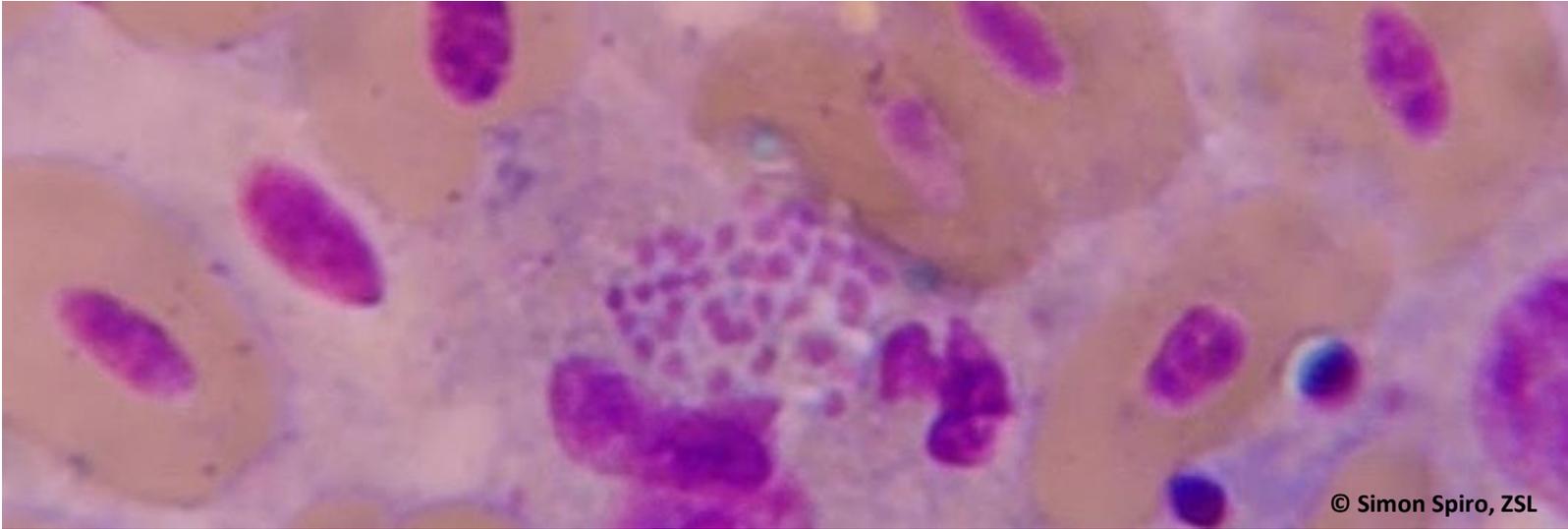


ZSL SCIENCE AND CONSERVATION EVENT

**Revealing the unseen:  
the amazing world of wildlife pathology**



© Simon Spiro, ZSL

**Tuesday 12 January 2021  
6:00pm – 7:30pm UK Time (BST)**

Online event livestreamed to [zsl.org/IOZYouTube](https://www.zsl.org/IOZYouTube)  
[Direct link: <https://youtu.be/aiucydgX1H8>]

There is no charge for this event, and no need to register in advance  
Please note: this event will show graphic images, viewer discretion is advised

## AGENDA

**Dr Simon Spiro, Wildlife Veterinary Pathologist, Wildlife Health Services, ZSL**  
*From echinoderms to elephants – an introduction to zoo and wildlife pathology*

**Dr Becki Lawson, Senior Research Fellow, Institute of Zoology, ZSL**  
*How pathological investigations helped us detect snake fungal disease in Europe*

**Rob Deaville, Cetacean Strandings Investigation Programme Project Manager,  
Institute of Zoology, ZSL**  
*Investigating giants of the sea – what happened to ‘Hessy’ the humpback whale?*

**Dr Tammy Shadbolt, Wildlife Veterinarian and Research Associate, Institute of  
Zoology, ZSL**  
*Protecting Britain’s endangered species*

## ABSTRACTS

### **From echinoderms to elephants – an introduction to zoo and wildlife pathology**

*Dr Simon Spiro, Wildlife Veterinary Pathologist, Wildlife Health Services, ZSL*

Veterinary anatomic pathology is the science of diagnosing diseases by recognising ways they physically change an animal's tissues, both at the macroscopic and microscopic levels. This talk will introduce you to how ZSL's pathologist, Dr Simon Spiro, deals with diagnosing animals that range in size and complexity from tiny corals to massive elephants. Simon will use photographs and time-lapse videos of post-mortem examinations to take you inside the autopsy room and reveal how we cope with these challenges. He will then use a virtual microscope to take you deep inside animal tissues until you can see the effect the diseases are having on a cellular level, and how this causes the macroscopic lesions and clinical syndromes that we can recognise in our living animals. This talk will give you front row seats to watch a battle between the immune system and invading bacteria and will showcase how an incidental finding in a routine post-mortem may help save a species from extinction. Please note that this talk will include pictures of dead animals and diseased tissues; viewer discretion is advised.

**Simon Spiro** graduated from the University of Cambridge with degrees in Veterinary Medicine and Pathology in 2010. He received a PhD in Virology from the University of Oxford in 2014 and went on to work developing vaccines for poultry diseases at the Pirbright Institute, before undertaking a residency in veterinary anatomic pathology at the Royal Veterinary College. Simon is a Fellow of the Royal College of Pathologists and a Diplomate of the American College of Veterinary Pathologists. He is currently the pathologist for ZSL. Outside of work, his serendipitously covid-friendly hobbies include astronomy, fiendishly difficult quizzes and Lego.

---

### **How pathological investigations helped us detect snake fungal disease in Europe**

*Dr Becki Lawson, Senior Research Fellow, Institute of Zoology, ZSL*

Disease surveillance of free-living wildlife often relies on undertaking post-mortem examinations to detect infections and diagnose disease. With this information we can build an understanding of the endemic, or established, conditions that affect certain taxa and be in a position to rapidly identify new and emerging trends. Our knowledge of wild reptile health is limited however, since cryptic species such as wild snakes are challenging to study. In 2013, we brought together our existing British wildlife disease investigation projects at ZSL and added hedgehogs under the umbrella of *Garden Wildlife Health* which we launched in partnership with the British Trust for Ornithology, Froglife and the Royal Society for the Protection of Birds. In addition to conducting pathological investigations on amphibians, garden birds and hedgehogs, wild terrestrial reptiles were included to help address this knowledge gap. We appeal to members of the public, herpetologists and ecological consultants to report sightings of sick and dead wild reptiles to us online ([www.gardenwildlifehealth.org](http://www.gardenwildlifehealth.org)), providing digital photos where available. Snake fungal disease, or ophidiomycosis, is a condition of potential conservation concern known to affect a range of wild snake species in North America. In this

presentation, we will retrace the steps of the investigation that led us to confirm ophidiomycosis as a cause of skin lesions in a grass snake (*Natrix helvetica*) in England, which represents the first diagnosis of this condition in wild snakes in Europe. We will describe how we collaborated with multiple national and international organisations, using available sample archives, to learn more about the occurrence of this condition. Important open questions regarding the epidemiology and impact of ophidiomycosis in wild snakes will be briefly outlined along with details of current and planned studies to help answer them. This presentation highlights the value of pathological investigations as a tool to understand wildlife health.

**Becki** is a Senior Research Fellow at the Institute of Zoology and has been based at ZSL for almost 20 years. After qualifying as a veterinarian from the University of Cambridge in 1997, she began working with treatment and rehabilitation of British wildlife casualties and subsequently focused on disease surveillance and outbreak investigation of various conditions affecting terrestrial and marine wildlife species. Her research interest focuses on investigating the impact of disease on free-living wildlife populations.

---

### **Investigating giants of the sea – what happened to ‘Hessy’ the humpback whale?**

*Rob Deaville, Cetacean Strandings Investigation Programme Project Manager, Institute of Zoology, ZSL*

On 6th October 2019, multiple sightings of a whale swimming within the Thames were reported. Over the next two days further sightings occurred of ‘Hessy’ the humpback whale, as she rapidly became known, before a body was found at Greenhithe on 8th October. A ZSL team from the Defra funded UK Cetacean Strandings Investigation Programme subsequently conducted a post-mortem examination, to try to learn more about how the whale had died and why she may have entered the Thames estuary. What happened to ‘Hessy’ the humpback? What did the post-mortem examination reveal about her death and what can such examinations tell us about the marine ecosystem and the impacts our activities have on vulnerable marine species such as cetaceans?

**Rob Deaville** is the Project Manager of the UK Cetacean Strandings Investigation Programme (CSIP). The CSIP is a collaborative research programme responsible for the investigation of UK stranded cetaceans, marine turtles and some elasmobranch species, under contract to the UK government. Rob co-ordinates the delivery of CSIP contract objectives across the UK, including overall management of the programme, liaison with funders, with/between partner organisations, other stakeholders and the UK media and general public. He also co-ordinates the regional recovery and post-mortem examination of stranded animals and facilitates the underpinning science carried out by the programme. He has over 20 years’ experience in strandings response, recovery and investigation, both in the UK and internationally.

---

## Protecting Britain's endangered species

*Dr Tammy Shadbolt, Wildlife Veterinarian and Research Associate, Institute of Zoology, ZSL*

Tammy will introduce you to her work on the disease risk analysis and health surveillance (DRAHS) project at IOZ, ZSL. She will discuss the importance of post-release health surveillance as a component of wildlife conservation translocation projects aimed at protecting some of Britain's most endangered species. Using a red kite case study Tammy will talk through the approach taken by DRAHS when a bird of prey is found dead and submitted for post-mortem examination. She will describe important clues that can be elicited from investigations as well noting some more obscure findings! Finally, Tammy will discuss how this work can make a real difference to wildlife conservation efforts.

**Tammy** graduated from Liverpool University in 2005 with a BSc Hons in Veterinary Conservation Medicine, Edinburgh University in 2007 with a BVM&S in Veterinary Medicine and Surgery, the Royal Veterinary College in 2013 with an MSc in Wild Animal Health and in 2017 with a PhD on The Pathogenesis of Tasmanian Devil Facial Tumour Disease. She also holds a PG Cert in Veterinary Education and is a Fellow of the Higher Education Academy. Tammy spent 12 years in small animal clinical practice working both in the UK and internationally in the private and charity sectors before directing her career towards fieldwork, teaching and research in wildlife conservation.

---

## Format of Live Events

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

### **Citizen Science and conservation: what does it add, who is taking part and who are we failing to reach?**

9 February 2021, 6:00pm – 7:30pm

Well-designed citizen science can be a cost-effective and high-impact way of gathering broad and detailed information, especially over large geographical areas. It can also be the glue that binds stakeholders around a conservation issue, builds social capital and connects people to nature. This event will use case studies from a variety of projects to illustrate and discuss what motivates people to get involved in citizen science, what the potential impacts of citizen science projects are, and which sections of society aren't engaging and why?



---

## 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](http://www.zsl.org/zsl-wild-science-podcast).

---

## Further Information

- Please contact the Scientific Events Coordinator, Eleanor Darbey ([eleanor.darbey@zsl.org](mailto: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](mailto:press.office@zsl.org).
- For more information about the ZSL Fellowship, please visit: [www.zsl.org/membership/zsl-fellowship](http://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](http://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](http://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.