

ZSL SCIENCE AND CONSERVATION EVENT

**Putting reptiles on the map:
ZSL Science for reptilian conservation**



**Tuesday 8 December 2020
6:00pm – 7:30pm UK Time (BST)**

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

[Direct link: <https://youtu.be/Bt3NVi6fc0A>]

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

AGENDA

Dr Monika Böhm, Research Fellow in the Institute of Zoology, ZSL
Assess, publish, repeat: building the scientific knowledge base for reptile conservation

Rikki Gumbs, EDGE Postdoctoral Research Scientist, ZSL
Reptiles on the EDGE: conservation priorities for the reptilian Tree of Life

Emmanuel Amoah, Threatened Species Conservation Alliance (THRESCOAL)
Protecting a sacred river: community-led conservation of the West African slender-snouted crocodile

Benjamin Tapley, Head of the Reptile Team, ZSL
Developing release strategies for confiscated and Endangered big-headed turtles in Vietnam

ABSTRACTS

Assess, publish, repeat: building the scientific knowledge base for reptile conservation

Dr Monika Böhm, Research Fellow in the Institute of Zoology, ZSL

Reptiles are incredibly diverse, comprising almost one third of all land vertebrate species on Earth. They are key components of the world's ecosystems, as prey, predators, seed dispersers and bioindicators for ecosystem health, and have captured humanity's imagination over the ages: from real-life "dragons" to bum-breathing turtles and venomous snakes, reptiles never cease to amaze. A decade ago, very little was known about the conservation status and needs of this diverse group, but this has changed considerably by now. In this talk, we will revisit some key ZSL projects which have contributed to the emergence of reptiles in the conservation arena, including the latest work on ZSL's flagship biodiversity indicators: the sampled Red List Index and the Living Planet Index. The world's lizards, snakes, turtles and crocodylians have suffered average population declines of more than 30% in the past 50 years, and one in five species are estimated to be threatened with extinction. Reptiles are particularly threatened by habitat loss, the pet trade, livestock farming and the impacts of invasive species. These threats are likely to be exacerbated in future as many reptile species are highly sensitive to climate change. This introductory talk will set the scene for the remainder of the event, as we now start to shift from gathering data on reptiles to implementing successful conservation on the ground, in order to firmly put reptiles on the conservation map!

Monni is a Research Fellow at ZSL's Institute of Zoology, and self-proclaimed taxonomic jack-of-all-trades. Originally from a mammal ecology background, her more recent research interest has focused on the extinction risk and threats to under-studied and often under-appreciated biodiversity, such as freshwater molluscs, dung beetles and reptiles. She has worked on the development of the sampled Red List Index, a biodiversity indicator aiming to adequately represent highly species-rich groups in conservation decision making and planning. She holds an MRes in Ecology and Environmental Management and a PhD in Environmental Science, both from the University of York.

Reptiles on the EDGE: conservation priorities for the reptilian Tree of Life

Rikki Gumbs, EDGE Postdoctoral Research Scientist, ZSL

The Tree of Life, which represents the evolutionary history of all life on Earth, is under threat. As we lose species to extinction, we also lose their unique and important evolutionary diversity and novelties, many of which are crucial to the future of nature and humanity. Very few species groups can boast such a variety of evolutionary novelties as the world's reptiles. From flying snakes and green-blooded lizards to subterranean alligators and giant tortoises, the vast evolutionary history of reptiles has produced an incredible diversity of form and function. In this talk, we will explore research led by ZSL scientists to prioritise the reptilian Tree of Life for conservation, including the first EDGE Reptiles list, which identifies the world's most evolutionarily unique and threatened reptiles in need of urgent conservation attention. Many of the world's most unique reptile species face extinction and, across lizards, snakes, crocodylians and turtles, we face the loss of more than 13 billion years of cumulative

evolutionary history—a universe's age of diversity. The regions of the planet with the highest concentrations of irreplaceable reptilian evolutionary history are facing much greater human encroachment and impacts than expected by chance, and many species for which we still lack real understanding may be both highly irreplaceable and at risk. This talk will discuss these findings and highlight ZSL's work on the ground to conserve some of the most weird and wonderful reptiles on Earth.

Rikki is a research scientist at ZSL's EDGE of Existence programme with a passion for reptile conservation. Rikki is responsible for developing EDGE species lists, which prioritise evolutionarily unique species for conservation action, and has overseen several of EDGE's conservation projects on threatened reptiles worldwide. His research focuses on the quantification of humanity's impact on the Tree of Life, and identifying future priorities for conservation research and action, and he is in the process of completing his PhD at Imperial College London.

Protecting a sacred river: community-led conservation of the West African slender-snouted crocodile

Emmanuel Amoah, Threatened Species Conservation Alliance (THRESCOAL)

Indigenous conservation of natural resources has been practiced in Africa for centuries. Indigenous use taboos, totems, superstitious beliefs, and fear of the gods to minimise pressure on natural resources and to protect the environment. For instance, in Ghana, the coastal communities do not go fishing on Tuesdays because they believe it is the day the gods of the sea rest. This particular taboo day is used to minimise pressure on marine resources. Totems, on the other hand, are mostly plants or animals that are used as symbolic objects of families or clans in Africa, and as such, they work hard to protect such animals or plants. Other forms of environmental conservation are the worshiping of rivers. The Tano River is one of such traditionally protected rivers. The river has all its aquatic creatures protected against consumption. This has led to the protection of West African slender-snouted crocodiles, a Critically Endangered species. The river currently holds one of the highest concentrations of the species in West Africa. THRESCOAL is working with local communities to secure long-term protection of the species through the creation of community-based protected areas, awareness campaigns, and local capacity building and alternative livelihood programmes.

Emmanuel is the Executive Director of Threatened Species Conservation Alliance a Ghanaian NGO dedicated to nature conservation. Emmanuel is currently pursuing a PhD degree at the Kwame Nkrumah University of Science and Technology (KNUST), Ghana with research focus on West African slender-snouted crocodiles. He holds an MPhil degree in Wildlife and Range Management and a BSc degree in Natural Resources Management from KNUST. He is an alumnus of the ZSL EDGE fellowship and the first recipient of the Segré Species Survival Award. Emmanuel is a member of the Crocodile Specialist Group and has over 5 years of experience working with crocodiles.

Developing release strategies for confiscated and Endangered big-headed turtles in Vietnam

Benjamin Tapley, Head of the Reptile Team, ZSL

In the late 1990s, the Asian turtle crisis, driven by unsustainable harvesting of freshwater turtles to supply Chinese markets, was recognised by the IUCN as a significant threat to turtle survival. Turtle harvesting remains at unsustainable levels and there is substantial need to develop regional *in* and *ex-situ* conservation efforts. The number of turtles seized by the local authorities is more than can be adequately housed in rescue centres and these centres are already stretched for resources; the ongoing seizures have the potential to overwhelm rescue centres and jeopardise animal welfare. Seized animals may be the only potential source population to restore highly threatened turtles into areas from where they have been extirpated. Currently, translocations following IUCN best practice guidelines are precluded, as disease risk analysis cannot be undertaken due to a lack of baseline pathogen and genetic data and in-country capacity. Moreover, funds are lacking for robust genetic screening of animals intended for release and subsequent post release monitoring. The big-headed turtle (*Platysternon megacephalum*) is assessed as Endangered by the IUCN and is recognised as a global priority for conservation by the Zoological Society of London's EDGE of Existence Programme due to its global endangerment and evolutionarily distinctiveness. In 2015 the number of big-headed turtles seized by local authorities in Vietnam increased dramatically. In response to a pressing need, we have been working with the Asian Turtle Program of Indo-Myanmar Conservation to develop in-country capacity and we are actively translocating big-headed turtles following IUCN best practice guidelines. We anticipate that the model developed by our team will result in the development of viable conservation release strategies for turtles seized from the illegal wildlife trade and that this model may be applied to other taxa currently held in Vietnam's overstocked rescue centres.

Ben is the Curator of reptiles and amphibians at the Zoological Society of London and PhD candidate at the University of Kent. Ben studied Conservation Biology at the University of Surrey Roehampton and went on to undertake an MSc in Conservation Biology at the Durrell Institute for Conservation and Ecology. Ben is currently involved in several amphibian and reptile conservation programmes and is currently working on Chinese giant salamanders in China, mountain chicken frogs from the Caribbean and Megophryid frogs and big-headed turtles in Vietnam. Ben is a Facilitator, IUCN Amphibian Specialist Group, Conservation Breeding Working Group and Vice-chair of the EAZA Amphibian Taxon Advisory Group.

Format of Live Events

- This interactive online event will be livestreamed to our YouTube channel here: [zsl.org/IOZYouTube](https://www.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.

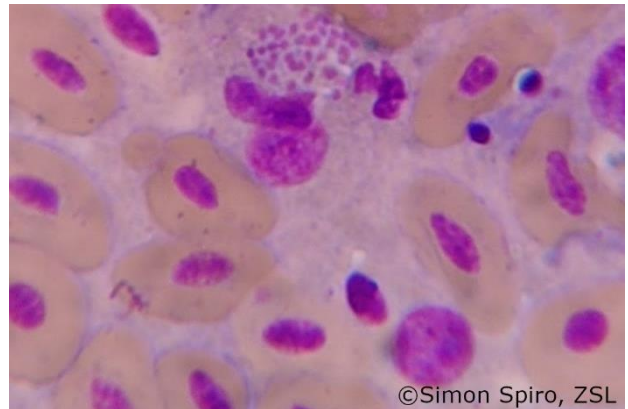
- There is no charge for this event, and no need to register in advance.

Join us at our next online event

Revealing the unseen: the amazing world of wildlife pathology

12 January 2020, 6:00pm – 7:30pm

Pathology is the science of diagnosing and characterising diseases by observing the physical changes they induce in animal cells and tissues, either in living (biopsies) or, more commonly in the veterinary world, dead animals (post mortems). During this event, ZSL's experienced pathologists, vets and scientists will: discuss the practicalities of performing post mortem examinations on zoo animals; describe how to track a snake-killing invasive fungus; show how they investigate the deaths of whales, dolphins and sharks that wash up on British coasts; and finish with the forensic work used to protect Britain's most endangered species.



©Simon Spiro, ZSL

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 the ZSL Fellowship, please visit: www.zsl.org/membership/zsl-fellowship.
- To receive email updates about forthcoming ZSL Science and Conservation Events, please visit: www.zsl.org/science/whats-on/science-and-conservation-events-email-updates
- Read the latest blog posts from our scientists and conservationists here: www.zsl.org/blogs/science.
- Follow us on Twitter [@ZSLScience](https://twitter.com/ZSLScience) to hear about new publications from our researchers, upcoming events and podcast episode releases.
- Join us on our new Facebook page [@ZSLScienceAndConservation](https://www.facebook.com/ZSLScienceAndConservation) for announcements of each event.