

ASAB Newsletter

Spring 2011



A note from the Newsletter Editor...

Dear ASAB member,

Welcome to the Spring 2011 edition of the ASAB Newsletter! After what has seemed to be a very long, cold Winter, Spring finally seems to be well into the swing of things with new life bursting onto the scene all around. It's a far cry from the frozen, snow-bound London of December that bore witness to the terrific ASAB Winter conference. In spite of the inclement weather conditions, attendees battled through the snow and arrived in great numbers (and spirits!). We announced the winner of the 2010 ASAB/ New Scientist Young Science Writer of the Year competition as Andrew Holmes of the University of Liverpool, whose winning article, "Family Matters" featured on the New Scientist website in December. You can read the article for yourself on page 4 of this newsletter.

Also in this edition of the Newsletter: ASAB President Prof. Jane Hurst explains how changes in BBSRC strategic priorities could potentially affect funding of animal behaviour research, Membership Secretary Prof. Sue Healy provides further information about the new online system for renewing your ASAB membership and Charlotte Evans, ASAB's new Education Officer, introduces herself and discusses the education news.

As always, we are keen for ASAB members to get involved with the Newsletter, so if you have any news or comments to include in the future editions, or if our student members wish to get involved in any way, please do contact me at ASABNewsletterEditor@gmail.com

With all best wishes,

Lisa Collins

In the news...

A brief look at some of the animal behaviour coverage in the media this Winter/Spring

Cave fish have been shown to sleep less than surface fish, according to a study by Duboué et al. in the April 7 issue of *Current Biology*. Under experimental conditions, the researchers found that surface fish slept for an average of 800 minutes, and cave fish for 110-220 minutes in a 24 hour period. They will next look for a genetic basis for this difference with potential applications to human insomnia cases.

A recent study by Hollis Parker et al. investigated the **molecular evolution of three independent origins of eusociality** by comparing 10 species of bee of varying levels of sociality. Their findings, published in *Proceedings of the National Academy of Sciences* on April 11, showed that genes linked to signal transduction, gland development and carbohydrate metabolism are the most rapidly evolving genes linked with eusociality.

André et al. have shown that **low frequency sound can cause permanent trauma to the hair cells of the statocysts in cephalopods** – the structures responsible for their balance and position. This work, published in *Frontiers in Ecology and the Environment* raises significant questions about human activities in marine environments and the potential consequences this has for behaviour and welfare of the affected animals.

Diversity within a team seems to be more beneficial to overall performance in human swarm intelligence tasks than adding expertise. Krause et al. also showed in their recent publication in *Animal Behaviour* that a group of individually low performers can out-compete a group of individually high performers in tasks. They question the societal emphasis on individual performance over team diversity in groups.

* New Membership Website *

Our online website <http://www.asabmembership.org/> is now up and running. The Membership Secretary, Sue Healy, will be emailing each of you at some point soon with login details. The site can be used : (1) to apply for membership (using the Register option); (2) keeping your contact details up to date; (3) as a place where you can find your Elsevier customer number, which you need for online access to *Animal Behaviour* when you are not using an institutional access; (4) as a portal for renewing your ASAB membership subscription (when not using a cheque or direct debit to do so).

We have a PayPal account that takes one-off payments so that you can use a credit card to pay online. Although this incurs a cost to ASAB for each payment, we consider that the benefits, especially to our non-UK members, of such a system is worth that cost.

Not all of you will have received an email from Sue yet but she will be in contact soon (ish – this does require emailing each of you individually). She is firstly emailing all of those who do not use a direct debit to pay their membership fee and then will email the remaining members. Entry of Elsevier customer numbers will occur after all this process is completed. If you would like your Elsevier number before it is posted on the site, please contact Sue (susan.healy@st-andrews.ac.uk) who will send it to you by return (with instructions on how to use it).

Finally, Sue would like to take this opportunity to ask members, once they have their login information, to update their contact details and to tell colleagues of this new system. We have lost touch with a number of members who have either not supplied an email address or not updated their email address and it would be great to be able to re-establish contact. An up-to-date email is also required for contact from Council and for receiving the newsletter, now sent electronically only.

Sue Healy
Membership Secretary

* Change in BBSRC funding of neuroscience, human psychology and animal behaviour *

UK Researchers may be aware of BBSRC's recent statement about a change in prioritization for funding research in the general area of neuroscience, human psychology and animal behaviour (the statement can be viewed at <http://www.bbsrc.ac.uk/news/policy/2011/110124-n-changes-in-bbsrc-grants.aspx> under the heading 'Prioritisation'). Essentially, BBSRC are concerned that (a) the demand for funding in some areas of neuroscience is too high so that too much of its funding is going to this area, and (b) that insufficient applications in this general area are focused on the priorities that are outlined in the current BBSRC strategic plan (in particular, food security, basic bioscience underpinning health and wellbeing including animal welfare, bio-energy and industrial biotechnology).

On behalf of ASAB, I sought clarification from BBSRC on the implications of this changed prioritisation for animal behaviour funding. BBSRC recognizes that they receive relatively few proposals in animal behaviour, so they are not specifically seeking to reduce the number of proposals in our research area. However, they are looking for more applications that contribute to their priorities (while not seeking any increase in proposals outside the priorities), recognizing that there are real opportunities for animal behaviour researchers to contribute - particularly (but by no means exclusively) to food security and animal welfare. An increase in successful proposals that address priority areas will quickly shift the balance within the BBSRC animal behaviour portfolio (as it is relatively small), making it less likely that they will attempt to take any further measures to reduce funding of this area. At present, they do not have any formal mechanisms in place to impose any reduction in funding across the general neuroscience / psychology / behaviour area, but across the board Committees will be asked to prioritise proposals that address current strategic priorities. So the message is clear – targeting your proposals towards BBSRC priorities where possible should provide a greater likelihood of success (see <http://www.bbsrc.ac.uk/science/strategic-overview.aspx> for current BBSRC Strategic Plan and Priorities). If they fail to achieve a better balance of funding between priority and non-priority areas through normal funding mechanisms and advice to the relevant communities, BBSRC may consider taking further measures and we will need to ensure that this does not result in reduced support for fundamentally important behaviour research.

Jane Hurst
ASAB President

UK Call for BBSRC Pool of Experts

Are you a well-established animal behaviour researcher in the UK with research interests that fall within the remit of BBSRC and at least 5 years experience in an academic post (normally at least Senior Lecturer)? Do you have a good track record of gaining research funding (including BBSRC grants) and of reviewing many research grant proposals? Then this call is for you.

BBSRC currently has an open call for expressions of interest for membership of its Pool of Experts who serve on grants Committees – see the BBSRC website at <http://www.bbsrc.ac.uk/news/policy/2010/101105-n-appointments-pool-of-experts.aspx>

The Pool currently has insufficient members with expertise in behaviour (non-human) and applications in this area are specifically invited. This applies to all areas of animal behaviour within BBSRC remit, though expertise is particularly short in insect behaviour (especially relevant for proposals involving pest species or pollinators). You need to have fairly substantial experience and track record of grant success to be considered, and previous service on a grants committee is an advantage – please check the guidance notes and person specification available on the website before submitting an application. If in doubt, a senior colleague can usually advise (or ask me). To apply you will need to fill in the appropriate form and provide sufficient details of your experience and specific areas of expertise relevant to BBSRC remit to make sure your application will be seriously considered. As a community, we need to ensure that excellent animal behaviour proposals are recognized and funded, so please consider doing your bit!

Jane Hurst
ASAB President

The ASAB Medal Winner 2011

The ASAB Medal, specially designed by Jonathan Kingdon and struck in bronze, is awarded annually for contributions to the science of animal behaviour - through teaching, writing, broadcasting, research, through fostering any of these activities, or through contributing to the affairs of ASAB itself. Council intends the medal not only to provide an appropriate way of recognising distinction in our field, but also to contribute to raising the profile of ASAB and the field of animal behaviour in the wider scientific community.

It is with pleasure that ASAB announce that the ASAB Medal winner for 2011 is Professor Alan Grafen (University of Oxford).

Christopher Barnard Award for Outstanding Contributions by a New Investigator Winner 2011

ASAB Council recognizes that there are many excellent young researchers in the field of animal behaviour whose work will shape the future of our discipline. The Christopher Barnard Award is given each year to acknowledge and reward the achievements of such researchers.

The winner for 2011 is Dr Sarah Pryke, of Macquarie University, Sydney, Australia, for her work on bird behaviour, ecology and the evolution of alternative reproductive strategies, mate choice, male competition, multiple mating, parental care, maternal investment, physiological adaptations, speciation and conservation.

The award will be presented at the Easter ASAB Meeting, to be held in April 2011 at Anglia Ruskin University, Cambridge, UK.

ASAB / New Scientist Science Writing Prize 2010

Andrew Holmes, University of Liverpool

Family. It's an odd thing, isn't it? A bunch of people you can adore or absolutely hate but who you'd still probably do anything for. People you can have nothing in common with except other relatives. You only have to look at culture through the ages to see just how important kinship is. Shakespeare used the theme of family repeatedly throughout his works, Hamlet's very first words are "A little more than kin, and less than kind", a fitting introduction to the family tragedy that unfolds. From Oedipus to Blood Brothers, kinship appears again and again in literature of all forms, and in particular a case of mistaken identity can make for fine comedy or delicious tragedy.

Why do relatives matter? In humans your family often consists of a group of people who are there for you no matter what. They provide support and encouragement, give advice and learning and do their best to help you have the best life possible. In nonhumans kin can group together for protection or foraging, can cooperatively care for young, or can simply choose not to fight one another. It doesn't always happen, siblicide and infanticide are common in many species, but there are many occasions when knowing your relatives can help. In particular the two big kin recognition factors are inbreeding avoidance and inclusive fitness: being able to recognise your relatives helps prevent matings between close kin; whilst W.D. Hamilton showed in the 1960s that because relatives have genes that are identical by descent, aiding a relative's reproductive success can improve an individual's own fitness, provided that the costs of giving help are outweighed sufficiently by the benefits gained.

It may not always be beneficial but there is evidence that under certain conditions kin recognition and the differential behaviours that result from it can be advantageous. Whilst self will normally come first, the closer the relative the more likely you are to share genes identical by descent and therefore the more you could gain from helping them. It's rather like the Arabic saying: "I against my brother, I and my brother against our cousin, I, my brother and our cousin against the neighbours, all of us against the foreigner".

Recognising relatives is often an easy task for us humans. Our highly social lifestyle and advanced vocal communication mean that it's rare to meet a relative without being aware of it, and we can normally remember those relations we've been introduced to before. It's a rare situation, but have you ever spotted a resemblance between two people and realised they were related before being told? Or have you noticed

similarities between your own family members, a shared physical or behavioural trait perhaps? Depending on who sees us my brother and I could be twins or adopted. One particular observer even claimed that we share a nose but nothing else.

But how do non-humans recognise relatives? A lot of the time it can be a simple rule – those present in the nest with me are related to me, everyone else I should treat as being unrelated to me. In many situations this mechanism no doubt works, it enables the recognition of the closest relatives, parents and siblings. But what about those situations where there is no nest, no initial period of cohabitation that allows relatives to be learnt? What about situations where previous litters have already left the nest? Close relatives could easily be encountered that simply weren't present when the young were taking names.

This is where I find kin recognition really comes together and gets interesting, because there is evidence that many different animals can recognise their relatives, despite never having encountered them before. Indeed, there is evidence of kin recognition in all the major groups from mammals to fish, birds to amphibians, as well as insects, plants and single-celled organisms. I'm sure that I'd be unlikely to recognise most of my relatives had I just encountered them in the street and never been introduced to them, shared nose or not. Yet certain animals are able to recognise unfamiliar kin and change their behaviour towards them accordingly, choosing not to fight, not to breed, to nest or group together or simply to avoid each other. And these are only the behaviours that can actually be observed. Often there's no way of telling whether any recognition has actually occurred. Perhaps many more species can recognise their kin but choose not to respond to them.

There are just so many questions associated with kin recognition. It can occur under different situations, for different reasons, and is perhaps often undetectable. We don't even know much of the time whether the behavioural difference we observe are due to a mechanism designed for recognising kin or whether it is simply part of an overall recognition mechanism reaching from self, through the different levels of relatedness to group recognition and onto species recognition. Debates flare up about particular issues or new bold claims for or against it and arguments linger about definitions for mechanisms, whether certain ideas would ever really work. Experiments are performed in their hundreds and models created. The modern phase of kin recognition is nearing 50 years old and yet it still seems just as fresh and exciting as it must have done originally. We know so much and yet there's so much left to discover. It can be messy and frustrating and confusing but it's always interesting and it always has a story to tell. I love it!

Education Report

It has been four busy months since I started work as the new Education Officer for ASAB. I would like to thank my predecessor Michael Dockery for his continued friendly guidance and Rob Thomas (ASAB Education Secretary, University of Cardiff) for his enthusiasm and support.

Since December, Issue 49 of our e-newsletter 'Feedback' has been published and thanks to Lisa Collins it is now directly downloadable from the ASAB website.

Also available are two brand new resources: One is by Dr Liz Evesham (Mill Hill School, London) which is titled '*Investigations into the behaviour of ants*'. Liz provides lots of interesting information about four common species and suggests both a field and a laboratory investigation which could be carried out with British ants.

The second resource '*Foraging behaviour of leaf-cutting ants*' is by Richard Bottrill (Wilmslow High School, Cheshire). After providing information on leaf-cutting species, the resource focuses on the foraging preferences of leaf-cutting ants. Sixth form students can collect data by observing DVD film footage of the ants' behaviour which they will need to analyse the data using an appropriate statistical test. There are also questions for students to consider regarding aspects of the experimental design and behaviour of leafcutting ants. If you would like a copy of either or both of these resources please email me, Charlotte. My email address is behaviour@cardiff.ac.uk.

Rob Thomas and I attended the ASAB winter conference on behalf of the education committee. Our display of resources was met with much interest and the mailing list continues to grow. It was an excellent opportunity for me to meet many members and start to get to know everyone, as well as commission the "animal cameo" articles for the summer edition of

Feedback. You have fork tailed drongos, giraffes, tortoises and the banded mongoose to look forward to. We will be back at the ASAB Easter meeting with our stall of educational resources –do call by and say hello.

I have also been attending a range of other events on behalf of the Education Committee. The Association for Science Education Conference was brilliant. Rupert Marshall (Aberystwyth University) gave an outstanding ASAB lecture entitled 'Birdsong: sing it again Sam' which was enjoyed by a large audience of teachers and other educators. I was also lucky enough to attend Sue Howarth and Karen Blackmore's (University of Worcester) session on science clubs. Dissecting owl pellets is the most fun I've had in ages. As you can see in the photo...

Finally, we need more fans! ASAB Education is very excited to have its own Facebook page. Search under "ASAB Education" to join the Facebook group, and to receive an almost daily fix of animal behaviour, interesting links and upcoming news.

Charlotte Evans
ASAB Education Officer
behaviour@cardiff.ac.uk



ASAB Easter Meeting & Postgraduate Workshop 2011 26th-28th April 2011, Anglia Ruskin University, Cambridge, UK

Day 1: Postgraduate workshop focusing on topics of great interest for researchers in the early stages of their career. The main theme this year is "Technology into Animal Behaviour".

Days 2-3: Easter scientific meeting. This meeting provides a valuable opportunity for post graduate researchers in animal behaviour to present their work either as talks or posters to a knowledgeable, friendly and appreciative audience. Prizes will be given to the student members of ASAB who present the best talk and poster. Alongside student presentations there will be plenary lectures from the winner of the ASAB Young Investigator Award and other leading researchers in our field.

In addition to the scientific aspects of the meeting there will plenty of opportunity to relax and mingle with like-minded folk, including a reception and a social event on the penultimate evening of the conference.

Further details and registration at: <http://asab.nottingham.ac.uk/meetings/index.php>.

Or alternatively, contact the conference organiser, charlotte.nevison@anglia.ac.uk.

Summer ASAB Meeting 2011: Understanding animal intelligence

18th-19th August 2011, University of St Andrews, UK

Organisers: Gillian Brown, Carl Smith and Kevin Laland

Plenary speakers:

- * **Louis Lefebvre** (McGill)
- * **Tom Seeley** (Cornell)
- * **Susanne Shultz** (Oxford)
- * **Elisabetta Visalberghi** (Rome)

Animals engage in complex behaviour and respond flexibly to a range of environmental and social parameters, in an apparently intelligent manner. How can we define animal intelligence, and how is intelligence manifested across different taxonomic groups? What selective pressures might have led to evolution of intelligence in some species? To what extent does behavioural flexibility rely on complex mental capacities and large brains? How is intelligence generated through the collective decisions of multiple individuals? What might the study of animal intelligence tell us about human beings? These example topics, and other relevant questions, will be addressed at the conference.

The conference will provide a combination of plenaries from leaders in the field and novel work from new and established investigators. The talks will ideally cover the breadth of animal taxonomic groups, include proximate and evolutionary perspectives on intelligence, and portray theoretical and experimental research findings. The conference talks will be complemented by posters and social events for delegates.

Abstract submission deadline: 15th April 2011

Early registration deadline: 31st May 2011

For further details, see the website: <http://lalandlab.st-andrews.ac.uk/conference-asab/index.html>.

Behavior 2011

July 25th-30th 2011, Indiana University, Bloomington, Indiana, USA

This will be the first-ever joint meeting of two international behaviour societies: the International Ethological Conference and the Animal Behavior Society. The goal of this meeting is to foster interdisciplinary communication and collaboration among behavioural biologists working in a broad array of disciplines, from around the world.

For information about the meeting, please visit the meeting website at www.indiana.edu/~behav11

ASAB Winter Meeting 2011: Why do animals mate with the “wrong partner”?

1st & 2nd December 2011, The Zoological Society, London

Organisers: David Shuker and Nathan Bailey, University of St Andrews.

This 2-day meeting will explore the causes and consequences of apparent errors in mate choice, in terms of both within- and between-sex mate choice, and within- and among-species mate choice. As such the meeting will cover themes relevant to individual variation in behaviour, context-dependent choice, sexual selection and speciation. The meeting will also host the 2011 Tinbergen Lecture, to be given by Professor Gene Robinson. We would be delighted to receive offers for spoken (20 + 5 minutes) and poster presentations addressing the topics of the meeting.

Please email an abstract to david.shuker@st-andrews.ac.uk.

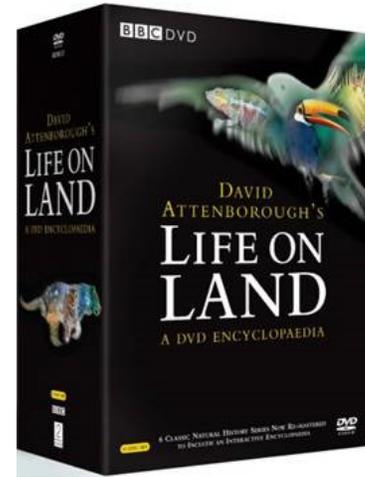
More details of the programme will follow shortly. As is traditional, the ASAB Winter Meeting has no fee and does not require registration. Delegates make their own arrangements for travel, accommodation and main meals. Delegates are also able to access London Zoo.

*Special Offer for ASAB Members on David Attenborough's *Life on Land* DVD encyclopedia*

Would you like to illustrate your talks, lectures or classroom teaching with relevant clips from David Attenborough's films?

Life on Land is a unique collection of his main series, which, for the first time allows finding clips on particular subject matters or animal species quickly and easily. A comprehensive index provides rapid reference to each species featured and to behavioural categories such as mimicry, camouflage or courtship. It can be accessed interactively on each of the discs and is also included as a hard-back book.

With 40 programmes covering the different groups of living creatures on earth – from plants and insects to amphibians, reptiles, birds and mammals, ***Life on Land*** is a unique wildlife resource for University lecturers, school teachers and other educators. Teachers will also find the material linked to both the Primary and Secondary School National Curriculum, which they can download from <http://www.naturalhistorydvd.co.uk/education.php>



Includes: *Private Life of Plants*, *Life in the Undergrowth*, *Life in Cold Blood*, *Life of Birds*, *Life of Mammals*, *First Eden*

Life on Land can be purchased from: www.bbcshop.com or by calling 0844 848 9799 (BT landlines cost 5p per min; other networks vary).

ASAB members can Buy David Attenborough's *Life on Land* DVD at BBC Shop and get an extra £2 off the selling price, with free delivery on this item to the UK (worth £2.45). Simply enter code BBCSHOP211 in the 'redeem a promotion' at checkout.

New Animal Behavior textbook published by Elsevier

This new textbook covers the broad sweep of animal behaviour from its neurological underpinnings to the importance of behavior in conservation. The authors, Michael Breed and Janice Moore, bring almost 60 years of combined experience as university professors to this textbook, much of that teaching animal behaviour. An entire chapter is devoted to the vibrant new field of behaviour and conservation, including topics such as social behaviour and the relationship between parasites, pathogens and behaviour. Thoughtful coverage has also been given to foraging behaviour, mating and parenting behaviour, anti-predator behaviour and learning.

This text addresses the physiological foundations of behavior in a way that is both accessible and inviting. Each chapter begins with learning objectives and concludes with thought-provoking questions. Additionally, special terms and definitions are

highlighted throughout. *Animal Behaviour* provides a rich resource for students (and professors) from a wide range of life science disciplines.

Readership

Advanced undergraduate and graduate students in animal behaviour courses.

