Symposia at AOC 2017

Managing threatened species

Wednesday 8th November, 10.00-17.00
Costa Hall

Symposium Convenor: Allan Burbidge

Many threatened species are under increasing levels of threat, and there are varied issues around conservation management for such species, ranging from social, economic and political issues through to the use of emerging technologies and, of course, the biology and ecology of rare species. Emerging (and re-emerging) technologies such as the use of acoustic monitoring technologies or the use of detector dogs to survey or monitor rare and difficult to detect species, are becoming more widely used, often with a citizen science component, but their strengths and limitations are still not widely understood, especially in relation to threatened species. How do we best use these approaches, and how do we best ensure that our findings are relevant and can be applied by managers to practical on-ground situations?

Waterbirds and shorebirds

Recent insights into their ecology, behaviour and conservation

Wednesday 8th November, 10.00-17.00
Lecture Theatre D2.193

Symposium Convenors: Andy Bennett & Marcel Klaassen

Australia's shorebirds and waterbirds perform some of the most remarkable feats of navigation known, from seasonal migration via the East Asian-Australasian flyway to Siberia and the Arctic, to nomadic waterbirds somehow detecting temporary water in inland deserts. Many of these taxa are also undergoing long term decline, some very rapidly, and effective action is needed. Understanding of shorebirds and waterbirds is being transformed by on-board tracking devices and sensors, and many new insights into their ecology, behaviour and conservation are emerging. This symposium will provide summaries of recent insights.

Evolution of Australian birds

Updates and Progress Reports

Thursday 9th November, 9.30-11.00
Costa Hall

Symposium Convenor: Leo Joseph

Description: The tools of genomics continue to revolutionize our understanding of the evolution of birds. They provide new frameworks for interpreting traditional data sets used in avian systematics such as palaeontology, osteology, anatomy, plumage and morphometrics. They also allow new study of adaptation in birds. This continues a trend started several decades ago with the advent of molecular data. The symposium's broad aim is to present integrated pictures of evolution of Australasian birds. It will draw on molecular and traditional systematics, studies of adaptation and selection, phylogeography, biogeography and finer scale population and landscape genetics. Speakers will be invited to pitch their contribution to ornithologists who don't work with molecular data or in the general themes just listed but who are often curious as to what all the fuss is about, especially with molecular research. This symposium has become a well-attended, regular fixture at the AOC.

Conservation genetics

Incorporating evolutionary process into avian conservation

Thursday 9th November, 11.30-13.00
Costa Hall

Symposium Convenors: Sasha Pavlova & Paul Sunnucks

What are the fitness consequences of reducing population sizes, and how do we minimize negative impacts? How can species' adaptive potential be maximized given widespread population isolation? Which population

processes become disrupted by human modifications of environment? Is there population genetic structure, and if so when did populations diverge, with how much past and present gene flow? What are population units of conservation concern? These and other important conservation biology questions can be tackled using genetic tools. With the advent of high throughput next-generation sequencing, very large numbers of genome-wide markers have become available for use in wildlife species. Genomic data enable better estimates of essential population parameters and adaptive potential, and also allow testing for signatures of selection and local adaptation. The proposed symposium will provide examples of the use of molecular tools in conservation and discussion of how genomics can be efficiently communicated during the current biodiversity crisis.

Avian pathogen coevolution

Thursday 9th November, 14.30-15.30
Lecture Theatre D2.193

The Long Dance: how infectious organisms and birds have shaped each other

Symposium Convenor: Andrew Peters

Parasites, microbes and viruses have had to adapt to and take advantage of the peculiarities of avian life histories. Disease ecology, immunology and conservation biology increasingly are required to consider how pathogens have shaped bird populations and avian evolution for better and worse. The advance of various molecular analytical techniques has provided mechanisms to examine the evolutionary dynamics of avian hosts and their infectious organisms. Selected presentations will provide examples of infectious organisms influencing host evolution or vice versa and will demonstrate the application of research methods to test and explore co-evolutionary dynamics in birds and their pathogens.

Woodland birds

Friday 10th November, 9.30-16.30
Lecture Theatre D2.193

Ecology and conservation of woodland birds

Symposium Convenor: David Watson

Temperate woodlands are among the most threatened habitats in Australasia, the vast majority cleared for agriculture and most remaining remnants subjected to intensifying pressures. These woodlands support a distinctive community of birds which have been the subject of concerted research—identifying determinants of occurrence, documenting movement patterns within and between landscapes and evaluating responses to management at multiple scales. This descriptive work is informing targeted management efforts across southern Australia, using woodland birds as ambassadors for biodiversity conservation in production landscapes. This symposium will bring together both aspects of this research, giving an up-to-date synthesis of what we know (and what we still don't know), and practical insights into how this knowledge is leading to improved on-ground outcomes for populations and overall assemblages.

Seabird biology and conservation

Friday 10th November, 11.30-13.00
Costa Hall

Symposium Convenors: Peter Dann & Barry Baker

Seabirds are one of the most rapidly decreasing groups of birds worldwide. This Australasian seabird Group sponsored symposium is intended to capture the interest of seabird biologists under a broad theme of seabird biology and conservation. Aggregation of the seabird papers into a symposium will provide synergies for interaction among participants and enhance potential for collaborative approaches. There has been sufficient interest at the past four AOCs to hold dedicated seabird symposia under broad themes.