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ISBE Newsletter

International Society for Behavioral Ecology
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Supplement to *Behavioral Ecology*

CONTENT

OBITUARY

John Hurrell Crook BSc, PhD, DSc (27 November 1930 to 15 July 2011)

John Crook, who has died at the age of 80, was a pioneer in the 1960s in the fields known then as social ethology and socio-ecology, disciplines that flourished later as behavioral ecology.

John Crook was educated at Oakmount School, Southampton, Sherborne School, Dorset and University College, Southampton, where he studied zoology. His independent undergraduate study of the gulls of Southampton Water led to his first publication in 1953, and this work helped him to gain a PhD place at Jesus College, Cambridge, where he was supervised by William Thorpe and Robert Hinde. Although his doctorate work was intended to be a field study – financed by the Colonial Office – of a single species, the weaver bird Quelea, a serious pest of African crops, he managed to extend the project to a comparative study of the weaver birds (Ploceinae) as a whole – a group of some 50 species – working at first in West Africa and then in India, the Seychelles and East Africa. In India he worked with the great Indian ornithologist Salim Ali, and together they relocated a weaver species lost to science since the nineteenth century.

Photo credit: Simon Child

John Crook's field study of the weaver birds (1962, 1964) pioneered the use of comparative methods in understanding how natural selection shapes display patterns and social organization as responses to environmental selection pressures. Before this the comparative method in behavior had been largely employed as a tool for the analysis of phylogeny and homology, with little application to understanding the adaptive nature of behavioral variation between species. His thinking about comparison and adaptation was shaped by his own gull study – which showed him how behavior is shaped by the interaction of environmental factors – and by conversations with two colleagues. In Cambridge, Peter Marler discussed with him how the variation in singing positions of pipits and skylarks might be understood in terms of selection to be heard and seen by conspecifics; and he noted that Desmond Morris' comparative work in Oxford on finches was hampered from an adaptive analysis by being in the laboratory rather than the field. The correlations between behavior, diet and habitat that John Crook's work revealed became apparent during field work, rather than being set up *a priori*, and much later he could still recall the excitement of seeing, in a table he had drawn up, the ecology/behavior relationships falling into place.

He extended his comparative analysis of the weaver birds to the social organization of the class of birds as a whole (1965), and his work was a major stimulus to David Lack's book length treatment of the same problem (*Ecological Adaptations for Breeding in Birds*, 1968). In that book Lack writes: "Crook's comparative method is that used throughout this book . . . and I find myself in virtually complete agreement with what he established earlier . . ." (p. 4).

Following his PhD John Crook took up a lectureship in the Psychology Department at Bristol University, later being promoted to a Readership in Ethology. He extended his weaver bird work with laboratory studies of the hormonal control of behavior, and simultaneously started to work on primates. As with his earlier avian work he combined field studies with a broad comparative approach, seeking to understand the adaptive nature of primate social systems. His field research in Ethiopia on the Gelada Baboon and in Morocco on the Barbary Macaque in the mid 1960s were subsequently developed by Robin Dunbar and John Deag, respectively.

His analysis of primate social systems led to the 1966 paper in *Nature* with Steve Gartlan, *Evolution of Primate Societies*. This seminal paper established the general principles of primate socio-ecology and – together with his avian work – motivated decades of research on the behavior and ecology of primates, ungulates, carnivores and birds. In many important ways it laid the foundations for modern behavioral ecology. During the later 1960s and 1970s, John Crook's research group in Bristol became one of the Meccas for research on behavioral ecology, attracting young postdocs like John Goss-Custard, Martin Daly and Richard Wrangham, as well as a host of PhD students. He was a founder member of the Primate Society of Great Britain and was awarded its Osman Hill Medal in 1992 at a joint meeting of The Association for the Study of Animal Behaviour (ASAB) and the PSGB.

John Crook's interest in the evolution of social systems later centered on our own species, stimulated by his year as a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University (1968-69), where he was introduced to the techniques of humanistic psychotherapy. This new interest led to his book, *The Evolution of Human Consciousness* (1980), and in 1977 he was one of the first people to undertake behavioral ecology studies of humans, initiating a study of a polyandrous community in Ladakh, in the Himalayas (1988), a mating system he interpreted in terms of the harshness of the environment. Collaborative projects followed on the social life, monasteries and agriculture of this remote area (*Himalayan Buddhist Villages* with Henry Osmaston, 1994; *The Yogins of Ladakh*, with James Low, 1997). This work combined John Crook's fascination with the evolution of social structure with a growing interest in Buddhism, which he first sought out during National Service in Hong Kong – before his doctorate studies – in the form of Chinese Zen (Chan) Buddhism (*Hilltops of the Hong Kong Moon*, 1997). This interest in the spiritual began in his childhood when, at the age of fourteen, he had an experience of "ineffable beauty" in the tranquility of the New Forest. Seeking to reconcile such experiences with his growing scientific world view led him at length to Buddhism.

John Crook took early retirement in 1987 and began practicing Zen Buddhism, becoming a Chan Buddhist Master in 1993. He formed the Western Chan Fellowship and developed a programme of retreats adapted to Western Zen practitioners, his Buddhist practices influenced by his exposure to psychotherapy at Stanford. On his return from Stanford he had set up the Bristol Encounter Centre and taught these techniques widely in the UK, and particularly at his retreat centre in mid Wales. His last book was *World Crisis and Buddhist Humanism* (2009), in which he argued for close parallels between a Buddhist and a rational scientific approach to global problems. He was a prolific writer and a lover of remote places.

John Crook died suddenly at his home in Somerset shortly after a gathering of his Bristol research group, to celebrate his 80th birthday. His old students and colleagues, who had come from around the world to attend this event, held him in great affection and respect. He was a formative influence on all their lives. He is survived by his sister Elizabeth; Eirene (married in 1958, divorced in 1973); their children Stamati and Tanya and six grandchildren; and by Hazel Russell, his recent partner.

John Lazarus, Newcastle University, UK
Robin Dunbar, Oxford University, UK

This obituary first appeared in the Summer 2011 issue of the Newsletter of the Association for the Study of Animal Behaviour, and reappears here with some minor changes.

FROM THE NEWSLETTER EDITOR

Going sustainable?

Thanks to all the excellent contributions in this edition of the ISBE newsletter. Every time I send the newsletter off to print and then onto the US for shipping I ask myself if the newsletter could not be delivered to members in a more sustainable manner.

The last time I asked that question, a few years ago, most of the respondents preferred to receive the newsletter in hard copy. Back then, email communication with members was also quite difficult, as I only had emails for less than 70% of members and many of the emails I sent to members bounced back for various reasons.

As I emailed members for this upcoming newsletter, I noticed two things: 1) more than 80% of members provided an email address to OUP (meaning that I can contact them electronically) and 2) fewer emails bounced back (meaning that my emails might even arrive.

It seems that the logistics for an electronically based newsletter are better than ever and likely to improve in future. If you have any opinion on whether or not the ISBE newsletter should go electronic, please email me (marie.herberstein@mq.edu.au)

Finally, I am as always grateful to Richard Peters who manages the ISBE website

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Macquarie University

OTHER SOCIETY NEWS

New Address

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New Chief Editors for Behavioral Ecology & Sociobiology

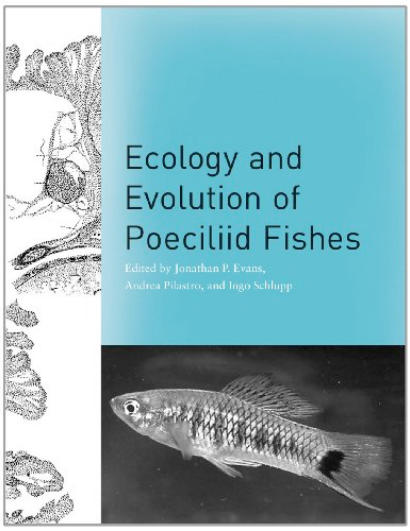
After 17 years of dedicated and excellent service, Tatiana Czeschlik (Heidelberg, Germany) retired as Chief Editor of *Behavioral Ecology and Sociobiology*, the first journal devoted exclusively to the publication of original research in these now-preeminent disciplines in behavioral biology. Tatiana is succeeded by Theo C. M. Bakker (University of Bonn, Germany) and James F. A. Traniello (Boston University, USA). Theo Bakker specializes on the behavioral ecology of fishes and will handle manuscripts dealing with vertebrates, while James Traniello, who studies the behavioral ecology of social insects, will be responsible for submissions using invertebrate models. The Editors-in-Chief invite the submission of manuscripts which present results of significant research on core topics in the disciplines, and encourage innovative articles integrating cutting-edge conceptual and empirical approaches in genomics and neuroecology to provide novel insights into behavioral adaptation

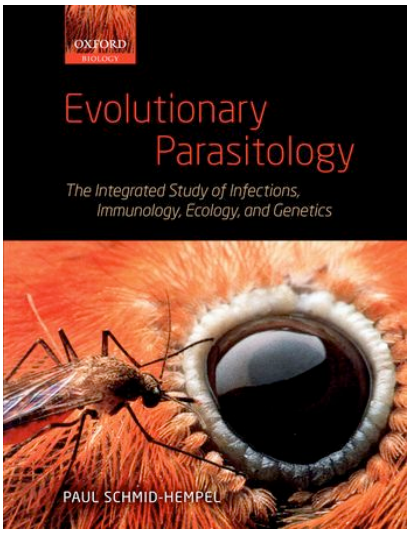
TEACHING TOOLS

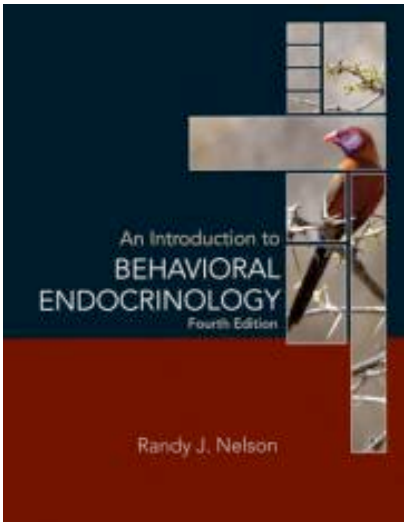
Online Research in Biology Project

The Cornell Lab of Ornithology has recently launched a website featuring technology-enhanced investigations for use in undergraduate biology, ecology, and behavior courses. Funded by NSF, the Online Research in Biology project provides a way to engage undergraduates in course-based research experiences using online data and visualization tools. Lessons currently featured on the website include Species Concepts in Birds, which uses sounds and videos to explore behavioral reproductive isolation, and Ornamentation in Birds, which uses Macaulay Library videos and Birds of North America Online species accounts to investigate sexual selection and sexual dimorphism. We are looking for faculty to pilot these investigations with undergraduate courses in Spring 2012, or to provide feedback as we develop new lessons using sound and video resources from the Macaulay Library, Raven sound software, and citizen science databases such as NestWatch. For more information or to download instructor guides and student sheets, please visit our website (URL: http://birds.cornell.edu/orb) or contact Colleen McLinn (Email: mclinn@cornell.edu). Join our listserv to be notified about teaching professional development opportunities at upcoming behavior meetings, and opportunities for teaching-related grants and fellowships.

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







If you are interested in receiving AND reviewing these books, please email me (marie.herberstein@mq.edu.au). The due date for the review is February 2012.

I S B E P H O T O C O M P E T I T I O N

Enter your best photos to the ISBE photo competition

The 2012 photographic competition is now open. Please send your photos to (isbephotocomp@gmail.com) by February 1st 2012. The winner and runners up will be announced in the 2012 Spring ISBE newsletter.

Prizes will include book prizes from Oxford University Press for winning entries for 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: this category is only open to current (2011) student members of ISBE. Photos should depict any aspect of behavior and behavioral ecology.

Competition rules

- The competition is open to current (2011) 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 images saved in TIFF, JPEG or RAW file.
- 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), will be displayed on the ISBE website and may be used for non-commercial 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 1st of February 2012.

Spider Behaviour: Flexibility & Versatility

Marie E. Herberstein (Ed.). CAmbridge University Press. 391pp.
ISBN 978-0-521-76529-9 (hardback), 978-0-521-74927-5 (softcover)

There is something about spiders that stirs up emotions in human beings. For most people, these emotions tend to range from revulsion to outright arachnophobia. For me they have always seemed fascinating, and over the years I have collected just enough knowledge about the positive aspects that I can convert one or two students with my annual arachnid lecture in the Invertebrate Zoology course I teach. Consequently I jumped at the opportunity to review this book, and it did not disappoint.

The objective of the book is to provide a concise, but not necessarily exhaustive, review of current knowledge of spider behavior, specifically focusing on the potential of spiders as excellent models for behavioral research. The subtitle of the book, "*Flexibility and Versatility*" captures this intent nicely, and several authors emphasize that many spiders employ a remarkable range of behaviors in response to a given stimulus depending on the context. Concepts are illustrated by case studies and examples, which make for easy but informative reading. Each chapter also ends with a "Conclusions and Outlook" section, where the authors summarize the chapter and the future potential for behavioral research in the area. An interesting twist (at least in the softcover version I reviewed) was that black and white illustrations were dispersed throughout the text, but the same illustrations were also presented on color plates grouped in the middle of the book. Presumably this arrangement was to keep production costs down. While I liked the fact that I did not have to search for figures, I think I would have preferred a different set of illustrations for the color plates rather than just a repetition.

Each of the 10 chapters covers a particular aspect of spider behavior, except Chapter 1, which gives a brief introduction to spider biology and phylogeny. Each chapter is written by one or several authorities. The format works well, except that there is some overlap between chapters. Chapter 2 deals with foraging strategies, Chapter 3 with spider webs, and Chapter 4 with anti-predator defense. Chapters 5 and 6 are about communication, with the latter focusing on deceptive signals. This is the area of expertise of the editor of the book, and I have to admit that I found that chapter particularly fascinating. Chapter 7 covered mating behavior and reproduction and Chapter 8 social and subsocial spiders, which is another extremely interesting topic. Table 8.1 lists all known species that exhibit social or subsocial behavior, and the discussion of the phylogeny of this group was particularly valuable for an understanding of these organisms. Chapter 9 discussed learning and cognition. Perhaps this chapter suffered somewhat from being relegated to the end of the book, as many of the examples had already been used in earlier chapters. Nevertheless, I found this chapter very informative as well. The final chapter on kleptoparasites was again an extremely interesting chapter, and it was very well chosen as a suitable end to the book.

Technically, the book is well written and very well edited. The final chapter had a few minor typographical errors (in both cases a word entered twice - perhaps the proof readers were getting tired). Factually, the book got off to a rough start for me when on page 7 the genus *Dolomedes* (fishing spiders) was assigned to the Lycosidae (wolf spiders - they are nursery web spiders, Pisauridae). Who knows how that happened, but as far as I could tell that was the only error.

If I seem enthusiastic about this book it may be because I have been a bit of an arachnophile since childhood, but I truly think that the information in this book can be useful in many ways. It provides a great reference book for examples of intriguing spider behavior that teachers interested in dispelling the myths about spiders could use, for example. It also summarizes the literature nicely for researchers, and provides ideas for potentially fruitful questions to pursue. I have thought for a long time that spiders are under-represented in ecological research, and this book demonstrates that the same holds for other disciplines as well. I thoroughly enjoyed reading the book, and recommend it for anyone wishing to gain a good understanding of spiders in general, and their behaviors in particular. The suggested retail price from Cambridge is $120 and $55 for the hard- and soft-cover editions, respectively. It is also available as Adobe or Mobipocket eBooks for slightly less ($44.00).

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Many thanks to Ken Otter who elicited and handled this book review.

An Introduction to Animal Behavior: An Integrative Approach

Michael J. Ryan and Walter Wilczynski, Cold Spring Harbor Laboratory Press, 2011. 258 pp.

ISBN 978-0-879698-58-4 (paperback)

"Imagine an animal that does not behave. Then try to imagine being interested in an animal that does not behave."

From the first two sentences, Ryan and Wilczynski capture the essence of what draws so many of us to the study of animal behavior, and then proceed to demonstrate how this field requires investigations from both the proximate and ultimate levels. After all, selection acts not on the physical formation of a sensory system, but rather the behaviors that are expressed as the sensory system processes signals from the environment. And yet, behaviors are heritable traits dependent upon physiology and gene expression, highlighting the importance of also studying the mechanisms responsible for animal behavior. This integration of studying both ultimate function and proximate mechanisms when researching animal behavior is the main thrust of the book, permeating the discussion of topics that include foraging, movement, and a suite of social behaviors.

In chapter 1, the authors use a series of examples to highlight the importance of approaching animal behavior from an integrative perspective. Using Tinbergen's four questions as a framework, they draw from vertebrate and invertebrate studies to demonstrate the utility of examining animal behavior using multiple levels of analysis. With a study on mate choice in swordtails, they show how phylogeny informs questions of function. Later, they use studies on echolocation in bats and homing abilities in pigeons to demonstrate how function informs questions of mechanisms. This presentation of several thoroughly described studies is an effective, often-used instructional tool throughout the book.

The second chapter focuses on the function and evolution of animal behaviors. Here, the authors do a great job of reviewing different types of natural selection (e.g., sexual and kin), as well as giving a brief overview of 'altruism' and selfish genes by using concrete examples – and color figures – to convey their point. They also more closely explore the role phylogeny plays in the study of animal behavior, including a clear description of why it is important to consider phylogeny when contrasting differences between species.

In chapter 3, the authors explore the proximate components of animal behavior more closely, specifically the role of mechanisms and developmental experiences. While the authors give detailed, and occasionally dense, descriptions and examples of neural, hormonal, genetic, and cellular control of behaviors, the authors excel at conveying the idea that each species has its own unique *Umwelt*, or subjective perception of the world. This idea is critical when considering animal behavior, and the authors expand upon this concept very clearly. For example, the authors discuss inter-species differences in sensory detection limits (e.g., frequency ranges of auditory perception differ between elephants, dogs, and whales), sensory systems (e.g., humans do not possess the electroreception sense of teleosts), and neural processing of sensory information (e.g., differences in perception of auditory signals between humans and echolocating bats). The authors also devote attention to how experiences earlier in life can affect current behaviors, reviewing modulation, plasticity, and learning.

The authors discuss foraging in chapter 4, breaking the process down into how animals find, capture, and choose different prey items. The authors sample from a variety of taxa and sensory systems to demonstrate the multitude of foraging behaviors that animals exhibit. The authors conclude the chapter with a discussion of optimal foraging theory. Throughout, the authors describe a series of mechanisms (e.g., neural processing of visual and auditory signals, infrared sensing by pit vipers), and place these behaviors within different phylogenetic (e.g., relationships among aposematic newts) and functional (e.g., parasite-induced changes in behaviors) contexts.

Chapter 5 focuses on movement, and specifically migration and orientation. Within a functional framework, the authors discuss why and how the evolution of migration occurred, and some of the potential benefits to migrating individuals. The authors also approach the topic from a proximate perspective, describing examples of "maps" such as location-specific magnetic fields used by sea turtles, and "compasses" such as stars and polarized light used by birds and insects. The authors also discuss other classic migratory phenomena, including olfaction-based migration of spawning salmon and density-dependent migratory behaviors of locusts.

Chapter 6 is the first of four chapters to explore social behavior. Here, the authors provide mechanistic explanations for sex-based differences in behavior, including genetic, hormonal, and temperature-based factors. They also compare the activational and organizational roles of hormones and the subsequent effects on behaviors. There is also a general overview of seasonality and a particularly intriguing discussion of the issues involved in animal communication, including signal propagation (and reception) in different environments and effective communication tactics to maximize signal efficiency over space and (the often overlooked variable) time.

The last three chapters cover specific sections of social behavior, namely mate choice, cooperation, and aggression. By selecting several studies and describing them in detail, the authors examine the topics of species recognition, song learning, iterative mating behaviors between socially paired mates, ornamentation, sexual selection principles, sensory exploitation, the evolution of mating systems, parental behavior, cooperation between related and unrelated individuals, eusociality, territoriality, mate guarding, social hierarchies, and infanticide, among others. Throughout these chapters, the authors continue to approach these behaviors from both ultimate and proximate perspectives. In particular, the neural and hormonal underpinnings for many of these behaviors are explored most thoroughly.

The authors were correct when they stated that this book is tailored for advanced undergraduates, graduate students, or faculty members who would like a detailed but condensed overview of some of the most commonly studied aspects of animal behavior. In the interests of maintaining a book of reasonable size, not every topic is covered in detail (e.g., plant-animal interactions and animal cognition do not receive much attention). Additionally, although the authors do consider both proximate and ultimate questions, the balance of the book is shifted toward mechanisms. However, the book is easy to read overall, and full of useful, colorful figures. The cited literature is a great mix of classic manuscripts and the most recent papers, and most experiments are covered in detail, creating an almost case-study approach to describing animal behavior. Thus, this book would be most helpful to students who have already become familiar with animal behavior in a previous course or program of study, due to the brevity of background material for some topics and the abundance of examples regarding proximate mechanisms. However, for those faculty members teaching a lower-level course in animal behavior, this book provides an excellent complement to John Alcock's classic text, either for the students themselves or for the instructor alone. Additionally, this book would make an excellent primary reference for graduate student seminars. For those students and faculty members who are interested in learning about or reviewing animal behavior at all levels of analysis, this book provides both a great resource and a very manageable, enjoyable read.

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Selected Papers:

Booksmythe I, Jennions MD, Backwell PRY. 2011. Male fiddler crabs prefer conspecific females during simultaneous, but not sequential, mate choice. *Animal Behaviour* 81:775-778

Booksmythe I, Kokko H, Jennions MD. 2010. Sexual selection: the weevils of inbreeding. *Current Biology* 20:R672-R673

Booksmythe I, Jennions MD, Backwell PRY. 2010. Interspecific assistance: fiddler crabs help heterospecific neighbours in territory defence. *Biology Letters* 6:748-750

Booksmythe I, Jennions MD, Backwell PRY. 2010. Investigating the 'dear enemy' phenomenon in the territory defence of the fiddler crab, *Uca mjoebergi*. *Animal Behaviour* 79:419-423

Booksmythe I, Detto T, Backwell PRY. 2008. Female fiddler crabs settle for less: the travel costs of mate choice. *Animal Behaviour* 76:1775-1781

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Research Interests: Habitat use, reintroduction biology & ecology of ground dwelling sciurids; novel methods for monitoring of soil biological activity

Selected Papers:

Gedeon C, Markó G, Németh I, Altbäcker V. 2010. Nest material selection affects nest insulation quality in the European ground squirrel (*Spermophilus citellus*). *Journal of Mammalogy* 91:636-641

Gedeon C, Váczi O, Koósz B, Altbäcker V. 2011. Morning release into artificial burrows with retention caps facilitates success of European ground squirrel (*Spermophilus citellus*) translocations. *European Journal of Wildlife Research* 57: 1101-1105

Gedeon C, Boross G, Németh A, Altbäcker V. in press. Release site manipulation to favour European ground squirrel (*Spermophilus citellus*) translocations. Wildlife Biology

Gedeon C, Drickamer LC, Meador A S. in press. Importance of Gunnison's prairie dog (*Cynomys gunnisoni*) burrow entrance mounds for vigilance and soil mixing. The Southwestern Naturalist

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Research Interests: Animal personality, sexual selection, foraging strategies, social information use

Selected Papers:

David M, Giraldeau L-A. in press. Zebra finches in poor condition produce more and consume more food in a producer-scrounger game. *Behavioral Ecology*

David M, Auclair Y, Dechaume-Moncharmont F-X, Cézilly F. in press. Handling stress does not reflect personality in female zebra finches (*Taeniopygia guttata*). *Journal of Comparative Psychology*

David M, Cézilly F, Giraldeau L-A. 2011. Personality affects zebra finch feeding success in a producer-scrounger game. *Animal Behaviour* 82: 61-67

David M, Cézilly F. 2011. Personality can confound common measures of mate-choice. *PLoS ONE* 6(9): e24778

David M, Auclair Y, Cézilly F. 2011. Personality predicts social dominance in female zebra finches (*Taeniopygia guttata*), in a feeding context. Animal Behaviour 81: 219-224

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Research Interests: The evolutionary implications of polyandry and sperm competition in mice

Selected Papers:

Firman, R. C. 2011. Polyandrous females benefit by producing sons that achieve high reproductive success in a competitive environment. Proceedings of the Royal Society of London B (doi:10.1098/rspb.2010.2791)

Firman, R. C. and Simmons, L. W. 2011. Experimental evolution of sperm competitiveness in a mammal. BMC Evolutionary Biology 11:19.

Firman, R.C., Cheam, L. Y., and Simmons, L. W. 2011. Sperm competition does not influence sperm hook morphology in selection lines of house mice. Journal of Evolutionary Biology 24: 856 – 862.

Firman, R. C. and Simmons, L. W. 2010. Experimental evolution of sperm quality via postcopulatory sexual selection in house mice. Evolution 64: 1245 – 1256.

Firman, R. C. and Simmons, L. W. 2010. Sperm midpiece length predicts sperm swimming velocity in house mice. Biology Letters 6: 513 – 516.

BEHAVIOR 2011: A STUDENT'S PERSPECTIVE

Joint Meeting of the Animal Behavior Society and the International Council of Ethologists, Bloomington, Indiana, USA

From July 25th to July 30th, the Behavior 2011 conference gathered behavioral scientists from around the world to Bloomington, Indiana. This conference marked the first joint meeting of the Animal Behavior Society and the International Council of Ethologists, and truly reflected the global membership, broad scope, and scientific excellence of these two societies.

The meeting was held at Indiana University (IU) and hosted by the IU Center for the Integrative Study of Animal Behavior. While Indiana is often thought of as a landscape dominated by intensive agriculture, the IU campus featured lush trees and rolling hills. After visiting IU, it comes as no surprise that the Arbor Day Foundation named the campus *Tree Campus USA* in 2008. Grand limestone buildings, nestled amongst towering maple, cherry, red oak and flowering dogwood trees, highlighted the picturesque campus. The surrounding town of Bloomington also proved a pleasant setting for socializing and relaxation outside the academic program. Being a college town largely devoid of undergraduates due to the North American summer vacation, the Behavior 2011 attendees had free run of its many fine pubs and restaurants.

Regina Macedo opened the conference with a plenary lecture highlighting her research on the proximate and ultimate factors maintaining sociality, and introducing the audience to some charismatic Brazilian birds. The eight plenary speakers over the course of the conference represented a truly diverse set of research fields and backgrounds, and the IU auditorium was a wonderful forum for these speakers. Study systems featured were birds, rodents, invertebrates, and even robots, in Ádám Miklósi's closing prospectus on the near and distant futures of behavioral research. Highlights from the plenary lectures included Nick Davies' engaging lecture on brood-parasitic cuckoo-host interactions, which showcased his research on the co-evolution of host and parasite reproductive strategies. Nick Davies demonstrated that a deep understanding of natural history remains an essential component of behavioral ecology research. Hopi Hoekstra presented a series of studies and experiments exploring tunnel-digging behavior in mice. Her research progressed logically and elegantly, starting with field descriptions of the different tunnels made by different mice species across habitats, and culminating with species hybridization experiments where her research team identified the genes likely responsible for different functional components of tunneling behavior. This lecture represented an impressive example of the scientific process in action, with research building on itself to thoroughly explore and answer a question of interest. Also of note was Russell Gray's lecture on tool use in New Caledonian crows. Russell captivated the audience, showing entertaining videos and providing an insightful perspective on how such complex behaviors can arise through incremental changes in cognition. All of the plenaries were enjoyable and entertaining, well-attended, and stimulated conversation throughout the week.

Five concurrent sessions featured interesting and diverse talks from across the breadth of behavioral research. Over the course of the conference, almost 400 talks were presented (Tables 1 and 2). Symposia ranged across topics related to communication and signaling, the effect of sensory pollution, perinatal effects on behavior, geographic variation in behavior, female competition, sociality, and how thought processes reflect behavioral processes. Contributed talks covered the gamut of behavioral research, covering topics from sexual selection, mating systems, genetics and evolution, allee effects, predation and foraging, ecological effects, cognition and learning, applied animal behavior, social behavior, and mechanisms of behavior. Some of the trends in the symposia and contributed talks were the use of social networks to contribute to a variety of research questions, a focus on genomic tools, and questions surrounding social complexity, animal personality, and the development and implications of lateralization. Talks were consistently stimulating and of high quality.

The elegant lobby of the IU auditorium was the site of the opening social, with excellent food, and featuring local beers and wines for sale. The poster sessions followed a similar format in terms of refreshments, and featured an impressive 450 posters over two days (Tables 1 and 2). The topics covered by the posters complemented the overall themes of the conference, with posters featuring research on communication, sexual selection, mating systems, genetics and evolution, predation and foraging, ecological effects, community ecology, cognition and learning, applied animal behavior, social behavior, parental care, and mechanisms of behavior. There were also posters covering topics such as education and conservation. The poster sessions were held in two large rooms in the IU conference center, and with so many posters, the challenge was attempting to see everything of interest before time ran out!

Table 1. Summary of talks and posters by topic.

Topic	Talks	Posters
Parental care and parent-offspring interactions	27	31
Sexual selection and mating systems	66	76
Social behavior	68	80
Personality	11	16
Applied animal behavior	21	23
Communication and signaling	67	69
Cognition	55	48
Predator-prey interactions and foraging	29	51
Other	20	56

One downside of such a large campus was that the conference was spread out across the vast IU campus. Concurrent sessions were split between four different buildings, with a 10-minute walk between the furthest of the

buildings. Moving between sessions proved to be challenging, and often required missing a talk for travel time. Furthermore, there was a dearth of occasions where all attendees were brought together into a central place, which made networking and making connections with other researchers more difficult. Coffee breaks were spread between the two furthest buildings, and lunch was not provided, which meant that attendees typically ventured across the campus and into the Bloomington downtown in small groups to fetch their midday meals. Although poster sessions provided the best opportunities for networking, having two poster session rooms did make it more difficult to make contacts.

Table 2. Summary of talks and posters by study system.

Study system	Talks	Posters
Mammals	102	109
Birds	107	122
Fish	47	61
Invertebrates	60	93
Reptiles and amphibians	20	35
Theoretical or multi-taxa	27	30

On the whole, however, it is a positive sign when our only complaint about a conference is that there are so many interesting talks, so many interesting posters, and so many interesting people that it was impossible to hear, see, and meet them all. The conference was an impressive showcase of behavioral research, and highly recommended to anyone interested in behavior at any level. The joint meeting of these two storied societies presented an outstanding opportunity for behavioral biologists around the world to come together and to its considerable credit, the international flavor of the meeting was evident throughout. We look forward to Behavior 2013, which is being held in Newcastle Gateshead, United Kingdom, from August 4 - 8, 2013.

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Are we a bunch of weirdos?

To the general public, behavioral ecologists must seem like a pretty strange crowd. We choose to spend long hours working in conditions that are often very difficult (isolated locations, extremes of weather, 7-day weeks, early mornings etc) in pursuit of knowledge that to outsiders probably seems esoteric and with little relevance to humankind. Consequently, I have always been curious as to which kinds of people become behavioral ecologists, or indeed, scientists of any kind. Is there any truth behind the standard media portrayal of male scientists as bearded, egg-headed eccentrics and female scientists as bespectacled geeks? Are there common childhood influences or shared experiences that shaped our interest in biology? Are there any patterns behind the wide diversity of study systems and study species used by behavioral ecologists, or the approaches they use to tackle their questions? How distant are we from the rest of the population, and what do they think of us? I had talked about these issues with lab-mates and colleagues for several years, and had been stimulated to think about them further by a reflective chapter in Tim Birkhead's (1993) excellent book *Great Auk Islands*. However, I had never come across a formal study of scientists' attributes, influences and opinions and so I decided to conduct one myself.

I therefore surveyed delegates attending the 2008 ISBE conference at Cornell University. The surveys were conducted anonymously and voluntarily and deposited in a box. 263 people completed a survey, most of which (91%) were from either North America (146) or Europe (92), which was a reasonable representation of the national composition of the meeting. Surveys were completed by 107 men and 152 women. The average age of male respondents was higher than that of females (male age: mean = 37, range 23-69, female age: mean = 29, range 20-63, $P<0.001$), which reflected my impression of the age demographic of the conference. However, I did not control for this age difference in the analyses, nor did I control for country of origin.

For several variables I compared the average value among respondents against the average value among the general population. These averages were obtained from literature searches or data available from the US census bureau (www.census.gov), reasoning that many of the delegates were from the US and that the equivalent figures from Europe and Canada would likely be similar given their broadly similar culture and attitudes. Many questions had more than one potential answer, such as 'Why did you pick your study species?'. If a respondent gave one main reason, then this reason was scored as a '1' and described as the primary reason. If a respondent gave two reasons that were equally important then these were each scored as '0.5', and if they gave three reasons each were scored as '0.33'. I then totaled the whole score for each reason so that for each question there was a 'primary reason' and a 'cumulative reason', since I was concerned that I could miss subtleties if I only focused upon one main reason.

Section 1. Scientific stereotypes

In this simple opening section, people categorized aspects of their physical appearance (hair colour, baldness, beardedness, and the use of vision aids), their taste in music, and whether they were considered eccentric, thought of themselves as a geek (= nerd), or had been an academic standout their whole life.

Hair colour was only analyzed for respondents above the age of 40 (n = 51), since this is the age by which most people who are going to develop grey or white hair have started to do so. Respondents with grey or white hair were significantly less common than expected by chance (observed = 6/51, expected = 12/51, $P< 0.05$). Male delegates were also less likely to have a bald or balding head than expected by chance, although the difference was not significant (observed = 27/105, expected = 39/105, $P = 0.1$). By contrast, male delegates were much more likely to have a beard than expected, with 33% (34/103) sporting beards in comparison with around 10% of the general population ($P = 0.001$).

Thirty-nine percent of respondents wore glasses, and men were more likely to wear them than women (49/104 M *vs* 50/152 F, $P = 0.026$). However, when the category was expanded to include other vision aids (contact lenses, laser surgery) there was no difference between the sexes (64/105 M *vs* 82/151 F, $P = 0.3$). Fifty-seven percent of respondents used some form of visual aid, which is not different from the US average of 62% ($P = 0.3$).

Ten percent of respondents said they were frequently described as eccentric. The regularity with which respondents were described as eccentric did not vary between the sexes (frequently = 12 M : 13 F, occasionally = 52 M : 87 F, never = 40 M : 52 F). Almost half of the respondents (47%) described themselves as a 'geek', with the proportion being significantly higher among females (35/105 M *vs* 81/148 F, $P = 0.001$). Not surprisingly, most respondents (65%) had stood out academically their whole lives, although interestingly, the proportion of females who had done so was much higher than males (52/104 M *vs* 110/148 F $P = 0.001$).

Table 1: Most respondents listen to a mix of music, with rock the next most popular category.

Genre	Primary Score	Cumulative Score
Mix	109	109
Rock	51	71
Folk	11	22
Pop	8	17
Classical	10	16
Techno	4	6
Other	13	14

Do behavioural ecologists fit the public perception of how scientists look? The answer seems to be no on most counts. Those surveyed at the ISBE were less likely to have graying or white hair, and were not particularly likely to need vision aids despite a job that involves a lot of time staring into a computer screen or through binoculars, or poring over books and journals.

Male behavioral ecologists were not more likely to be bald or balding than a random section of the population, but they were three times more likely to have a beard than expected by chance. A survey of male British academics (Carter and Astrom 2004) also found a noticeably high frequency of beards, and the probability of having a beard increased in proportion to their seniority. Why do so many male scientists have beards, and perhaps more to the point, why do men have beards in the first place? There is a fascinating literature on beards that suggests several possible reasons for the exaggerated facial hair seen in humans and yet not in our closest primate relatives. One hypothesis is that beard length indicates the aggressiveness or testosterone level of males, perhaps by enhancing the 'jutting jaw' of a manly male (Muscarella and Cunningham 1996). This may be an important signal in the competitive world of science, although conversely, males with beards are also perceived as less trustworthy (Hellstrom and Tekle 1974), which may explain why remarkably few male politicians have beards, and why no American presidential candidate since 1916 has had any facial hair at all. As pertains to academia, men with beards tend to be perceived as more intelligent and educated (Hellstrom and Tekle 1974) and thus male scientists may grow beards to enhance their status or apparent age as a proxy for seniority (Muscarella and Cunningham 1996). Of course the question then becomes whether this perception is innate, or whether it has been engendered through popular images of well-known scientists who happen to have flowing beards, the most famous being Charles Darwin (who, ironically, was clean shaven when he wrote *The Origin of Species*).

There was mixed evidence that female behavioral ecologists conformed to their media stereotype. For instance, when children were asked to draw their image of a scientist, the second most common feature of these sketches (after 'lab coat') was glasses (e.g. Steinke et al. 2007). However, fewer female delegates than male delegates wore glasses, and the proportion of females that needed some form of visual aid did not differ from the population mean. Nevertheless, more than half of the female delegates described themselves as geeks, which does accord with how they are often portrayed on TV in particular (personal observation), and most children attribute their impressions of scientists to TV and movies (Steinke et al. 2007: see also several other interesting articles by the same author). In my view, we need to find a way to bolster more positive images of female scientists in the mass media so that girls perceive science as an enjoyable and rewarding occupation.

There was intuitive evidence to support the public impression of scientists as eccentrics or geeks. Although I could not find any hard data on the proportion of eccentrics and geeks among the general population (not surprisingly), it is difficult to believe that a tenth of the population is eccentric and a half of them are geeks. Musically, behavioral ecologists are actually pretty cool, with most listening to a mix of music, especially rock! Classical music was not popular, despite it being usually perceived (unfairly) as the province of the cultured intelligentsia.

Section 2. Personal history

Here I asked respondents about their parents' occupation, the number of siblings they have, their birth order, the environment they grew up in, the number of reasonably close childhood friends they had (on a 5 point scale), the extent of their childhood interest in natural history, and the source of that interest.

The range of parental occupations was amazingly diverse, with many only being cited once. However, several occupations cropped up repeatedly. A disproportionately high number of respondents came from an academic family, with 16% (41/256) listing one or both parents as having a PhD or doing a job which I assumed would require a PhD (usually a university lecturer or professor, though not necessarily a biologist), which is much higher than the national rate of people with a PhD (1.0%). Also disproportionately common as parents of behavioral ecologists were doctors (3.1% *vs* a national level of 0.67%), lawyers (3.1% *vs* 0.8%), and most strikingly, teachers (21.9% *vs* 3.7%), which was the most common parental occupation.

Respondents had a greater number of siblings (1.73) than a random person from the general population (1.29, U = 20,831 $P < 0.001$), which was mostly due to a relatively low number of respondents being only children (observed = 24, expected = 87). There was a tendency for the respondent to be the first born in their family, although this was not statistically significant.

Table 2: Number of siblings and birth order or respondents

Brood size	**1st**	**2nd**	**3rd**	**4th**	**5th**
2	59	38			
3	33	21	26		
4	13	9	6	4	
5	2	7	3	1	1

The proportion of respondents who grew up in the various categories of environmental urbanization did not differ from the expected proportion, using estimates taken from the 1975 US census to coincide with the childhood era of most respondents (Urban : 72 *vs* 78 expected, Suburbs : 120 *vs* 127, Rural/Isolated : 64 *vs* 51; $\chi_2^2 = 4.16$ $P > 0.5$). (The survey had a fourth category of 'isolated' but only 4 respondents had grown up in these areas so I merged them into the rural category).

Fifteen percent of respondents categorized themselves as 'obsessed' by natural history during their childhood, and more than half were at least 'very interested' (obsessive = 40, very = 127, fairly = 68, barely = 18, no interest at all = 6). Most people cited themselves or their parents as their main source of interest in natural history.

The respondents' level of interest in natural history (Table 3) did not vary according to the urbanization of the environment they grew up in (H = 1.55 P = 0.46), how many close friends they had (H = 1.4 P = 0.46), how many siblings they had (H = 7.6 P = 0.11), or their sex (U = 7283, P = 0.16). Only 20% (53/256) had ever kept their study taxon as a pet (and to the presumed relief of their parents, this did not include the 2 respondents who studied sharks and elephants!).

Clearly, behavioral ecologists (and likely all scientists) are not drawn from a random cross-section of the population, and are disproportionately more likely to have parents who are either academics themselves or teachers. There are several possible reasons why children of academic parents and teachers might be more likely to enter academia, or at least pursue a higher degree. One is that both types of parents are more likely to value education and consequently encourage their children to study hard at school, and may even assist in their education themselves. Another is that these parents' enthusiasm for the academic lifestyle or for natural history in general, coupled with their propensity for passing on knowledge, permeates through to their children. This seems plausible given that many respondents attributed their interest in natural history to their parents.

Table 3: Sources of interested in natural history

Source of interest in natural history	**Primary**	**Cumulative**
Self	43	77
Parents	24	58
Media	10	31
Teacher	11	26
Friend	0	8
Other	0	5

Respondents had more siblings than people in the general population, and were no more likely to be an only child: in fact, only children were under-represented. I asked this question because I wondered whether behavioral ecologists were more likely to have developed an interest in natural history because they were an only child and thus sought enjoyment for themselves by venturing into the countryside (which in retrospect is an embarrassingly patronizing scenario). In fact, only children had just as many close childhood friends as those with one or more siblings, and thus were not likely to lack social stimuli. There was a tendency for respondents to be the first born child, although it was not significant, and conclusions are limited because the academic or career success of their siblings was not assessed. Nevertheless, there is a large (and turbulently controversial) literature on birth order in humans and how it affects their personality traits and success as adults, with Sulloway's (1995) meta-analysis finding support for first borns being 'more responsible, achievement-oriented, organized and planful, scholastically successful and disciplined' all of which would be useful traits for scientists (and perhaps, anybody).

I was surprised that the type of environment respondents grew up in was not related to their childhood interest in natural history, as I had suspected that many behavioral ecologists spent their youth in relatively rural areas and were thus exposed to wildlife from an early age. In retrospect, one could argue the exact opposite: children who live in cities might be more stimulated to get out into the countryside at weekends or seek out oases of greenery such as Central Park in New York, and are also more likely to have access to zoos and museums. Most respondents attributed their interest in natural history to themselves, with their parents also being a major contributing factor, while the influence of the media was a distant third. The fact that most of us developed our interest in natural history on our own was intriguing (see EO Wilson's 'Biophilia' hypothesis), and led me to ponder the future of behavioral ecology. In an intriguing book, Louv (2006) lamented the increasing distance between children and the natural world (see also Weigl (2009) for a similar refrain) and drew links between this and the rise in childhood obesity and attention deficit disorders. Part of this distance is due to parents being increasing reluctant to let their children wander off into the woods, but much of it is due to the explosion in alternative forms of entertainment such as electronic media. If children continue to abandon the natural world, will there still be an influx of students interested in behavioral ecology in 50 years time?

Of course, these analyses may be unwarranted, since it is possible that an interest in natural history is not a prerequisite to being a behavioral ecologist, particularly for those studying captive animals. Indeed, cynics would say they could perform their current study perfectly well without knowing anything at all about the biology of other species or taxa present at their field site, let alone those in the jungles of Peru or the plains of Africa. Still, I am willing to bet that almost all behavioral ecologists have some interest in nature, since even famously mathematically-oriented biologists like Bill Hamilton and John Maynard Smith were both ardent naturalists at heart, and a strong childhood interest in natural history shone through in the autobiographies of 16 of 21 eminent animal behaviorists featured in an enjoyable recent compilation (Drickamer and Dewsbury 2009).

Section 3. Attitudes to research

In this section I first asked whether people could pursue their current study for the rest of their life, and then asked graduate students (MSc/PhD candidates) their career goal on a 5-point 'scale' where 1 = leaving academia after graduation, 2 = do a post-doc then leave, 3 = professor at a small school, 4 = professor at a large school and 5 = head of department. It is important to note that I do not consider being a professor at a large school as a 'better' or more advanced job than being a professor at a small school, since people prefer the working environment of one rather than the other for a variety of reasons and there are many excellent small schools. It was simply more convenient to treat the categories as a progression for the analysis.

Gratifyingly, at least half of the respondents seem to be enjoying their research, with 52% (123/227) stating they could carry on doing what they are doing for the rest of their life. The average intended career 'rank' of female graduate students was lower than that of males (41 M *vs* 97 F, U = 1,759 $P<$ 0.01, Figure 1). This difference appears to be influenced by the extremes of the distribution, with a higher proportion of females intending to leave after graduating and none wanting to be a head of department. Much has been said about gender inequality in science and so I will not add to that here, except to say that anyone attending current ISBE conferences will realize that there are at least as many female graduate students as there are male, and yet these data suggest that some factor(s) cause females to be less inclined to pursue a research career.

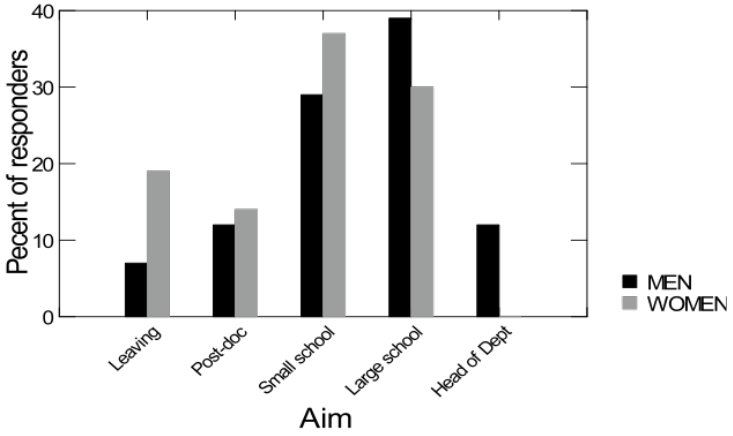

Figure 1. Frequency distribution of career goal of graduate students attending the 2008 ISBE meeting

I then asked three short questions to see what attracts people to their study system and topic, and whether they were 'watchers' (preferring to passively observe their study subjects) or 'doers' (preferring to be actively catching or measuring things) (categories by Birkhead 1993), in part to see if there were differences in how men and women approach their research. Most respondents (86%) considered a study organism or system more attractive to them if nobody else was working on it, rather than if lots of other people were already doing so. Interestingly, the proportion varied between the sexes, with male respondents being more inclined than females to enter a research area already well studied (19/69 *vs* 12/120, $P = 0.01$). Most respondents (62%) said that they simultaneously considered both the organism and the question when designing a study, with 26% saying they thought of the question first and then came up with the appropriate organism, and just 12% said they had the organism in mind first then thought of a suitable question. Females tended to be more likely than men to be 'watchers' rather than 'doers' (88/137 females *vs* 47/92 males, with 8 of each sex describing themselves as 'a bit of both', $P = 0.056$). This result fits my subjective impression that women tend to be more patient than men, although the literature is inconclusive on this trait.

I then 'gave' people 1 billion dollars and asked how they would spend this windfall in order to advance the whole field of behavioral ecology. Surprisingly, only 42 people could think of a way to spend 1 billion dollars! Several people suggested further funding of their current study (!), or conserving land or setting up multi-user field stations, which are both laudable plans but neither are likely to take the field to the next level. The most popular answer (10 people) was to link genetics, development and behavior. My own feeling is that the biggest advances will come from a 'model system', with teams of researchers collaborating in order to concentrate their expertise of genetics, immunology, and behavior etc on a single species, perhaps across a broad geographic range, but only time will tell.

I then asked people if they had read the mega-cited Darwin classics *The Origin of Species* and *The Descent of Man*, since I have always wondered how many people have actually read the hallowed tomes, and also *The Selfish Gene*, another widely-cited work. Finally, I asked people to name the most influential book or paper they had ever read. Reassuringly, 86% of respondents had at least browsed the *Origin* and 59% had browsed the *Descent*. Forty-three percent had read the *Selfish Gene* from cover to cover, although this is admittedly a modern, popular science paperback and considerably easier to read than the heavier Victorian prose of the others.

Table 4: Reading material of respondents

Coverage	***The Origin of Species***	***The Descent of Man***	***The Selfish Gene***
Cover to cover	41	12	110
Most of it	53	36	38
Dipped into it	127	102	50
Never	36	106	60

One hundred and sixty three respondents cited one work as being particularly influential to them (146 books, 17 journal articles). The diversity of influential texts was much greater than I had expected, with no fewer than 75 books or papers being cited, including one 1977 paper on anuran communication so memorable that the respondent was able to provide the reference to the exact volume and page numbers! (I checked). Works that 3 or more people listed as their most significant influence were the *Selfish Gene* (19 people), *The Origin of Species* (8), *The Red Queen* (4), *Sociobiology* (4), *The Extended Phenotype* (4), Krebs and Davies textbook(s) (3) and Tinbergen's (1953) 'Four questions' paper (3). By author, those with 5 or more citations were the traditional heavyweights of Richard Dawkins (24), Robert Trivers (12), Edward Wilson (7), Stephen Jay Gould (7), Bill Hamilton (6) Matt Ridley (6) and Jared Diamond (5).

Section 4. Study system

Here I asked why people chose their study organism and study topic, why they choose to study wild versus captive animals, and why they prefer to work as part of a team versus alone.

Most people selected their study species because it was easy to work with, with only a small number of masochists enjoying the challenge of tackling an awkward beast. Animals that do something unusual were also relatively popular study subjects, perhaps because they appeal to our own eccentricity. The location of the study site was relatively unimportant, at least as a primary reason, which was surprising considering the number of intriguing animals living in exotic or stunningly beautiful locations. I also expected more people to be studying a particular taxon simply because they have been fascinated by it their whole lives, as is often the case in people who study dinosaurs, for instance (*personal observation*).

Table 5: Reason for choosing study organisms

Reason	Primary reason	Cumulative reason
Tractable/functional	50	86
Lots of reasons	62	62
Does something unusual	11	32
Joined an ongoing project	19	19
Affinity for this taxon/ organism	10	19
Location	5	19
Enjoy a challenge	3	5
Suggested by advisor	4	4

Not surprisingly, many people had lots of reasons for choosing their study species rather than one in particular, and similarly, most people had lots of reasons for choosing their research area. Many people were attracted to their research area because it had a strong theoretical background and there was much potential for integration with other fields, which are solidly scientific grounds. Studying something because it was a hot topic was also fairly common, although this could be because such projects are inherently more fundable.

Table 6: Reason for choosing a field of research

Reason	Primary reason	Cumulative reason
Lots of reasons	73	73
Strong theoretical background	37	58
Integrative	23	42
Hot topic	13	24
Can be done cheaply	6	12
It's just interesting to me	10	11
Avoided by others as too difficult	2	6
Relevant to humanity	3	5
Conservation angle	1	1

Table 7: Reasons for studying wild animals

Reason	Primary reason	Cumulative reason
Important to study it in its context	25	60
Like being outdoors	14	50
Impossible to do study in captivity	2	8
All three	49	49

Table 8: Reasons for studying captive animals

Reason	Primary reason	Cumulative reason
Easier to get data	24	33
Like being in control	2	11
Don't like working outdoors	3	4
All three	2	2

More behavioral ecologists study animals in the wild than in captivity (167 *vs* 50), and the main reasons chosen for doing so were the desire to understand an animal's behavior in the context of its natural environment and/or a love of being outdoors. This could stem from a childhood love of natural history or the desire to surround oneself with nature. After all, can any field biologists honestly say they do not pay attention to animals other than their study species while working? Those preferring to study animals in captivity cited the ease of data collection as their main reason.

Table 9: Reasons for working in a team

Reason	Primary reason	Cumulative reason
Like to discuss work	59	101
Inherently social	7	47
Too much work for one person	15	37
Like to take charge of group	0	5
All four	8	8

Table 10: Reasons for working alone

Reason	Primary reason	Cumulative reason
Sole responsibility for data	16	20
Inherently antisocial	4	8
Rigidly single-minded	2	4

Most people worked as part of a team rather than alone (198 *vs* 32), with the main reason being the enjoyment of discussing the work with others. This is hardly a shocking result given the importance of communication in science, but many respondents also attributed their fondness for teamwork to an inherently sociability. The main reason for working alone was the feeling of having sole responsibility for the data rather than a desire for solitude itself.

Section 5. Your place in the community.

In this final section I asked people how often they present their work to a non-scientific audience, and if they rarely or never do this, why not. Also, I asked about the reaction they usually get from non-scientists when describing their research.

More than half of the respondents talked about their work to a non-scientific audience at least once a year (several times a year = 68, once a year = 121, never = 61). Those who never or rarely do so gave their main reason as a lack of opportunity rather than a lack of motivation (no opportunity = 88, no motivation = 9, bit of both = 29). I was simultaneously encouraged by how many people give talks outside of academic circles, and yet discouraged by how many want to give talks but do not get the chance. Perhaps we should be exploring more options to spread the word through local natural history groups and high schools, since giving talks is a great way to foster an interest in natural history or science in young people who might then be stimulated to pursue a career in biology, and thus keep behavioral ecology alive.

Does the outside world perceive us as having a function in society, or as oddballs allowed to indulge our whims at their expense? Happily, the reaction that most respondents get when describing their research is one of intrigue, with relatively few calling us a waste of taxpayers' money (amused = 60, intrigued = 149, indifferent = 23, waste of money = 15). Many receive an amused response, which is particularly likely for behavioral ecologists considering our apparent fascination with all things sexual!

In sum, I would say this survey has achieved what it set out to do by shedding some light on our origins and influences. I acknowledge that some of the analyses are weakened by confounding variables, and there is a modest amount of noise due to subtle differences associated with age, country of origin, family history and quirks of fate. Nevertheless, I think the survey produced several interesting results that will hopefully make behavioral ecologists ponder the circumstances that led them to their current occupation, and also perhaps stimulate a more sophisticated and objective survey in the future.

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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).

19th Biennial Conference on the Biology of Marine Mammals
27 Nov - 2 Dec 2011, Tampa Florida, USA
http://www.marinemammalscience.org

ASAB Winter meeting 2011: Why do Animals mate with the 'wrong' partner?
1-2 December, 2011 London, UK
http://biology.st-andrews.ac.uk/shuker/ASAB-Winter-Meeting-2011.html

25th International Congress for Conservation Biology
5 – 9 December 2011, Auckland, New Zealand
www.conbio.org/2011

VIII Göttinger Freilandtage: Behavioral Constraints and Flexibility
6-9 December 2011, Göttingen, Germany
http://www.soziobio.uni-goettingen.de/congresses.php

ASAB Easter meeting
11-13 April 2012, University of Abersystwyth, UK
http://www.aber.ac.uk/en/ibers/events/asab-easter-conference-2012/

9th Congress of the Portuguese Society of Ethology
12-13 April 2012, University of Lisbon, Portugal
http://spe2012.fc.ul.pt/EN/index.html

First Joint Congress on Evolutionary Biology
6-10 July 2012, Ottawa, Canada
http://www.confersense.ca/Evolution2012/index.htm

Gordon Research Conference: Neurology of Cognition
8-13 July, Lucca, Italy
http://www.grc.org/programs.aspx?year=2012&program=neurcog

7th Symposium of the European Association of Acarologists
July 9-13, 2012, Vienna, Austria
http://euraac.boku.ac.at/SympVienna

10th International Congress on the Biology of Fish
15-19 July 2012, Madison, Wisconson, USA
http://www.fishbiologycongress.org/

VI European Conference on Behavioural Biology
20-22 July 2012, Essen, Germany
www.ecbb2012.org.

7th World Congress of Herpetology
8-14 August 2012, Vancouver Canada
http://wch2012vancouver.com/

14th Congress of the International Society for Behavioral Ecology
August 11-17 2012, Lund, Sweden
http://www.isbe2012lund.org/

International Congress of Entomology
August 19-25 2012, Korea
www.ice2012.org/

Pan-African Ornithological Congress
14-21 October, 2012
http://www.flamingo-sg.org

International Ornithological Congress of Southeast Asia
November 2012
http://harrison-institute.org/IOCSEA/index.html

.....and beyond 2012

Society for Integrative and Comparative Biology
January 3-7, 2013, San Francisco, USA
http://sicb.org/meetings/2013/callsymp.php3

IEC/ASAB Summer meeting
4th-8th August 2013, Newcastle Gateshead, UK
http://iec2013.com/

19th International Congress of Arachnology
June 23-28 2013, Kenting National Park, Taiwan
http://araneae.thu.edu.tw/ica2013/welcome

XVII IUSSI International Congress
July 2014, Cairns, Australia
http://www.iussi.org/

ISBE 2012 Lund, Sweden

The 14th International Behavioral Ecology Congress will be hosted by Lund University, Sweden, in 2012. The congress is scheduled for August 12-17. Lund University is Scandinavia's largest institution for higher education with around 6000 employees and 46000 students. The University was founded in 1666 although a college for higher education was founded here already in 1425. The city of Lund is even older, it was founded by the Danish king around 990 and the present cathedral (there was a previous one!) was founded 1085. The city of Lund has around 100,000 inhabitants and it is situated in the southernmost Swedish province Skåne (Scania).

The conference venue will be in the picturesque old parts of the University in downtown Lund. Here the lecture halls and a poster exhibition hall are closely situated around the old University Square.

The large international Copenhagen Airport (in Denmark) is situated only 30 minutes away by train. These trains connect the airport to Lund every 20 minutes.

Welcome to Lund in 2012.

Anders Brodin, Susanne Åkesson
Dennis Hasselquist, Erik Svensson
and Anders Hedenström.
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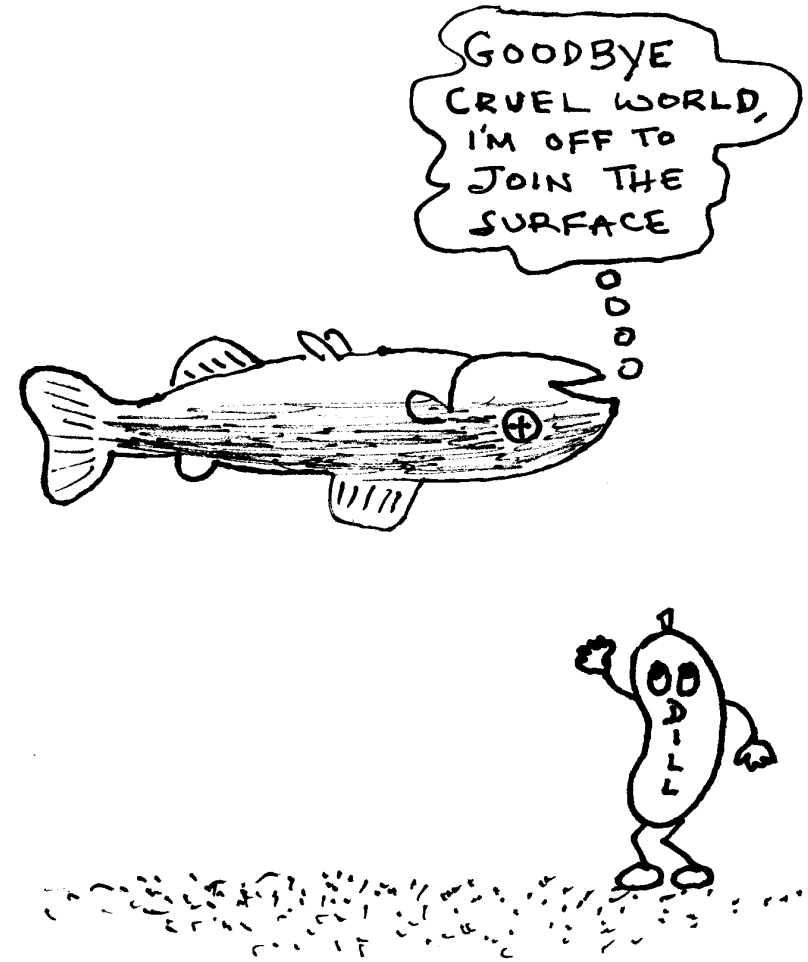
GOODBYE CRUEL WORLD, I'M OFF TO JOIN THE SURFACE
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