

ZSL SCIENCE AND CONSERVATION EVENT

**Return to the wild:
How can we recover Extinct in the Wild species?**



**Tuesday 9 March 2021
6:00pm – 7:30pm UK Time (GMT)**

Online event livestreamed to [zsl.org/IOZYouTube](https://www.zsl.org/IOZYouTube)

[Direct link: <https://youtu.be/VWTbrzJe1ZI>]

There is no charge for this event, and no need to register in advance

AGENDA

Dr Axel Moehrensclager, Chair IUCN SSC Conservation Translocation Specialist Group, and Director of Conservation & Science, Calgary Zoo Foundation

Will we save species that are extinct-in-the-wild?

The ultimate test for conservation

Dr Sarah E. Dalrymple, Liverpool John Moores University

How do we restore extinct in the wild plants?

Dr Amanda Trask, Institute of Zoology, Zoological Society of London

Saving the sihek: recovery planning for an extinct in the wild species

Paul Pearce-Kelly, Zoological Society of London

Reintroducing Partula snails to the wild

ABSTRACTS

Will we save species that are extinct-in-the-wild? The ultimate test for conservation

Dr Axel Moehrenschrager, Chair IUCN SSC Conservation Translocation Specialist Group, and Director of Conservation & Science, Calgary Zoo Foundation

The global biodiversity crisis requires swift and decisive action to counter loss of species and habitats. 'Extinct in the Wild' species rely absolutely on human care to prevent extinction and, beyond this, the will and commitment of people to achieve recovery in the wild. Nowhere else is this stark test of humanity more clearly defined and the potential reward for nature so great. There are challenges to maintaining species in ex-situ facilities in perpetuity, and the IUCN Red List evidences the fact that it is possible to successfully establish populations of 'Extinct in the Wild' species in natural habitat through conservation translocations. Re-establishing such species may entail difficult decisions, trading off benefits and risks on competing values. 'Assisted colonization' for example is a form of conservation translocation involving releases in new environments that may prove critical to the conservation of species where suitable habitat within the indigenous range no longer exists. Our acknowledgement and treatment of 'Extinct in the Wild' species, along with our accepted options for wild recovery need recognition, review and reinvigoration.

Dr Axel Moehrenschrager leads community conservation and conservation translocation programmes as Director of Conservation and Science at the Calgary Zoological Society, an IUCN Member organisation. Dr Moehrenschrager is Chair of the IUCN Species Survival Commission (SSC) Conservation Translocation Specialist Group, Adjunct Professor at the University of Calgary, and Research Associate at Oxford University's Wildlife Conservation Research Unit where he received his PhD. Dr Moehrenschrager also serves on the Technical Advisory Committee of the UN Equator Prize, and as Trustee of the St Andrews Prize for the Environment.

How do we restore extinct in the wild plants?

Dr Sarah E. Dalrymple, Liverpool John Moores University

For plants to be classed as 'Extinct in the Wild' (EW) they exist only in ex situ facilities, either cultivated in gardens, nurseries or arboretum, or stored in seed and gene banks. It is tempting to view the restoration of EW plants as being no different to any other threatened plant, but in practice there are many constraints to returning these acutely threatened species to their wild habitats. In this talk, I provide examples of EW species that have been reintroduced to their former habitat but highlight the many constraints associated with this approach. Of 42 species of EW plants in the IUCN Red List, almost half have not been seen in the wild for more than 20 years. Long time periods in ex situ facilities are problematic because the species become increasingly poorly adapted to conditions in their native habitat. Additionally, geospatial records are typically patchy and two thirds of the EW species are known from less than 20 sites; robust niche descriptions are therefore difficult to produce and it prevents evaluations of habitat change in the interim from species extirpation (loss from the wild) to the present day. The number of ex situ collections also varies widely and may represent limited parts of the natural range. Overall, the many difficulties highlight the huge obstacles that must be overcome

when attempting to restore EW species to the wild. If nothing else, the EW species should act as a reminder of what we might lose should we continue to let species decline, and a warning to act decisively to avoid more extinctions whilst we are still able to do so.

Sarah Dalrymple is a Senior Lecturer in Conservation Ecology and Programme Leader BSc Wildlife Conservation at Liverpool John Moores University, UK. She is a plant ecologist focusing on threatened species, seed ecology and conservation, and the efficacy of conservation translocations under a changing climate. Sarah has undertaken various practical conservation initiatives including reintroduction and habitat restoration, has reviewed threatened plant translocations, and contributed to policy documents, including co-authoring the IUCN Reintroduction Guidelines (2013) and the Scottish Code for Conservation Translocations (2014). She is an advisor to various reintroduction programmes in England and co-leads the global Plant Translocation Network.

Saving the sihek: recovery planning for an extinct in the wild species

Dr Amanda Trask, Institute of Zoology, Zoological Society of London

Recovery planning for extinct in the wild species can be challenging, in particular when threats still exist in the species' native range. Then, it is imperative to understand the dynamics of the captive population to ensure releases do not jeopardize population viability. Additionally, where releases to areas outside the species' native range are considered, there may be unintended impacts on release-site ecosystems.

The Guam kingfisher, or sihek in Chamorro, was extirpated from Guam by 1988 due to predation by invasive brown tree snakes and currently exists entirely under human care in breeding institutions in the mainland United States and on Guam. This talk will give an overview of the conservation translocation planning work by the Sihek Recovery Team to release sihek back to the wild. This recovery planning involves using a structured decision-making approach with multiple stakeholder engagement to assess different translocation strategies, including releases to areas outside the sihek's native range, with the ultimate aim of reintroduction to Guam. The talk will also discuss work assessing the viability of the captive population, to ensure removing individuals for releases to the wild are sustainable. The talk will then cover future next steps, including assessing potential impacts of releases on ecosystems outside the sihek's native range.

Amanda is a conservation biologist at the Institute of Zoology, ZSL, with research interest in population ecology and genetics. Amanda is part of an international team working on recovery planning of the extinct-in-the-wild sihek (Guam kingfisher). This involves working with multiple stakeholder groups to design and implement a recovery strategy, as well as identifying threats to the viability of the captive population, and understanding potential ecological impacts of releases to sites outside the sihek's native range. Amanda completed her PhD at the University of Aberdeen, investigating genetic and demographic threats to the viability of the Scottish red-billed chough population, and also continues to be involved with this work.

Reintroducing Partula snails to the wild

Paul Pearce-Kelly, Zoological Society of London

Throughout the last century, the Partula tree snails of Polynesia have provided biologists with valuable insights into evolutionary genetics. Unfortunately, they have also provided a stark example of the vulnerability of island species to invasive predators with many Partula species being made extinct due to the introduced predator rosy wolf snail. Finally they are demonstrating the value of concerted conservation efforts for preventing species extinction and, through the conservation breeding programme, restoring wild populations of Extinct in the Wild species. This briefing will provide an overview of the progress and challenges of the Partula reintroduction programme and how it might inform wider species conservation efforts.

Paul Pearce-Kelly is the Zoological Society of London's Senior Curator of invertebrates and fish and specialises in the development and management of species conservation breeding and reintroduction programmes with particular focus on ectotherms. His research interests include demographic and genetic management of group-living species and the evaluation of climate change impacts on species and ecosystems, with particular emphasis on coral and associated biodiversity. He also coordinates the European and global Partulid snail conservation breeding and reintroduction programme and has been involved with their conservation for the last 30 years.

Format of Live Events

- This interactive online event will be livestreamed to our YouTube channel here: zsl.org/IOZYouTube. A direct link to the livestream will also be shared on the event web page before the event.
- Before attending this event, please read our Code of Conduct found [here](#).
- This event will run from 6:00pm – 7:30pm, and will be recorded and available to watch afterwards on our YouTube channel.
- Each event will comprise of 3 – 4 presentations from experts in the topic, similar to our previous events.
- There will be opportunities for the audience to submit questions during the event (this process will be explained on the night), to be answered live after each presentation. If you wish to submit a question to a speaker prior to the event, please send it to scientific.events@zsl.org. Please be aware we may not be able to answer all questions.
- There is no charge for this event, and no need to register in advance.

Join us at our next online event

Why do eggs fail?

11 May 2021, 6:00pm – 7:30pm

Hatching failure occurs in all birds, but its incidence varies across species, populations and individuals. Small, threatened populations are particularly vulnerable, with rates of hatching failure sometimes exceeding 70%. Egg hatchability can therefore be considered a weak link in the chain of events that determines avian reproductive success. Eggs fail for a number of reasons. In this event we will explore the different aspects that lead to female reproductive failure from gamete malfunction to developmental environment, and ask why female fertility is so poorly understood not only in birds, but across most species?



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ZSL Wild Science Podcast

Listen to our award winning **ZSL Wild Science podcast** episodes produced by Dr Monni Böhm and Eleanor Darbey here: www.zsl.org/zsl-wild-science-podcast.

Further Information

- Please contact the Scientific Events Coordinator, Eleanor Darbey (eleanor.darbey@zsl.org), if you have any queries about our Science and Conservation events or podcasts.
- For press enquiries, please contact the ZSL Press Office: press.office@zsl.org.
- For more information about how to join the ZSL Fellowship programme and engage with a network of thousands who are shaping the future of conservation, please visit: www.zsl.org/membership/zsl-fellowship.
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ZSL and our Zoos - London and Whipsnade - are in danger of being lost forever, now we have closed our gates again. As a charity we need your help to continue to care for our amazing animals and protect wildlife around the world today. Your support really makes a difference, please give what you can: <https://www.donate.zsl.org>.