

ASAB Newsletter

Spring 2014



A note from the Newsletter Editor...

Dear ASAB member,

Welcome to the Spring 2014 edition of the ASAB Newsletter! The ASAB Winter meeting on The Evolution of Behavioural Mechanisms, was fantastic, with plenary lectures given by Prof. Melissa Bateson, Prof. Reuven Dukas and Prof. Simon Laughlin FRS. We're all looking forward to the Easter meeting, which is just around the corner, this year to be held at the University of Sheffield, UK.

In this edition of the newsletter, we hear from ASAB's President Prof. Tim Birkhead (page 2), as well as from Daniel Osorio from the Ethics committee, who has written a report on cephalopods in research (page 3). On page 4, we have reports from the ASAB research grant holders, letting us know what they've been getting up to!

You can receive all the latest ASAB news on grants, awards, conferences and interesting research by following us on Twitter. I hope you enjoy catching up on all the news from ASAB.

With all best wishes,

Lisa Collins

***In this edition...**

A message from the President	2
ASAB Ethics matters	3
Grant reports	4-5
Notices and meetings	6-7



A message from the ASAB President

The New Year arrived with some excellent news regarding our journal *Animal Behaviour*. The number of submissions continues to increase: from 989 in 2012 to 1061 in 2013- the highest annual number in the journal's long history. The time to make editorial decisions has dropped too, both for the first decision (from 5 weeks in 2012 to 4.8 weeks in 2013), and for the final decision (10.9 to 10 weeks). The rate of rejection (61% in 2012 to 66% in 2013) reflects our commitment to maintaining the very high standard of *Animal Behaviour*. Feedback from authors confirms that the vast majority were very happy with the way their submissions were handled and by the speed of publication. It is clear that our editors do an excellent job. The overall visibility of the journal has increased dramatically in the last year. Papers were downloaded in 101 countries all over the world and the total number of downloads in 2013 was close to 1 million (a 10% increase compared to 2012, which also represented an increase over the previous two years). ASAB members may be curious to know about the top five most-cited papers since 2009 (see below). They are on mate choice, personality and methodology such as satellite tracking and assessing behavioural syndromes.

Tim Birkhead, ASAB President

Cited	Details	Link
62	Female mate choice based upon male motor performance Byers, J., Hebets, E., Podos, J. 2010 <i>Animal Behaviour</i> 79 (4) , pp. 771-778	http://dx.doi.org/10.1016/ j.anbehav.2010.01.009
38	Personality in captivity reflects personality in the wild Herborn, K.A., Macleod, R., Miles, W.T.S., Schofield, A.N.B., Alexander, L., Arnold, K.E. 2010 <i>Animal Behaviour</i> 79 (4) , pp. 835-843	http://dx.doi.org/10.1016/ j.anbehav.2009.12.026
36	Assessing accuracy and utility of satellite-tracking data using Argos-linked Fastloc-GPS Witt, M.J., Åkesson, S., Broderick, A.C., Coyne, M.S., Ellick, J., Formia, A., Hays, G.C., Luschi, P., Stedson Stroud, Godley, B.J. 2010 <i>Animal Behaviour</i> 80 (3) , pp. 571-581	http://dx.doi.org/10.1016/ j.anbehav.2010.05.022
36	A method for exploring the structure of behavioural syndromes to allow formal comparison within and between data sets Dingemanse, N.J., Dochtermann, N., Wright, J. 2010 <i>Animal Behaviour</i> 79 (2) , pp. 439-450	http://dx.doi.org/10.1016/ j.anbehav.2009.11.024
36	A domain-specific opposite-sex bias in human preferences for manipulated voice pitch Jones, B.C., Feinberg, D.R., DeBruine, L.M., Little, A.C., Vukovic, J. 2010 <i>Animal Behaviour</i> 79 (1) , pp. 57-62	http://dx.doi.org/10.1016/ j.anbehav.2009.10.003

Ethics Matters: ASAB Ethics Committee

Cephalopods and the Law

J.Z. Young, a formidable champion of *Octopus vulgaris*, is credited with the inclusion of this single invertebrate species in a 1993 amendment of the UK Animals (Scientific Procedures) Act 1986¹. In January 2013 the EU Directive “Protection of Animals Used for Scientific purposes” was transposed into national laws. This, somewhat more logically, extended protection to all cephalopods: nautilus, cuttlefish and squid, as well as the octopuses.

Those who work with these fascinating and enigmatic animals agree that they are at least equal to vertebrates in many behavioural and cognitive respects, justifying their ethical treatment and legal protection. Nonetheless, the new Law poses challenges in working with the authorities, and perhaps facing changes to practice in cephalopod research. But some saw an opportunity to respond constructively to the change, including Paul Andrews, Emeritus Professor of Comparative Physiology at St George’s, University of London, and Graziano Fiorito, Research Co-ordinator at the Stazione Zoologica Anton Dohrn in Naples. Fiorito studies octopus cognition and neuroscience, and continues the Stazione’s mission to combine field and laboratory biology, a critical point in ethology, by hosting scientific visitors to the Bay of Naples, not least J.Z. Young, and also Andrews.

Andrews was already a member of the Boyd Group, which aims to promote dialogue, and inform policy, on animal use in science. In 2010 the Boyd Group formed a committee, chaired by Andrews, with members who had expertise in animal welfare and cephalopod biology². At the same time Fiorito and others established CephRes³, a non-profit research organization whose mission is to support cephalopod research and welfare. CephRes organised conferences in 2011 and 2012, with scientists, representatives of the EU, and others concerned with animal welfare and research³.

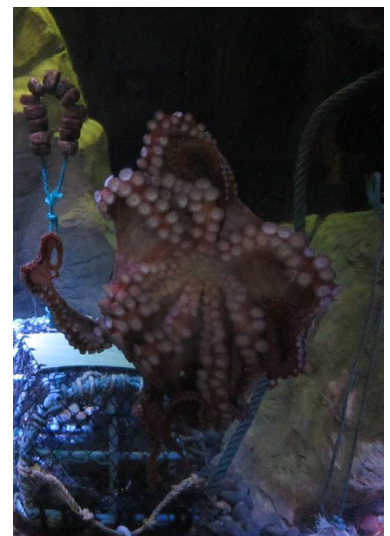
So what did these meetings and organisations achieve? The legal protection of cephalopod welfare poses many questions: do they experience ‘pain, suffering, distress and lasting harm’; if so what can be done to mitigate them, and how do we respond when we cannot answer these questions?

The same concerns apply to any non-human animal, but with vertebrates one can administer anaesthetics and analgesics with some confidence, and perhaps identify relevant brain centres. With a cephalopod it is possible to block neurotransmission, for example by modulating Mg²⁺, but very little is known about pain relief and anaesthesia. The way through what might seem to be a legal and philosophical minefield has been to find a consensus amongst cephalopod aquarists and researchers, about current understanding and best practice. So far there have been three key publications⁴⁻⁶, while guidelines for care and welfare of cephalopods originating from the 2012 CephRes meeting, are being prepared.

Recently the EU has recognised the value of this work with support by the Cooperation in Science and Technology (COST) organisation, for a 4-year programme ‘Ceph in Action’ led by Giovanna Ponte of CephRes. The Action will promote knowledge exchange and research on cephalopod biology, in relation with their welfare and management for research purposes, as well as basic understanding of these fascinating animals⁷. I wonder which class, or phylum, will be next to join vertebrates and cephalopods?

Daniel Osorio, Ethics Committee Member

1. www.legislation.gov.uk/ukxi/1993/2103/made; 2. www.felasa.eu/announcements/felasa-collaboration-on-cephalopods. 3. www.cephalopodresearch.org/; 4. Andrews PLR et al. 2013. The identification and management of pain, suffering and distress in cephalopods, including anaesthesia, analgesia and humane killing. *J. Exp. Marine Biol. Ecol.* 447, 46–64; 5. Smith JA et al. 2013. Cephalopod research and EU Directive 2010/63/EU: Requirements, impacts and ethical review. *J. Exp. Marine Biol. Ecol.*, 447, 31-45; 6. Fiorito G, et al. 2014. Cephalopods in neuroscience: regulations, research and the 3Rs. *Invert. Neurosci.* 14, 13-36; 7. www.cost.eu/domains_actions/fa/Actions/FA1301



Giant Pacific octopus, *Enteroctopus dofleini* (Taken by Dave Wolfenden).

Grant deadlines from 2014 onwards

Please remember that the grant deadlines are changing from 2014 onwards to:

1st June

1st October

1st February

Please mark these dates in your diaries.

Research grant reports

Matthias Galipaud

UMR CNRS, Dijon

A leap into the unknown: the evolution of mate switching rules with limited information

A recent experiment revealed that males of a gammarid species did not compare the quality of prospective females (i.e. their time remaining to sexual receptivity) with the quality of their current female to base their switching decision. Regardless of the quality of new females, they only decided to switch when their current female was far from sexual receptivity. The aim of this work was to understand theoretically the adaptive nature of such a counterintuitive mate-switching rule with limited information. To a greater extent, it also aimed at investigating mate choice evolution when long lasting pairings produce strong competition for mate access. Using a dynamic programming approach, I investigated optimal male mate choice strategies before and after pairing as a function of females' time remaining to sexual receptivity. Under even sex-ratio, males should pair with the first encountered female without discrimination. However, once paired and future copulation secured, it pays males to switch for new unpaired females they encountered. Males did not switch more often when their ability to find an unpaired female while paired increased. However, male's capacity to find unpaired females while unpaired strongly affected mate switching. When this ability was high, only a few unpaired females far from sexual receptivity remained in the population. As a result, it did not pay males to switch unless their own female was really far from receptivity. However, when unpaired male's ability to encounter unpaired females was low, several unpaired females of any quality remained in the population. The quality of males' current females was often poorer than the expected quality of unpaired females and their probability to switch increased accordingly. As a follow up of this work, I intend to include information for paired males about the prospective unpaired females' quality and look at resulting mate choice strategies.

Research grant reports

Bibiana Rojas

Centre of Excellence in Biological Interactions, Department of Biology and Environmental Sciences, University of Jyväskylä

The simpler, the better: testing the effect of aposematic simplicity on predator avoidance learning

The remarkable colour-pattern variation exhibited by some aposematic species is paradoxical because predation is expected to select signal uniformity. Although the mechanisms allowing for the maintenance of such variation are not well understood, an interaction between natural and sexual selection seems the most likely explanation; alternatives include morph-specific immune responses, changes in predator community composition, and predators' ability to generalise among different signals. Here we test whether warning-signal polymorphisms, such as that of dyeing poison frogs (*Dendrobates tinctorius*), could be maintained by differences in detectability among morphs under different light environments. We did experiments in the wild using wax models with different colour patterns and examined the attack rates by wild predators over time, and the detectability of different morphs by 'human predators' under different light environments. We registered 115 attacks (out of 1031 models), 62 of which were unequivocally attributable to birds (brown= simple =14, and complex = 10). Both aposematic models had a significantly higher survival than brown models over time. There were no differences between the aposematic morphs in the frequency of predation attempts. Overall, human predators found more models in the gap than in the closed forest. This means that light environment influences frog detectability, making them more easily detectable in gaps than in the closed forest. We also found that some morphs seem to be more detectable in one of the light environments than in the other, but this detectability depends on whether the predator went from closed forest to gap, or *vice versa*. We suggest that differential detectability among morphs in different light conditions could be a mechanism allowing the maintenance of warning-signal polymorphisms, and highlight the importance of considering the light environment at which predators create search images for future studies on predation in the wild.

New A/AS level educational resource

New for AS/A2 Psychology students and teachers: This free resource focuses on human fears of animals, specifically targeting Edexcel and WJEC examination boards. The practical looks at how fearful humans are of fourteen species of animals and seeks to determine if their fear is associated with the perceived 'ugliness' of the animal. Developed by Michael Dockery and The Manchester Museum - ASAB are pleased to make it available for download online.

Animal Cannibalism

5m Publishing has just published **Animal Cannibalism: the dark side of evolution** by *David Soulsby*. It is a study of the phenomenon of cannibalism in those animals known to prey upon and eat their own kind and is structured in accordance with conventional taxonomy and ranges from microbes to mammals. Where such information is available, the reasons for cannibalistic behaviour are presented for some 2000 species. The book is priced at £25.00 – for further details or to place an order visit: <http://www.5mbooks.com/animal-cannibalism-the-dark-side-of-evolution.html>

4th Canine Science Forum and 1st Feline Science Forum

These meetings are to be held at the University of Lincoln, UK, from the 14th July 2014 (Feline Science Forum) to the 17th July 2014 (Canine Science Forum).

Further information can be found at the conference website:

<http://www.csf2014.com/index.php>

51st Annual Conference of the Animal Behaviour Society

The **51st Annual Conference of the Animal Behavior Society** will be held in Princeton, New Jersey from **Saturday, August 9th to Thursday, August 14th, 2014.**

More information can be found at the conference website:

<https://abs2014.princeton.edu>.

17th International Union for the Study of Social Insects (IUSI 2014)

The 17th International Union for the Study of Social Insects (IUSI 2014) is to be held from 13 – 18 July 2014 in Cairns, Australia.

IUSI 2014 is of interest to research scientists, university teachers, extension specialists, pest management specialists, policy makers and insect enthusiasts. The Congress will feature some of the world's leaders in the study of social insects and key players from the fields of entomology, genetics, behaviour and evolutionary biology.

Further information on the congress can be found at <http://www.iussi2014.com/>

ISBE 2014

International Society for Behavioral Ecology: the ISBE 2014 conference takes place July 31st-August 5th 2014, in New York City. Morning chorus (early bird!) registration is now open!

<http://www.isbe2014.com/registration.html>

Register for the conference by November 30, 2013, for a discounted, morning chorus rate of \$495 for most participants, including post-docs; the reduced early bird rate is \$245 for any current students and for students and other researchers based in developing-world countries.

ECBB 2014

VII EUROPEAN CONFERENCE ON BEHAVIOURAL BIOLOGY



The European Conference on Behavioural Biology (ECBB) is organized every even year in a European country by the local Ethological Society in cooperation with the Committee of European Societies for Behavioural Biology (CESBB). The Czech and Slovak Ethological Society welcomes you to join **VII ECBB held at the Czech University of Life Sciences Prague between July 17 and 20, 2014.**

ECBB 2014 is organized in collaboration of the Czech and Slovak Ethological Society, the Czech University of Life Sciences Prague, Faculty of Agrobiolgy, Food and Natural Resources, Department of Husbandry and Ethology of Animals, and Institute of Animal Science Praha Uhřetíněves, Department of Ethology.

The ECBB hosts the official summer meeting of **the Association for the Study of Animal Behaviour and of the Ethologische gesellschaft (Germany).**

Please feel free to contact us at ecbb2014@gmail.com or visit the website for further details: <http://ecbb2014.agrobiology.eu>

Behaviour 2015

34th International Ethological Conference

Cairns Convention Centre, Tropical North Queensland, Australia, 9th – 14th August 2015

This joint meeting of the International Ethological Conference, Australasian Evolution Society and Australia, New Zealand and Africa Region of Applied Ethology will feature a diverse selection of plenaries, symposia and conference sessions that span the entire range of behaviour research: communication, cognition, sexual selection, predator-prey, foraging, social and sensory behaviour, parental care, personality, parasitism, human behaviour, cooperation, applied ethology, conservation ethology, and many more.

We encourage participation of delegates from all geographic regions working on all behaviour disciplines and taxa. We promise an inclusive and vibrant academic and social environment during the conference to allow for those important chats between delegates. After all, Australians are welcoming, friendly and easy-going ... and we sure know how to throw a party! Come and join us at Behaviour2015.

www.behaviour2015.org