

Fellowship Conference

Saturday 20 April 2024

9:50am – 10am:

Welcome

Professor Sir Jim Smith, President, Zoological Society of London (ZSL)

10am – 10:45am:

Lecture 1: Extinct in the Wild – the Opportunity is in Our Hands

Dr Fiona Sach, Zoo Conservation Impact Manager, ZSL

Extinct in the Wild (EW) species are the most threatened species globally, depending entirely on zoos, aquariums and botanic gardens for survival. ZSL holds nearly half of the world's EW animal species and is in a unique position to halt their extinction, by applying our expertise in conservation breeding and reintroduction. Through our EW Initiative, working with our partners, we strive to let no EW species slip to extinction on our watch. We draw on the unique strengths of our conservation science to support decision making and learn about these uniquely challenging biological and social scenarios. Species examples include the Mexican Pupfish (Charco Palma Pupfish *Cyprinodon veronicae*, La Palma Pupfish *C. longidorsalis*, and Potosi pupfish *C. alvarezi*), the Socorro Dove (*Zenaida graysoni*), Sihek and Partula Sp. We care for these species at ZSL's Conservation Zoos and ZSL staff have active roles within global breeding programmes. We aim to revitalise the ex-situ populations and assist in the release and reinforcement of wild populations; ultimately leading to species down listing on the IUCN Red List. As we approach ZSL's bicentenary year, the opportunity to change the trajectory for these species is in our hands.

10:45am – 11:00am

Break

11:00am – 12:15pm:

Fellowship Talks

11am – 11:10am

Talk 1: "The Lost Words": Representations of Environmental Issues in Children's Literature and the Implications for Environmental Education

Ross Buckingham, Phd Graduate, University of Cambridge

The intersection between children's literature research, ecocriticism, ecology and environmental education holds a rich history, evolving alongside societal attitudes towards nature and sustainability. Historically, children's literature has served as a platform for moral and educational instruction, with early works addressing environmental stewardship. However, the emergence of ecocriticism in the late 20th century brought about a systematic examination of ecological themes in literary texts, including those aimed at young readers. This interdisciplinary approach highlighted the potential of children's literature to shape environmental awareness and values in young audiences. Concurrently, advancements in ecology provided a scientific foundation for understanding ecosystems, informing both literary analysis and educational practices. Today, there is a growing

emphasis on experiential learning and interdisciplinary approaches in environmental education, with children's literature playing a pivotal role in conveying complex ecological concepts in accessible ways. The ongoing intersection of these disciplines continues to inform pedagogical practices and contribute to a broader understanding of how literature can nurture environmental consciousness from a young age, addressing pressing global challenges such as climate change.

11:10am – 11:20am Talk 2: From Conservation to Restoration: what impact will the EU's proposed Nature Restoration Regulation have within the EU, the UK and beyond?

Dr Martin Steinfeld, Affiliated Lecturer in EU Law, University of Cambridge

The EU is now very close to finally making the proposed Nature Restoration Regulation law, having passed voting in the European Parliament. This is significant for three reasons. Firstly, it illustrates the culmination of many years of evolution within EU law (and its wider influence beyond Europe) in the sphere of biodiversity and conservation. Secondly, it marks an important political and legal evolution from conservation to restoration akin within the EU. Thirdly, under the UK-EU agreement post Brexit it is perfectly possible that one way or the other the UK will seek to align itself with this regulation as best practice, i.e. it is as relevant to ZSL fellows as it is to zoologists etc within the EU.

11:20am– 11:30am Talk 3: A New Offering in Sustainability Consulting: Acting for Nature

Bethany Greenman, Oakdene Collins

Following graduating from the University of Portsmouth in Biology, Bethan began working at Sustainability and Circular Economy consultancy Oakdene Hollins whilst completing her Masters Degree in Environmental Management. As part of her consultancy work, she has been piloting a new sector of work called 'Acting for Nature' with mattress manufacturer Silentnight group.

With the help of Oakdene Hollins, Silentnight Group has already begun a decarbonisation programme aligned with the Science-Based Targets Initiative (SBTi). Climate change and biodiversity loss are closely linked problems and need to be addressed in an integrated way; for example, nature can help us to store carbon and likewise, damaging nature can release carbon. As a planet, we are waking up to the fact that if we want to reverse climate change, we are also going to need to act with nature in mind. This is a part of what we are terming 'Acting for Nature'.

Acting for nature offerings are therefore likely going to be increasingly important for our clients and therefore, as consultants we need to be ready to answer their questions and understand the current landscape.

11:30am – 11:40am Talk 4: Hybridization in Endangered Wildlife Populations

Ray Heaton FLS, Trustee, Wader Quest

During the current biodiversity crisis many animal species survive as small endangered populations; conservation interventions to protect these species may include the establishment of ex-situ populations. Captive populations need to be managed for welfare including natural behaviour, and for maximising genetic diversity. The genetic relationship and makeup of the founder animals is important.

This presentation will reference issues of hybridisation in animal populations including ex-situ ones.

Captive populations of great apes, other primates, big cats, ungulates, reptiles and amphibians are discussed. Reference will be made to wild populations where hybridisation has been problematic in species survival but also where hybridisation, with closely-related subspecies, has been used in genetic rescue.

The widespread reticence to consider hybrid animals in conservation work has meant that some species, particularly sub-species, have been sadly neglected and their survival compromised.

IUCN guidelines do not consider hybrids; USA Fish and Wildlife Service will not consider protection or funding for hybrids and subspecies.

Reintroduction of the correct island type using partial hybrid tortoises (all that survive) is happening in Galapagos.

Hybridisation is an important evolutionary processes which can lead to speciation; permitting such processes is important in conservation planning. An example will be given from Bornean Orangutan.

11:40am – 11:50 am Talk 5: Researching the history and current distribution of the Eurasian Golden Jackal (*Canis aureus*) in mainland Europe

Professor Keith Somerville, Senior Research Fellow at Institute of Commonwealth Studies, University of London

The jackal has never been present north of the Balkans, in Central East and Western Europe – with no fossil or observation records in those areas. It has been present since at least the 14th century in Bulgaria (probably longer) and for long in parts of Greece, the Adriatic Coast of the Balkans, Turkey and the Caucasus – having dispersed into the Middle East from Iran. Most evidence suggests they originated in India and South-East Asia where sub-species evolved and dispersed, with those moving into Iran developing a different genetic mix to the South and South-East Asian populations. In the last 50 years they have spread from southern Europe and the Balkans through Romania and Hungary into Eastern Europe, Central Europe and then Western Europe, becoming more and more common in Austria and Italy, but reaching as far as the Netherlands, Belgium, France and even northern Spain. They have spread to the north through the Baltic states and into Finland and inside the Arctic Circle in Norway.

11:50am – 12:00am Talk 6: A Caribbean Killer

Dr Byran Wilson, Researcher, University of Oxford

In the last decades, Caribbean reefs have suffered a cavalcade of assaults, which have seen the abundance and diversity of coral populations plummet. A recent novel threat has appeared to hasten this demise - an aggressive Peyssonnelioid Algal Crust (PAC) which overgrows and kills live corals, and then prevents their larvae from establishing on the reef. Their only natural predator, the spiny black sea urchin, has been almost wiped out by two separate marine epidemics, leaving little in the way of the subject of the second half of this talk, this golden scourge, an ecological winner for our changing oceans.

12:30pm – 1:00pm

Animal Behaviour Session

ZSL applies behavioural science in animals' lives to ensure best practice in animal training and enrichment across our two conservation Zoos. From teaching African wild dogs to accept wearing radio-tracking collars, training fish for voluntary relocation, or lions to participate in voluntary veterinary and husbandry activities, ZSL Keepers work to give animals greater choice and control over their own environment.

Head down to the Macaw House for a self guided to see our keeper teams in action practicing their animal training to get a sense of the work that goes on behind the scenes.

1:00pm – 2:00pm:

Lunch Break

The Library will be open from 12:30pm – 2pm. Why not head down and see their new updates and browse some of the titles.

2:00pm-4:00pm:

Engagement Sessions

Ah Ah Ah Ah Staying Alive: Basic Animal First Aid

Stephanie Isaac, Registered Veterinary Nurse, Royal Veterinary College

Come and join exotic veterinary nurse Stephanie Isaac to learn some tips and tricks of exotic animal first aid. Perfect for those with veterinary and animal experience or those who want to learn something new. You will even have the opportunity to put your hand at bandaging and animal CPR!

Master planning and Curatorial: How do you plan for the future of ZSL?

Robin Fitzgerald, Head of Capital Projects and Sarah Forsyth, Curator of Mammals, ZSL

What is the future of our two conservation sites? How do we decide what species are our priority? How do you manage historically listed buildings? Join the ZSL team as they answer these questions. They will introduce you to the decision making process behind what species at our Zoos are best placed to communicate our conservation story as well as how to ensure ZSL is future proofed for the next 200 years.

The Chagos Brain Coral Rescue Mission and the Future of corals at ZSL London Zoo

Colette Gibbings, Curatorial Lead Keeper (Marine), ZSL

Showcasing the experience of an expedition in 2023 to save The Chagos brain coral – *Ctenella chagius* and to safeguard its future within a captive environment. Providing details on how this coral is doing in captivity and the future for all corals at ZSL going forward.

Time for a Trus-tea

Peter Higgins, Professor Sir Jim Smith, Paul Wilson, Loraine Woodhouse, Trustees, ZSL

Ever wondered what it takes to help steward one of the largest conservation organisations throughout the year? For nearly 200 years our Trustees have been at the helm of ZSL each step of the way. Come and speak with our Trustees to learn more about their role, how they are representatives for Fellows and how you get involved with the governance.

ZSL 200 – a 'History Hive' of activity

Tina Campanella, Bicentenary Project Manager, ZSL and Natahsa Wakley, Archivist, ZSL

Bicentenary Project Manager Tina Campanella will give a brief overview of where ZSL is with bicentenary celebration planning, before giving participants a sneak peek at the project's

first media moment, which will take place on April 29th – the launch of ZSL’s History Hive, marking the two-year countdown to the big year.

The History Hive project will call on members of the public to submit images, footage, stories and objects connected to ZSL, to help bring our history to life in new ways in 2026. Fellows will be actively encouraged to submit to the Hive, and participants of this engagement session will be able to see firsthand some of the artefacts ZSL already has in its archives, before brainstorming what we might expect to receive post launch and how these might be used in 2026.

*Please note the sessions must be prebooked ahead of attending. If slots are available you can book during the first break at 10:45am – 11:00am.

3:40pm – 4:15pm: Break with the Youth Advisory Board

4:15pm – 5:00pm: Lecture 2: Predicting species population abundance response to climate, land-use, and future scenarios

Robin Freeman, Indicators and Assessment Unit, ZSL

We present our recent analysis of 1751 population trends of 712 species from the Living Planet Database, focusing on terrestrial and freshwater birds and mammals from 1950-2014. We explore how species abundance trends respond to climate and land-use changes, considering both immediate and time-lagged responses.

Our analysis highlights that recent population trends may be better explained by historical rather than contemporary climate and land-use changes, particularly for larger species; this suggests that some biodiversity responses may be 'locked-in' and efforts to 'bend-the-curve' may be more urgent than previously thought.

Our predictive models also offer interesting opportunities to explore how population abundance may change under different future scenarios. This evidence-based approach, combining historical, contemporary, and future data, can provide a 'leading' indicator of population abundance for decision-making in biodiversity conservation.

5:00pm – 5:10pm: Closing Remarks

Professor Sir Jim Smith, President, ZSL

5:10pm-5:45pm: Refreshments and networking

5:45pm: Event Closes