V O L U M E 2 2 I S S U E 2

ISBE Newsletter

International Society for Behavioral Ecology
www.behavecol.com

Content

ISBE photo competition

This new initiative aims to promote the exciting research in behavioral ecology and generate an accessible archive for teaching and presentations. We invite submission in three categories: Behavior and Interactions; Behavioral Ecology in Action; Student Price.

Email your photos to isbephotocomp@gmail.com by February 1st 2011. Prizes will include book prizes from Oxford University Press for the winning entries. For more details go to page 11.

Photo credit: Bruce Lyon

ISBE 2012: Lund beckons

Why I'm glad you're reading this

Here in Heteren, on the banks (with a bit of poetic license) of the Neder Rijn, we're preparing to move to new premises in Wageningen. The new building will bring with it various advantages, but more space isn't one of them. Those of us of the older generation are unhappily faced with the prospect of consigning our back runs of journals to the paper skip: when we were undergraduates we admired the long runs of journals on the shelves behind our tutors' heads, and when we became post-graduates, we signed up to a scientific ('learned') society to start our own collection. The electronic journal publishing revolution has brought enormous benefits, but made paper copies of journals all but redundant. In so doing it has removed one of the main reasons for young academics to join a learned society – or even to become aware of their existence.

Many learned societies, among them ISBE, perform two main activities: they organize conferences and publish journals. Many of you were at the 13th ISBE conference in Perth and enjoyed the buzz from the heady mix of hearing about the latest research and mixing with behavioral ecology friends, old and new, and old and young. In a discipline like behavioral ecology, there would be no conference without the Society, either as a whole and or as dedicated individual members, such as Leigh Simmons and his wonderful team, who are prepared to take on – unpaid - the job of organisation: unlike in the medical sciences, for example, there are no commercial interests queuing to lay on a conference for us if we, as a community, do not. Moreover, while the more 'mechanical' aspects of conference organisation are farmed out nowadays to a specialist company, the quality of the scientific program, and the relaxed friendly atmosphere of our conferences, depend critically on the enormous amount of work done by people like Leigh and his team. It is for this reason that we make membership of the Society a pre-condition for attending our conferences, and we hope that those of you who joined in order to attend the conference in Perth will want to stay on as members of the Society.

The Society's other main activity, publishing the journal Behavioral Ecology, was one of the main motivations for founding the ISBE. In the early days of the discipline, the only journal dedicated to the subject was produced by a commercial publisher, creating a financial double-whammy: the profits went into the publishing company's shareholders' pockets, while journals produced by commercial publishers are usually several times more expensive than those produce by learned societies. Our publisher, Oxford University Press, carried the initial losses while Behavioral Ecology was becoming established, and since the journal moved into profit a few years ago, the Society gets a substantial income from the journal. This is currently largely used to provide travel grants to attend the ISBE conference, but also provides the financial means for any future developments that we think will support behavioral ecology.

Besides the ISBE conferences and Behavioral Ecology, the Society serves another important function – one that is perhaps less immediately obvious, but also critical to the health of the discipline: The Society holds the discipline together, and in so doing turns a collection of individuals into a community. It gives us the means to recognise and publicise the achievements of our field, and hence provides presence and weight to the discipline that is crucial in competing with other disciplines for scarce academic resources.

If you are keen to see behavioral ecology continue to flourish there are two things that you can do: the chances are, if you're reading this, that you are already a member of ISBE, but explain to your colleagues who are not members, especially your post-graduates and post-docs, why the Society is important and encourage them to join. The membership subscription (without the journal) is ridiculously cheap (£8, $17 or €13) and includes this Newsletter twice a year to keep you in touch with the behavioral ecology community. The second is to support the journal: not necessarily by subscribing to it, but by helping to maintain its success by publishing your excellent research there – the more successful the journal is, the more money comes back to the ISBE, the more can be used to support behavioral ecology.

See you at the ISBE conference in Lund in 2014!

Kate Lessells

PITELKA PRIZE WINNER 2010

The 2010 Pitelka Prize winner is Dr Christina Halpin, Centre for Behaviour and Evolution, Newcastle University, UK for her paper:

Christina G. Halpin, John Skelhorn, and Candy Rowe (2008). Being conspicuous and defended: selective benefits for the individual Behavioral Ecology 19(5): 1012-1017

Congratulations!

Behavioral Ecology – Report from the Editor-in-Chief

At the end of 2010, the journal will have published 21 volumes. This coming-of-age marks the extraordinary success of our journal, affirming its significant role in meeting the aims of the society – to facilitate communication between workers in the field and stimulate research and related academic activities. Oxford University Press first published *Behavioral Ecology* in 1990, with Staffan Ufstrand (1990-1995) and Don Kramer (1990-1994) as founding Editors. The first volume had two issues comprising 21 papers of 177 pages. The journal has subsequently flourished, and last year Oxford University Press published six issues comprising 184 papers of 1582 pages. The scope of the journal has also expanded during this time, judging by the increased range of topics in our published papers and the diverse expertise of the Members of the Editorial Board. The journal has also become more international; 86% of our authors in the first two volumes had addresses in the USA (41%), Canada (19%), UK (13%) and Scandinavia (13%), whereas our authors are now drawn from almost 70 nations across the globe. In particular, there has been extraordinary growth in the number of authors from continental Europe and increasing numbers from Africa, South America, South East Asia, Australia and New Zealand. Further details of the accomplishments of the journal and its authors are provided in an Editorial in *Behavioral Ecology* 20(1).

Editorial Structure

Behavioral Ecology currently comprises an Editor-in-Chief, eleven Editors and fifteen members of the Editorial Board. The Editor-in-Chief is appointed by the Executive of the International Society for Behavioural Ecology and has overall responsibility for managing the editorial process and liaising with the ISBE Executive and our publisher, Oxford University Press. The Editors of the journal, appointed by the Executive of ISBE on advise by the serving Editors, are wholly responsible for deciding whether allocated manuscripts are suitable for publication. Editors serve for terms of up to five years. Members of the Editorial Board, selected by the serving Editors and Executive of the ISBE, serve for terms of four years and provide general advice on manuscripts and specific commentary on potential contributions to the Forum Section.

Three Editors completed their terms over the past two years, including Jeremy Field (2009), Will Cresswell (2009) and Mark Hauber (2010). Their generous contribution to the journal, through both their excellent editorial decision making and in providing wise advice over a variety of issues relating to the journal, is greatly appreciated. During this time, we have also appointed five new Editors, including Deborah Gordon (2012), Gil Rosenthal (2014), Michaela Hau (2014), Ben Hatchwell (2014) and Regina Macedo (2015). The combination of these new Editors and our current editors Rob Brooks (2011), Sue Healy (2012), Hans Hofmann (2012), Daiqin Li (2012), Candy Rowe (2013) and Iain Couzin (2013) represent considerable diversity of expertise. The membership of the Editorial Board has also changed, with Alexandra Basolo, Laurent Keller, Ellen Ketterson, Kate Lessells and Mats Olsson completing their term in October 2008, and we are very grateful for their generous support of the journal. We welcome Susan Alberts, Angus Buckling, Doug Emlen, Eileen Hebets and Steve Phelps, who joined the Board in November 2008.

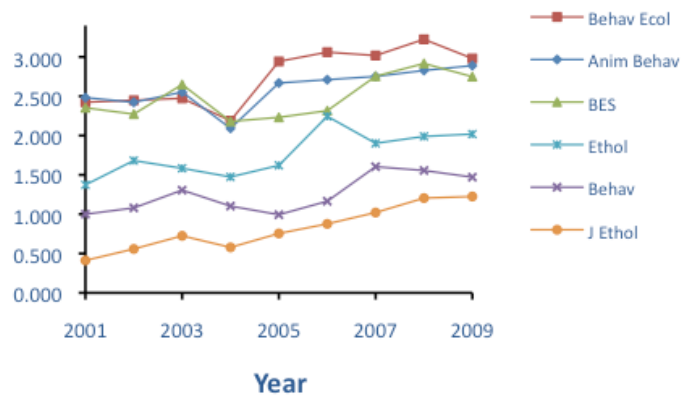
The composition of the editorial team is increasingly representative of the community of behavioral ecologists, including a broad range of taxonomic and conceptual expertise, increasing international representation including Europe, North and South America, South East Asia and Australia, and highly credible gender balance.

Journal Impact

Behavioral Ecology is arguably the leading journal in the field, enjoying a reputation of publishing the results of broadly interesting and rigorous research. While the relevance of *ISI Impact Factors*™ as a comparative measure of the standing of a journal is debatable, it suggests that *Behavioral Ecology* has consistently been the most highly cited journal in the field (Fig. 1), reaching our highest score of 3.22 in 2008, and exceeding 3.0 in three of the past four years.

ISI Impact Factors™ are influenced by a combination of citations per paper and the number of papers published in that year. A more detailed analysis of citation patterns are given in Table 1. Two key differences emerge when comparing *Behavioral Ecology* with, say, *Evolution*. The highest citing paper in *Behavioral Ecology* had one third of the number of citations of the equivalent paper in *Evolution*, and only 19% of the publications in *Evolution* have been cited less than 3 times, compared with 30% in *Behavioral Ecology*. Comparisons with *Animal Behaviour* and *Behavioral Ecology and Sociobiology* suggest that they have a slightly longer tail of papers that are not cited.

Figure 1. Journal Impact Factors



New Initiatives - the Forum Section

In 2010, we established a new focus to the Forum section by introducing two kinds of peer-reviewed pieces, 'Ideas' and 'Invited Reviews', overseen by a dedicated Forum Editor. 'Ideas' are short pieces containing new ideas, approaches and perspectives of current or emerging interest. These pieces are commissioned, following a review of the author's brief proposal by the Forum Editor and one Member of the Editorial Board. 'Invited Reviews' take the form of reviews, syntheses and meta-analyses that are both forward-looking and of exceptional significance – broad, generic reviews, especially of an established area, and reviews focusing on an author's work are not commissioned. The Forum Editor, drawing on advice from Members of the Editorial Board, identifies areas appropriate for review or synthesis and suitable authors from whom to commission a review. Authors can suggest a review article by submitting a brief proposal direct to the Forum Editor; the Forum Editor

Journal	Number of papers	Average citations per paper	H-index	Impact Factor (2009)	Highest citation number	% papers with < 3 citations	% papers with 0 citations
Animal Behaviour	1473	6.13	26	2.890	66	34	11
Behavioral Ecology	661	7.14	24	2.981	57	30	7
Behavioral Ecology and Sociobiology	782	6.61	22	2.749	57	32	11
Behaviour	341	3.28	12	1.471	22	53	20
Ethology	534	4.63	16	2.019	45	40	11
Journal of Ethology	203	2.31	8	1.225	31	67	29
Biology Letters	822	6.87	24	3.521	116	32	8
Evolution	1018	10.99	36	5.429	155	19	5

Table 2. Decision outcomes according to country of origin of corresponding author, 2008-2010

Country	Accept	Total	Accept Ratio	Country	Accept	Total	Accept Ratio
Argentina	0	5	0%	Korea, Republic of	1	3	33%
Australia	42	102	41%	Latvia	1	2	50%
Austria	4	10	40%	Lithuania	0	1	0%
Belgium	3	14	21%	Mexico	2	11	18%
Brazil	2	12	17%	Namibia	0	1	0%
Canada	21	69	30%	Netherlands	17	32	53%
Chile	2	7	29%	New Caledonia	1	1	100%
China	3	30	10%	New Zealand	4	12	33%
Czech Republic	1	12	8%	Norway	5	18	28%
Denmark	3	4	75%	Palestinian Territory	0	1	0%
Egypt	0	2	0%	Poland	1	6	17%
Finland	8	21	38%	Portugal	2	3	67%
France	15	51	29%	Russian Federation	0	2	0%
French Guiana	0	1	0%	Serbia	1	2	50%
Germany	15	49	31%	Singapore	0	1	0%
Greece	0	2	0%	South Africa	1	10	10%
Hungary	2	9	22%	Spain	10	54	19%
Iceland	0	1	0%	Sri Lanka	1	1	100%
India	1	13	8%	Sweden	11	24	46%
Iran	0	1	0%	Switzerland	12	29	41%
Ireland	0	1	0%	Taiwan	2	7	29%
Israel	3	19	16%	United Kingdom	62	124	50%
Italy	2	15	13%	United States	106	308	34%
Japan	6	31	19%	Uruguay	1	3	33%
Jordan	0	1	0%				

and one Member of the Editorial Board will evaluate the proposal and decide whether to commission the review. 'Invited Review' articles are accompanied by 3-5 short commentaries from leading researchers in the field, published at the end of the article with a short rejoinder if necessary from the 'Invited Review' author/s.

Rob Brooks very kindly agreed to take on the role of Forum Editor, and has commissioned 11 'Invited Reviews', of which four have been accepted and one rejected. Six 'Ideas' pieces have been commissioned, of which five have been accepted. The quality and appeal of the articles has been high, and we encourage authors to take advantage of the novel publishing opportunities offered in the new Forum section.

Decision outcomes

The outcome of editorial decisions for manuscripts over the past two years (August 2008 – September 2010) was 32% accepted, 29% rejected without review and 38% rejected following review, which is broadly comparable with the previous two-year period (August 2006 – July 2008: 32% accepted; 27% rejected without review; and 41% rejected after review). Each Editor takes sole responsibility for deciding the fate of manuscripts, including whether it will be sent out for review. These decisions depend on the judgement of the editors will be advised, but not bound, by the reviewer's recommendation. The average rejection rate among the current Editors is 72 ± 0.03%, with 42 ± 0.06% rejected immediately. The mean time to reach a decision across the current editors is 42 ± 3 days. A decision was reached within 30 days for almost 50% of submitted manuscripts, and 75% of the manuscripts were initially resolved within 60 days. The time taken to reach a decision depended upon the outcome; manuscripts were rejected without benefit of review within two weeks of receipt, while the fate of reviewed manuscripts was resolved within ten weeks.

While manuscripts have been submitted from across the globe, there is variation in the outcomes according to the domicile of the lead author (Table 2).

Authors and affiliations

Behavioral Ecology has published some 2178 papers since its establishment in 1990. The success of the journal is due to the authors of each of these papers, but some authors have been especially supportive, including Anders Pape Møller (60), Graeme Ruxton (21), Dan Blumstein (17), László Zsolt Garamszegi (17), Luc-Alain Giraldeau (16), Jan Komdeur (16), Leigh Simmons (16), Patricia Parker (12) Hans Richner (12), Nicola Saino (12), Juan José Soler (12), Bart Kempenaers (11) and Bob Montgomerie (11). Anders, Dan, Lazlo, and Leigh also top the list for publishing the most papers in the past two years.

At the risk of being thought obsessive, some interesting patterns emerge when examining authors' affiliations. The number of papers published in *Behavioral Ecology* per institution since 2008 are: University of Cambridge (18), University of Groningen (16), University of California, Davis (15), Max Planck Institute of Ornithology (13), University of California, Los Angeles (13), University of Helsinki (13), University of Bern (12), University of Exeter (12), University of Melbourne (12), Australian National University of (11), University of Sydney (11), University of Western Australia (11), University of Glasgow (10), University of Sheffield (10) and the University of St Andrews (10). The overabundant representation from Australian Universities, relative to the national population, seems to reflect a healthy enthusiasm for the discipline – perhaps not surprising given its curious biota.

Summary

The journal remains in excellent shape, attracting increasing number of submissions and publishing papers that are making a substantial contribution to the field. It is therefore meeting the aims of the International Society for Behavioral Ecology.

More personally, I am extremely grateful for the opportunity to have had a continuous formal editorial association with the journal, commencing as one of the founding Members of the Editorial Board and finishing in my current role. I thank all of the Editors who have worked with me while I was Editor-in-Chief for their considered decision-making, good humour and patience. I would also like to especially thank Jenny Fulford, our Editorial Assistant, who has been crucial to the smooth running of the editorial processes, and to the production staff of Oxford University Press, who ensure that accepted papers are published rapidly and accurately. And finally, I wish every success to my successor.

Mark A Elgar
Editor-in-Chief, *Behavioral Ecology*
Melbourne, October 2010

Business Meeting ISBE, Perth 2010

Kate Lessells, the new President of the ISBE, welcomed the 200 people who gave up part of Tuesday lunch to attend the biennial Business Meeting. She introduced the ISBE Executive, and encouraged members to contact any member of the Executive if they have queries or comments.

Kate outlined the major activities of the ISBE and benefits of being a member. Most conspicuously, the ISBE held biennial meetings, organized by a local committee, and Kate thanked Leigh Simmons and his team for a wonderful start to the Perth meeting. The Society also publishes a highly successful journal, *Behavioral Ecology*, a Newsletter, and has an active web site. Kate thanked all those involved, including Mark Elgar, Editor in Chief of *Behavioral Ecology*, and Mariella Herberstein, Newsletter and web site editor.

Another major benefit of being a member is that we provide travel grants to attend our biennial meetings. These grants are primarily designed to cover travel costs by students and early career behavioural ecologists, but can also include other expenses, such as registration. We encourage applications from developing countries, and provide as much assistance as possible. Kate emphasized that everyone should spread the word about travel grants.

Kate mentioned two developments in the Society. First, *Behavioral Ecology* is looking for a new Editor-in-Chief, after Mark Elgar steps down in 2011, and Kate encouraged applicants to apply for the position. She welcomed applications from current Editors of the Journal as well as other behavioural ecologists. Kate warmly thanked Mark for his stewardship of the Journal, which has flourished in the time he has been Editor-in-Chief. Second, Kate mentioned that the ISBE is in the process of re-negotiating the Journal contract with Oxford University Press. Both the Journal and publishing environment have changed since OUP published our first issue in 1990. The Society and OUP have come a long way in the last 20 years!

Walt Koenig gave the Treasurer's report. Despite the global financial crisis, the Society had an income, primarily from the Journal, of about $100,000 US per year. After meeting its other financial commitments and establishing a modest contingency fund, the Executive believes the best use of these funds is to support students, early career researchers and others in need to attend our biennial conferences. This year we awarded $120,000 to support 65 people from around the world, and for the next conference, in Lund 2012, we hope to allocate more money and support more applications. Walt indicated that he would prefer to retire at the end of his current term in 2 years, and asked anyone interested to contact him. It is best, given the Society's financial arrangements, if the Treasurer is in the USA.

Mark Elgar, as Editor-in-Chief, reported on the fortunes of *Behavioral Ecology*. The editorial structure includes the EiC, 11 Editors and 15 members of an Editorial Board. The journal is currently thriving, and its Impact Factor, although flat over the last few years, still leads comparable journals in the field. The journal receives many more manuscripts than it can publish, which is another good indicator of its health: overall 32% of submissions are accepted, 29% rejected without review and 38% rejected after review. Manuscripts are allocated at random to Editors, as a way of encouraging papers of broad interest, and the current Editors reject 72% of papers and take an average of 42 days to reach a decision. The double-blind reviewing process seems to work well, and there is no difference in acceptance of papers by female (30%) or male (31%) first authors. The journal's major initiative is the establishment of a Forum section, including an Ideas section for short papers expressing new ideas, and an invited Reviews section focussed on forward-looking reviews, not just summaries of current knowledge. Anyone interested in writing a review should first contact Rob Brooks, the Forum editor. Mark raised the issue of data archiving, a process in which authors are encouraged or required to submit data along with manuscripts. This is a new move in publishing, with potential benefits and costs, and *Behavioral Ecology* will need to consider its policy. Mark finished by wishing the journal and his successor well, and thanking everyone who has been involved with the journal for their support. He has been associated with the journal since its inception, as a Board Member, then Editor and finally Editor-in-Chief, and has clearly left the journal in good shape.

As people drifted off to re-join the conference, I overheard one graduate student – obviously still in shock – muttering about 72%!, and recalled Mark's words about an Editor's burden of having to inflict more pain than joy. Perhaps that's why the ISBE runs both a journal and a conference. The conference was 99% joy, and after the conference dinner I noticed the same graduate student on the dance floor like everyone else.

I'd like to add my thanks to Leigh, everyone involved in organizing, and delegates for a marvellous conference.

Rob Magrath
ISBE Secretary
Australian National University

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.

Reproductive Skew in Vertebrates – Proximate and Ultimate Causes

Reinmar Hager & Clara B. Jones. Cambridge University Press, 2009. 523 Pp.
ISBN 978-0-521-86409-1 (hardback)

Reproductive skew is concerned with the unequal distribution of reproductive success in animal societies. Skew theory provides models for exploring the ecological and genetic factors causing the partitioning of reproduction. One goal of skew theory is to elucidate factors common to the evolution of animal sociality. Skew can vary from 0 (all individuals reproduce) to 1.0 (only one individual reproduces). Skew can occur in either sex, but much of the research focuses on reproductive skew in mature females. This book explores the strengths and weaknesses of skew theory.

An interesting and entertaining forward (Vehrencamp) provides a brief historical overview of skew theory and its derivation from considering helping behavior in birds. Part I consists of two chapters on reproductive skew theory. Chapter 1 (Johnstone & Cant) discusses skew models. In transaction models, one individual has full control over other group members, but when an outside option exists, the dominant female may concede reproductive opportunities to others in order to maintain the group and group benefits. By contrast, compromise models allow for incomplete control within the group and ignore outside options. In restraint models, the subordinate refrains from obtaining as large a share of reproduction as it could in order to avoid eviction. Model predictions are discussed, but the most important contribution of this chapter is a new model that develops the outside option principle, which forms the core of skew theory; an individual's prospect outside a given association can influence the resolution of conflicts inside it. The model suffers from the same ailment infecting skew models; it focuses on two individuals, which is much too simplistic with respect to the world of animal societies. Chapter 2 (Cant *et al*.) considers the evolution of human menopause and emphasizes a model incorporating demography and female-biased dispersal, which produces relatedness asymmetries between older and younger females and their offspring. Conflict over reproduction favors older females who will forgo reproduction when younger females initiate reproduction.

Part II consists of nine chapters that test the assumptions and predictions of skew models. Most of the chapters have reviews of skew theory, which help focus the reader's thinking. Holekamp and Engh (Chapter 3) provides an excellent review of skew in female-dominated mammalian societies and focuses on spotted hyenas and lemurs. They conclude that neither transactional nor compromise models apply completely. The assumptions are too simple, e.g., they ignore individual variation. They make another critical point: the extent of reproductive skew should be based on offspring survivorship. I would add two points that receive too little emphasis in skew theory: (1) skew should be based on lifetime reproductive success (LRS) and (2) reproductive success should include the production of reproductive offspring; i.e., grandoffspring. Chapter 4 (Jones) develops ideas to explain why most social mammals have intermediate or low skew. Social mammals are exposed to variable environments, and through the evolution of endothermy, large brains, and behavioral flexibility, are preadapted to variable regimes and likely to adjust so that reproductive skew is likely to be low compared to social insects. Chapter 5 (Wang et al.) reports skew in social behaviors in ten yellow-bellied marmot groups defined by a simple association index. Previous research reported variation in rates of social behavior was related to population density, kinship, length of shared residency, the age-sex structure of the population, and individual behavioral phenotypes (Armitage 1991). None of these relationships are included in the skew model; thus, it is unclear whether skew provides any insights into behavioral variability. However, the lack of skew in the propensity to emit alarm calls supported previous reports that a sentinel role does not occur in marmots. Chapter 6 (Hager) provides a good review of skew theory and incorporates future mating prospects as a factor affecting the degree of skew in male langurs. Chapter 7 (Kutsukake & Nunn) argue that a model that is appropriate for one species may not be appropriate for another or may fit certain demographic or ecological situations but not others within a species. They discuss the priority of access model in relation to skew models and argue that skew models can incorporate a greater number of variables which permits a more detailed investigation of variation in male mating access. They, as well as other authors, suggest the need to test alternative explanations. In chapter 8, Rubenstein and Nuñez point out that horses and zebras form mixed non-kin groups because young of both sexes disperse at maturity, which results in reproductive skew in both sexes. Skew emerges when dominants limit the reproduction of subordinates and do worse in the absence of subordinates and when subordinates do better than they would by leaving. This last point is critical and inadequately investigated. Most skew research is short-term and subordinates are considered to have low fitness. However, the fitness of the subordinate must be compared with the fitness it would have if it left the group and sought reproductive success elsewhere. Furthermore, in long-lived species, one should determine if a subordinate over time improves its rank and increases its LRS. Theoretically, there could be no skew when LRS is considered.

Conflict and cooperation go hand-in-hand in avian societies (Chapter 9, Koenig et al.) and current skew theory has many problems coping with this condition. Incest avoidance is considered a reason for non-breeding and needs to be incorporated into skew models. I found an inter-specific meta-analysis quite revealing: it identified relatedness, benefits of coalitions, and ecological constraints as critical factors in group living. By contrast, an examination of five species of cichlids and wrasses found no obvious relationship between average relatedness, group size, and levels of reproductive skew (Chapter 10). Taborsky emphasizes the need to consider state dynamics as conditions constantly change due to continuous growth after maturation. In chapter 11, Field & Cant report that only one of eight studies of primitively eusocial wasps found support for the concession model (the dominant concedes some reproduction to the subordinate).

Part III consists of three chapters under the theme of resolving reproductive conflicts. Chapter 12 (Abbott et al.) considers the role of self-restraint and infanticide in promoting reproductive skew in female common marmosets. Faulkes & Bennett (Chapter 16) provide a good discussion of the importance of dispersal and inbreeding as factors influencing the degree of skew in mole rats. I

especially liked their discussion of restraint models (the subordinate reproduces less than it could) as I have never accepted the idea that an individual should make a conscious decision not to reproduce. As Faulkes & Bennett state, it is unclear how this restraint operates from a physiological and neuroendocrine point of view. Abbott et al. state in chapter 12 that if the dominant female is removed, the restraint is quickly lost. In chapter 14, Young discusses the causes of physiological suppression and distinguishes between subordinate restraint vs active interference by dominants and considers the importance of cues in restraint. But do not these cues, even if subtle, represent reproductive suppression on the part of the dominant individual? It is not difficult to conceive that natural selection could favor the use of subtle cues rather than active aggression; both animals would save time and energy and avoid possible harm associated with more vigorous interference.

Part IV has three chapters that focus on future directions. Harris and Hagar (Chapter 16) present a genetical view of the evolution of reproductive skew. Hodge points out that models do not consider variation in the capacity to reproduce. She also emphasizes that it is more important to determine the causes of skew than testing whether a particular model is consistent with the pattern of skew. This theme is vigorously developed by Crespi (Chapter 17, p.500) who suggests that "top-down" models should be replaced with a "bottom-up" approach. Furthermore, Crespi states that "simple assumptions of control are unjustified and their predictions are too general, in most cases, to be of much practical use for the planning or interpretation of empirical studies" and that the structure of life-history trade-offs is missing from most models. In other words, we need to determine what individuals do to maximize their reproductive success and determine whether skew models or individual fitness models better capture the results. In this same vein, Taborsky (Chapter 10) has an excellent discussion of empirical research in behavioral ecology (pp. 292-294) that is valuable and informative for any behavioral ecologist.

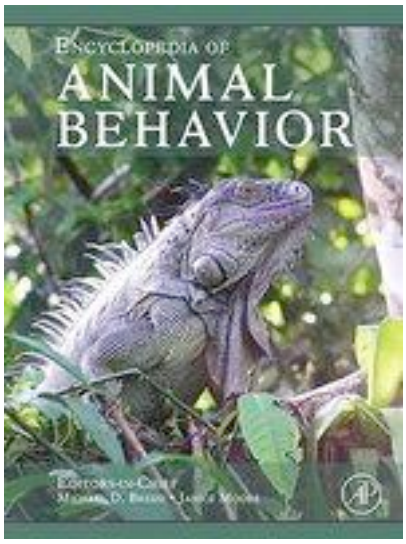
My research has emphasized individual fitness approaches (e.g., Armitage & Schwartz 2000) and I have doubted the usefulness of skew theory. Despite my doubts, I found this book informative, thoughtful, and well-written. Anyone interested in skew theory should read this book and the length is about right for a semester-long graduate seminar. Hagar stated that the factors causing skew can be analyzed without skew theory, but skew models offer testable hypotheses. The readers of this book can judge for themselves the usefulness of reproductive skew theory.

Kenneth B. Armitage
Ecology & Evolutionary Biology Department,
University of Kansas, U.S.A.

References

Armitage KB. 1991. Social and population dynamics of yellow-bellied marmots: Results from long-term research. Annu Rev Ecol Syst. 22:379-407.

Armitage KB, Schwartz OA. 2000. Social enhancement of fitness in yellow-bellied marmots. Proc Natl Acad Sci USA. 97:12149-12152.



If you are interested in receiving AND reviewing this 3 volume tome by Breed and Moore, please email me (marie.herberstein@mq.edu.au). The due date for the review is end of February 2011.

Tinbergen's Legacy in *Behaviour*

Frank von Hippel. Brill, 2010. 539 Pp.
ISBN 978-90-04-17029-2 (hardcover)

This book is a compilation of landmark publications on stickleback behavior that were published over the last 60 years in the journal *Behaviour*. It showcases how the study of behavior has changed over time from Tinbergen's classic ethological studies to research being conducted on stickleback today that, while using more modern approaches, do not lose sight of the importance of the earlier ethological foundation. In addition, the transition from historical to more recent papers, as von Hippel notes, shows how the nature of science and science writing has changed over time. There has been a shift from simple experiments and observations to detailed studies of phylogenetics and toxicology; from a verbose, anthropomorphic writing style to a more concise, objective form. Above all, the book emphasizes the varied uses of the threespine stickleback as a model system. It is still the 'go to' organism for many ethological studies but it is also widely used for evolutionary biology and genetics and, most recently, has served as an indicator species in ecotoxicology. Von Hippel provides a variety of reasons for why sticklebacks are so widely studied, beyond their charismatic nature. Tinbergen was attracted to their stereotypic, easily characterized behavior while researchers today are drawn to their complex social systems and extreme geographic variation in morphology and behavior. In addition, findings in stickleback can be generalized to many social vertebrates making them an ideal study system for a wide variety of research questions.

The book is divided into five sections and articles within each section are presented in chronological order. This adds to the continuing theme of moving from a historic to a more modern approach. Throughout all five sections Tinbergen's four postulates are an underlying theme, with an emphasis on causation and function. Each of these sections is prefaced by an introduction by von Hippel that serves to orient the reader to upcoming topics and tie the articles together as well as place the articles within a given section in both a historical and modern framework. Some articles are presented in their entirety while excerpts of others are given. The excerpts are chosen well and the main points are retained. Nine of the chapters are preceded by compelling retrospectives from the respective authors that provide insight into each author's career path, the development of the study the chapter is based on, and/or their research trajectory after the study was published. An interesting addition is the bibliography at the end of the book that lists all of the articles on stickleback published in *Behaviour* since its inception. This provides the reader with an appreciation of Tinbergen's legacy beyond the articles featured in the book.

The first section (Reproductive cycle) starts with a discussion of displacement activities and moves on to articles covering aggression during the breeding season, paternal care and fry survival, and finally, articles on nuptial coloration and its function and significance. A discussion of courtship in the ninespine stickleback, then called the ten-spined stickleback, is also included and is one of only a few articles in this book on stickleback species other than the threespine stickleback. This is not surprising, given the popularity of threespine versus other stickleback species. The order of the papers in this section reflects a shift from a traditional ethological way of thinking to the more current behavioral ecological approach. This progression mirrors the shift from viewing courtship and nuptial coloration as being controlled by innate releasing mechanisms to understanding that they, like much of behavior, are actually the product of the environmental and social context in which they are expressed. We see how ethological principles can benefit from being placed in an ecological context, an idea that extends far beyond the study of stickleback. This section is the strongest in the text, which is not surprising given that much of the work on stickleback has focused on the reproductive cycle. I was especially fond of Bakker's retrospective in this section as it provides an excellent reflection on the development and growth of a research program.

Section 2 (Homosexuality, cannibalism and sexual strategies) contains articles that are a natural progression from Section 1 in the book. Here the emphasis is on behavior during the breeding season and includes articles on territoriality, mate choice, and egg cannibalism. I often found myself wondering why an article was placed in Section 2 rather than Section 1 and vice versa. This by no means detracts from the articles or the book as a whole but I do wonder if there might have been another way to organize these two sections. This section contains both laboratory and field studies and highlights the role that both social and physical environment play in shaping stickleback courtship, aggression, and paternal care. Articles here, especially Foster's 1995 article on the evolution of courtship displays and egg-cannibalism in freshwater populations of threespine stickleback in Alaska, provide excellent examples of the extreme behavioral variation that exists in threespine sticklebacks, something that certainly would have surprised Tinbergen.

Predators and parasites (Section 3) focuses on the role that predators and prey have played in shaping threespine stickleback morphology and behavior. The development and function of the stickleback's unique body armor and spines and the effects that parasitism has on stickleback behavior are both addressed by articles in this section. Von Hippel's introduction to this section, while short, does a good job of tying together articles that are quite disparate in focus. The reader understands the rationale between grouping articles on antipredator behavior and parasitism, mainly because they both deal with defense mechanisms. This section also continues the ongoing theme of the book, how environment has shaped both morphology and behavior in the stickleback.

Section 4 (Physiology and behavior) is the shortest section with only three articles. These articles include studies on nestbuilding and osmoregulation, photoperiod effects on reproduction, and Borg and Mayer's study on androgens and behavior, which I found especially interesting. This section lacked the cohesion of the other sections, in my opinion. This likely reflects the nature of the journal rather than any fault of the editor. I found myself disappointed with the introduction to this section, which did not seem to fit the articles as well as von Hippel's introductions for the other sections do. In fact, much of what was discussed in the introduction felt like it might have more appropriately have preceded the section on genetics. Despite these flaws, I did still find this section to be a worthwhile read; I just did not feel it was as solid as the other sections.

The final section (Behavioral genetics, phylogenetics and speciation) reflects where the study of stickleback is going

and shows where the potential for future study exists. The emphasis here is on how the environment has shaped behavioral differences among populations of threespine stickleback as well as on the genes that underlie these behaviors. The articles in this section include an exploration of the genetics behind differences in conspecific aggression in the threespine stickleback and a study on behavioral differences in the behavior of sympatric forms of threespine sticklebacks. These works clearly demonstrate the knowledge that has been gained on the mechanisms underlying rapid morphological and behavioral adaptation through the use of the threespine stickleback as a model system. With the recent sequencing of the stickleback genome, its role in developmental genetic and phylogenetic studies will only increase.

This book is recommended for those interested in the development and growth of the field of ethology and for anyone working with stickleback so they can gain a real understanding and appreciation of the "roots" of these studies. One of the real strengths of this anthology is the breadth of articles contained within. It provides a clear picture of the historical study of stickleback behavior and of the future of stickleback research. It is clear that the stickleback will remain a model system, not just for ethologists but for geneticists and evolutionary biologists as well. This truly is Tinbergen's legacy.

Teresa L. Dzieweczynski
Psychology Department, University of New England
Biddeford, ME 04005, USA

Enter your best photos to the ISBE photo competition

The 2011 photographic competition is now open. Please send your photos to (isbephotocomp@gmail.com) by February 1st 2011. The winner and runners up will be announced in the 2011 March 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 (2010) student members of ISBE. Photos should depict any aspect of behavior and behavioral ecology.

Competition rules

- The competition is open to current (2010) 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 2011.

Name: Dominic Wright

Education: BSc (1999) Univ College London; PhD (2005) Leeds Univ

Current address: AVIAN Behaviour Genomics and Physiology Group, Linköping University, Linköping 58183, Sweden; domwright@gmail.com

Research interests: The genetic basis of behavioural traits; genetics of sexual ornaments; domestication

Selected papers:

Wright D, Rubin C, Martinez Barrio A, et al. (in press) The genetic architecture of domestication in the chicken: effects of pleiotropy and linkage. Mol Ecol.

Wright D, Boije H, Meadows JRS, Bed'hom B, Gourichon D, Vieaud A, et al. (2009) Transient ectopic expression of SOX5 during embryonic development causes the Pea-comb phenotype in chickens. PloS Genetics 5: e1000512.

Wright D, Kerje S, Brändström H, Schütz K, Kindmark A, Andersson L, et al. (2008) The genetic architecture of a female sexual ornament. Evolution 62: 86-98.

Wright D, Nakamichi R, Krause J, Butlin RK (2006) QTL analysis of behavioural and morphological differentiation between wild and laboratory zebrafish (*Danio rerio*). Behav Gen. 36: 271-284.

Name: Tom Price

Education: BSc (1999) Univ Cambridge; PhD (2004) Univ Leeds

Current address: College of Life and Environmental Sciences, University of Exeter, Penryn, Cornwall, TR10 8BZ, UK; tom.price@exeter.ac.uk

Research interests: Sexual selection and the evolution of polyandry; meiotic drivers and other selfish genetic elements; *Drosophila* ecology and evolution; extinction

Selected papers:

Price TAR, Lewis Z, Smith DT, Hurst GDD, Wedell N (2010) Polyandry prevents extinction. Curr Biol. 20: 471-475.

Price TAR, Lewis Z, Smith DT, Hurst GDD, Wedell N (2009) Sex ratio drive promotes sexual conflict and sexual coevolution in the fly *Drosophila pseudoobscura*. Evolution 64: 1504-1509.

Price TAR, Hodgson DJ, Hurst GDD, Wedell N (2008) Selfish genetic elements promote polyandry. Science 322: 1241-1243

Name: Joanna Wiszniewski

Education: BMarSc Hons (2004) Macquarie Univ; PhD (2010) Macquarie Univ

Current address: Taronga Conservation Society Australia, Sydney NSW Australia; jo.wiszniewski@gmail.com

Research interests: Evolution of social behaviour and cooperation, dynamics of social networks, mating systems, population genetics, cetacean biology and conservation.

Selected papers:

Wiszniewski, J, Allen, SJ, and Möller, LM. 2009. Social cohesion in a hierarchically structured embayment population of Indo-Pacific bottlenose dolphins. Anim Behav. 77: 1449-1457

Wiszniewski, J; Lusseau, D, and Möller, LM. 2010. Female bisexual kinship ties maintain social cohesion in dolphin network. Anim Behav. 80: 895-904

Wiszniewski, J, Möller, LM, Allen, SJ, and Beheregaray, LB. 2010. Environmental and social influences on the genetic structure of bottlenose dolphins (*Tursiops aduncus*) in Southeastern Australia. Conserv Genet. 11: 1405-1419

Name: Anindita Bhadra

Education: BSc (1999) Calcutta Univ; (MSc 2001); PhD (2008) Indian Institute of Science

Current address: Department of Biology,

Indian Institute of Science Education and Research - Kolkata, PO. BCKV Main Office, Mohanpur 741252, Nadia, West Bengal, India; abhadra@iiserkol.ac.in

Research interests: behavioural ecology of the feral/ stray dogs in India

Selected papers:

Bhadra B, Mitra A, Deshpande S, Chandrashekhar K, Naik DG, Hefetz A, Gadagkar R. 2010. Regulation of reproduction in the primitively eusocial wasp *Ropalidia marginata*: On the trail of the Queen pheromone. J Chem Ecol. 36: 424-431.

Bhadra A, Jordan F, A. Sumana, S, Deshpande A, Gadagkar R. 2009. Comparing social networks of wasp colonies and classrooms: heterogeneity and functioning, Ecol Complex. 9: 48-55

Bhadra A, Gadagkar R. 2008. We know that the wasps know: Cryptic successors to the queen in the primitively eusocial wasp *Ropalidia marginata*. Biol Let. 4: 634-637

ISBE 2010

12th Biannual Congress, Perth, Australia

After arriving in Perth many of us realized why Australian delegates sometimes look so pale at the beginning of congresses in Europe and North America. Sleeping on airplanes is never easy, and there is a limit to how many movies you can watch on a flight. At the welcome reception, however, after the opening speeches of main organizer Leigh Simmons it soon became clear that the travel effort was worth it. There was a spectacular slideshow overview of Western Australia's natural beauty and interesting wildlife presented by Lynn Beasley (Chief Scientist of Western Australia) after which the cultural riches of this region were highlighted by the performance of a aborigine dancing troop. This of course happened alongside joyful reunions of old colleagues and other scientific acquaintances. Also, ALL of us had shown up for this occasion, which caused some inconveniencies, such as a scramble competition for drinks and snacks, and the joyfulness being a bit too loud. With that, however, we have to say that this was really the only time the Perth convention centre had underestimated us behavioural ecologists. The lunches were excellent, with great fresh salads, and yes, those deserts, and with plenty of food and drink to go around. The location itself was appropriately at the Swan riverside, in downtown Perth, connected directly to the main city bus and metro system, with many excellent restaurants nearby. Going out to a restaurant the first day of the congress, however, proved to be problematic. Due to the Queen's Birthday most restaurants were closed Monday evening. But wait, was it really the Queen's birthday? Confusion among those of us not from the commonwealth, or make that those of us not from Western Australia, since the rest of Australia considers the queen's birthday to be in June, and the actual day of birth of Elizabeth is on the 21st of April.

The convention centre was large, and while there were other congresses running in parallel, this was hardly noticeable to us, and all auditoriums were right next to each other, in the same building. As usual, the length of the oral presentations was 15 minutes, followed by 3 minutes for questions and then 2 more minutes for movements between sessions. This was plenty of time in this building, also aided by the great ISBE tradition that sessions are synchronized by a computer system with sound signalling at set time intervals. This time we were alerted by a Western Australian frog that told us to stop and take questions. After 17 minutes a loud chorus of laughing kookaburras made further talking impossible. This was followed by didgeridoo music that ended when the next session should start. We saw several people getting really into the groove of the didgeridoo tunes.

The number of delegates, 734, was somewhat lower than predicted by the stable increase that has been a trend in previous meetings (Fig. 1) . This was probably due to several factors, including the timing at the end of September which is during the autumn semester in large parts of Europe and North America, and, the distance (high prices, long flights) between Australia and North America and Europe. It should be observed, however, that the attendance still is a record for the Southern Hemisphere since the number of delegates in Perth was higher than in Canberra in 1996. Many delegates agreed that this was the correct timing for a congress in Australia, considering the flowers and the wildlife. The somewhat low attendance was more that compensated for by a record number of talks, 426 (the previous one was 402 in Cornell), of which six were memorable plenaries. The number of posters was slightly less intimidating, 250, which made it possible to continue the agreeable tradition from Cornell to allow posters to remain in place for the whole congress.

The organizers solved the gender issue elegantly with a perfect 3:3 ratio among the six plenary speakers. This seems representative of the overall contribution to this conference, judged from the ratio among all presenters of accepted talks the sex ratio for the 420 submitted talks was 52% men and 48 % women. The topics of the plenaries were a good mix of cutting edge technology, old questions and new insights. Both Nina Wedell and Mariana Wolfner used new technological tools to provide insight to the old question of why females mate multiply and how males can (or cannot) influence female reproductive behaviour. While Nina Wedell focussed on selfish genetic elements and male & female genetic compatibility, Marianne Wolfner educated us on the tango of male and female derived molecules during fertilization and their effects on social interactions.

New technology was also implemented in Jens Krause's talk, in which he showed us his studies on spatial behaviour of schools of fish with the aid of a robo-fish. Remarkably, robo-fish can be replaced by robo-ecologists, with some simple instructions. Perhaps this is an idea for future ISBE meetings in getting all us behavioural ecologists to where the organisers want us to be for coffee breaks, reception parties, etc.

Social interactions were an important theme also in the plenary of Stuart West, who used the molecular approach when he explained that iron (in siderophores) may be important for social interactions (in microbes). Before this talk most of us would probably not even have considered something like sociobiology in microbes. Social interactions were important also for the baboons in Louise Barret's presentation of sexual conflicts in various types of these. At least I know much more about how different baboons from various parts of Africa now. Mats Olsson made it clear that the best sexual partners have the longest ones also among lizards, the longer the better. Fathers with longer ones get more fit offspring and older fathers get sons with shorter ones. Telomeres that is, of course.

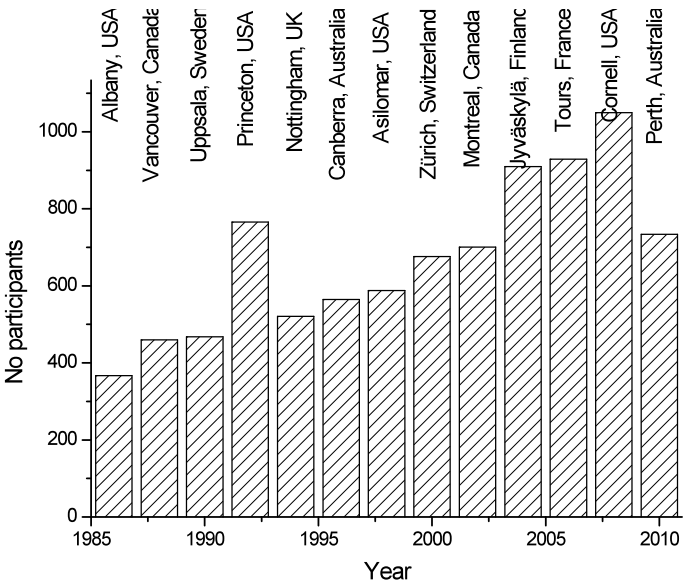


Figure 1. Number of delegates in ISBE congresses

The Hamilton lecture that was given by Nick Davies was, as expected, excellent. He used his study system on cuckoos and their hosts to illustrate the development of the field of behavioural ecology in a historical overview. A highlight was the first film of a cuckoo parasitizing a nest, with some amazing equipment from that time. We'd love to get a hold on that camouflage tent! Early behavioural ecologists were clearly into natural history. We also learned that an old clerical piece of advice (during the Victorian age) that humans should adopt the mating system of dunnocks was quite bad. Hopefully it was given under poor knowledge of dunnock ecology and not from sexual desires.

The development of the field of behavioural ecology goes on. In order to investigate subject trends we have tried to merge the subjects categories used at the meeting into a smaller subset of topics that were used in the report from the Cornell meeting (Stewart et al. 2008). Of course this is very difficult, because many of the talks fit into several categories and the categories are not mutually exclusive. The categories we used were (categories in the program in italics): 1. Sperm competition, mating systems and sexual selection (*Mating systems, Sperm competition and cryptic female choice, Alternative mating strategies, Female choice, Sexual selection, heterozygosity and inbreeding, Mating competition, sexual selection and speciation*), 2. Personality (*Personality and behavioural syndromes)*, 3. Cognition (*Learning and decision making, Mechanisms of cognition*), 4. Communication and signals (*Acoustic communication, Olfactory communication, Caretenoids and fitness, Visual communication, Structural colours, Predation and signal evolution*), 5. Predator – prey (*Anti-predator strategies*), 6. Parental care (*Parental care*), 7. Life history (*Life-history evolution*), 8. Host-parasites (*Host-parasite interactions*), 9. Population structure (This was not a category anymore, only mentioned in single talks!), 10. Sex ratios (*Sex ratios*), 11. Behaviour (*Hormones, physiology, behaviour, Migration and dispersal, Interspecific conflict & cooperation, Conflict, cooperation & sociality, Conflict, cooperation & kinship, Sexual conflict*), 12. Conservation (*Ecology & conservation*), 13. Foraging ecology (*Foraging*), 14. Others (*Genetics, Paternal & maternal effects*). The talks in the category *Sexual selection and signalling* was allocated to either "Communication and signals" or "Sexual selection" depending on the emphasis of the presentation.

It appears as if sexual selection and sperm competition is becoming less dominant, although this is not apparent from the topics in the plenary presentations. The final category, behaviour, increased, but this category is a bit diffuse, almost anything could be included here.

The conference outings mid week were a welcome break from the indoors activities. Many of us had opted to go out to the nature reserve, and those that did saw a black cockatoo in all its glory, and loud obnoxiousness. For the outcome of the traditional football or soccer tournament, you will have to ask around yourself, since we did not participate, but we did not notice anyone with any serious injuries, so presumably it was played European, not Australian style.

Among the submitted talks some were especially noteworthy, and this in combination with being heard by one of the authors. Tanya Latty's presentation of optimal foraging in slime moulds was amazing. Not only did we learn that these brain- (and nerve-) less creatures are able to choose correctly between foraging alternatives with different levels of risk (OFT-risk, not predation) but we also learned which types of Australian beer we should avoid. We are already looking forward to the next ISBE congress where Tanya has promised to tell us how slime moulds can be so cognitive. Alexandra Balogh presented an interesting

Table 1. Topic trends. Presentations listed by topic at Zurich 2000, Cornell 2008 and Perth 2010.

	2000	2008	2010
Sperm competition, mating systems and sexual selection	30.6	27.1	18.3
Personality	0	2.2	4.8
Cognition	1.7	3.9	4.8
Communication and signals	17.6	24.5	12.6
Predator prey	3.8	2.1	4.8
Parental care	5.3	4.2	3.6
Life history	11.9	12.5	6.6
Host-parasites	3.2	2	4.8
Population structure	4.6	1.3	0
Sex ratios	2.6	1.2	3.6
Behaviour	14.2	13.6	19
Conservation	0.2	1.2	2.4
Foraging		4.3	4.2
Others (Paternal & Maternal Effects, Genetics	?	?	6.0

overview of the theory behind the evolution of Mullerian mimicry. She suggested that initial mutational leaps towards feature similarity in one dimension could explain mimicry evolution in several dimensions.

Manfred Milinski's game theoretical approach on how to prevent climate change was very interesting. When there is a mix of "rich" and "poor" players' cooperation towards a common goal (e.g. reducing greenhouse gases) will only occur if an intermediate short-term goal exists. Our suggestion is that Manfred should be a plenary speaker at the next IPCC meeting; maybe they would get at least some results then. Nico Michiels gave an interesting talk on fluorescence in fish suggesting that this may be a hitherto unrecognized channel for signalling in fish. Lots of fish seem to have these fluorescent colours; will we see a new research field emerge here?

Richard Prum suggested that sexual selection needs a null model revolution. He argued that the Lande-Kirkpatrick model of trait-preference coevolution is like the Hardy-Weinberg equilibrium of sexual selection: meaning that arbitrary traits and preferences will co-evolve to an (un)stable equilibrium in the absence of any further selection on trait or preference. He argues that incorporation of the LK model into sexual selection will improve understanding of how natural selection acts on preferences to shape signals. This is an interesting new point of view on existing models and data!

Stephen Emlen proposed a broader, more inclusive, theoretical frame work for the formation of cooperative social groups, beyond ecological constraints thinking. Instead he proposed to assume that insiders largely control group membership– including cooperative social groups, for two categories of group benefits: resource access and socially produced benefits. This may explain a larger spectrum of social group living, than the current ecological constraints model.

The conference dinner was excellent, with beautifully set tables and of course great food, wine and company. After Leigh Simmons made his closing statement, the band started playing, and even before desert many of us were on the dance floor. I think everyone eventually made it up there. It was a wonderful ending to a wonderful conference. Invigorated with the inspirational talks and social events, many of us went on to explore the natural beauty of Australia.

Anders Brodin, and Machteld Verzijden
University of Lund

With additional spying help from Lotta Kvarnemo, Göteborg and Anders Berglund, Uppsala.

References

Stewart I, Wetzel D, Martin S. 2008. Review of ISBE2008 Cornell University: Cornell was gorge-ous. ISBE Newsletter 20 (2): 9-11.

Twelve suggestions for presenting a successful talk

Giving a talk at a conference is something that all behavioral ecologists must do at some point, and yet there are surprisingly few guides to help you go about this. Here I give several suggestions on how to prepare yourself for speaking, and how to improve your slides and the general smoothness of your presentation. I composed this informal list simply because I had never seen one by anyone else, and while I don't expect everyone will agree with all of it, hopefully most people will find something useful in it.

1) Don't panic! First of all, nothing really bad is going to happen. The stage is not going to collapse, the ceiling projector is not going to drop on your head, and your clothes are not going to suddenly fall off! It's only natural to be nervous, but don't make the situation worse for yourself by envisioning a lecture theatre filled with crotchety old professors eager to publicly humiliate you with cutting comments and nasty questions. In reality, the majority of academics are nice people, and if they really disagree with your talk they are much more likely to either seek you out privately later to discuss it or just let it pass altogether. Always remember that the vast majority of the audience is on your side before you even say anything: they have made the effort to be there because they are interested in your research and want to learn something. Nobody wants to see you slip up. Also, since many of them will have given a talk themselves and understand how nerve-wracking it can be, a few little wobbles from the speaker are hardly unexpected. Even if there are a few 'big cheeses' sitting in the dark corners, take confidence from the fact that you know more about the specifics of the subject and your study system than the remainder of the audience.

2) Appreciate that you've never had it so good. Giving a talk has never been more straightforward than it is today thanks to PowerPoint, which in one merciful stroke consigned overhead projectors, CCTV and the dreaded slide carousels to the dustbin. Provided the various formatting options are used with restraint (see note 3) it is not too difficult to generate a very professional-looking presentation, and you can now give the audience an enjoyable 'hands-on' feel for your research by embedding sound clips and videos of animals in action. PowerPoint's user-friendliness also makes it easy to totally overhaul a talk you are unhappy with or fine-tune an existing talk until you are satisfied, which was a real hassle in the days of slides.

3) Don't overcomplicate the appearance of your slides. The latest version of PowerPoint does indeed contain a dazzling array of backgrounds, colors, fonts and font-styles. However, just because they are available does not mean you have to use them. Certain combinations of background, text and font style can be very difficult to read, particularly if they vary between slides, and remember that approximately 7% of men are red-green color blind. The best combination is usually a simple, sans serif font on a plain or subtly-featured background. Avoid placing text over a background photograph, as this can be unreadable, especially if the text goes across differently-colored areas of the photo. Also, think carefully before using animated text. A rapid series of text blocks zooming in from all angles is more likely to induce motion sickness than interest. A more effective way to introduce a series of points is to create a sequence of duplicate slides in which each point is highlighted in turn while the rest are darkened or subdued. Modifying duplicate slides is also a nice way to build up a complex figure or flow chart that would be otherwise overwhelming. Begin with a slide showing the basic relationship or key components, then add in levels of detail by overlaying progressively more complicated versions of the original slide. Finally, slides that look great on your computer do not always look so good on the big screen. Once you have prepared your slides, try viewing them from the back of a practice room to make sure they look OK.

4) Don't overdo the text. The audience will soon lose interest if your slides are a daunting series of long-winded sentences and statements, especially if you then proceed to read them verbatim (something else to be avoided by the way – after all, the audience can just as easily read them themselves). The best slides are often those with just a few subheadings that act as prompts for points which you then elaborate upon verbally. If you absolutely cannot avoid a series of text-heavy slides, perhaps because of the need to explain a particularly complex methodology, then you could try interleaving them with a couple of quick photographs of your study species, field site or experimental set-up in order to keep your talk alive.

If your talk still seems like a fairly tedious plod of bullet pointed lists of text, an alternative way to get the message across is to use schematics such as flow charts, with arrows between each variable or event. These arrows can then be given positive or negative symbols to illustrate the direction of relationships or sequence of events. Lastly, avoid having text at the bottom of your slides since people at the back of the room may not be able to read it because of the person in front of them.

5) Don't try to say too much. You've put a lot of hard work into collecting your data so it is tempting to present all of it in order to impress the audience. Unfortunately, if you overwhelm people with information and frequently divert into data that are somewhat tangential the audience will become confused and lose sight of what your main question was. Likewise, if you have too many slides you will be forced to rush through each one with only a brief explanation, and if you don't reach your summary the audience will not get the critically important 'take-home message'. A talk that runs badly over time is uncomfortable for everyone, especially the poor moderator who has to tactfully interrupt you. Remember that the audience would much rather see a good talk based on relatively little data than a bad one based on lots.

6) Be careful when using humour. Any talk can be enlivened by a few light-hearted remarks or slides featuring cartoons, sound effects or comedic fieldwork situations, especially if they help to make a point. However, there are few things more embarrassing for both the speaker and audience than a joke that dies completely (I speak from experience, and from both sides). The easiest way to avoid these awkward silences is to steer clear of potentially offensive topics. Politically-charged barbs, disparaging comments about religion, leaden puns and crude sexual innuendoes are much more likely to backfire than clarify your study. If in doubt, try the jokes out on your lab-mates while practicing. If they don't laugh, nobody else will.

7) Don't despair if your talk looks like it will be too long. There are plenty of opportunities for shaving off a few precious seconds here and there. For instance;

a) never read out your title slide. It is already up on the screen for all to see, and even if it isn't, the moderator has probably just read it out together with the names of your co-authors and institution

b) don't bother with a 'talk outline' slide. These can be effective as part of a longer, keynote lecture, but are a waste of time in a standard talk since these all follow the exact same format of an introduction, methods, results then a discussion

c) don't dwell on basic field or lab methods unless they are particularly relevant. Many of these are now so standard they are almost taken for granted, especially if you are in a specialist symposium (e.g. how you caught and bled animals for genetic analyses or how you extracted DNA etc).

d) don't dwell on statistics unless they are unusual, complex, or an explicit aspect of your study (e.g. a new type of analysis). It is simply not worth taking the time to introduce each analysis with 'We compared weights between group 1 and group 2 using a *t*-test etc'. The pool of analyses used to compare means or test for relationships is actually fairly small (*t*-test, *U*-test, χ^2, correlation, and the various forms of ANOVA and regression) and most of the audience will either anticipate which one you used or can see for themselves provided you state it explicitly on your slide e.g. 'Spearman's $r = 0.12$ $n = 20$ $P = 0.76$'.

Also, there are several small snippets of information relevant to the data that can be inserted onto slides as sidebars rather than stated verbally, such as 'data square-root transformed for analysis' or 'data checked for normality'.

e) don't spend too long on the acknowledgements. By all means draw attention to people who have been particularly helpful, but listing every single person who played some role in your study and explaining what each of them did takes too long and will be forgotten the moment the next talk starts. Instead, try dividing your acknowledgements slide into categories, such as 'Field assistants' then list their names, and even photos if you have space, then 'Lab assistants', then 'Funding' etc. If you leave this slide up at the end people can read through it while you are answering questions.

8) Practice, practice, practice. There can be a world of difference between how a talk sounds in your head and how it sounds when you try to say it out loud, especially if you are not a naturally talkative person. Practicing in front of your lab-mates is a great way to identify slides that you stumble over or struggle to transition between, or slides that seem perfectly clear to you but are hopelessly confusing to everyone else. Your talk will ultimately be a lot better if they are frank with their feedback, even if it means taking out your most treasured and perfectly-formatted slide! The more you practice your talk, the smoother your delivery will be on the big day.

9) Anticipate computer problems. Take several copies of your talk to the meeting and use more than one format (e.g. CD and USB thumb drive) just in case the local computer can not read one of them. As a back-up, e-mail the talk to yourself so you can always download it later if you arrive at your destination but your luggage does not! If you have embedded sound clips or videos in your talk, make sure you take the original files in case there is a problem uploading, and be prepared to carry on unruffled if your video will not play during your talk.

10) Use the podium accessories. Many conference rooms are sufficiently large that it is impossible for people in the back rows to hear you unless you use a microphone. This is not as simple as it sounds however, since the microphone is usually fixed to the podium, meaning that your voice will decrease to a whisper if you wander away from the podium or turn your head to look at the big screen. To avoid these fluctuations, try to remain by the microphone, and follow the progress of your talk by looking down at the monitor in front of you rather than at the screen. Laser pointers are best used in moderation. They are useful for highlighting certain data points but can become very annoying and distracting if you use them to whiz bright red streaks back and forth on every slide.

11) Learn from other presentations. Whenever you see a really good talk, ask yourself what it was about it that made it good (and if you see a bad talk, try to identify why it was bad). Inevitably, part of this will be the data – it is easier to give a seamless talk if the data are great and unambiguously support your hypothesis. Irrespective of the data, however, almost all good talks feature a confident speaker who transitions smoothly between slides that are economical with text, and who follows the classic talk structure of a clear outline of what the hypothesis is and how it was tested, a presentation of only the graphs or tables that are directly relevant, then a neat summary of what the data show.

12) Don't despair if it 'doesn't go well'. Talks never proceed as perfectly as you want them to, probably because you have an idealized mental image of how they will play out and so any slight hesitation, stumble or omission detracts from this. Fortunately, since the audience never saw your idealized image, they probably never even noticed and thought the talk went better than you did! Nor should you let yourself be undone by other potentially disconcerting situations. For instance, you may only attract a small audience because someone very prestigious or in a more well-studied research area is talking in a parallel session. This is just circumstance, and does not demean the importance or quality of your own work. Also, if you don't get many questions, don't assume this means nobody was interested: it is just as likely that people are digesting the information before coming up with a question, or that you explained everything well and your data were thoroughly convincing!

Even if your talk didn't go as well as you would have liked, don't let this spoil your enjoyment of the rest of the conference, and don't let it prevent you from approaching people to discuss your data. Behavioral ecologists are a community after all, and people are much more likely to help you than dismiss you.

Good luck!

I thank Amanda Ensminger, Kay Shenoy, Damon Orsetti and Mariella Herberstein for useful comments and additional suggestions.

Ian Stewart
Department of Biology
University of Kentucky
Lexington, Kentucky, USA
itsacharliebrownchristmas@hotmail.com

President
Kate Lessells
NIOO-KNAW
Centre for Terrestrial Ecology
P.O. Box 40, 6666 ZG Heteren
The Netherlands
Tel: +31 (0)26 4791 230
Fax: +31 (0)26 472 32 27
Email: k.lessells@nioo.knaw.nl

Past-President
Patricia Monaghan
Division of Environmental & Evolutionary Biology
University of Glasgow
Glasgow G12 8QQ Scotland, UK
Tel: +41 330 6640
Fax: +41 330 5971
Email: p.monaghan@bio.gla.ac.uk

President-elect
Gunilla Rosenqvist
Department of Biology
Norwegian University of Science and Technology
Tel: + 47 7359296
Fax: +47 736100
Email: Gunilla.Rosenqvist@bio.ntnu.no

Secretary
Robert Magrath
School of Botany and Zoology
Australian National University
Canberra 0200, Australia
Tel: +61 2 6125 3060
Fax: +61 2 6125 5573
Email: robert.magrath@anu.edu.au

Treasurer
Walt Koenig
Lab of Ornithology
159 Sapsucker Woods Rd.
Ithaca, NY 14850 USA
Tel: +1 607 254 2151
Fax: +1 607 254 2904

Councilors

Dr Laura Roxana Torres Avilés
Intituta de Ecologia
Universidad Nacional Autonoma de Mexico
04510 México
Tel: +52(55) 56229044
Email: lrtorres@servidor.unam.mx

Maydianne Andrade
Department of Biological Sciences
University of Toronto Scarborough
1265 Military Trail
Scarborough, ON M1C 1A4 Canada
Phone: +1 416-287-7425
Fax: +1 416-287-7676
Email: mandrade@utsc.utoronto.ca

Bart Kempenaers
Max Plank Institute for Ornithology
Behavioural Ecology and Evolutionary Genetics
Haus Nr. 5, Postfach 1564
82305 Starnberg/Seewiesen, Germany
Tel: +49 (0) 8157 932 - 334
Fax: +49 (0) 8157 932 - 400
Email: b.kempenaers@orn.mpg.de

Bruce Lyon
Earth & Marine Sciences A308
University of California
Santa Cruz, CA 95064
Tel: +1 831.459.3949
Fax: +1 831.459.5353
Email: lyon@biology.ucsc.edu

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).

Association for the Study of Animal Behaviour, Winter Meeting: Interspecific communication
December 2-3, 2010, London, UK
http://asab.nottingham.ac.uk/meetings/asab.php

Society for Integrative and Comparative Biology
January 3-7, 2011
http://www.sicb.org/meetings/index.php3

Joint Meeting of the British Ecological Society, The Biochemical Society and the Society for Experimental Biology
Stress response - molecules, organisms and environments
January 4-7, 2011, Charles Darwin House, London, UK
http://www.jointstress.org/

In the Light of Evolution V: Cooperation
January 6-8, 2011, Irvine, California, USA
http://www.evolutionsociety.org/news.asp#Cooperation

The International Biogeography Society, 5th Biennial Conference
January 7-11, 2011, Crete, Greece
http://www.biogeography.org/html/Meetings/index.html

Keystone Symposia Meeting on: "Evolutionary Developmental Biology"
February 27 – March 3, 2011, Tahoe City, California, USA.
http://www.keystonesymposia.org/meetings/

Australasian Society for the Study of Animal Behaviour - Annual Meeting
April 11-15 2011, Adelaide, Australia
http://www.assab.org/meetings/assab-2011/

Gordon Research Conference: Ecological and Evolutionary Genomics
July 10-15, 2011, University of New England
Biddeford, USA
http://www.grc.org

The Society for the Study of Evolution, Annual Meeting
June 17-21, 2011, Norman, Oklahoma, USA
http://www.evolutionsociety.org/meetings.asp

International Ethological Conference
July 25-30 2011. Bloomington IN, USA
www.indiana.edu/~behav11

13th European Society for Evolutionary Biology Congress
August 20-25 2011, Tübingen in Germany
http://www.eseb2011.de/

European Ornithologists' Union (EOU) 8th Conference
August 27-30 2011, Riga, Latvia
http://eou.biology.lv/

XXIII meeting of the International BioAcoustic Council (IBAC)
September 12th - 16th 2011, La Rochelle, France
http://www.cb.u-psud.fr/ibac2011/

Australasian Ornithological Conference
September 28-30 2011, Cairns Australia
http://www.birdsaustralia.com.au

2nd World Conference on Biological Invasions and Ecosystem Functioning
November 21-24, 2011, Mar del Plata, Argentina
http://www.grieta.org.ar/biolief/

Association for the Study of Animal Behaviour Summer Meeting 2011: Understanding Animal Intelligence
August 18- 19 2011, University of St Andrews, UK
http://asab.nottingham.ac.uk/meetings/index.php

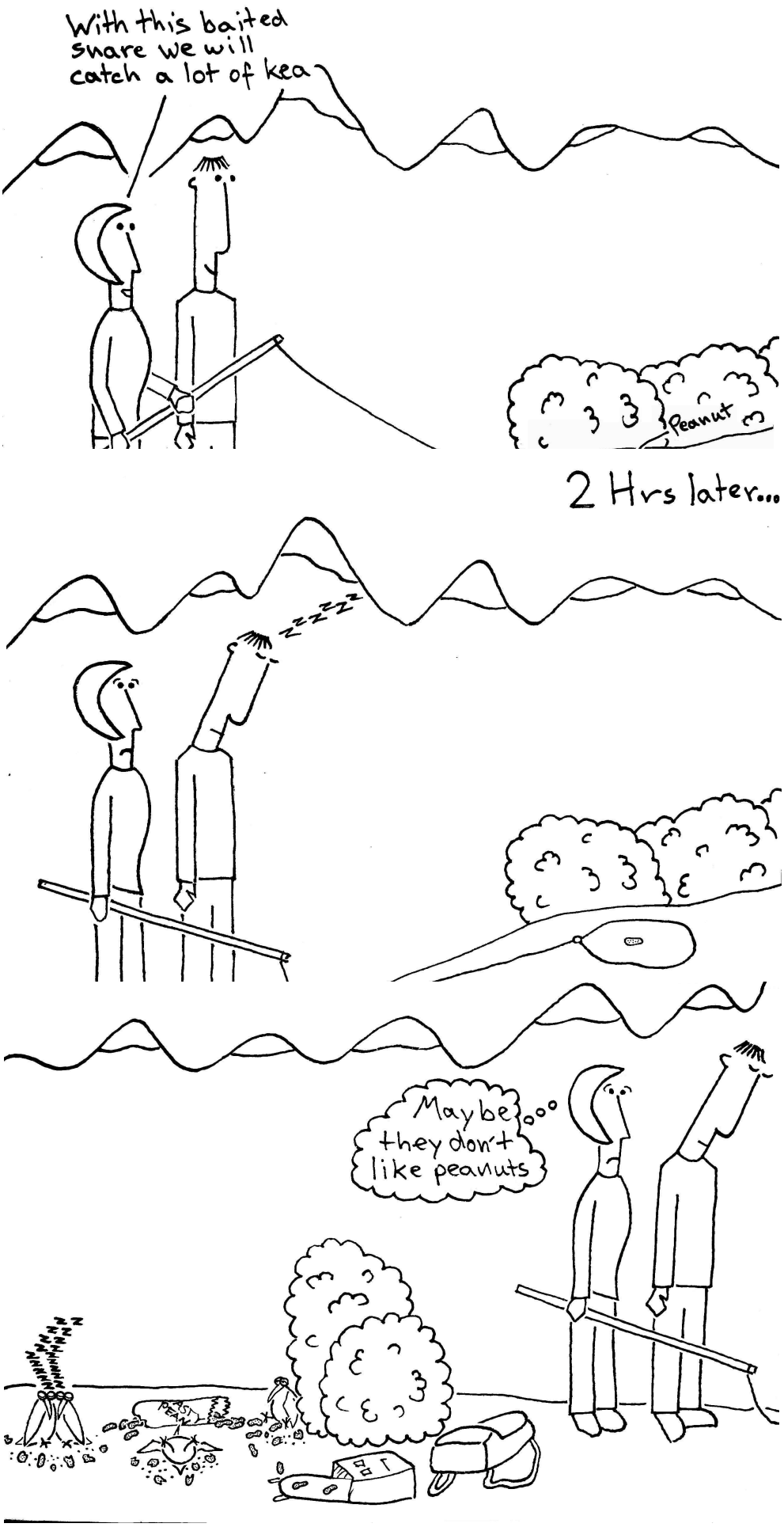
Frontiers in Behavioural Biology
From Ethology to Comparative Cognition
September 24-25 2010, University of Vienna, Austria
www.klf.ac.at/symposium2010

…..and beyond 2011

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

14th Congress of the International Society for Behavioral Ecology
August 11-17 2012, Lund, Sweden

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



by Raoul Schwing, University of Auckland