



ASAB and ZSL Joint Symposium on Bird Behaviour in a Changing World

#BirdSense Discussion Sessions

Thursday 14th September

1. Sensing the world as birds do
(Chaired by Innes Cuthill and Hannah Rowland)

Scientists are increasingly aware of how our sensory systems differ from those of the birds we study. But what are the areas where these differences may still impede our understanding of the behaviour, evolution and ecology of birds? More broadly, how does understanding differences between avian sensory systems and the sensory systems of other vertebrates improve our understanding of the behaviour, evolution and ecology of vertebrate groups?

2. What can sensory ecology contribute to avian conservation and welfare?
(Chaired by Steve Portugal and Tom Pike)

We will discuss whether understanding the sensory abilities of birds has any predictive validity toward understanding how they may cope with anthropogenic change, and changes in welfare practice, and how we might apply this to management decisions. We will also discuss if flexibility (or lack of) in bird responses to humans is a conservation problem. Is this something we should view as a symptom of conservation crisis, or a hopeful sign that we're moving toward possible coexistence? We will document which species, among those studied by conference attendees, show particular lack of flexibility, and what anthropogenic and welfare challenges they face.

Friday 15th September

3. Can birds evolve their way out of the environmental crises we impose on them?
(Chaired by Gail Patricelli and John Swaddle)

We will discuss whether anthropogenic change is resulting in evolutionary responses in avian sensory systems. For instance, to what extent do birds rely on specific sensory strategies for foraging, and how adaptable are these across the current conditions they face- during migration, breeding, and habitats with different competitors, etc? We will also cover topics such as the relationships between noise and vocalizations, and whether this is caused by evolution in urban birds, or developmental/behavioural plasticity. Given that many birds that are found in urban areas are also found in rural areas, we will also discuss issues such as the role of small population sizes in cities, gene flow in and out of cities, etc.

4. New concepts and technologies: how do we make sense of the world for a bird?
(Chaired by Esteban Fernandez-Juricic and Eve Schneider)

We will explore how differences between bird sensory systems and our own affect our science and the new technology we need to address this question. For example, how should we quantify and represent the physical variation in the environment of sensory stimuli (e.g. sound pressure, light, heat) that best makes sense to birds and other wildlife? This discussion will include recommendations for instrumentation and analyses, and the implications and inferences from existing methods, for example microspectrophotometry, gene expression, receptor density, neural activation, behavioural responses. We will also explore the topic of sensory integration, from an avian perspective.