

outbreaks in the region were followed by lectures and interactive sessions on post mortem examination and cytology. The latter sessions were led by June Williams, a pathologist from the Faculty of Veterinary Science, University of Pretoria. The veterinary theme closed with presentations on biosecurity and primary healthcare as well as some pointers on chemical capture.

The Workshop included a technical training component facilitated by Chenay Simms of the South African National Parks Scientific Services, comprising a day of hands-on exercises, regional case studies, and equipment assessments relating to the selection and application of electronic data capture, including smart-phone apps, global positioning systems, remote sensing and drones.

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A milestone for migratory waterbird conservation in Asia–Pacific

Twenty years after hosting an influential meeting that catalysed migratory waterbird conservation in the Asia–Pacific region, the city of Kushiro in Japan again provided a spectacular wintry venue for the latest meeting of partners of the East Asian–Australasian Flyway Partnership. In December 1994 the workshop *Conservation of migratory waterbirds and their wetlands in the East Asian–Australasian flyway* was held in Kushiro, bringing together representatives of governments from 16 countries, two inter-governmental organizations, and two non-governmental organizations to discuss, for the first time, a multilateral approach to conserving migratory waterbirds in the region. Attendees agreed then that ‘the current decline in the numbers of migratory waterbirds in the flyway and the degradation and loss of wetland habitats on which these species depend, should be stopped and reversed’. Accordingly, a work plan was proposed for the establishment of a formal multilateral agreement to conserve these species (*The Stilt*, 1995, 26, 7–8). This arrangement crystallized in 2006 as the East Asian–Australasian Flyway Partnership, a non-legally binding agreement, with participation of state and non-state actors.

The 8th meeting of the Partnership was held in Kushiro in January 2015, bringing together representatives from 16 countries, two inter-governmental organizations, and eight non-governmental organizations. This meeting was attended by six people who were also present at the founding event in 1994 and who have been instrumental in waterbird conservation in this flyway.

Although many migratory waterbird species have declined in this region there is some hope of achieving conservation outcomes. This flyway encompasses the migratory range of c. 285 waterbird species that complete their life cycle anywhere from Australia and New Zealand to Siberia and Alaska. The Partnership covers 25 bird families, with four focal groups (Anatidae, seabirds, cranes and shorebirds). Fifty-five of the species are categorized as globally threatened on the IUCN Red List as a consequence of multiple threats, including habitat loss and hunting. However, conservation efforts already appear to have aided the recovery of at least one species, the black-faced spoonbill *Platalea minor*.

Some challenges of the Flyway Site Network, a habitat-based conservation approach, were addressed at the meeting. Currently, of 906 potential sites identified as part of the Network, only 13.6% have been designated as protected areas. Moreover, the boundaries of 73% of the designated sites are unknown, potentially undermining effective management. Recent cooperation with the Ramsar Convention has, however, facilitated training for Network site managers, potentially improving conservation outcomes. The need for a formal monitoring protocol for the Network, to identify and redress emerging management issues, was agreed at the meeting.

Since the last meeting of the partners, the Network and the Partnership membership have expanded. New sites have been designated in Mongolia (one site), Japan (two), Myanmar (three), Australia (one) and Thailand (two), and four new partners have joined (Myanmar, Vietnam, the ASEAN Centre for Biodiversity, and the Convention on Biological Diversity). The accession of the Convention on Biological Diversity is particularly important, as its national focal points are different to those of the Partnership, potentially leveraging its implementation through additional support from national governments.

Habitat loss is an important driver of shorebird population declines in this flyway (*Biological Conservation*, 2010, 143, 2238–2247; *Frontiers in Ecology and the Environment*, 2014, 12, 267–272), yet hunting may also warrant attention. A review of the hunting of migratory shorebirds was presented at the meeting and, although this activity has been widespread, the evidence is fragmented and no monitoring is in place. Consequently, delegates called for a flyway-wide situation analysis on hunting of migratory shorebirds and to extend it to include other waterbird species.

Several emerging topics were also discussed. As countries in the flyway transition to renewable energy, bird strikes

from wind turbines may become relevant. In one session the potential impacts of this infrastructure, and regulatory frameworks to minimize collisions, were presented. Additionally, as there has been large-scale loss of intertidal flats in the Yellow Sea (*Frontiers in Ecology and the Environment*, 2014, 12, 267–272), there was discussion of a potential transboundary offsetting scheme across the flyway, as well as on researching the feasibility of habitat restoration.

The meeting indicated that the East Asian–Australasian Flyway Partnership is now gathering momentum and transitioning from negotiation to implementation. The event concluded with an agreed work plan for 2015–2016, which partners will report against at the next meeting in 2017, tentatively to be held in Singapore. For access to the full minutes of the meeting see <http://www.eaaflyway.net>

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Large fires in the Andean Araucaria forests: when a natural ecological process becomes a threat

The fire season of 2014–2015 in Chile has been one of the worst of the last 50 years, with large and simultaneous fires affecting vast areas of Andean *Araucaria–Nothofagus* forests in several national parks, forest reserves and private properties. The worst-affected protected areas are China Muerta and Malleco National Reserves, and Conguillío and Tolhuaca National Parks, with an estimated total area of >12,000 ha burned. In 2002 fires burned >20,000 ha, affecting mostly the same protected areas and other private land covered by Araucaria forests, with c. 30 and 60% of the total area of Malleco National Reserve and Tolhuaca National Park burned, respectively. As then, the 2014–2015 fires have stirred public, political and scientific concern.

Fire is an intrinsic ecological process in these forests. Fire regimes are dominated by mixed-severity fires that include low-severity surface fires and crown fires, depending on forest type and topographic location. Fires typically result in a mosaic burnt to varying degrees of severity. In the last 150 years the fire regime has changed dramatically. With the arrival of Euro–Chilean settlers human-caused fires increased, and burning and logging (until *Araucaria araucana* was declared a National Monument in 1976) resulted in the loss of c. 50% of the original distribution of *A. araucana*.

Much of the Araucaria forests are confined to national parks and reserves that are valued for their cultural and spiritual significance by the Mapuche-Pehuenche peoples, and for their biodiversity and other ecosystem services. These areas have become refuges for the *Araucaria–Nothofagus* forests and action is required for the prevention and control of fires. Additionally, the consumption of seeds by exotic

species and domestic animals, and the unregulated collection of seeds, and ranching, by local communities affect forest regeneration, especially in early post-fire recovery. Given predictions of reduced precipitation and increased temperatures for south-central Chile, these ecosystems will be exposed to more frequent fires.

As well as recent initiatives of the Chilean forest services for the restoration of these forests, there is a need for engagement with stakeholders, communities and the wider public to establish long-term commitments and partnerships for forest conservation. This may be the biggest challenge of all.

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16th Student Conference on Conservation Science

Nearly 180 students from 53 countries attended the 16th Student Conference on Conservation Science (SCCS) on 24–26 March 2015 in the Department of Zoology, University of Cambridge, UK. Delegates were given a warm welcome by Patricia Zurita, the new Chief Executive of BirdLife International, whose secretariat is based in Cambridge.

SCCS is an international conference series aimed entirely at young conservation scientists, so its key features are the sessions devoted to student presentations and posters. The conference avoids having a single theme, to encourage contributions that span the social and natural sciences and all taxonomic groups. The 32 student talks were interspersed with student poster sessions, with 97 posters and nine expert workshops on practical skills. Senior conservation scientists provided written feedback on all talks and posters and awarded prizes to the best three of each.

Stimulating plenary lectures were given by Julie Razafimanahaka (Madagasikara Voakajy) on resolving conservation issues in Madagascar, Patricia Majluf (Oceana) on reconciling commercial fishing with marine conservation, Tom McCarthy (Panthera) on novel and diverse approaches to promoting the co-existence of snow leopards and pastoralists, and Paul Ferraro (Georgia State University) on the standards of evidence in conservation science. Julie Razafimanahaka first attended SCCS as a student a decade ago and became the first SCCS alumnus to return as a plenary lecturer.

Social and networking events included a Who's Who in Conservation? session at which 30 conservation agencies, institutes and NGOs displayed posters and provided staff to talk about their work. Conservation practitioners play a key role in SCCS, and the conference was visited by 90 staff or representatives from 37 bodies.