elasmobranch Society. www.dce.k-state.edu/conf/jointmeeting/

ISBE2014
July 31 - August 5 2014, New York, USA
www.isbe2014.com/

Xth European Congress of Entomology
August 3-8, 2014, York, UK
http://www.royensoc.co.uk/meetings

The 51st Annual Conference of the Animal Behavior Society August 9 - 14, 2014 Princeton, New Jersey https://abs2014.princeton.edu

25th Congress of the International Primatological Society
August 11-16, 2014, Hanoi, Vietnam
http://ips2014.vnforest.gov.vn/

26th International Ornithological Congress
August 18-24, 2014, Tokyo, Japan
http://ioc26.jp/

28th European Congress of Arachnology
August 24-28, Torino, Italy
http://www.eca2014.it/

The Association for the Study of Animal Behaviour (ASAB) Winter meeting 2014
December 4-5 2014. Zoological Society of London, UK. Theme: Individuals in Groups
http://asab.nottingham.ac.uk/meetings/

Australasian Ornithological Conference
December 4-7, 2014, Auckland New Zealand
http://birdlife.org.au/get-involved/whats-on/aoc/

SICB 2015 Meeting Division of Animal Behavior – January 3-7, 2015 in West Palm Beach, FL – Mark your calendar for the Society for Integrative and Comparative Biology (SICB) 2015 annual meeting. The meeting will include contributed oral and poster presentations as well as several symposia, five of which are co-sponsored by SICB's Division of Animal Behavior. www.sicb.org/meetings/2015/

Behaviour2015 meeting in Cairns, Australia
August 9-14, 2015. A joint meeting of the International Ethological Conference (IEC), Australasian Society for the Study of Animal Behaviour (ASSAB), Australasian Evolution Society (AES), and Australasia, New Zealand and Africa Region of Applied Ethology. http://behaviour2015.org/

Society Of Integrative And Comparative Biology (SICB) 2016 Meeting in Portland, OR. *Call for Symposia* Please consider proposing a symposium for an upcoming SICB meeting! We are particularly interested in conceptually-themed symposia that integrate animal behavior with other areas of biology.
http://www.sicb.org/meetings/2016/callsymp

XXV International Congress of Entomology
September 25-30 2016, Orlando, Florida, USA
www.ice2016orlando.org

SPOTLIGHT ON...

Name: Bridie Allan

Education: BSc Zoology (2006) Otago University, New Zealand. MSc AppSci (2011) James Cook University, Australia. PhD candidate (2012-2015) James Cook University, Australia.

Current Address: ARC Centre of Excellence for Coral Reef Studies. School of marine and tropical biology. James Cook University, Townsville. Australia. Email: bridie.allan@my.jcu.edu.au Twitter: Bridie Allan @_seachange

Research Interests: Effects of climate change on predator-prey interactions in fish. Trans-generational acclimation. Lateralized behaviour in fish. Parental effects. Kinematic responses in fish. Behavourial changes in response to environ-mental stressors.

Selected papers:

Allan BJM, Miller GM, McCormick MI, Domenici P, Munday PL. 2014 Parental effects improve escape performance of juvenile reef fish in a high-CO2 world. Proceedings of the Royal Society B 281: 20132179.

Allan BJM, Domenici P, McCormick MI, Watson S-A, Munday PL. 2013 Elevated CO2 affects predator–prey interactions through altered performance. PloS ONE 8, e58520.

Domenici P, Allan BJM, Watson S-A, McCormick MI, Munday PL. 2014 Shifting from Right to Left: The combined effect of elevated CO2 and temperature on behavioural lateralization in a coral reef fish. PLoS ONE 8, e87969

Domenici P, Allan BJM, McCormick MI, Munday PL. 2012 Elevated carbon dioxide affects behavioural lateralization in a coral reef fish. Biology Letters 8, 78–81.

Name: Stefan Fischer

Education: MSc (2010) University of Vienna, Austria; PhD (2014) University of Bern, Switzerland

Current Address: Department of Behavioural Ecology, Institute of Ecology and Evolution, University of Bern, Switzerland. Wohlenstrasse 50a, 3032 Hinterkappelen.
E-mail: stefan.fischer@iee.unibe.ch Website: http://behav.zoology.unibe.ch/index.php?pp=57&p=108

Research Interests: Developmental / Activational Plasticity, Cooperative breeding, Social behaviour, Life-history evolution, Eutrophication, Coloniality.

Selected papers:

Fischer S. (2014): The influences of early and current environment on social and antipredator behaviour in a cooperatively breeding cichlid. PhD-Thesis, University of Bern, supervised by Prof. Dr. Barbara Taborsky

Zöttl M., Fischer S. & Taborsky M. (2013): Partial brood care compensation by female breeders in response to experimental manipulation of alloparental care. Animal Behaviour 85:1471-1478

Fischer S. & Frommen J. G. (2013): Eutrophication alters social preferences in three spined-sticklebacks (Gasterosteus aculeatus). Behavioural Ecology and Sociobiology 67:293-299

Schaedelin F. C., Fischer S. & Wagner R. H. (2012) Reduction in predator defense effort in the presence of neighbors in a colonial fish. PLoS ONE. 7(5)

Fischer S. (2010) Aggregation pattern and anti-predator defense in a monogamous cichlid. MSc-Thesis, University of Vienna supervised by PD. Dr. Richard Wagner
http://othes.univie.ac.at/8500/

ANIMAL SOCIAL NETWORK TRAINING COURSE IN ECUADOR

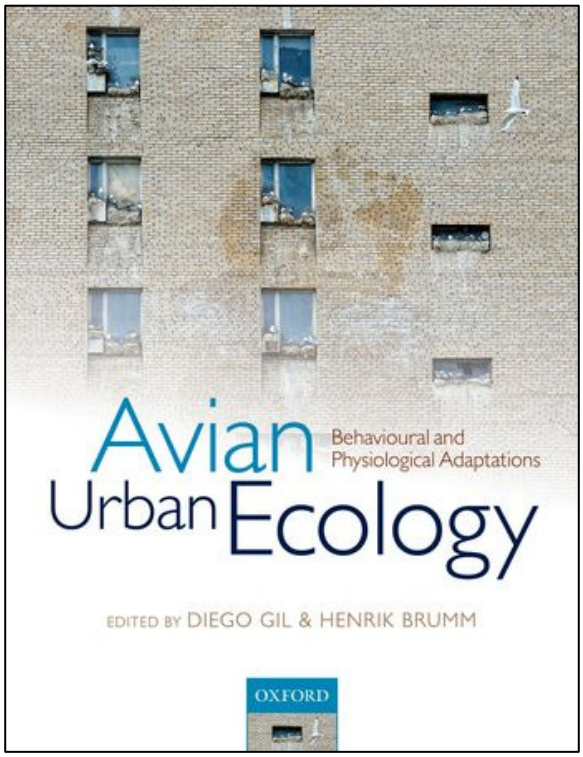
A 10-day short course on the western slope of the Andes in Ecuador. Timing: June, July or August 2014 (not to overlap with ISBE meeting). Typical day: morning nature hike, followed by a late-morning lecture on the hows and whys of social network analysis (SNA), including fundamental concepts (e.g., network centrality, degree distributions, flow vs. bond models, elements of graph theory). Afternoon sessions will emphasize hands-on practice in implementing SNA with R scripts. Datasets for analysis will be available, but participants are encouraged to bring their own data and questions of interest.

Accommodations: Simple bunkhouses, with two 2-3 person rooms, and bathroom (h/c shower, h/c sink, toilet). Three hot meals/day in a covered patio surrounded by hummingbird feeders (visited by about 20 of Ecuador's 123 species of hummingbirds). Expected cost: airfare (approx. $1,200 RT from US) plus $1,200 for tuition and all in-country travel, meals and lodging. If interested, send an email to dbmcd@uwyo.edu

David B. McDonald
www.uwyo.edu/dbmcd/mcd.html

Avian Urban Ecology: Behavioural and physiological adaptations.

Edited by Diego Gil and Henrik Brumm
Oxford University Press ISBN 978-0-19-966158-9
Paperback £37.50



The statistics are staggering. Over 43% of households in the US and over 64% in the UK provide food for birds, and there are apparently over 5 million nest boxes distributed throughout the latter. Similar data from other countries shows that the level of interest shown in urban birds by the general public has never been higher, and the same is true of scientists. In this edited volume by Gil and Brumm a diverse group of scientists synthesize the results of studies documenting a range of behavioral and physiological differences between urban birds and their rural counterparts.

The book is divided into four sections, the first of which (The Urban Environment) starts with a broad chapter by Shanahan et al. describing the challenges faced by urban birds such as habitat loss and fragmentation and the many forms of pollution, as well as an review of which species fare well or poorly in urban settings. Spoelstra and Visser then discuss the effects of artificial light upon urban birds, which can be relatively subtle such as causing them to sing earlier or later in the day or be potentially fatal through disorienting or attracting migrants. Amrhein ends the opening section with a spirited chapter on how wild bird feeding (probably) affects the ecology of urban birds, since several measures of productivity usually (but not always) increase in birds provided with food either during the breeding season or the preceding winter. This opening section laid a solid foundation for themes which reappear frequently throughout the book and I think could be easily understood by non-scientists as the chapters were all short, snappy, and free of statistics.

The second section (Behaviour and physiology) focusses upon behavior and physiology and begins with an entertaining chapter by Blumstein describing interspecific variation in anti-predator behaviors such as susceptibility to disturbance, which are likely very important to urban birds as they presumably face a daily barrage of erratic visual and aural stimuli, few of which are actually dangerous. This is followed by an outstanding chapter by Møller in which he identified the key predictors of urbanization while acknowledging that different studies have found different results, which is probably because multiple variables act in concert. Gil and Brumm then review how acoustic communication varies between birds in urban versus rural environments and show that the differences are more subtle than simply urban birds singing more loudly, with some song components being more affected than others. Halfwerk and Slabberkorn continue the acoustic theme by outlining several direct and indirect ways through which noise could negatively affect the fitness of urban birds which they illustrate using correlative data as well as results from some careful experiments varying the amount of noise that box-nesting Great Tits were exposed to. Deviche and Davies then synthesize the differences in reproductive phenology between urban and non-urban conspecifics and highlight the relatively few data on hormonal differences. This was perhaps my favorite chapter of the whole volume as it delineated how certain variables associated with urbanization exert direct effects upon birds (e.g. artificial light, food supplementation) whereas others are more likely have an indirect effect by influencing the availability of key variables such as insect abundance and diversity (e.g. planting of non-native trees and shrubs). I also appreciated the section devoted to directions for future research, and feel confident that this will stimulate a range of physiological comparisons, especially since it is becoming increasingly possible to perform a comprehensive suite of endocrinological and immunological assays with relatively small plasma volumes. The section finishes with a chapter by Martin and Boruta on the impact of urbanization on disease transmission and although there are currently relatively few data on this subject the authors outline several good reasons for expecting higher disease transmission among urban birds and also describe several profitable research areas.

The third section (Evolutionary processes) addressed evolutionary processes and began with a succinct chapter by Partecke categorizing the factors that could produce phenotypic and genetic changes between source populations of rural birds and the subset of these that immigrate into urban areas. This chapter highlighted the differences between selection events and phenotypic plasticity and dwelt upon the role of personality, and the importance of behavioral traits such as boldness. Delaney followed with a tidy

review of the effects of habitat loss and fragmentation upon genetic structure which included a brief but welcome description of the various molecular techniques involved. Genotyping of several populations of sedentary birds has revealed an unexpected degree of population structure and these studies are likely to become much more common due to the availability of high-throughput systems and an increasingly large number of cross-specific microsatellite loci. This section ends with a masterfully integrative chapter by Badyaev in which molecular and developmental data enhance what is already an enviably detailed study of morphological differences among populations of the House Finch, a desert-dwelling bird that has undergone a rapid expansion across many ecologically distinct areas and is now common throughout the United States. Urban finches are common at bird feeders where they consume seeds that are larger and harder than the soft, thin grass seeds wild birds are exposed to, and the greater bite force required has affected their beak development, which in turn has affected their song production. Badyaev and his co-workers have taken their study to the next level through a histological examination of beak development in finch embryos and also used RNA sequencing to detect differences in the genes associated with ossification between urban and rural House Finches.

The fourth section contained a diverse series of case studies, beginning with a chapter by Potvin et al. on the role of urban noise as a selective pressure in Australian Silvereyes. Although the authors have not found any morphological or genetic differences between urban and rural Silvereyes, there are clear differences in several aspects of their song, and also in their contact and alarm calls. Next, Duckworth evaluates factors affecting competition between Western and Mountain Bluebirds, both of which are secondary cavity nesting species, showing that the former aggressively displaces the latter but only when the breeding density is high. This was an interesting chapter since the conspecific Eastern Bluebird is perhaps the prime example of a bird that humans have both hindered, through habitat destruction and the introduction of alien competitors, but also helped, through the widespread provision of nest box trails. Nemeth and Zollinger then model six different scenarios of how motorway noise would negatively impact Stone Curlews and predict which noise control measures would be most effective in each. Finally, Jokimäki et al. describe the importance of wooded green areas for several breeding birds and find that the size of these areas is the most important factor affecting species richness and abundance though there are some interesting species-specific differences.

I am sure many people might wonder if it is still worth buying this book since its content overlaps with two impressive edited volumes about urban birds by Marzluff et al. (2001), and very recently, Lepczyk and Warren (2012) [reviewed in last year's newsletter, as was a relevant volume edited by Candolin and Wong (2012) evaluating how animals of multiple taxa are showing altered behavior in response to anthropogenic activity www.behavecol.com/pages/pdf/newsletters/Vol25(1).pdf.] Although I must admit that I only skimmed Marzluff (2001) and Lepcyz and Warren (2012) my impression is that these two volumes are more similar to each other than either is to Gil and Brumm (2014), as they both contain several chapters devoted to citizen science as well as within-species differences in specific life history components. Gil and Brumm distance their book from its predecessors by stating that it is aimed at understanding the mechanisms behind the differences between urban and rural birds as opposed to tabulating the differences. To be frank, I wasn't convinced by this claim as most of the chapters are primarily descriptive and repeat the admission that much of the data are correlational (Halfwork and Slabberkorn's chapter being a notable exception). To be fair to the authors, however, performing well-controlled experiments on urban birds must be rather challenging for a variety of reasons and I admire the resolve of those that try.
In sum, this is an enjoyable, reasonably-priced book that is eminently readable. Since it covers a remarkable breadth of topics it is likely to appeal to a wide audience and although it is primarily aimed at scientists studying urban birds it would also be useful to city planners with an ecological conscience as well as interesting to anyone interested in the lives of their backyard birds.

Ian Stewart
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References

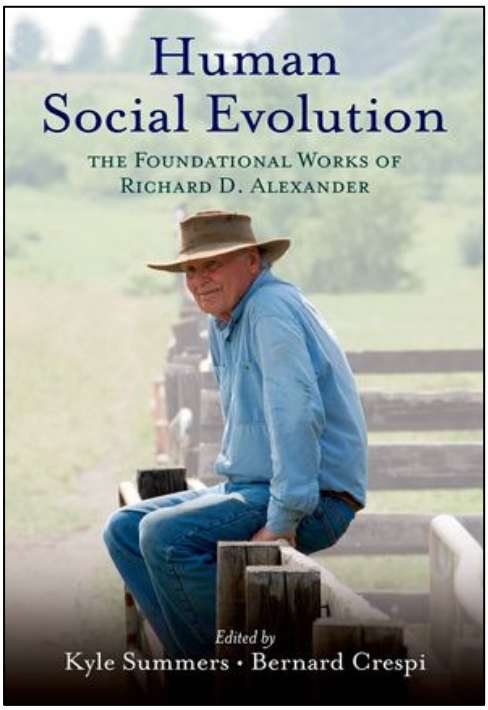
Candolin U and Wong B.B.M. (eds) 2012. Behavioural Responses to a Changing World: Mechanisms and Consequences. Oxford University Press, UK.

Marzluff J, Bowman R, Donnelly R. (eds) 2001. Avian ecology and conservation in an urbanizing world. Kluwer Academic Publishers, Massachusetts, USA.

Lepczyk CA and PS Warren (eds). 2012. Urban Bird Ecology and Conservation. University of California Press, Berkeley CA.

Human Social Evolution: The Foundational Works of Richard D. Alexander

Kyle Summers and Bernard Crespi (eds). 2013. Oxford University Press. 476 pp.
ISBN 978-0-19-979175-0 (hardback USD28.63)



Human Social Evolution is a collection of fifteen pieces by Richard Alexander, ranging from short excerpts to entire articles, and from those published in the 1970s to a new essay first appearing in this volume. Each chapter is introduced by a former student or colleague of Alexander's; in the editors' introduction, Kyle Summers and Bernard Crespi justify this approach as reflecting Alexander's investment in stimulating his students to generate their own hypotheses about human social behavior. I found these contributions to be one of the most valuable aspects of the book, providing insight into Alexander's work that could not be obtained had one simply read a collection of Alexander's most important works (which is what the book otherwise is). Many of these researchers' names were familiar to me as a behavioral ecologist, but others were not, and I enjoyed learning about those, e.g. anthropologists, further outside my field. Additionally, each chapter starts with a poem by Alexander; while his scientific prose is rightly better known than his poetry, Alexander's words are apt for the book's chapters:

promising itineraries of unfolding expansion;
they proffer guides to the triumphs of synthesis,
declare the meaning of life.

The book is split into two unequal parts: Part I, "General Foundations", consists of four chapters on Alexander's research on non-human animals, while Part II, which shares the book's title, focuses solely on humans. The material in Part I is probably more familiar to behavioral ecologists, but provides excellent context for the later work on humans, and it seems that rigorous but understandable explanations of kin selection cannot be repeated too many times (Abbot et al. 2011). In Chapter 1, both Mary Jane West-Eberhard's introduction and the excerpt from Alexander's paper on "Comparative animal behavior and systematics" show that it is not necessarily, as Paul Turke puts it in Chapter 8, "a perilous game for a cricket biologist to write about human evolution". That behavior in general, and particularly human behavior, can be studied from an adaptive perspective, thus emerges as one of the major themes of the book.

Fact box - Richard D. Alexander
Born 1929. BSc in Biology 1950 and PhD in Entomology 1956. Currently Professor Emeritus of Evolutionary Biology at the University of Michigan, USA. Favorite study animals are cicadas, katydids, crickets, naked mole-rats, horses, and, importantly, humans.

The remaining three chapters in Part I focus explicitly on social behavior, primarily in the eusocial insects. A short Chapter 2, introduced by Steven Frank, discusses cooperation in the context of reproductive levelling, in an excerpt from *The Biology of Moral Systems*. Paul Sherman then discusses in Chapter 4 an excerpt from Alexander *et al.*'s chapter in *The Biology of the Naked Mole-Rat*. Here, Alexander predicts the characteristics of a eusocial mammal before American researchers knew of the naked mole-rat's existence; this is perhaps one of the better known examples of Alexander's remarkable prescience which becomes apparent throughout the book. This is not to say that Alexander never makes mistakes, which David Queller points out in his introduction to Chapter 5, on parental manipulation of offspring; Queller also hints at the importance of mathematical models to supplement Alexander's (well-developed) verbal hypotheses.

The eleven chapters of Part II, "Human Social Evolution", form the bulk of the book's material. Mark Flinn introduces an excerpt from a book chapter on evolution and culture in Chapter 5, which clearly lays out Alexander's adaptationist approach, and provides excellent coverage of potential misconceptions about evolution and the levels of analysis. I was initially dismayed by the brevity of Chapter 6, on intergroup competition and within-group cooperation, given that, as Bobbi Low mentions in her introduction, this is an important selective pressure in human evolution (Bowles 2009). However, it turned out that this topic permeated many other chapters – the editors' task of categorizing Alexander's works must have been (enjoyably) difficult, given how broad in scope each is – and indeed is a key theme throughout the book, along with indirect reciprocity, which is explicitly dealt with in Chapter 9.

Chapters 7 and 8 are concerned with two topics relating to parental care and the "uniquely unique" aspects of humans. First, Beverly Strassmann assesses the evidence for Alexander and Noonan's hypothesis that concealed ovulation in humans facilitated greater paternal care. This is followed by Paul Turke's thought-provoking discussion of Alexander's hypothesis for altriciality in human babies: namely, that it allows a "maggot-like" juvenile to become a "better adult". Chapter 10, a lengthy book chapter on "Evolution of the human psyche" introduced by Robin Dunbar, may have been better placed immediately after Chapter 8, as it continues on the importance of humans' advanced social intelligence. Chapter 9, which is entitled "Indirect reciprocity" and introduced by Karl Sigmund, would then follow on from this, as Alexander stresses the importance of human intelligence in making sense of the complexity inherent in reciprocal interactions.

Indirect reciprocity, along with intergroup competition, is a key theme in the next two chapters of the book. In Chapter 11, Alexander hypothesizes that morality evolved to maximize individuals' reproductive success via within-group reciprocal cooperation in the context of intergroup competition; in his excellent introduction, David Lahti clarifies why it makes sense to consider morality from an evolutionary standpoint. We go on to learn in Chapter 12, introduced by Stan Braude, that these factors were also likely selection pressures for the evolution of humor.

Laura Betzig's introduction and Alexander's excerpt in Chapter 13 were both fascinating but short, and possibly mis-named and mis-placed. This chapter discussed eusociality in humans and other animals, without much focus on the "Ecological constraints" in the title, and followed directly from some of the topics featured earlier in the book, especially in Part I. I would have liked to see more emphasis on this important topic, especially given recent interest in and misconceptions about human sociality (Wilson 2012).

I was especially interested to read Chapter 14, a previously unpublished essay accompanied by a short introduction by William Irons. In this chapter, which may have been better placed to follow the chapter on morality, Alexander attempts to unify previous explanations of religion by hypothesizing a kin-selected concept of God, upon which the editors elaborate in an article in press (Crespi and Summers 2014), and in which he calls for "people everywhere… to work to understand themselves sufficiently better from knowledge of evolution, so as to influence the sociality of global humanity in a positive way". While this would have made a meaningful ending to the book, it is succeeded by an intriguing final chapter, introduced by the editors, in which Alexander proposes that the arts evolved via social selection in humans.

I would recommend the book to three audiences. First, behavioral ecologists wanting to learn more about human behavior would find this a good introduction (it would have been helpful to have the page numbers of Alexander's excerpts to facilitate finding them within the originals). Second, anthropologists and sociologists unfamiliar with the biological or adaptationist approach should find themselves convinced by Alexander's explanations. Third, the book would be a useful text for advanced students, both undergraduate and graduate, in an animal behavior course, serving a comparable function to, say, *The Triumph of Sociobiology* (Alcock 2001). One misgiving, however, is the frequency of errors throughout the book, including missing citations in the bibliographies, punctuation errors, and incorrect order of chapters in the introduction, which does not make it a good model for students.

I found *Human Social Evolution* both informative and enjoyable, and it has two aspects that a standard edited book on the topic would lack. The personal touch from Alexander's colleagues stood out: while Alexander's reputation as a biologist precedes him, I enjoyed gaining a fuller picture of a man who Summers and Crespi introduce as "a farmer and rancher, horse trainer, poet, story teller, folk singer, musician, author, and a philosopher". In addition, the book provided excellent perspective on the history of (human) behavioral ecology, and I was struck by how, in some ways, little has changed in the period of Alexander's work. On the negative side, we are still battling some of the same mis-conceptions, both from outside the field (e.g. creationism) and closer to home (e.g. levels of analysis and selection). However, on the positive side, the book makes apparent how forward-thinking Alexander was, in that his visionary hypotheses are still being tested today. This book is a fascinating introduction to the evolution of human behavior, in which, again using Alexander's own words, his collected works

help us to know what we
hadn't even known we wanted to know.

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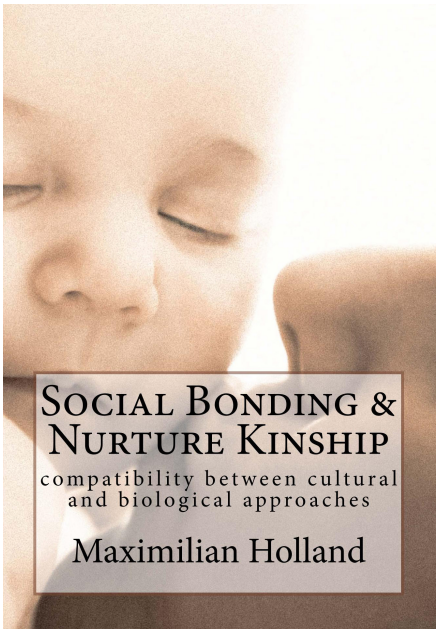
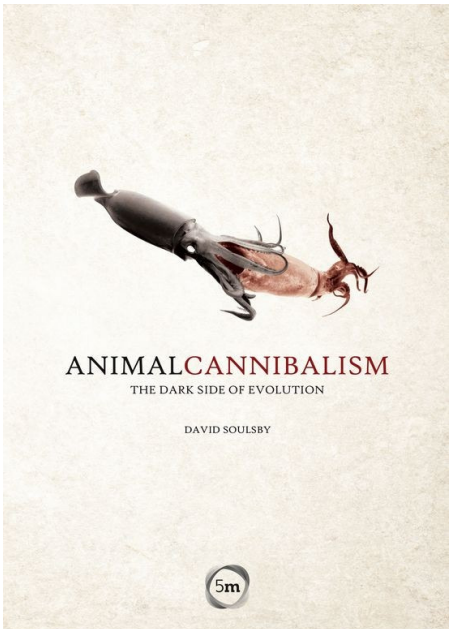
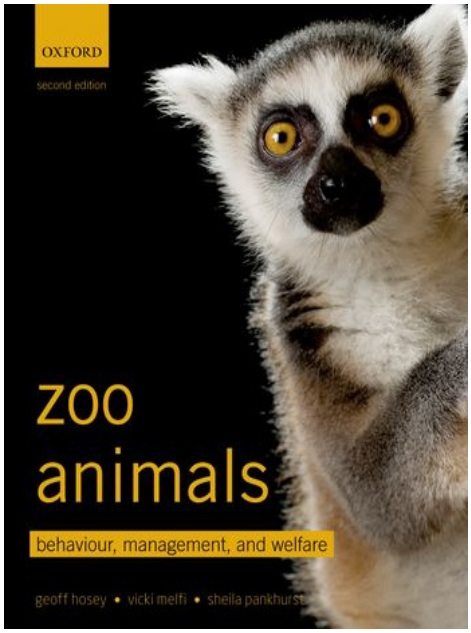
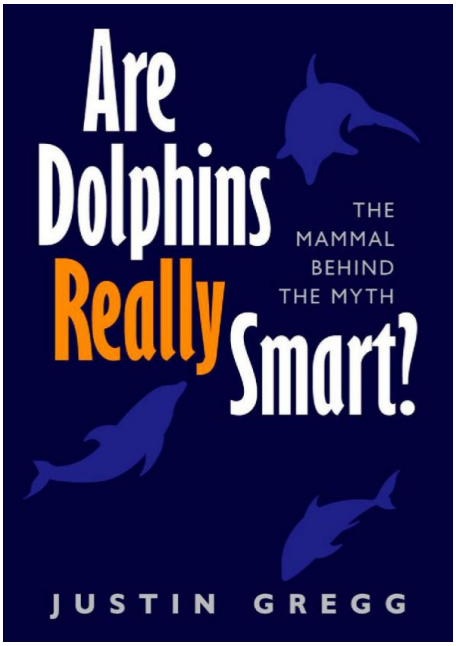
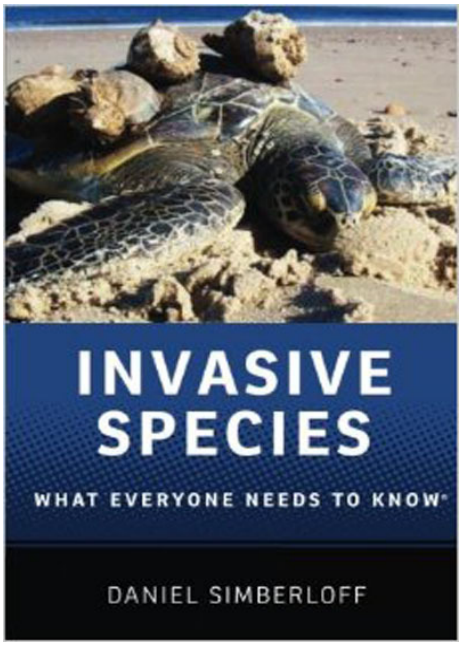
BOOKS FOR REVIEW











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