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Welcome Message

Welcome to BEHAVIOUR2017, a joint meeting of the 35th International Ethological Conference (IEC) and the 2017 Summer Meeting of the Association for the Study of Animal Behaviour (ASAB).

We are very pleased to host BEHAVIOUR2017 in the Lisbon area! Lisbon hosts internationally significant research centers in the fields of neuroscience and behavior and in short-distance from the city you will find nature areas with an inspiring fauna for the study of behaviour, from a resident bottlenose dolphin population (which inspired the conference logo) to many birds, fish and invertebrates, currently studied by different local labs.

The conference venue, located at the Estoril Congress Center, boasts a privileged location on the Estoril coast, 25 km away from Lisbon airport, and right next to the famous Casino with its surrounding gardens and sea view. This location has been chosen because it combines an excellent congress venue with plenty of accommodation with a relaxed environment and beach culture, which we hope will provide the right environment for networking among delegates. The Estoril Congress Center is also the only venue in Portugal certified as a Green Venue (EarthCheck's Silver Certification) for its good environmental practice and commitment to sustainable business, and its choice is in line with a strategy of an ecologically sustainable meeting for BEHAVIOUR2017.

BEHAVIOUR2017 will gather international professionals, academia members and students from all fields of behaviour research, such as behavioural ecology, neuroethology, behavioural endocrinology, behavioural genomics, animal cognition, evolutionary biology, Human ethology, applied ethology, conservation ethology, animal welfare, modelling and many others. The conference program will offer an opening keynote address from Frans de Waal plus 5 other invited plenary talks from distinguished researchers covering topics such as social evolution, behavioural genomics, animal cognition, evo-devo of behavioural adaptations, and modeling behaviour evolution. There will also be a program of 33 symposia, selected from the call for symposia, that will span the entire range of behaviour research and that will help advance and foster scientific research, education and training, and applications. Finally the program will also include 280 contributed talks and over 350 poster presentations, which will enable all delegates to present their work and to have the opportunity to discuss the most recent developments in their research fields.
With close to 900 registered delegates from all geographic regions, working across a wide span of behaviour disciplines and taxa, BEHAVIOUR2017 represents a major gathering of knowledge on animal behaviour at the global scale! We hope you will enjoy it and take the most out of your experience in Portugal.

Welcome to Estoril!

Rui F. Oliveira

Chair of the Organising Committee
Host Institution

([ISPA - Instituto Universitário](#))

Sponsors

([Champalimaud Research](#))

CASCAIS

Organizing Committee

MANUEL EDUARDO DOS SANTOS (ISPA - Instituto Universitário)

EMANUEL GONÇALVES (ISPA - Instituto Universitário)

SUSANA LIMA (Champalimaud Research)

MARTA MOITA (Champalimaud Research)

RUI OLIVEIRA (Committee Chair) (ISPA - Instituto Universitário and Gulbenkian Institute of Science)

GONZALO POLAVIEJA (Champalimaud Research)
<table>
<thead>
<tr>
<th>Hours</th>
<th>July 30th (Sunday)</th>
<th>July 31st (Monday)</th>
<th>August 1st (Tuesday)</th>
<th>August 2nd (Wednesday)</th>
<th>August 3rd (Thursday)</th>
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<td>09:15-09:30</td>
<td>Gene Robinson</td>
<td>Hanna Kokko</td>
<td>Sylvie Retaux</td>
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<td>Symposia Sessions 29-33**</td>
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<td>Raghavendra Gadagkar</td>
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<td>ASAB AGM</td>
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<td>Peter McGregor</td>
<td>Susan Healy &amp; Lars Koerner</td>
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* Contributed Talks

** Symposia

** Monday AM
1. Animal cognition 1 (auditorium)
2. Animal communication 1 (room B)
3. Spatial behaviour, navigation and migration (room C1)
4. Genes and behaviour (room C2)
5. Animal personality and behavioural syndromes (room D)
6. Mate choice (room E)
7. Cooperation 1 (room F1)
8. Predator-prey interactions (room F2)

** Monday PM
1. How social behaviour can impact individual health and fitness (auditorium)
2. Integrating male mate choice, female competition and female ornaments (room B)
3. Animal welfare and conservation breeding: synergies and challenges (room C1)
4. Art as a human behaviour: challenges and prospects forty years on (room C2)
5. Evolvability and plasticity of behaviour: using cichlid fishes as model systems (room E)
6. Comparative cognition across avian taxa (room F1)
7. Learning to avoid: what do the studies on aposematism and mimicry tell us about cognition of predators? (room F2)

** Tuesday AM
9. Animal cognition 2 (auditorium)
10. Sexual selection and mating behaviour 1 (room B)
11. Evolution of behaviour and life-histories (room C1)
12. Neuroethology (room C2)
13. Conservation and behavioural ecology 1 (room D)
14. Cooperation 2 (room E)
15. Camouflage and mimicry (room F1)
16. Human Behaviour (room F2)

** Tuesday PM
8. Mental time travel in non-human animals (auditorium)
9. Parental care and the dynamic genome (room B)
10. When (if ever) do signals need to be costly to be honest? (room C1)
11. Social dynamics and the speciation process: from initiation of divergence to reproductive isolation (room C2)
12. Animal cultures: field studies in social learning (room E)
13. The evolution of social complexity: using cichlid fishes as model systems (room F1)
14. How to survive in extreme environments? Behavioral and physiological adjustments of mammals living in arid and semiarid habitats (room F2)
Wednesday AM
17. Sexual selection and mating behaviour 2 (auditorium)
18. Social learning (room B)
19. Sensory biology (room C1)
20. Conservation and behavioural ecology 2 (room C2)
21. Development and early-life effects on behaviour (room D)
22. Animal communication 2 (room E)
23. Social evolution (room F1)
24. Foraging behaviour (room F2)

Wednesday PM
15. Intraspecific variation in cognitive traits (auditorium)
16. Molecular and neural control of sexually dimorphic social behaviors (room B)
17. Sexual selection on motor displays (room C1)
18. Experimental behavioral field studies in neotropical primates: advances, challenges, and perspectives (room C2)
19. Effects of oxytocin on social behavior in fish and mammals (room E)
20. Behavior under visual conspicuousness - modesty or even more bragging? (room F1)
21. Behavioural measures of animal welfare (room F2)

Thursday AM
25. Social cognition and theory of mind (auditorium)
26. Acoustic communication (room B)
27. Parental care (room C1)
28. Maternal effects (room C2)
29. Hormones and behaviour (room D)
30. Social networks and collective behaviour (room E)
31. Contest behaviour (room F1)
32. Inter-species interactions (room F2)

Thursday PM
22. Avian cognition (auditorium)
23. Developmental plasticity as a driver of adaptation to environmental change (room B)
24. Flexibility and learning in insect behaviour (room C1)
25. Computational approaches to animal camouflage (room C2)
26. Host-pathogen interaction: from sociality to susceptibility (room E)
27. The diverse relevance of animal behavior for human cognition (room F1)
28. Fish uses in behavioral neurosciences: from stress to sociality (room F2)
Friday AM
33. Animal emotions (room E)
34. Animal culture, teaching and tool use (room F1)
35. Animal welfare (room F2)

Friday AM
29. The interplay of cooperation and conflict on cognition (auditorium)
30. Understanding how pathogens transmit and their effects on host behavior (room B)
31. Pathways in social evolution (room C1)
32. Hormones and behavior: advancing our understanding of hormone-behaviour relationships through investigations of individual variation (room C2)
33. How mating behaviour affects competition for mates (room D)
Conference Program

Sunday July 30th 2017

16:30–18:30 Registration  
Location: Hall

17:30–18:30 Welcome Reception  
Location: Hall

18:30–19:30 Opening Lecture
The myth of human cooperation as a “huge anomaly”
Frans de Waal (Yerkes National Primate Research Center & Emory University, USA)
Chair: Rui Oliveira  
Location: Auditorium
Monday July 31st 2017

8:30–18:00  
Registration  
*Location: Hall*

9:00-10:00  
**Invited Lecture**  
*Me to we: searching for the genetic roots of social life*  
Gene Robinson (*University of Illinois at Urbana-Champaign, USA*)  
Chair: Susana Lima  
*Location: Auditorium*

10:00–10:30  
**Coffee Break**

10:30-12:30  
**Contributed Talks Session 1 – ANIMAL COGNITION 1**  
Chair: Susan Healy  
*Location: Auditorium*

10:30-10:45  
**CT1.1**  
Human-like interactions between top-down and bottom-up attention in barn owls (*Tyto alba*)  
Tidhar Lev-Ari (*The Technion, Israel*)

10:45-11:00  
**CT1.2**  
Selective auditory grouping by zebra finches: testing the iambic-trochaic law  
Michelle Spierings (*Leiden University, Netherlands*)

11:00-11:15  
**CT1.3**  
Working memory in chimpanzees: capacity, types of information, & sensitivity to interference  
Christoph Völter (*University of St Andrews, UK*)

11:15-11:30  
**CT1.4**  
Calling dolphins by name: captive bottlenose dolphins recognize their own human-made sound label both underwater and in the air  
Alice Lima (*University of Rennes 1 – CNRS, France*)

11:30-11:45  
**CT1.5**  
Dogs demonstrate visual perspective taking in the guesser-knower task  
Amélie Catala (*University of Veterinary Medicine Vienna, Austria*)

11:45-12:00  
**CT1.6**  
How expectations affect value perception in an invertebrate  
Felix B. Oberhauser (*University of Regensburg, Germany*)
12:00-12:15 CT1.7 Zeroing in on nothing: honeybees recognise zero as a quantity at the low end of the discrete numerical sequence
Scarlett Howard (RMIT University, Australia)

12:15-12:30 CT1.8 Signature limits of intuitive statistics in great apes
Johanna Eckert (Max Planck Institute for Evolutionary Anthropology, Germany)

10:30-12:30 Contributed Talks Session 2 – ANIMAL COMMUNICATION 1
Chair: Dustin Penn
Location: Room B

10:30-10:45 CT2.1 The protective value of deimatism varies with the experience of wild predators
Johanna Mappes (University of Jyväskylä, Finland)

10:45-11:00 CT2.2 Signalling about information which is already publically available
Shana Caro (Wageningen University, Netherlands)

11:00-11:15 CT2.3 Exploring animal communication through the lens of a linguist
Jenny Amphaeris (Bangor University, UK)

11:15-11:30 CT2.4 Signals of commitment
Gilbert Roberts (Newcastle University, UK)

11:30-11:45 CT2.5 Simple deception: the single decision of signal detection
Peter Trimmer (UC Davis, USA)

11:45-12:00 CT2.6 Phylogenetically conserved courtship signalling in web-building spiders
Anne Wignall (Massey University, New Zealand)

12:00-12:15 CT2.7 The evolution of crying: distress calls and infants’ needs in wild chimpanzees
Guillaume Dezecache (University of Neuchâtel, Switzerland)

12:15-12:30 CT2.8 The evolution of synchronous courtship in fiddler crabs
Daniela Perez (The Australian National University, Australia)
10:30-12:30 Contributed Talks Session 3 – SPATIAL BEHAVIOUR, NAVIGATION AND MIGRATION
Chair: Andrew Bennet
Location: Room C1

10:30-10:45 CT3.1 Navigation and the importance of the outbound path for landmark learning in *Melophorus bagoti*
Cody Freas (Macquarie University, Australia)

10:45-11:00 CT3.2 A magnetic compass that might help coral reef fish larvae return to their natal reef
Michael Bottesch (University Oldenburg, Germany)

11:00-11:15 CT3.3 The role of landmarks in small-scale, 3D navigation by wild hummingbirds
David Pritchard, (University of St Andrews, UK)

11:15-11:30 CT3.4 Homing pigeons (*Columba livia*) modulate wingbeat characteristics as a function of route familiarity
Lucy Taylor (University of Oxford, UK)

11:30-11:45 CT3.5 It’s time to move on: preliminary insights into tiger movement ecology in human dominated landscape
Bilal Habib (Wildlife Institute of India, India)

11:45-12:00 CT3.6 Pre- and post- ballooning behavior of large spiders (*Xysticus genres*)
Moonsung Cho (Berlin Institute of Technology, Germany)

12:00-12:15 CT3.7 Sex difference in movement patterns can enhance mating encounters
Nobuaki Mizumoto (Kyoto University, Japan)

12:15-12:30 CT3.8 How do nomadic waterbirds find water in the desert?
Andrew Bennett (Deakin University, Australia)

10:30-12:30 Contributed Talks Session 4 – GENES AND BEHAVIOUR
Chair: Nadia Aubin-Horth
Location: Room C2

10:30-10:45 CT4.1 Sex-specific inbreeding depression and the unguarded x-hypothesis in *Drosophila melanogaster*
Zahida Sultanova (University of Valencia, Spain)
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<th>CT</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
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<td>10:45-11:00</td>
<td>CT4.2</td>
<td>The t haplotype: a selfish genetic element that manipulates migration propensity in its carrier?</td>
<td>Jan-Niklas Runge</td>
<td>University of Zurich, Switzerland</td>
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<td>11:00-11:15</td>
<td>CT4.3</td>
<td>The polymorphism in serotonin transporter gene is related to anti-predator behaviour in a forest passerine: a candidate gene approach</td>
<td>Killu Timm</td>
<td>University of Tartu, Estonia</td>
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<td>11:15-11:30</td>
<td>CT4.4</td>
<td>Alternative reproductive tactics and sex role reversal in the peacock blenny Salaria pavo, a transcriptomic analysis</td>
<td>Sara Cardoso</td>
<td>Gulbenkian Institute of Science, Portugal</td>
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<td>11:30-11:45</td>
<td>CT4.5</td>
<td>Molecular mechanisms of behavioural change: reprogramming the phenotype</td>
<td>Seirian Sumner</td>
<td>University College London, UK</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>CT4.6</td>
<td>Disentangling the roles of familiarity and relatedness on group foraging behaviour</td>
<td>Carolina Doran</td>
<td>Leibniz Institute of Freshwater Ecology and Inland Fisheries, Germany</td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>CT4.7</td>
<td>Self-referent mhc matching and kin recognition in toad tadpoles</td>
<td>Bruce Waldman</td>
<td>Seoul National University, South Korea</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT4.8</td>
<td>Maternal care and sex modulate social behavior, reproduction and metabolism in npy1r conditional KO mice</td>
<td>Paola Palanza</td>
<td>University of Parma, Italy</td>
</tr>
</tbody>
</table>

10:30-12:30 Contributed Talks Session 5 – ANIMAL PERSONALITY AND BEHAVIOURAL SYNDROMES

Chair: Alison Bell
Location: Room D

<table>
<thead>
<tr>
<th>Time</th>
<th>CT</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
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<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT5.1</td>
<td>Testing the pace-of-life syndrome hypothesis in males of an invasive fish, the australian guppy</td>
<td>Jean-Guy Godin</td>
<td>Carleton University, Canada</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT5.2</td>
<td>Personality as a predictor of cognitive performance in Macaca fascicularis</td>
<td>Vanessa Wilson</td>
<td>Georg-August University, Germany</td>
</tr>
</tbody>
</table>
11:00-11:15  CT5.3  State- and environment dependence of behavioural consistency: case studies in European lacertids
Gergely Horváth (Eötvös Loránd University, Hungary)

11:15-11:30  CT5.4  Personality variation in semi-wild Asian elephants of Myanmar and its link to fitness
Martin Seltmann (University of Turku, Finland)

11:30-11:45  CT5.5  Is behavioural plasticity consistent through time and across different environmental gradients?
David J. Mitchell (Deakin University, Australia)

11:45-12:00  CT5.6  Is social dominance a part of animal personality? How dominance rank affects space use and fitness in social voles
Jana Eccard (University of Potsdam, Germany)

12:00-12:15  CT5.7  Personality meets community ecology: a comparative approach to study personality variation among six sympatric rodent species
Melanie Dammhahn (University of Potsdam, Germany)

12:15-12:30  CT5.8  Does personality reflect space use in free-ranging juvenile lemon sharks?
Felicie Dhellemmes (Humboldt University Berlin, Germany)

10:30-12:30  Contributed Talks Session 6 – MATE CHOICE
Chair: Gunilla Rosenqvist
Location: Room E

10:30-10:45  CT6.1  Mate choice plasticity in a coral reef fish
Trond Amundsen (Norwegian University of Science and Technology, Norway)

10:45-11:00  CT6.2  Release from ecological constraint erases sex difference in social ornamentation
Gonçalo Cardoso (University of Porto - CIBIO, Portugal)

11:00-11:15  CT6.3  Mate choice in sticklebacks reveals that a 'magic trait' encoded by mhc immunogenes maintains adaptation to local parasites
Manfred Milinski (Max Planck Institute for Evolutionary Biology, Germany)
11:15-11:30  CT6.4  Male mating preference for female eyespan size and fecundity in the stalk-eyed fly, *Teleopsis dalmanni*
Alison Cotton (Bristol Zoological Society, UK)

11:30-11:45  CT6.5  Behavioural and hormonal assortative mating: do the mates really need to choose?  
Cécile Schweitzer (University of Bourgogne Franche-Comté, France)

11:45-12:00  CT6.6  Are female budgies attracted to clever males?  
Jiani Chen (Chinese Academy of Sciences, China)

12:00-12:15  CT6.7  Mate preference, not choice is related to reproductive success  
Lies Zandberg (Wageningen University, Netherlands)

12:15-12:30  CT6.8  ‘Robo-crabs’ reveal that female fiddler crabs are sensitive to changes in male display rate  
Sophie Mowles (Anglia Ruskin University, UK)

10:30-12:30  Contributed Talks Session 7 – COOPERATION 1  
Chair: Redouan Bhsary  
Location: Room F1

10:30-10:45  CT7.1  Flip for flap: direct reciprocation in taking the lead allows northern bald ibis to maintain cooperation during migratory formation flights  
Bernhard Voelkl (University of Bern, Switzerland)

10:45-11:00  CT7.2  "Social bet-hedging" in food-sharing vampire bats  
Gerald Carter (Smithsonian Tropical Research Institute, Panama)

11:00-11:15  CT7.3  Do chimpanzees engage in indirect reciprocal behaviours?  
Martin Schmelz (University of Vienna, Austria)

11:15-11:30  CT7.4  Comparison of adult-adult food sharing among three callitrichid species  
Eloísa Guerreiro Martins (University of Zurich, Switzerland)

11:30-11:45  CT7.5  Bottlenose dolphins do not behave prosocially in an instrumental helping task  
Ana Pérez Manrique (University of the Balearic Islands, Spain)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter</th>
<th>Institution</th>
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<tbody>
<tr>
<td>11:45-12:00</td>
<td>CT7.6</td>
<td>Who volunteers: how do chimpanzees (Pan troglodytes) overcome conflicts of interest to coordinate their actions?</td>
<td>Shona Duguid (Max Planck Institute for Evolutionary Anthropology, Germany)</td>
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<tr>
<td>12:00-12:15</td>
<td>CT7.7</td>
<td>Coordination and communication between chimpanzees in a two-touch-screen ball playing game</td>
<td>Matthias Allritz (University of St Andrews, UK)</td>
<td></td>
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<tr>
<td>12:15-12:30</td>
<td>CT7.8</td>
<td>Rats hunt stag: how social competence and tolerance drive cooperation in a rodent social dilemma task</td>
<td>Scott Rennie (Champalimaud Foundation, Portugal)</td>
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</tbody>
</table>

10:30-12:30 Contributed Talks Session 8 – PREDATOR-PREY INTERACTIONS
Chair: Alice Exnerová
Location: Room F2

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter</th>
<th>Institution</th>
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<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT8.1</td>
<td>Hoo are you? Naïve tits do not recognize novel predators</td>
<td>Nora Carlson (University of St Andrews, UK)</td>
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</tr>
<tr>
<td>10:45-11:00</td>
<td>CT8.2</td>
<td>Too hard to eat: a novel defense mechanism in an aposematic beetle</td>
<td>Lu-Yi Wang (National Taiwan Normal University, Taiwan)</td>
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<tr>
<td>11:00-11:15</td>
<td>CT8.3</td>
<td>Chemical cues of heterospecific predator enhance swimming alteration on naïve white shrimp</td>
<td>Francisco Navarrete-Mier (Universidad Laica Eloy Alfaro de Manabi, Equador)</td>
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<tr>
<td>11:15-11:30</td>
<td>CT8.4</td>
<td>Leadership, decision-making and collective behaviour along a predatory risk landscape</td>
<td>Alexander Wilson (University of Sydney, Australia)</td>
<td></td>
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<tr>
<td>11:30-11:45</td>
<td>CT8.5</td>
<td>Predator cues raise metabolic rate but slow spiders down</td>
<td>Mohammad Ameri (Macquarie University, Australia)</td>
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<tr>
<td>11:45-12:00</td>
<td>CT8.6</td>
<td>The tricks up a sailfish’s sleeve to catch its schooling prey</td>
<td>Ralf Kurvers (Max-Planck Institute for Human Development, Germany)</td>
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</tbody>
</table>
12:00-12:15  CT8.7  Table manners matter: how ungulates avoid ingesting insects while feeding
Tali Sarah Berman (University of Haifa, Israel)

12:15-12:30  CT8.8  Alternative strategies for dealing with prey toxins and implications for the evolution of color in jumping spiders
Michael Vickers (University of Florida, USA)

12:30-13:30  LUNCH BREAK

12:30-13:30  INTERNATIONAL COUNCIL OF ETHOLOGISTS MEETING I
Location: Room D

13:30-14:00  MEET THE EDITORS
Peter McGregor (Chief-Editor of Acta Ethologica and Bioacoustics)
Location: Room B

14:00-16:00  Poster Session I
(please see list of posters at the end section of this program)
Location: Hall

16:00-16:30  Tea Break

16:30-18:45  Symposium 1 – HOW SOCIAL BEHAVIOUR CAN IMPACT INDIVIDUAL HEALTH AND FITNESS
Organizer(s): Katja Rudolph (German Primate Center, Germany) and Céline Bret (Liverpool John Moores University, U.K.)
Location: Auditorium

16:30-16:35  Introduction to the symposium

16:35-17:05  S1.1  Group therapy? Potential impacts of the social environment on individual health in Verreaux’s sifakas
Katja Rudolph (German Primate Center, Germany)

17:05-17:35  S1.2  Social determinants of physiological stress and health in wild crested macaques, Macaca nigra
Céline Bret (Liverpool John Moores University, UK)

17:35-18:05  S1.3  Interactions between hormones, behaviour, and reproductive success in phocid seals; oxytocin and social transitions between solitary foraging and colony living
Kelly Robinson (University of St. Andrews)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Topic</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>18:05-18:35</td>
<td>S1.4</td>
<td>Infection, behaviour and personality: insights from an experimental</td>
<td>Iain Barber <em>(University of Leicester, UK)</em></td>
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<td>fish parasite model</td>
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<tr>
<td>18:35-18:45</td>
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<td>Final discussion</td>
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<tr>
<td>16:30-18:45</td>
<td></td>
<td>Symposium 2 – INTEGRATING MALE MATE CHOICE, FEMALE COMPETITION AND</td>
<td>Ingo Schlupp <em>(University of Oklahoma, USA)</em></td>
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<td>FEMALE ORNAMENTS</td>
<td>Location: Room B</td>
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<tr>
<td>16:30-16:35</td>
<td></td>
<td>Introduction to the symposium</td>
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<tr>
<td>16:35-17:05</td>
<td>S2.1</td>
<td>Male mate choice and sexual selection</td>
<td>Ingo Schlupp <em>(University of Oklahoma, USA)</em></td>
</tr>
<tr>
<td>17:05-17:35</td>
<td>S2.2</td>
<td>When does male mate choice shape female traits? A population genetic</td>
<td>Courtney Fitzpatrick <em>(Duke University, USA.)</em></td>
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<td>model</td>
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<tr>
<td>17:35-18:05</td>
<td>S2.3</td>
<td>Sex roles, sexual selection and female ornaments</td>
<td>Trond Amundsen <em>(Norwegian University of Science and Technology, Norway)</em></td>
</tr>
<tr>
<td>18:05-18:35</td>
<td>S2.4</td>
<td>Caring fathers, competitive females and the effect of the social and</td>
<td>Katja Heubel <em>(University of Cologne, Germany)</em></td>
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<td>environmental context on reproductive decisions</td>
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<tr>
<td>18:35-18:45</td>
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<td>Final discussion</td>
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<tr>
<td>16:30-18:45</td>
<td></td>
<td>Symposium 3 – ANIMAL WELFARE AND CONSERVATION BREEDING: SYNERGIES</td>
<td>María Díez-León <em>(University of London, UK)</em>, Kairi Kiik</td>
</tr>
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<td>AND CHALLENGES</td>
<td><em>(University of Tartu, Estonia)</em> and Tiit Maran <em>(Tallinn University and Tallinn Zoo, Estonia)</em></td>
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<td>Location: Room C1</td>
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<tr>
<td>16:30-16:35</td>
<td></td>
<td>Introduction to the symposium</td>
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<tr>
<td>16:35-17:05</td>
<td>S3.1</td>
<td>Exploring individual variation in animals and its consequences</td>
<td>Lisa Collins <em>(University of Lincoln, UK)</em></td>
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</tbody>
</table>
17:05-17:35  S3.2  Welfare and reproductive benefits of mate choice in conservation breeding programs
Meghan Martin (San Diego Zoo, USA)

17:35-18:05  S3.3  Low reproductive success in captive-reared whooping cranes after release into the wild
M. Elsbeth McPhee (University of Wisconsin Oshkosh, USA)

18:05-18:35  S3.4  In search of resilience: the applied importance of early life experience
Victoria Braithwaite (Penn State University, USA)

18:35-18:45  Final discussion

16:30-18:45  Symposium 4 – ART AS A HUMAN BEHAVIOUR: CHALLENGES AND PROSPECTS FORTY YEARS ON
Organizer(s): Larissa Mendoza Straffon (Leiden University, Netherlands) and Alejandra Wah (University of Groningen, Netherlands)
Location: Room C2

16:30-16:35  Introduction to the symposium

16:35-17:05  S4.1  A precursor behaviour to the arts in human evolution
Ellen Dissnayake (University of Washington, USA)

17:05-17:35  S4.2  Cognitive processes underlying the artistic experience
Alejandra Wah (University of Groningen, Netherlands)

17:35-18:05  S4.3  Two become one: the shared nature of aesthetic and social emotions
Larissa Mendoza Straffon (Leiden University, Netherlands)

18:05-18:35  S4.4  Singing as an adaptive behavior of Homo sapiens
Piotr Podlipniak (Adam Mickiewicz University in Poznan, Poland)

18:35-18:45  Final discussion
16:30-18:45  Symposium 5 – EVOLVABILITY AND PLASTICITY OF BEHAVIOUR: USING CICHLID FISHES AS MODEL SYSTEMS
Organizer(s): Michael Taborsky (University of Bern, Switzerland)
Location: Room E

16:30-16:35  Introduction to the symposium

16:35-17:05  S5.1 The adaptive radiation of cichlid fishes in East African Lake Tanganyika
Walter Salzburger (University of Basel, Switzerland)

17:05-17:35  S5.2 Behavioral diversity in cichlid fishes
Kristina Sefc (University of Graz, Austria)

17:35-18:05  S5.3 Divergent origins of social plasticity in cooperatively breeding cichlids
Barbara Taborsky (University of Bern, Switzerland)

18:05-18:35  S5.4 Early life environment shapes social competence through an evolutionary conserved pathway in a cooperatively breeding African cichlid
Nadia Aubin-Horth (Laval University, Canada)

18:35-18:45  Final discussion

16:30-18:45  Symposium 6 – COMPARATIVE COGNITION ACROSS AVIAN TAXA
Organizer(s): Anders Brodin (Lund University, Sweden) and Mathias Osvath (Lund University, Sweden)
Location: Room F1

16:30-16:35  Introduction to the symposium

16:35-17:05  S6.1 Reconstructing the origins of the avian mind: palaeognath cognition
Ivo Jacobs (Lund University, Sweden)

17:05-17:35  S6.2 A chick’s sense of number
Giorgio Vallortigara (University of Trento, Italy)

17:35-18:05  S6.3 Tackling challenges of comparative cognition in birds
Auguste von Bayern (Max Planck Institute for Ornithology, Germany)

18:05-18:35  S6.4 Cognition in Parids
Utku Urhan (Lund University, Sweden)

18:35-18:45  Final discussion
16:30-18:45  Symposium 7 – LEARNING TO AVOID: WHAT DO THE STUDIES ON APOSEMATISM AND MIMICRY TELL US ABOUT COGNITION OF PREDATORS?
Organizer(s): Alice Exnerova (Charles University, Czech Republic) and Johanna Mappes (University of Jyvaskyla, Finland)
Location: Room F2

16:30-16:35  Introduction to the symposium

16:35-17:05  S7.1  Warning signal efficacy and predator perception in visually heterogeneous environments
Ossi Nokelainen (University of Jyvaskyla, Finland)

17:05-17:35  S7.2  Do aposematic prey benefit from taste rejection or go-slow predation by wild free-living predators?
Hannah Rowland (University of Cambridge, UK)

17:35-18:05  S7.3  Sending mixed messages: an effective form of antipredator defence?
John Skelhorn (Newcastle University, UK)

18:05-18:35  S7.4  Social transmission of avoidance among predators facilitates the spread of novel prey
Rose Thorogood (University of Cambridge, UK)

18:35-18:45  Final discussion

19:30-21:30  SOCIAL EVENT – RECEPTION OFFERED BY THE MAYOR OF CASCAIS
Location: Cidadela de Cascais (Cascais Fortress)
Tuesday August 1st 2017

8:30–18:00 Registration
Location: Hall

9:00–10:00 Invited Lecture
Multiple mating, dispersal and (facultative) sex: can bet-hedging explain them all?
Hanna Kokko (University of Zurich, Switzerland)
Chair: Gonzalo Polavieja
Location: Auditorium

10:00-10:30 Coffee Break

10:30-12:30 Contributed Talks Session 9 – ANIMAL COGNITION 2
Chair: Giorgio Vallortigara
Location: Auditorium

10:30-10:45 CT9.1 Information and plasticity: analysing the information value of behavioral plasticity without bayes and without shannon
David Stephens (University of Minnesota, USA)

10:45-11:00 CT9.2 The quick are the dead: individuals who are slow to reverse a learned association survive for longer in the wild
Joah Madden (University of Exeter, UK)

11:00-11:15 CT9.3 Bumblebees show cognitive flexibility by improving on an observed complex behaviour
Olli Loukola (Queen Mary University of London, UK)

11:15-11:30 CT9.4 Attacked ravens flexibly adjust signalling behaviour according to audience composition
Thomas Bugnyar (University of Vienna, Austria)

11:30-11:45 CT9.5 Brain size predicts cognitive flexibility in a reversal-learning test
Séverine Buechel (Stockholm University, Sweden)

11:45-12:00 CT9.6 Is there a link between language acquisition and acquiring foraging skills?
Itay Berger (Tel-Aviv University, Israel)
<table>
<thead>
<tr>
<th>Time</th>
<th>Code</th>
<th>Title</th>
<th>Speaker &amp; Affiliation</th>
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<tbody>
<tr>
<td>12:00-12:15</td>
<td>CT9.7</td>
<td>Questioning the trap tube paradigm: parrots can learn to solve a trap table, but probably without causal understanding</td>
<td>Laurie O'Neill (<em>Max Planck Comparative Cognition Research Station Tenerife, Spain</em>)</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT9.8</td>
<td>Economic decision-making in parrots</td>
<td>Anastasia Krasheninnikova (<em>Max-Planck Comparative Cognition Research Station Tenerife, Spain</em>)</td>
</tr>
</tbody>
</table>
| 10:30-12:30  |       | **Contributed Talks Session 10 – SEXUAL SELECTION AND MATING BEHAVIOUR 1** | Chair: Ingo Schlupp  
**Location: Room B**                                                                 |
| 10:30-10:45  | CT10.1| Correlated response of alternative male morphs to morph specific selection | Bruno Buzatto (*University of Western Australia, Australia*)                           |
| 10:45-11:00  | CT10.2| Sexual selection intensity explains the co-existence of alternative male mating strategies in a cheating spider | Paolo Ghislandi (*Aarhus University, Denmark*)                                          |
| 11:00-11:15  | CT10.3| Wild female bonobo mating rates are moderated by female attributes and dominance over males | Pamela Heidi Douglas (*Max Plank Institute for Evolutionary Anthropology, Germany*)  |
| 11:15-11:30  | CT10.4| Cheating cheaters: social monogamy but genetic polygamy in a brood parasite | Diana Bolopo (*Universidade de Valladolid, Spain*)                                     |
| 11:30-11:45  | CT10.5| Low level of polyandry constrains phenotypic plasticity of male body size in mites | Peter Schausberger (*University of Vienna, Austria*)                                  |
| 11:45-12:00  | CT10.6| Strategy-related survival of male spiders: cheating vs. honest mating tactics | Magdalena Matzke (*Ludwig-Maximilian-University Munich, Germany*)                    |
| 12:00-12:15  | CT10.7| Arms race under sexual conflict orchestrated by two Hox genes         | Antonin Crumière (*Institute of Functional Genomics of Lyon, France*)                |
12:15-12:30  CT10.8  Males harm females less when competing with familiar relatives
Samuel Lymbery (University of Western Australia, Australia)

10:30-12:30  Contributed Talks Session 11 – EVOLUTION OF BEHAVIOUR AND LIFE-HISTORIES
Chair: Sara Magalhães
Location: Room C1

10:30-10:45  CT11.1  The evolution of monogamy in fish
Emily Stanbrook (University of Manchester, UK)

10:45-11:00  CT11.2  The evolution of non-adaptive female pursuit of extra-pair copulations
Nan Lyu (Chinese Academy of Sciences, China)

11:00-11:15  CT11.3  A general rule for the evolution of altruism in a risky world
Patrick Kennedy (University of Bristol, UK)

11:15-11:30  CT11.4  Short and fast vs long and slow: age changes courtship in male orb-web spiders
Marie Herberstein (Macquarie University, Australia)

11:30-11:45  CT11.5  Pace-of-life and the evolution of secondary sexual traits
William Sowersby (Stockholm University, Sweden)

11:45-12:00  CT11.6  Unexpected variability of pace-of-life syndrome in two populations of eastern mosquitofish (*Gambusia holbrooki*) with opposing life history
Giovanni Polverino (Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Germany)

12:00-12:15  CT11.7  Evolution of thermoregulatory behaviours in birds
Matthew Symonds (Deakin University, Australia)

12:15-12:30  CT11.8  Born at the right time: can coral reef fish larvae compensate for an inauspicious birthdate?
Jeff Shima (Victoria University of Wellington, New Zealand)

10:30-12:30  Contributed Talks Session 12 – NEUROETHOLOGY
Chair: Herwig Baier
Location: Room C2
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT12.1</td>
<td>Stress-adaptive decision-making and dispersal behaviors in nematodes involve coordination of the flp family of neuropeptides</td>
<td>Pei-Yin Shih (California Institute of Technology, USA)</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT12.2</td>
<td>Connectome-driven study of the associative learning circuit in Drosophila larva</td>
<td>Claire Eschbach (Howard Hughes Medical Institute - Janelia, USA)</td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>CT12.3</td>
<td>Circuits for integrating good and bad in Drosophila larva</td>
<td>Bruno Afonso (Howard Hughes Medical Institute - Janelia, USA)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT12.4</td>
<td>Do dipteran use a vertical reference to control their flight?</td>
<td>Roman Goulard (Aix-Marseille University - CNRS, France)</td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>CT12.5</td>
<td>Intricate interactions between gas exchange, spiracular activity, and the ventilation motor pattern during locust discontinuous gas exchange cycles</td>
<td>Amir Ayali (Tel Aviv University, Israel)</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>CT12.6</td>
<td>Cuttlefish crypsis: asymmetries in the serotonergic system and visual processing</td>
<td>Alexandra Schnell (University of Caen, France)</td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>CT12.7</td>
<td>Learning about reward: how fish encode reward stimuli</td>
<td>Marco Vindas (Gothenburg University, Sweden)</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT12.8</td>
<td>Does operant conditioning alter the neurogenomic response to song presentation?</td>
<td>Maeve McMahon (Queen Mary University of London, UK)</td>
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<tr>
<td>10:30-12:30</td>
<td></td>
<td>Contributed Talks Session 13 – CONSERVATION AND BEHAVIOURAL ECOLOGY 1</td>
<td>Chair: Rui Rosa</td>
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<td>Location: Room D</td>
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<tr>
<td>10:30-10:45</td>
<td>CT13.1</td>
<td>The FAQs about ecological traps in marine ecosystems</td>
<td>Stephen Swearer (University of Melbourne, Australia)</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT13.2</td>
<td>Noise distracts hermit crabs, but how important is it?</td>
<td>Svenja Tidau (Plymouth University, UK)</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
<td>Speaker</td>
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<tr>
<td>10:30-12:30</td>
<td>CT14.1</td>
<td>Why do humans and nonhuman animals engage in concealed sex? The cooperation maintenance hypothesis</td>
<td>Yitzchak Ben Mocha (Max Planck Institute for Ornithology, Germany)</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT14.2</td>
<td>Other-rewarding preference in fish: evidence from simple choice in the convict cichlid of biparental care</td>
<td>Shun Satoh (Osaka City University, Japan)</td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>CT14.3</td>
<td>Adult sex ratios and their implications for cooperative breeding in birds</td>
<td>Jan Komdeur (Groningen University, Netherlands)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT14.4</td>
<td>The optimal timing of dispersal decisions in cooperatively breeding ambrosia beetles</td>
<td>Jon Andreja Nuotclà (University of Bern, Switzerland)</td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>CT13.3</td>
<td>Behavioural studies of critically endangered European mink (<em>Mustela lutreola</em>) in captivity</td>
<td>Kairi Kiik (University of Tartu, Estonia)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT13.4</td>
<td>Dark clouds with silver linings: fragmented habitats create natural experiments for studying sexual selection</td>
<td>Sam Cotton (Bristol Zoo Gardens, UK)</td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>CT13.5</td>
<td>Sex in murky waters: algal induced turbidity increases sexual selection in pipefish</td>
<td>Gunilla Rosenqvist (NTNU, Norway)</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>CT13.6</td>
<td>Mitigating maladaptive habitat selection to improve ecological restoration</td>
<td>Rob Hale (University of Melbourne, Australia)</td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>CT13.7</td>
<td>Plasticity in den site selection of wolves <em>Canis lupus</em> recolonizing central Europe</td>
<td>Robert Mysłajek (University of Warsaw, Poland)</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT13.8</td>
<td>Who’s the boss? Chipmunks’ adaptations to unpredictable beech masting cycle</td>
<td>Patrick Bergeron (Bishop’s University, Canada)</td>
</tr>
</tbody>
</table>
11:30-11:45  CT14.5  Why is eusociality so common in the hymenoptera?
Andrés Quiñones Paredes (University of Neuchâtel, Switzerland)

11:45-12:00  CT14.6  Testing the cooperative breeding hypothesis in corvids
Lisa Horn (University of Vienna, Austria)

12:00-12:15  CT14.7  The evolution of cleaning behaviour in wrasses
Simon Gingins (Max Planck Institute for Ornithology, Germany)

12:15-12:30  CT14.8  Predatory threat related intra-specific aggression mediates benefits of first- and second order sociality in a cooperative breeder
Joachim Frommen (University of Bern, Switzerland)

10:30-12:30  Contributed Talks Session 15 – CAMOUFLAGE AND MIMICRY
Chair: Hannah Rowland
Location: Room F1

10:30-10:45  CT15.1  Look before you jump: proximate factors in discriminating different ants by jumping spiders
Divya Uma (Azim Premji University, India)

10:45-11:00  CT15.2  Iridescence as a form of camouflage?
Karin Kjernsmo (University of Bristol, UK)

11:00-11:15  CT15.3  Why to resemble a wingless ant if you are a bug?
Myrmecomorphy in heteroptera
Pavel Stys (Charles University, Czech Republic)

11:15-11:30  CT15.4  Matching morphology and behaviour for effective crypsis
Erik van Bergen (Gulbenkian Institute of Science, Portugal)

11:30-11:45  CT15.5  The question of automimicry: how does the variation in prey chemical defence affect reactions of avian predators
Alice Exnerova (Charles University, Czech Republic)

11:45-12:00  CT15.6  Camouflaged or conspicuous? It all depends on speed
Diana Umeton (Newcastle University, UK)
12:00-12:15  CT15.7  Distance-dependent colouration in the poison frog *Dendrobates tinctorius*
Innes Cuthill *(University of Bristol, UK)*

12:15-12:30  CT15.8  Predator generalization, mimicry and maintenance of multiple morphs
Katja Rönkä *(University of Jyväskylä, Finland)*

10:30-12:30  Contributed Talks Session 16 – HUMAN BEHAVIOUR
Chair: Gillian Brown
*Location: Room F2*

10:30-10:45  CT16.1  Facial attractiveness is positively related to sporting performance in male, but not female, olympic biathletes
Tim Fawcett *(University of Exeter, UK)*

10:45-11:00  CT16.2  A genetic-genealogy reconstruction of spatio-temporal trends in human extra-pair paternity throughout history
Maarten H. D. Larmuseau *(KU Leuven, Belgium)*

11:00-11:15  CT16.3  “That’s my baby!” The ability to recognize newborns by voice is independent of sex and parenthood status in humans
Hélène Bouchet *(Université de Lyon –CNRS, France)*

11:15-11:30  CT16.4  Biophilia: children’s relationships with animals in the ethologists’ perspective
Katharina Hirschenhauser *(University College for Education of Upper Austria, Austria)*

11:30-11:45  CT16.5  Chimpanzees and children coordinate in a prisoner’s dilemma task
Alejandro Sánchez Amaro *(Max Planck Institute for Evolutionary Anthropology, Germany)*

11:45-12:00  CT16.6  Co-representation interference from a partner’s task: a comparison between non-human great apes and human pre-schoolers
Sophie Milward *(Max Planck Institute for Evolutionary Anthropology, Germany)*

12:00-12:15  CT16.7  The trouble with symbol: symbolic behavior and human evolution
Akiko Uchida *(Waseda University, Japan)"
12:15-12:30  CT16.8  Conjuring the dead: using ancient DNA analysis to understand human artistic endeavors
Danalaxshmi Shanen Ganapathee (Duke University, USA)

12:30-13:30  LUNCH BREAK

13:30-14:00  MEET THE EDITORS
Susan Healy (Chief-Editor of Animal Behaviour)
Location: Room B

14:00-16:00  Poster Session I
(please see list of posters at the end section of this program)
Location: Hall

16:00-16:30  Tea Break

16:30-18:45  Symposium 8 – MENTAL TIME TRAVEL IN NON-HUMAN ANIMALS
Organizer(s): Christelle Jozet-Alves (University of Caen-University of Rennes 1-CNRS, France) and Nicola Clayton (University of Cambridge, UK)
Location: Auditorium

16:30-16:35  Introduction to the symposium

16:35-17:05  S8.1  Ways of thinking: from corvids to children and back again
Nicola Clayton (University of Cambridge, UK)

17:05-17:35  S8.2  Episodic-like memory in an invertebrate: the cuttlefish
Christelle Jozet-Alves (University of Caen-University of Rennes 1-CNRS, France)

17:35-18:05  S8.3  Animal models of episodic memory
Jonathon Crystal (Indiana University, USA)

18:05-18:35  S8.4  Ravens plan domain-flexibly with an eye to the future
Mathias Osvath (Lund University, Sweden)

18:35-18:45  Final discussion

16:30-18:45  Symposium 9 – PARENTAL CARE AND THE DYNAMIC GENOME
Organizer(s): Rebecca Calisi Rodriguez (University of California Davis, USA)
Location: Room B

16:30-16:35  Introduction to the symposium
16:35-17:05  S9.1  Avian parental care: uncovering sex-biased genomic mechanisms in a bi-parental system
Rebecca Calisi Rodríguez (University of California Davis, USA)

17:05-17:35  S9.2  Neurogenomics of fatherhood in threespine sticklebacks
Alison Bell (University of Illinois, USA)

17:35-18:05  S9.3  Hypothesis driven tests of the genes and molecules affecting parenting
Allen Moore (University of Georgia, USA)

18:05-18:35  S9.4  Experience-driven dynamics in maternal neural circuit activation
Danielle Stolzenburg (University of California Davis, USA)

18:35-18:45  Final discussion

16:30-18:45  Symposium 10 – WHEN (IF EVER) DO SIGNALS NEED TO BE COSTLY TO BE HONEST?
Organizer(s): Szabolcs Számadó (Eötvös Loránd University, Hungary) and Dustin Penn (Konrad Lorenz Institute of Ethology, Austria)
Location: Room C1

16:30-16:35  Introduction to the symposium

16:35-17:05  S10.1  Persuasive signalling and indices
Alan Grafen (University of Oxford, UK)

17:05-17:35  S10.2  Signal expression physiology explains signal honesty without costs: the case of male house sparrows
Ismael Galvan (Doñana Biological Station – CSIC, Spain)

17:35-18:05  S10.3  The cost of begging: does it exist? And if so, is it necessary for guaranteeing honest parent-offspring communication?
Gregorio Moreno-Rueda (University of Granada, Spain)

18:05-18:35  S10.4  The ‘Trade-Off Principle’ as an alternative to the ‘Handicap Principle’
Szabolcs Számadó (Eötvös Loránd University, Hungary) and Dustin Penn (Konrad Lorenz Institute of Ethology, Austria)

18:35-18:45  Final discussion
16:30-18:45  Symposium 11 – SOCIAL DYNAMICS AND THE SPECIATION PROCESS: FROM INITIATION OF DIVERGENCE TO REPRODUCTIVE ISOLATION
Organizer(s): Michael Greenfield (Institut de Recherche Sur La Biologie de L’Insecte – CNRS, France) and Darren Rebar (University of Cambridge, UK)
Location: Room C2

16:30-16:35  Introduction to the symposium

16:35-17:05  S11.1 The social and ecological context of male-male competition alters the process of speciation
Janette Boughman (Michigan State University, USA)

17:05-17:35  S11.2 Evolutionary and developmental social feedback loops in sexual selection and speciation
Rafael L. Rodriguez (University of Wisconsin – Milwaukee, USA)

17:35-18:05  S11.3 Climate change and mate choice and social dynamics: can thermal stress affect mate selection and interspecific social interactions?
Machteld Verzijden (Aarhus University, Denmark)

18:05-18:35  S11.4 Adapting to life without parental care: rapid evolution of parental and offspring phenotypes to a novel social environment
Darren Rebar (University of Cambridge, UK)

18:35-18:45  Final discussion

16:30-18:45  Symposium 12 – ANIMAL CULTURES: FIELD STUDIES IN SOCIAL LEARNING
Organizer(s): Gruber Thibaud (University of Geneva, Switzerland) and Lucy Aplin (University of Oxford, United Kingdom)
Location: Room E

16:30-16:35  Introduction to the symposium

16:35-17:05  S12.1 Combining field experiments and long term field data to understand social and ecological influence on cultural tool use behaviour in chimpanzees
Thibaud Gruber (University of Geneva, Switzerland)

17:05-17:35  S12.2 Social learning and cumulative cultural evolution in the rock ant, Temnothorax albipennis
Takao Sasaki (University of Oxford, UK)
17:35-18:05  S12.3  Cultural legacies: exploring the inter-generational transmission of foraging behaviour in birds
Lucy Aplin (University of Oxford, UK)

18:05-18:35  S12.4  Cetacean cultures
Luke Rendell (University of St Andrews, UK)

18:35-18:45  Final discussion

16:30-18:45  Symposium 13– THE EVOLUTION OF SOCIAL COMPLEXITY: USING CICHLID FISHES AS MODEL SYSTEMS
Organizer(s): Sigal Balshine (McMaster University, Canada)
Location: Room F1

16:30-16:35  Introduction to the symposium

16:35-17:05  S13.1  The proximate and ultimate causes of female mouthbrooding and male territoriality in cichlid fish
Peter Dijkstra (Central Michigan University, USA)

17:05-17:35  S13.2  Quantifying the behavioural, ecological, and neurobiological basis of differences in ‘sociality’ among Lake Tanganyikan cichlids
Alex Jordan (Max Planck Institute for Ornithology, Germany)

17:35-18:05  S13.3  Mechanisms of social evolution
Michael Taborsky (University of Bern, Switzerland)

18:05-18:35  S13.4  The evolution of social diversity in cooperatively breeding cichlids
Hirokazu Tanaka (University of Bern, Switzerland)

18:35-18:45  Final discussion

16:30-18:45  Symposium 14 – HOW TO SURVIVE IN EXTREME ENVIRONMENTS? BEHAVIORAL AND PHYSIOLOGICAL ADJUSTMENTS OF MAMMALS LIVING IN ARID AND SEMIARID HABITATS
Organizer(s): Filipa Abreu (Federal Rural University of Pernambuco, Brazil) and María Fernanda De la Fuente (Federal Rural University of Pernambuco, Brazil)
Location: Room F2

16:30-16:35  Introduction to the symposium
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>16:35-17:05</td>
<td>S14.1</td>
<td>Coping with unpredictable arid environments: flexible social structure of desert rodents</td>
<td>Jan Randall <em>(San Francisco State University, USA)</em></td>
</tr>
<tr>
<td>17:05-17:35</td>
<td>S14.2</td>
<td>Staying alive: far-reaching consequences of behavioral (and physiological) adaptations of desert gerbils</td>
<td>Burt P. Kotler <em>(Ben-Gurion University of the Negev, Israel)</em></td>
</tr>
<tr>
<td>17:35-18:05</td>
<td>S14.3</td>
<td>Surviving in a semiarid environment: adjustments of a small neotropical primate <em>(Callithrix jacchus)</em> to Caatinga challenging conditions</td>
<td>Fernanda de la Fuente <em>(Federal Rural University of Pernambuco, Brazil)</em></td>
</tr>
<tr>
<td>18:05-18:35</td>
<td>S14.4</td>
<td>Chimpanzees live here? Feeding strategies of <em>Pan troglodytes verus</em> in a hot and dry environment</td>
<td>Stacy Lindshield <em>(Iowa State University, USA)</em></td>
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<tr>
<td>18:35-18:45</td>
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<td>Final discussion</td>
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<tr>
<td>19:30-23:30</td>
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<td>SOCIAL EVENT - FADO NIGHT IN LISBON</td>
<td><em>Departure by Bus from Estoril Congress Center</em></td>
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</table>
Wednesday August 2nd 2017

8:30–18:00 Registration
Location: Hall

9:00-10:00 Invited Lecture
Evolution of behaviour: how do cavefish survive in the dark?
Sylvie Retaux (CNRS – Gif Sur Yvette, France)
Chair: Emanuel Gonçalves
Location: Auditorium

10:00-10:30 Coffee Break

10:30-12:30 Contributed Talks Session 17 – SEXUAL SELECTION AND MATING BEHAVIOR 2
Chair: Trond Amundsen
Location: Auditorium

10:30-12:30 CT17.1 Timing control mechanism for female genital mutilation in a spider, *Cyclosa argenteoalba*
Kensuke Nakata (Kyoto Women's University, Japan)

10:30-10:45 CT17.2 A communist experiment with great bowerbirds
Aída Rodrigues (Deakin University, Australia)

10:45-11:00 CT17.3 Highly conserved olfactory signals in stickleback mate choice across continents
Christoph Gahr (Max Planck Institute for Evolutionary Biology, Germany)

11:00-11:15 CT17.4 Sexy females desperately screaming for mates
Arja Kaitala (University of Oulu, Finland)

11:15-11:30 CT17.5 How do my neighbours sing? Influence of body quality in a bushcricket (Orthoptera: Tettigoniidae)
Fran Rebrina (University of Zagreb, Croatia)

11:30-11:45 CT17.6 Implication of reproductive senescence for post-copulatory sexual selection and fitness in a promiscuous bird
Vuarin Pauline (Emirates Center for Wildlife Propagation, Morocco)
11:45-12:00  CT17.7  Ejaculates in competition: variations in sperm and seminal fluid allocation in two goby species with alternative reproductive tactics
Federica Poli (University of Western Australia, Australia)

12:00-12:15  CT17.8  Strategic sperm regulation: it isn’t quantity, but quality that matters
Kerstin E. Thonhauser (University of Veterinary Medicine Vienna, Austria)

10:30-12:30  Contributed Talks Session 18 – SOCIAL LEARNING
Chair: Ludwig Huber
Location: Room B

10:30-10:45  CT18.1  Auditory conspecific recognition and cross-modal matching in the domestic dog and cat
Zsofia Budai (Kyoto University, Japan)

10:45-11:00  CT18.2  Social cognition and egg incubation temperature: cool lizards are better at social learning
Harry Siviter (Royal Holloway University of London, UK)

11:00-11:15  CT18.3  Mate-copying of a natural trait in Drosophila melanogaster
Sabine Nöbel (Toulouse University - CNRS, France)

11:15-11:30  CT18.4  The role of mate-choice copying in speciation and hybridization
Susana A. M. Varela (University of Lisbon, Portugal)

11:30-11:45  CT18.5  Copy parents or follow friends? Juvenile foraging behaviour changes in response to social environment
Victoria Franks (University of Cambridge, UK)

11:45-12:00  CT18.6  Social learning of fear from others showing different responsiveness
Aiko Murata (Waseda University, Japan)

12:00-12:15  CT18.7  Immediate early gene expression and social learning in zebra finches
Lauren Guillette (University of St Andrews, UK)

12:15-12:30  CT18.8  Foraging traditions in great tits
Anders Brodin (Lund University, Sweden)
<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
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<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT19.1</td>
<td>Evolution under different light environments diverges colour based foraging preferences</td>
<td>Gemma Cole</td>
<td>Deakin University, Australia</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT19.2</td>
<td>Discrete input asymmetries between senses enable the division of functions in a weakly-electric fish</td>
<td>Kyriacos Kareklas</td>
<td>University Belfast, UK</td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>CT19.3</td>
<td>The adaptive significance of using long-wavelength sensitive receptors for edge detection in bees</td>
<td>Vera Vasas</td>
<td>Queen Mary University of London, UK</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT19.4</td>
<td>Dogs cannot distinguish red from green, except when they can!</td>
<td>Sarah-Elizabeth Byosiere</td>
<td>La Trobe University, Australia</td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>CT19.5</td>
<td>Diurnal active photolocation enhances detection of cryptic predators in a marine fish</td>
<td>Matteo Santon</td>
<td>University of Tuebingen, Germany</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>CT19.6</td>
<td>Active photolocation of microprey through iris fluorescence in a diurnal fish</td>
<td>Pierre-Paul Bitton</td>
<td>Eberhard Karls Universität, Germany</td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>CT19.7</td>
<td>Analyzing visual signals using biologically-inspired computer vision algorithms</td>
<td>Sandra Winters</td>
<td>New York University, USA</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT19.8</td>
<td>Vision to behavior: neural circuits for action selection in zebrafish</td>
<td>Herwig Baier</td>
<td>Max Plank Institute of Neurobiology, Germany</td>
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</tbody>
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**10:30-12:30 Contributed Talks Session 19 – SENSORY BIOLOGY**

Chair: Innes Cuthill  
*Location: Room C1*

**10:30-12:30 Contributed Talks Session 20 – CONSERVATION AND BEHAVIOURAL ECOLOGY 2**

Chair: Stephen Swearer  
*Location: Room C2*
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter and Institution</th>
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</thead>
<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT20.1</td>
<td>Getting “through the day”: thermoregulatory influences on daytime activity of the cathemeral Azara’s owl monkey (Aotus azarae)</td>
<td>Juan Perea-Rodriguez (Yale University, USA)</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT20.2</td>
<td>Improving the reintroduction success of captive-bred helmeted honeyeaters</td>
<td>Michael Magrath (Zoos Victoria, Australia)</td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>CT20.3</td>
<td>Adaptive value of learning under sexual selection in changing environments</td>
<td>Doriane Muller (Catholic University of Louvain, Belgium)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT20.4</td>
<td>Olfactory-mediated recognition of predators is impaired in low environmental calcium waters</td>
<td>Reehan Mirza (Nipissing University, Canada)</td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>CT20.5</td>
<td>Behavioural flexibility in an invasive lizard</td>
<td>Isabel Damas Moreira (Macquarie University, Australia)</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>CT20.6</td>
<td>Can good parenting help invasive birds?</td>
<td>Françoise Lermite (University of Newcastle, Australia)</td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>CT20.7</td>
<td>Spatial memory and exploration in scatter hoarders along an urban gradient</td>
<td>Megan Joy Thompson (University of Ottawa, Canada)</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT20.8</td>
<td>Vertical habitat compression for oceanic top predators in expanding hypoxic dead-zones</td>
<td>Rui Rosa (University of Lisbon, Portugal)</td>
</tr>
</tbody>
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10:30-12:30  Contributed Talks Session 21 – DEVELOPMENT AND EARLY-LIFE EFFECTS ON BEHAVIOR

Chair: Ton Groothuis
Location: Room D

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter and Institution</th>
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</thead>
<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT21.1</td>
<td>Feeding the soul: dissociating the effects of alternative early-life feeding schedules on the development of adult depressive phenotypes</td>
<td>Melissa Bateson (Newcastle University, UK)</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT21.2</td>
<td>I share because I care? A longitudinal study of food-sharing in cockatiels</td>
<td>Agatha Liévin-Bazin (University of Paris Nanterre, France)</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
<td>Speaker &amp; Institution</td>
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<tr>
<td>11:00-11:15</td>
<td>CT21.3</td>
<td>Contrasting juvenile experiences drive different patterns of variation in adult black widow spiders</td>
<td>Nicholas DiRienzo (University of Arizona, USA)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT21.4</td>
<td>Rearing environment influences behavior and monoamine gene expression in three-spined sticklebacks</td>
<td>Robin Abbey-Lee (Linköping University, Sweden)</td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>CT21.5</td>
<td>Painted goby larvae under high-CO$_2$ fail to recognize reef sounds</td>
<td>Ana M. Faria (ISPA-Instituto Universitário, Portugal)</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>CT21.6</td>
<td>Developmental stress and social influences on song learning in zebra finches</td>
<td>Neeltje Boogert (University of Exeter, UK)</td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>CT21.7</td>
<td>When in doubt, observe your parents!</td>
<td>Mukta Watve (Universität Bern, Switzerland)</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT21.8</td>
<td>Social predispositions at birth</td>
<td>Giorgio Vallortigara (University of Trento, Italy)</td>
</tr>
</tbody>
</table>

**Contributed Talks Session 22 – ANIMAL COMMUNICATION 2**

Chair: Gilbert Roberts  
Location: Room E

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker &amp; Institution</th>
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<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT22.1</td>
<td>Do fish see face: the first implication for face-viewing in fish</td>
<td>Takashi Hotta (Osaka City University, Japan)</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT22.2</td>
<td>Male house mice regulate pheromone production depending upon social status in seminatural conditions</td>
<td>Dustin Penn (Konrad Lorenz Institute of Ethology, Austria)</td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>CT22.3</td>
<td>Effects of urban noise and night light levels in the vocal behavior of vermilion flycatchers</td>
<td>Alejandro Ariel Ríos-Chelén (Universidad Autónoma de Tlaxcala, Mexico)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT22.4</td>
<td>Spontaneous discrimination of urine odours in wild African lions (Panthera leo)</td>
<td>Geoffrey Gilfillan (University of Sussex, UK)</td>
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<tr>
<td>Time</td>
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<tr>
<td>11:30</td>
<td>CT22.5</td>
<td>Interspecific eavesdropping on African large predator urine by wild spotted hyaenas (<em>Crocuta crocuta</em>) and sympatric mammals</td>
<td>Jessica Vitale (University of Nottingham UK)</td>
</tr>
<tr>
<td>11:45</td>
<td>CT22.6</td>
<td>Multi-modal signalling in estrildid finches: song, dance and colour are associated with different ecological and life history traits</td>
<td>Ana Cristina Gomes (University of Porto - CIBIO, Portugal)</td>
</tr>
<tr>
<td>12:00</td>
<td>CT22.7</td>
<td>Richardson's ground squirrels track predators using information from multiple alarm signalers</td>
<td>James Hare (University of Manitoba, Canada)</td>
</tr>
<tr>
<td>12:15</td>
<td>CT22.8</td>
<td>Information used to be recognized as a kin differ between ecological contexts</td>
<td>Marie Collet (University of Lyon 1 – CNRS, France)</td>
</tr>
</tbody>
</table>

**Contributed Talks Session 23 – SOCIAL EVOLUTION**

*Chair: Barbara Koenig*

*Location: Room F1*

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
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<tbody>
<tr>
<td>10:30</td>
<td>CT23.1</td>
<td>Selection on colony behavior favors social susceptibility</td>
<td>Jonathan Pruitt (University of California Santa Barbara, USA)</td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td>CT23.2</td>
<td>Pair-living as a stepping stone to group-living in primate social evolution</td>
<td>Peter Kappeler (University Georg-August Goettingen, Germany)</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>CT23.3</td>
<td>Inbreeding avoidance and kin recognition in a highly social passerine</td>
<td>Rene van Dijk (University of Sheffield, UK)</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>CT23.4</td>
<td>Uncertainty about social interactions leads to the evolution of cooperative heuristics</td>
<td>Pieter van den Berg (Catholic University of Leuven, Belgium)</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>CT23.5</td>
<td>Genes and light affect social interactions in fruit flies</td>
<td>Elisabetta Versace (University of Trento, Italy)</td>
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<td>Time</td>
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<tr>
<td>11:45-12:00</td>
<td>CT23.6</td>
<td>Emergence of cooperation in self-organising social systems: an evolutionary game theoretical approach to honeybee behaviour</td>
<td>Luis Alberto Martinez-Vaquero (Institute of Cognitive Sciences and Technologies, National Research Council, Italy)</td>
<td></td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>CT23.7</td>
<td>Familiarization leads to equitable and differentiated social relationships in the guppy</td>
<td>Silvia Cattelan (University of Padova, Italy)</td>
<td></td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>CT23.8</td>
<td>Indirect genetic effects: a key component of the genetic architecture of behaviour</td>
<td>Francesca Santostefano (Max Planck Institute for Ornithology, Germany)</td>
<td></td>
</tr>
<tr>
<td>10:30-12:30</td>
<td></td>
<td>Contributed Talks Session 24 – FORAGING BEHAVIOR</td>
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<td>Chair: Eva Millesi</td>
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<td>Location: Room F2</td>
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<tr>
<td>10:30-10:45</td>
<td>CT24.1</td>
<td>What’s going on at the entrance? Influence of the number of nest entrances on the foraging behaviour of ant workers</td>
<td>Marine Lehue (Free University of Brussels, Belgium)</td>
<td></td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>CT24.2</td>
<td>Dexterity and flexibility in termite fishing by chimpanzees (Pan troglodytes troglodytes) in the Goualougo triangle, Republic of Congo</td>
<td>A. J. Osuna-Mascaró (University of Georgia, USA)</td>
<td></td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>CT24.3</td>
<td>Does a high toxic load make social information about prey more valuable for predators?</td>
<td>Liisa Hämäläinen (University of Cambridge, UK)</td>
<td></td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>CT24.4</td>
<td>Trade-off between accessibility, and quantity, of food in congeneric, sympatrically foraging bat species: a key to resource partitioning?</td>
<td>Sabine Schmidt (University of Veterinary Medicine Hannover, Germany)</td>
<td></td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>CT24.5</td>
<td>Bee-lines: how do bumblebees develop efficient routes between foraging destinations and what can go wrong?</td>
<td>Joseph Woodgate (Queen Mary University of London, UK)</td>
<td></td>
</tr>
</tbody>
</table>
11:45-12:00 CT24.6 The evolution of food hoarding: simple decision rules result in complex behaviour patterns
Lindsay Henderson (Newcastle University, UK)

12:00-12:15 CT24.7 A simple rule connects mechanistic and evolutionary models of foraging behavior in C. elegans
Alfonso Pérez-Escudero (Massachusetts Institute of Technology, USA)

12:15-12:30 CT24.8 To hibernate or not to hibernate? Common hamsters adjust overwintering strategies in relation to external energy reserves
Eva Millesi (University of Vienna, Austria)

12:30-13:30 LUNCH BREAK

12:30-13:30 ASAB ANNUAL GENERAL MEETING
Location: Auditorium

13:30-14:00 MEET THE EDITORS
Debbie Kelly (Chief-Editor of Animal Cognition) & Lars Koerner (Springer Editor of Animal Sciences)
Location: Room B

14:00-16:00 Poster Session II
(please see list of posters at the end section of this program)
Location: Hall

16:00-16:30 Tea Break

16:30-18:45 Symposium 15 – INTRASPECIFIC VARIATION IN COGNITIVE TRAITS
Organizer(s): Sarah Dalesman (Aberystwyth University, UK) and Lisa Leaver (University of Exeter, UK)
Location: Auditorium

16:30-16:35 Introduction to the symposium

16:35-17:05 S15.1 Animal innovations and intra-specific differences in cognition
Sabine Tebbich (University of Vienna, Austria)

17:05-17:35 S15.2 The relationship between personality, neophobia and learning in wild grey squirrels (Sciurus carolinensis)
Lisa Leaver (University of Exeter, UK)

17:35-18:05 S15.3 The frontiers of insect cognition
Clint Perry (Queen Mary University of London, UK)
18:05-18:35  S15.4  Variation in hummingbird cognitive abilities: what does it mean?  
Susan Healey (University of St Andrews, UK)

18:35-18:45  Final discussion

16:30-18:45  Symposium 16 – MOLECULAR AND NEURAL CONTROL OF SEXUALLY DIMORPHIC SOCIAL BEHAVIORS  
Organizer(s): Galit Shohat-Ophir (Bar Ilan University, Israel)  
Location: Room B

16:30-16:35  Introduction to the symposium

16:35-17:05  S16.1  Dimorphic neuronal connectivity and behavior are established by sex-specific synapse pruning during development  
Meital Oren Swissa (Columbia University - HHMI, USA)

17:05-17:35  S16.2  Dimorphic regulation of the Drosophila odorant binding protein 69a links social experience to modulation of behavioral responses to cVA  
Galit Shohat-Ophir (Bar Ilan University, Israel)

17:35-18:05  S16.3  Neuronal and molecular underpinnings of socially regulated plasticity in circadian rhythms in bees  
Guy Bloch (Hebrew University, Israel)

18:05-18:35  S16.4  Behavioral phenotyping of social hierarchy in a group of mice  
Itsik Sofer (Weizmann Institute of Science, Israel)

18:35-18:45  Final discussion

16:30-18:45  Symposium 17 – SEXUAL SELECTION ON MOTOR DISPLAYS  
Organizer(s): Tim Fawcett (University of Exeter, UK) and Matt Fuxjager (Wake Forest University, USA)  
Location: Room C1

16:30-16:35  Introduction to the symposium

16:35-17:05  S17.1  Can sexual selection theory account for dynamic courtship behaviour?  
Tim Fawcett (University of Exeter, UK)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>17:05-17:35</td>
<td>S17.2</td>
<td>Motor performance, and the functional morphology of male ornamentation</td>
<td>Chris Clark (University of California Riverside, USA)</td>
</tr>
<tr>
<td>17:35-18:05</td>
<td>S17.3</td>
<td>Physiological costs of repetitive courtship displays</td>
<td>Sophie Mowles (Anglia Ruskin University, UK)</td>
</tr>
<tr>
<td>18:05-18:35</td>
<td>S17.4</td>
<td>Male motor skills and female choice in golden-collared manakins</td>
<td>Matthew Fuxjager (Wake Forest University, USA) and Leonida Fusani (University of Vienna, Austria)</td>
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<tr>
<td>18:35-18:45</td>
<td></td>
<td>Final discussion</td>
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<tr>
<td>16:30-18:45</td>
<td>Symposium</td>
<td>EXPERIMENTAL BEHAVIORAL FIELD STUDIES IN NEOTROPICAL PRIMATES: ADVANCES, CHALLENGES, AND PERSPECTIVES</td>
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<td>Organizer(s): Christini Caselli (Federal Rural University of Pernambuco, Brazil) and Nicola Schiel (Federal Rural University of Pernambuco)</td>
<td>Location: Room C2</td>
</tr>
<tr>
<td>16:30-16:35</td>
<td></td>
<td>Introduction to the symposium</td>
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</tr>
<tr>
<td>16:35-17:05</td>
<td>S18.1</td>
<td>Acoustic signals as a potential mechanism to reduce within-group</td>
<td>Nicola Schiel (Federal Rural University of Pernambuco, Brazil)</td>
</tr>
<tr>
<td>17:05-17:35</td>
<td>S18.2</td>
<td>Food quantity and food type fail to influence spatial memory in free-living common marmosets: an experimental approach in small-scale space</td>
<td>Filipa Abreu (Federal Rural University of Pernambuco, Brazil)</td>
</tr>
<tr>
<td>17:35-18:05</td>
<td>S18.3</td>
<td>Using playback to investigate intergroup interactions and the function of loud calls in two New World primates aggressive behavior in common marmosets: a field experimental approach</td>
<td>Christini Barbosa Caselli (Federal Rural University of Pernambuco, Brazil)</td>
</tr>
<tr>
<td>18:05-18:35</td>
<td>S18.4</td>
<td>Unravelling social learning in wild tufted capuchin monkeys through field experiments</td>
<td>Eduardo Benedicto Ottoni (University of São Paulo, Brazil)</td>
</tr>
</tbody>
</table>
16:30-18:45  Symposium 19 – EFFECTS OF OXYTOCIN ON SOCIAL BEHAVIOR IN FISH AND MAMMALS
Organizer(s): Gil Levkowitz (Weizmann Institute of Science, Israel) and Valery Grinevich (Heidelberg University, Germany)
Location: Room E

16:30-16:35  Introduction to the symposium

16:35-17:05  S19.1  Homeodomain protein Otp affects developmental neuropeptide switching in oxytocin neurons associated with a long-term effect on social behaviour
Gil Levkowitz (Weizmann Institute of Science, Israel)

17:05-17:35  S19.2  Contrasting the organizational vs activational roles of oxytocin system in the regulation of zebrafish social behaviour
Ana Rita Nunes (Gulbenkian Institute of Science, Portugal)

17:35-18:05  S19.3  Oxytocin modulation of somatosensory processing during social interactions in mammals
Valery Grinevich (Heidelberg University, Germany)

18:05-18:35  S19.4  The role of the oxytocinergic system in mediating mice group behaviour
Yair Shemesh (Max Planck Institute of Psychiatry, Germany)

18:35-18:45  Final discussion

16:30-18:45  Symposium 20 – BEHAVIOR UNDER VISUAL CONSPICUOUSNESS - MODESTY OR EVEN MORE BRAGGING?
Organizer(s): Wladimir Alonso (University of São Paulo, Brazil)
Location: Room F1

16:30-16:35  Introduction to the symposium

16:35-17:05  S20.1  Evolution of bright colours in animals: worlds of prohibition and oblivion
Wladimir Alonso (University of São Paulo, Brazil)
17:05-17:35  S20.2  Conspicuity and aposematism: covertly measuring the influence of object patterning upon human behaviour in VR
Paul George Lovell (Abertay University, UK)

17:35-18:05  S20.3  Behavioural and visual conspicuousness as a tool for communication in animals
Magdalena Ruiz-Rodríguez (Estación Experimental de Zonas Áridas - CSIC Almería, Spain)

18:05-18:35  S20.4  Conspicuousness and behaviour in human evolution
Joseph Jordania (University of Melbourne, Australia)

18:35-18:45  Final discussion

16:30-18:45  Symposium 21 – BEHAVIOURAL MEASURES OF ANIMAL WELFARE
Organizer(s): Bernhard Voelkl (University of Bern, Switzerland) and Christine Nicol (University of Bristol, UK)
Location: Room F2

16:30-16:35  Introduction to the symposium

16:35-17:05  S21.1  What can inactivity, in its various forms, reveal about affective states in animals?
Carole Fureix (Plymouth University, UK)

17:05-17:35  S21.2  Different approaches to investigating associations between body posture, facial expression and emotional states in animals
Linda Keeling (Swedish University of Agricultural Sciences, Sweden)

17:35-18:05  S21.3  What can mother hens teach us about measuring animal welfare? Detecting shifts in emotional states in a hen-chick model
Joanne Edgar (University of Bristol, UK)

18:05-18:35  S21.4  Measuring optimistic and pessimistic biases across species: towards a universal task design
Sara Hintze (University of Natural Resources and Life Sciences, Austria)

18:35-18:45  Final discussion
19:15 - 21:30  SOCIAL EVENT – SUNSET CHILL OUT SESSION WITH DJ SIR.AIWA

Location: Azimut Beach Bar, Rata Beach.
Thursday August 3rd 2017

8:30-18:00 Registration
Location: Hall

9:00-10:00 Invited Lecture
Bringing Tinbergen to a neglected behaviour: nest building by birds
Susan Healy (University St Andrews, UK)
Chair: Marta Moita
Location: Auditorium

10:00–10:30 Coffee Break

10:30-12:30 Contributed Talks Session 25 – SOCIAL COGNITION AND THEORY OF MIND
Chair: Thomas Bugnyar
Location: Auditorium

10:30-10:45 CT25.1 Does sociality influence cache protection strategies in corvids?
Debbie Kelly (University of Manitoba, Canada)

10:45-11:00 CT25.2 Individuals in larger groups are more successful on associative spatial learning tasks
Ellis Langley (University of Exeter, UK)

11:00-11:15 CT25.3 Group size mediates the development and fitness consequences of general intelligence in a wild bird population
Benjamin Ashton (University of Western Australia, Australia)

11:15-11:30 CT25.4 The interplay between behaviour-reading and mental state attribution in Eurasian jays (Garrulus glandarius)
Ljerka Ostojic (University of Cambridge, UK)

11:30-11:45 CT25.5 Can great apes attribute false beliefs to others?
Christopher Krupenye (Max Planck Institute for Evolutionary Anthropology, Germany)

11:45-12:00 CT25.6 What does anticipatory looking behaviour tell us about human and non-human theory of mind?
Edward Legg (University of Cambridge, UK)
12:00-12:15  CT25.7  Apes’ (Chimpanzee, Bonobo, Orangutan, & Gorilla) ability to instruct others using concrete and abstract means
Suska Nolte (University of St Andrews, UK)

12:15-12:30  CT25.8  Investigating precursors of theory of mind-like abilities in corvids
Katharina Brecht (University of Cambridge, UK)

10:30-12:30  Contributed Talks Session 26 – ACOUSTIC COMMUNICATION
Chair: Peter McGregor
Location: Room B

10:30-10:45  CT26.1  The function of vocal greeting in wild Vervet monkeys
Stéphanie Mercier (University of Neuchâtel, Switzerland)

10:45-11:00  CT26.2  Bonobos converse and pay attention to breaking conversational rules
Florence Levréro (Université de Lyon/Saint-Etienne, France)

11:00-11:15  CT26.3  Acoustic multi-tasking by bats: a dual function of an acoustic signal – Can bats communicate through echolocation?
Anna Bastian (University of Cape Town, South Africa)

11:15-11:30  CT26.4  Vocal greeting behavior in an infant-parking primate
Marina Scheumann (University of Veterinary Medicine Hannover, Germany)

11:30-11:45  CT26.5  Sources of variation in wolf howls, a complex long-range signal
Arik Kershenbaum (University of Cambridge, UK)

11:45-12:00  CT26.6  Experimental evidence for associative learning of heterospecific alarm calls among wild black Capuchin monkeys
Brandon Wheeler (University of Kent, UK)

12:00-12:15  CT26.7  A way out of the “hard-wired vocalizations” conundrum: combining emotion and intention in animal vocalizations
Thibaud Gruber (University of Oxford, UK)
12:15-12:30  CT26.8  Are they talking about us? Dolphin whistle repertoires change with human context  
Tan Morgan (Ben-Gurion University of the Negev, Israel)

10:30-12:30  Contributed Talks Session 27 – PARENTAL CARE  
Chair: Allen Moore  
Location: Room C1

10:30-10:45  CT27.1  Do parents coordinate feeding young? Biological processes generating alternation of nest visits  
Davide Baldan (Netherlands Institute of Ecology, Netherlands)

10:45-11:00  CT27.2  Pre-breeding food restriction promotes parental investment  
Adam Dusek (Institute of Animal Science, Czech Republic)

11:00-11:15  CT27.3  Offspring cannibalism and parental care in the plainfin midshipman fish  
Aneesh Bose (McMaster University, Canada)

11:15-11:30  CT27.4  Among-pair differences and within-pair adjustment to brood value in Canada geese nest defence behaviours  
Jeanne Clermont (University of Quebec Montréal, Canada)

11:30-11:45  CT27.5  Wing-shivering display in blue tits: does it stimulate parental care?  
Paola Stefanini (University of Padova, Italy)

11:45-12:00  CT27.6  From cannibal to care giver, tracking the transition in a cichlid fish  
Filipa Cunha-Saraiva (Konrad-Lorenz Institute of Ethology, Austria)

12:00-12:15  CT27.7  He’s a good dad unless she’s a fighter: male parental effort in american goldfinches reflects female expression of a socially-selected status signal  
Troy Murphy (Trinity University, USA)
12:15-12:30 CT27.8 Age at reproductive debut: developmental predictors and consequences for lactation, infant mass, and subsequent reproduction in Rhesus macaques (*Macaca mulatta*)
Florent Pittet (*California National Primate Research Center, USA*)

10:30-12:30 Contributed Talks Session 28 – MATERNAL EFFECTS
Chair: Barbara Taborsky
Location: Room C2

10:30-10:45 CT28.1 Pre-natal exposure to conspecific and anthropogenic sounds: effects on stress physiology and behavioural responses to novel environments in the Japanese quail
Karen Spencer (*University of St Andrews, UK*)

10:45-11:00 CT28.2 Prenatal acoustic communication and thermal adaptation in the zebra finch
Mylene Mariette (*Deakin University, Australia*)

11:00-11:15 CT28.3 Maternal emotions guide fetal auditory memory
Alban Lemasson (*University of Rennes, France*)

11:15-11:30 CT28.4 Integrating personal information and maternal effects across populations in Trinidadian guppies
Laura Stein (*Colorado State University, USA*)

11:30-11:45 CT28.5 The influence of communal rearing on competition and dispersal in adult male house mice
Stefan Fischer (*University of Liverpool, UK*)

11:45-12:00 CT28.6 Food availability influence and oxidative defence in the European earwig
Shirley Raveh (*University of Glasgow, UK*)

12:00-12:15 CT28.7 Does paternal immunocompetence explain why mothers not always boost offspring development by maternal androgens?
Ton Groothuis (*University of Groningen, Netherlands*)

12:15-12:30 CT28.8 Prenatal and pubertal testosterone affect brain lateralization
Tess Beking (*University of Groningen, Netherlands*)
10:30-12:30  Contributed Talks Session 29 – HORMONES AND BEHAVIOUR  
Chair: Katharina Hirschenhauser  
Location: Room D

10:30-10:45  CT29.1  Acute peaks of testosterone suppress paternal care: evidence from individual hormonal reaction norms  
Wolfgang Goymann (Max Planck Institute for Ornithology, Germany)

10:45-11:00  CT29.2  Sex differences in the brain and behaviour: a critical evaluation of the role of gonadal hormones  
Gillian Brown (University of St Andrews, UK)

11:00-11:15  CT29.3  Oxytocin modulates shoaling behaviour in zebrafish  
Lars Westberg (University of Gothenburg, Sweden)

11:15-11:30  CT29.4  Dog-Human socio-positive interactions increase humans’ but not dogs’ urinary oxytocin levels  
Marshall-Pescini Sarah (University of Veterinary Medicine Vienna, Austria)

11:30-11:45  CT29.5  Juvenile hormone controls the social dominance behavior in bumblebees (Bombus terrestris)  
Atul Kumar Pandey (Alexander Silberman Institute of Life Sciences, Israel)

11:45-12:00  CT29.6  To beat or not to beat: “opportunistic” behaviour during antler growth period modifies cortisol concentration in red deer (Cervus elaphus) males  
Bruno Esattore (Institute of Animal Science, Czech Republic)

12:00-12:15  CT29.7  Increased parental work load upregulates glucocorticoids, but does not affect parental care and reproductive success in males of a passerine bird  
Stefania Casagrande (Max Planck Institute for Ornithology, Germany)

12:15-12:30  CT29.8  Chicken domestication changes expression of stress-related genes in brain, pituitary and adrenals  
Pia Løtvedt (Linköping University, Sweden)

10:30-12:30  Contributed Talks Session 30 – SOCIAL NETWORKS AND COLLECTIVE BEHAVIOR  
Chair: Mike Webster  
Location: Room E
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
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<tbody>
<tr>
<td>10:30-10:45</td>
<td>CT30.1</td>
<td>Social networks in Port Jackson sharks</td>
<td>Culum Brown (Macquarie University, Australia)</td>
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<tr>
<td>10:45-11:00</td>
<td>CT30.2</td>
<td>Social inheritance in wild spotted hyenas is mediated by the mother-offspring relationship</td>
<td>Amiyaal Ilany (Bar-Ilan University, Israel)</td>
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<tr>
<td>11:00-11:15</td>
<td>CT30.3</td>
<td>Does the social network of Trinidadian guppies predict the discovery and diffusion of an unpredictable resource in the wild?</td>
<td>Lysann Snijders (Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Germany)</td>
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<tr>
<td>11:15-11:30</td>
<td>CT30.4</td>
<td>Social regulation of individual dance activity in honey bee foragers</td>
<td>Ebi George (National Centre for Biological Sciences Bangalore, India)</td>
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<tr>
<td>11:30-11:45</td>
<td>CT30.5</td>
<td>Social foraging aggregations and networks dynamics in Australasian gannets (Morus serrator)</td>
<td>Teri Jones (University of Liverpool, UK)</td>
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<tr>
<td>11:45-12:00</td>
<td>CT30.6</td>
<td>Social context of temperature homeostasis in bumblebees</td>
<td>Linda Garrison (University of Konstanz, Germany)</td>
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<tr>
<td>12:00-12:15</td>
<td>CT30.7</td>
<td>Ant relocation dynamics: individual responses and their effect on colony level decisions</td>
<td>Anoop Karunakaran (Indian Institute of Science Education and Research Kolkata, India)</td>
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<tr>
<td>12:15-12:30</td>
<td>CT30.8</td>
<td>Characterizing cues for collective construction of macrotermes termites</td>
<td>Daniel Calovi (Harvard University, USA)</td>
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</tbody>
</table>

10:30-12:30 Contributed Talks Session 31 – CONTEST BEHAVIOUR
Chair: Svante Winberg
Location: Room F1

10:30-10:45 CT31.1 Assessing dominance in gregarious species: a new approach and theory
Axel-Cyrille Ngonga Ngomo (University of Paderborn, Germany)
10:45-11:00  CT31.2  Immune costs of receiving and inflicting injuries in a sea anemone
Sarah Lane (Plymouth University, UK)

11:00-11:15  CT31.3  The influence of experience on contest assessment strategies
Gareth Arnott (Queen's University Belfast, UK)

11:15-11:30  CT31.4  Fighting cichlids: studying aggression as a key element to understand neuroendocrine regulation
Maria Florencia Scaia (University of Buenos Aires, Argentina)

11:30-11:45  CT31.5  How hard to fight? Contest dynamics reflect resource quality, but only when individuals have prior resource experience
Erin McCallum (McMaster University, Canada)

11:45-12:00  CT31.6  Winning fights, losing fertilizations
Cristina Tuni (Ludwig Maximilian University, Germany)

12:00-12:15  CT31.7  Opponent assessment before and during overt aggression in guppies (Poecilia reticulata)
Wouter van der Bijl (Stockholm University, Sweden)

12:15-12:30  CT31.8  Fight club: transcriptomic and endocrine regulation of aggression in the Siamese fighting fish Betta splendens
David Gonçalves (University of Saint Joseph, Macao SAR)

10:30-12:30  Contributed Talks Session 32 – INTER-SPECIES INTERACTIONS
Chair: Sylvia Cremer
Location: Room F2

10:30-10:45  CT32.1  Behaviour and life-history consequences of interspecific reproductive interactions
Sara Magalhães (University of Lisbon, Portugal)

10:45-11:00  CT32.2  Chemical control of the parasitic mite Varroa destructor and its effects on the host (Apis mellifera L.)
natural defenses mechanisms
Igor Medici (Hebrew University of Jerusalem, Israel)
11:00-11:15 CT32.3 Inter- and intraspecific conflicts over host manipulation – an experimental study
Nina Hafer (Max Planck Institute for Evolutionary Biology, Germany)

11:15-11:30 CT32.4 The male crab drives his vehicle to the female’s home on summer nights
Masanori Kohda (Osaka City University, Japan)

11:30-11:45 CT32.5 Female cuckoo calls misdirect host defences towards the wrong enemy
Jennifer York (University of Cambridge, UK)

11:45-12:00 CT32.6 Breeding site competition between two sympatric cichlid fishes affects their breeding system
Franziska Schaedelin (Konrad Lorenz Institute of Ethology, Austria)

12:00-12:15 CT32.7 Are ant invaders leaving a mark beyond biodiversity loss?
Adam Devenish (University of Bristol, UK)

12:15-12:30 CT32.8 Effect of symbiont efficiency on host condition and behaviour
Valentina Balzarini (University of Exeter, UK)

12:30-13:30 LUNCH BREAK

12:30-13:30 INTERNATIONAL COUNCIL OF ETHOLOGISTS MEETING II
Location: Room D

13:30-14:00 ASAB AWARDS CEREMONY
Location: Auditorium

14:00-16:00 Poster Session II
(please see list of posters at the end section of this program)
Location: Hall

16:00-16:30 Tea Break

16:30-18:45 Symposium 22 – AVIAN COGNITION
Organizer(s): Carel ten Cate (Leiden University, Netherlands) and Susan Healy (University of St Andrews, UK)
Location: Auditorium

16:30-16:35 Introduction to the symposium
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:35-17:05</td>
<td>S22.1</td>
<td>Spatial cognition in birds</td>
<td>Debbie M. Kelly (<em>University of Manitoba, Canada</em>)</td>
</tr>
<tr>
<td>17:05-17:35</td>
<td>S22.2</td>
<td>Evidence for probabilistic reasoning in a grey parrot</td>
<td>Irene M. Pepperberg (<em>Harvard University, USA</em>)</td>
</tr>
<tr>
<td>17:35-18:05</td>
<td>S22.3</td>
<td>Avian vocal production and perception: bioacoustics and mechanisms</td>
<td>Christopher Sturdy (<em>University of Alberta, Canada</em>)</td>
</tr>
<tr>
<td>18:05-18:35</td>
<td>S22.4</td>
<td>Avian cognition and the evolution of prey defences</td>
<td>Candy Rowe (<em>Newcastle University, UK</em>)</td>
</tr>
<tr>
<td>18:35-18:45</td>
<td></td>
<td>Final discussion</td>
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### Symposium 23 – Developmental Plasticity As A Driver Of Adaptation To Environmental Change

Organizer(s): Jan Komdeur (*University of Gronigen, Netherlands*) and Barbara Taborsky (*University of Bern, Switzerland*)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter and Affiliation</th>
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<tbody>
<tr>
<td>16:30-16:35</td>
<td></td>
<td>Introduction to the symposium</td>
<td></td>
</tr>
<tr>
<td>16:35-17:05</td>
<td>S23.1</td>
<td>Integrating genetic polymorphism and phenotypic plasticity</td>
<td>Olof Leimar (<em>Stockholm University, Sweden</em>)</td>
</tr>
<tr>
<td>17:05-17:35</td>
<td>S23.2</td>
<td>How early-life experiences shape developmental and evolutionary responses to environmental change</td>
<td>Sinead English (<em>Cambridge University, UK</em>)</td>
</tr>
<tr>
<td>17:35-18:05</td>
<td>S23.3</td>
<td>Effects of temperature on sperm traits: implications for fitness and potential for transgenerational plasticity</td>
<td>Clelia Gasparini (<em>The University of Western Australia, Australia</em>)</td>
</tr>
<tr>
<td>18:05-18:35</td>
<td>S23.4</td>
<td>Consistent cooperation is caused by maternal and developmental effects</td>
<td>Claudia Kasper (<em>University of Bern, Switzerland</em>)</td>
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<tr>
<td>18:35-18:45</td>
<td></td>
<td>Final discussion</td>
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</tbody>
</table>
16:30-18:45  Symposium 24 – FLEXIBILITY AND LEARNING IN INSECT BEHAVIOUR
Organizer(s): Natalie Hempel de Ibarra (University of Exeter, UK) and Barbara Webb (University of Edinburgh, UK)
Location: Room C1

16:30-16:35  Introduction to the symposium

16:35-17:05  S24.1  Different roles for taste and nutritional value in learning and memory in the honey bee
Julie Mustard (University of Texas RGV, USA)

17:05-17:35  S24.2  Flexibility in the learning flights of bumblebees
Natalie Hempel de Ibarra (University of Exeter, UK)

17:35-18:05  S24.3  Learning and flexible use of navigational cues in ants
Barbara Webb (University of Edinburgh, UK)

18:05-18:35  S24.4  Neural mechanisms that encode valence and guide memory-based action selection in Drosophila
Yoshinori Aso (Howard Hughes Medical Institute - Janelia, USA)

18:35-18:45  Final discussion

16:30-18:45  Symposium 25 - COMPUTATIONAL APPROACHES TO ANIMAL CAMOUFLAGE
Organizer(s): Laszlo Talas (University of Bristol, UK) and Jolyon Troscianko (Exeter University, UK)
Location: Room C2

16:30-16:35  Introduction to the symposium

16:35-17:05  S25.1  The definition, measurement, and evolution of disruptive camouflage
Jolyon Troscianko (Exeter University, UK)

17:05-17:35  S25.2  Masquerade meets background matching in a neotropical toad
Constantine Michalis (University of Bristol, UK)

17:35-18:05  S25.3  Diverted by dazzle: testing the motion dazzle hypothesis
Anna Hughes (University College London, UK)
16:30-18:45  Symposium 26 – HOST-PATHOGEN INTERACTION: FROM SOCIALITY TO SUSCEPTIBILITY
Organizer(s): Nadine Mueller (Georg-August University Göttingen, Germany) and Charlotte Defolie (Georg-August University Göttingen, Germany)
Location: Room E

16:30-16:35  Introduction to the symposium

16:35-17:05  S26.1  Don’t worry, be healthy? Sociality, stress and indicators of health in wild redfronted lemurs (*Eulemur rufifrons*)
Charlotte Defolie (Georg-August University Göttingen, Germany)

17:05-17:35  S26.2  Social immunisation in ants
Sylvia Cremer (Institute for Science and Technology, Austria)

17:35-18:05  S26.3  Seasonality in sociality: dynamic social networks in models of pathogen transmission
Andrea Springer (University of Veterinary Medicine, Hannover)

18:05-18:35  S26.4  Macaques, sociality and parasites: (how) do social interactions predict parasite infection?
Nadine Müller (Georg-August University Göttingen, Germany)

18:35-18:45  Final discussion
A comparative approach to the neuroanatomy and behavior of visual deprivation in Humans from animal models to model animals
Michael Proulx (University of Bath, UK) and Alexandra de Sousa (Bath Spa University, UK)

Magnetoreception in mammals: different approaches for detecting magnetic fields
Sandra Malewski (University of Duisburg-Essen, Germany) and Sabine Martini (University of Duisburg-Essen, Germany)

Zebrafish as a model organism that can reveal the neurophysiological, anatomical, and genetic bases of behaviour
Caroline Brennan (Queen Mary University of London, UK)

Stereo vision and depth perception in humans and praying mantises
Vivek Nityananda (Newcastle University, UK)

Final discussion

Symposium 28 – FISH USES IN BEHAVIORAL NEUROSCIENCES: FROM STRESS TO SOCIALITY
Organizer(s): Caio Maximino (Federal University of South and South-East Pará, Brazil)
Location: Room F2

Introduction to the symposium

The role of monoaminergic signalling to mutualistic behaviour between fish
Marta C. Soares (Universidade do Porto - CIBIO, Portugal)

Shoaling and the dopaminergic system in zebrafish: a proof of concept analysis
Robert Gerlai (University of Toronto, Canada)
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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tr>
<td>17:35-18:05</td>
<td>S28.3</td>
<td>Physiological and behavioral markers of stress in zebrafish: role of monoamines</td>
<td>Caio Maximino <em>(Federal University of South and South-East Pará, Brazil)</em></td>
</tr>
<tr>
<td>18:05-18:35</td>
<td>S28.4</td>
<td>Genetic and environmental control of stress coping styles in teleost fish</td>
<td>Svante Winberg <em>(Department of Neuroscience, Uppsala University, Uppsala, Sweden)</em></td>
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<tr>
<td>18:35-18:45</td>
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<td>Final discussion</td>
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<td>20:00-02:00</td>
<td></td>
<td>CONFERENCE BANQUET &amp; PARTY</td>
<td><em>(live-music by VOODOO MARMALADE)</em></td>
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<td><em>Location: Salão Preto e Prata, Casino do Estoril</em></td>
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Friday August 4th 2017

09:00-11:15 Symposium 29 – THE INTERPLAY OF COOPERATION AND CONFLICT ON COGNITION
Organizer(s): Molly Cummings (University of Texas Austin, USA)
Location: Auditorium

09:00-09:05 Introduction to the symposium

09:05-09:35 S29.1 Are sexually dimorphic cognitive-behavioral profiles driven by sexual conflict?
Molly Cummings (University of Texas Austin, USA)

09:35-10:05 S29.2 Sexual conflict and brain evolution
Alexander Kotrschal (Stockholm University, Sweden)

10:05-10:35 S29.3 On the challenge to distinguish between evolved and ontogenetic interspecies differences in cognitive performance
Reduoan Bshary (University of Neuchatel, Switzerland)

10:35-11:05 S29.4 Cooperation and conflict can generate sexual selection on brains and behavior: insights from the ocellated wrasse
Suzanne Alonzo (University of California Santa Cruz, USA)

11:05-11:15 Final discussion

09:00-11:15 Symposium 30 – UNDERSTANDING HOW PATHOGENS TRANSMIT AND THEIR EFFECTS ON HOST BEHAVIOUR
Organizer(s): Doris Wu (Max Planck Institute for Evolutionary Anthropology, Germany) and Filipa Paciência (German Primate Center, Germany)
Location: Room B

09:00-09:05 Introduction to the symposium

09:05-09:35 S30.1 Seasonal and inter-annual variation of malaria parasite detection in wild chimpanzees (Taï National Park, Côte d’Ivoire)
Doris Wu (Max Planck Institute for Evolutionary Anthropology, Germany)
<table>
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<th>Title</th>
<th>Speaker/Institution</th>
<th>Location</th>
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<tbody>
<tr>
<td>09:35-10:05</td>
<td>S30.2</td>
<td>Behavioural determinants and consequences of a sexually transmitted disease in wild olive baboons (<em>Papio anubis</em>)</td>
<td>Filipa Paciência (German Primate Center, Germany)</td>
<td>Room C1</td>
</tr>
<tr>
<td>10:05-10:35</td>
<td>S30.3</td>
<td>Sickness and sociality: a case study on wild house mice (<em>Mus musculus domesticus</em>)</td>
<td>Barbara Koenig (University of Zurich, Switzerland)</td>
<td>Room C1</td>
</tr>
<tr>
<td>10:35-11:05</td>
<td>S30.4</td>
<td>How is mating behavior influenced by pathogens? A case for the Major Histocompatibility Complex</td>
<td>Jamie Winternitz (Max Planck Institute for Evolutionary Biology, Germany)</td>
<td>Room C1</td>
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<td>11:05-11:15</td>
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<td>Final discussion</td>
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<td>Room C1</td>
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<tr>
<td>09:00-11:15</td>
<td>S31.1</td>
<td>Direct benefits and evolutionary transitions to complex societies</td>
<td>Sigal Balshine (McMaster University, Canada)</td>
<td>Room C1</td>
</tr>
<tr>
<td>09:35-10:05</td>
<td>S31.2</td>
<td>The evolution and structure of complex animal societies</td>
<td>Dustin Rubenstein (Columbia University, USA)</td>
<td>Room C1</td>
</tr>
<tr>
<td>10:05-10:35</td>
<td>S31.3</td>
<td>Collective action problem in heterogeneous groups</td>
<td>Sergey Gavrilets (University of Tennessee, USA)</td>
<td>Room C1</td>
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<tr>
<td>10:35-11:05</td>
<td>S31.4</td>
<td>Patterns and process in social evolution: a discussion</td>
<td>Susanne Shultz (University of Manchester, UK) and Lukas Dieter (University of Cambridge, UK)</td>
<td>Room C1</td>
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<tr>
<td>11:05-11:15</td>
<td></td>
<td>Final discussion</td>
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Symposium 32 - HORMONES AND BEHAVIOR: ADVANCING OUR UNDERSTANDING OF HORMONE-BEHAVIOUR RELATIONSHIPS THROUGH INVESTIGATIONS OF INDIVIDUAL VARIATION
Organizer(s): Leonida Fusani (University of Vienna, Austria) and Ignacio T. Moore (Virginia Tech, USA)
Location: Room C2

09:00-09:05  Introduction to the symposium

09:05-09:35  S32.1  Testosterone and courtship behavior in a cooperative lek-breeding bird
Ignacio Moore (Virginia Tech, USA)

09:35-10:05  S32.2  In search of fitness relationships in hormonal traits: individual variation, reaction norms and covariation with behaviour
Michaela Hau (Max Planck Institute for Ornithology, Germany)

10:05-10:35  S32.3  Behavioural profiles are shaped by social experience: hormonal mechanisms and adaptive significance
Norbert Sachser (University of Münster, Germany)

10:35-11:05  S32.4  Opportunistic breeding: individual variation in hormones, reproductive timing and behaviour
Kate Buchanan (Deakin University, Australia)

11:05-11:15  Final discussion

Symposia Session 33 – HOW MATING BEHAVIOUR AFFECTS COMPETITION FOR MATES
Organizer(s): Leonor Rodrigues (University of Lisbon, Portugal) and Sara Magalhães (University of Lisbon, Portugal)
Location: Room D

09:00-09:05  Introduction to the symposium

09:05-09:35  S33.1  Polyandry and host-endosymbiont conflicts in the spider mite Tetranychus urticae
Leonor Rodrigues (University of Lisbon, Portugal)

09:35-10:05  S33.2  Flies are tiny - why are their sperm so long?
Mollie Manier (George Washington University, USA)
10:05-10:35  S33.3  The evolution of mate choice
Alexandre Courtiol (Leibniz Institute for Zoo and Wildlife Research, Germany)

10:35-11:05  S33.4  Sex ratio bias and mating competition in sex role reversed honey locust beetles
Isobel Booksmythe (University of Zurich, Switzerland)

11:05-11:15  Final discussion

09:00-11:15  Contributed Talks Session 33 – ANIMAL EMOTIONS
Chair: Melissa Bateson
Location: Room E

09:00-09:15  CT33.1  Facial infrared thermography as a measure of emotion in Barbary macaques
Oliver Schülke (University of Göttingen, Germany)

09:15-09:30  CT33.2  Goats prefer happy human faces
Alan McElligott (Queen Mary University of London, UK)

09:30-09:45  CT33.3  Green-eyed monster in a non-human species? Dogs show jealousy-like behaviour
Judit Abdai (Éötvös Loránd University, Hungary)

09:45-10:00  CT33.4  Are domestic cats jealous at their rivals?
Benoit Bucher (Kyoto University, Japan)

10:00-10:15  CT33.5  The repeatability and heritability of optimism: individual emotional traits and links with personality in the red junglefowl
Enrico Sorato (Linkoping University, Sweden)

10:15-10:30  CT33.6  Fearful dairy calves see the glass as half empty
Benjamin Lecorps (University of British Columbia, Canada)

10:30-10:45  CT33.7  Cognitive bias and copying styles in cichlid fish
Eliane Gonçalves-de-Freitas (Sao Paulo State University, Brazil)

10:45-11:00  CT33.8  Cognitive bias and cellular aging: impact of stress perception on telomere length
Felipe Espigares (Gulbenkian Institute of Science, Portugal)
11:00-11:15  CT33.9  Impulsive behaviour is a heterogeneous trait in the red junglefowl  
Hanne Lovlie (Linköping University, Sweden)

09:00-11:15  Contributed Talks Session 34 – ANIMAL CULTURE, TEACHING AND TOOL USE  
Chair: Sabine Tebbich  
Location: Room F1

09:00-09:15  CT34.1  How do leaders recruit followers?  
Mike Webster (University of St Andrews, UK)

09:15-09:30  CT34.2  Vertical transmission of object-movement information in kune kune pigs  
Ludwig Huber (University of Veterinary Medicine Vienna, Austria)

09:30-09:45  CT34.3  Social learning from conspecifics and from human demonstrators in dog puppies  
Claudia Fugazza (Eötvös Loránd University, Hungary)

09:45-10:00  CT34.4  A test for over-imitation in human children and bonobos  
Claudio Tennie (University of Tübingen, Germany)

10:00-10:15  CT34.5  Hook tool manufacture in new caledonian crows: individual variation and seasonal changes  
Shoko Sugasawa (University of St Andrews, UK)

10:15-10:30  CT34.6  Food-offering calls in wild golden lion tamarins (Leontopithecus rosalia): evidence for teaching behaviour?  
Camile Troisi (University of St Andrews, UK)

10:30-10:45  CT34.7  Safekeeping of tools in goffin's cockatoos  
Auersperg Alice (University of Veterinary Medicine Vienna, Austria)

10:45-11:00  CT34.8  Can hook-bending be let off the hook? bending/unbending of pliant tools by cockatoos and orangutans  
Isabelle Laumer  (University of Vienna, Austria)
Pelicans are social learners but not tool users: support for the adapted intelligence hypothesis in an avian cooperative hunter

Samara Danel (University of Lyon, France)

Contributed Talks Session 35 – ANIMAL WELFARE
Chair: Victoria Braithwaite
Location: Room F2

Social models improve freestall use by naïve heifers
Geoffrey Nemeth (University of British Columbia, Canada)

An unexpected acoustic indicator of positive emotions in horses
Mathilde Stomp (University of Rennes 1, France)

Abnormal repetitive route-tracing in captive carnivora: is natural foraging niche a risk factor?
Emma Mellor (University of Bristol, UK)

Watching the watchers: cod seek novelty in a captive environment
Wren Patton (Penn State University, USA)

Linking stress and welfare in a popular ornamental fish
Chloe Stevens (University of Exeter, UK)

Chemosensory enrichment as a simple and effective way to improve the welfare of captive lizards
Alicia Bartolomé (University of Valencia, Spain)

Measuring the reward value of social sounds in the dog brain using fMRI
Attila Andics (Eötvös Loránd University, Hungary)

Effects of environmental enrichment on learning in fish
Percilia Giaquinto (State University of Sao Paulo, Brazil)

Does size matter? Effects of space allowance on measures of animal welfare in laboratory mice
Jeremy Bailoo (University of Bern, Switzerland)

Coffee Break
11:45-12:45  Closing Lecture
The evolution of social organization: a tale of two tropical wasps
Raghavendra Gadagkar (Indian Institute of Science, India)
Chair: Manuel Eduardo dos Santos
Location: Auditorium

12:45-13:00  Conference Farewell
Chair of Organising Committee, IEC Secretary, ASAB President
**Poster Sessions**

**POSTER SESSION I**
(Monday & Tuesday from 14:00 to 16:00)

**P1** Nature’s coat of many colours: multilayer iridescence as an anti-predator adaptation to differing light conditions  
Joanna Hall (*University of Bristol, UK*)

**P2** Tadpole response to background colour under threat  
Luan Tavares Pinheiro (*Pontifícia Universidade Católica de Minas Gerais, Brazil*)

**P3** Spatial and temporal instability of local biotic community mediate a form of aposematic defense  
Koji Mochida (*Keio University, Japan*)

**P4** How receiver psychology shapes phenotypic evolution: studies of mimicry  
David Kikuchi (*University of Arizona, USA*)

**P6** The great Indian joint families of free-ranging dogs  
Anindita Bhadra (*Indian Institute of Science Education and Research Kolkata, India*)

**P7** Problem solving capabilities of Peach-fronted Conures (*Eupsittula aurea*)  
Sara Torres Ortiz (*University of Southern Denmark, Denmark*)

**P8** Conditional approach as cooperation in predator inspection: role of serotonin  
Caio Maximino (*Universidade Federal do Sul e Sudeste do Pará, Brazil*)

**P9** A friend in need? Helping behaviour in rats decreases when an alternative is present  
Joana Carvalheiro (*University of Minho, Portugal*)

**P11** Inbreeding in social birds: risk, cost and avoidance mechanisms  
Amy Leedale (*University of Sheffield, UK*)

**P12** Costs involved in a dear enemy relationship in territorial cichlid: Implications for reciprocal altruism?  
Shumpei Sogawa (*Osaka City University, Japan*)
Measuring lactation investment among communally nursing female house mice
Amanda Davidson (University of Liverpool, UK)

Nepotism and increased growth of related helpers in a cooperatively breeding cichlid
Hirokazu Tanaka (University of Bern, Switzerland)

Social and cognitive factors influencing inequity aversion in dogs and potential implications for cooperation
Jim McGetrick (University of Veterinary Medicine Vienna, Austria)

Fitness consequences of sociality in Octodon degus: are benefits of increasing group size under harsh conditions offset by costs of high social cohesion?
Loren Hayes (University of Tennessee at Chattanooga, USA)

The helpful little brother: brood care by juvenile males in a eusocial wasp
Robin Southon (University of Bristol, UK)

Do wolves and dogs recruit a partner in a loose-string apparatus?
Mónica Boada (University of Veterinary Medicine Vienna, Austria)

Exploring the social structure and individual cooperation effort of an obligate cooperatively breeding bird species, the white-winged chough (Corcorax melanorhamphos)
Constanza Leon (The Australian National University, Australia)

An attempt to establish a novel rodent model of cooperation
Ferenc Kassai (Semmelweis University, Hungary)

Effects of domestication on cooperation of wolves and dogs both with conspecifics and human partners
Friederike Range (University of Veterinary Medicine Vienna, Austria)

Social assortment by cooperativeness and individual repeatability of cooperativeness scores in guppies
Josefine Bohr Brask (University of Exeter, UK)

Mechanisms underlying cooperation among non-kin
Sylvia Dimitriadou (University of Exeter, UK)

Physiological costs of cooperative behaviour in Damaraland mole rats
Rute Mendonça (University of Pretoria, South Africa)
P26 Experience, efficiency and task allocation in thermoregulating bumblebees
Anja Weidenmüller (Universität Konstanz, Germany)

P27 Can cooperation be under social selection?
André Ferreira (University of Montpellier, France)

P28 Specialism and generalism in cooperating groups under environmental stochasticity
Koichi Ito (University of Exeter, UK)

P29 CO-BREE: a new platform bringing together researchers of cooperative breeding
Yitzchak Ben Mocha (Max Planck Institute for Ornithology, Germany)

P30 Experimental evidence of social learning of a more efficient tool-use technique in wild bearded capuchin monkeys (Sapajus libidinosus)
Clara Corat (Universidade de São Paulo, Brazil)

P31 Sparrows’ use of private versus social information of food-related cues
Noa Truskanov (Tel-Aviv University, Israel)

P32 Does Mate-Choice Copying Promote Dispersion When Genotype-by-Environment Effects Are Present?
Manuel Sapage (Universidade de Lisboa, Portugal)

P33 Artificial birdsong dialects in the laboratory: song production learning in males and song preference in female zebra finches (Taeniopygia guttata)
Lucille Le Maguer (Université Paris Nanterre, France)

P34 Social learning of parental care in zebra finches
Boglárka Morvai (Eötvös Loránd University, Hungary)

P35 Social learning in pheasant and domestic chicks – using Network Based Diffusion Analyses to track spread of behaviour
Pip Laker (University of Exeter, UK)

P36 He says, she says: cultural evolution of male and female song diversity across a songbird metapopulation
Wesley Webb (Massey University, New Zealand)

P37 To eat or not to eat: horizontal social transmission of food preferences in the wild Algerian mice
Rita S. Andrade (Universidade de Lisboa, Portugal)
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P213  Multi-modal display constrains use of deceptive acoustic duets
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• Prey-Capture Strategies of Fish-Hunting Cone Snails: Behavior, Neurobiology and Evolution: Olivera, B.M.; Seger, J.; Horvath, M.P. (Salt Lake City, Utah); Fedosov, A.E. (Moscow)
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