



Wildlife Disease & Contaminant Monitoring & Surveillance Network

WILDCOMS newsletter number 37: Spring 2026 www.wildcoms.org.uk

The WILDCOMS newsletter reports recent newsworthy items, publications from member partners and items of interest about wildlife ecology from the UK and overseas. WILDCOMS is funded by NERC UKRI and delivered under the National Capability Programme.

Spotlight on a citizen science project

New Volunteer Network to Strengthen UK Bird Monitoring Amid Ongoing Challenges:



Predatory Bird
Monitoring Scheme

The [Predatory Bird Monitoring Scheme \(PBMS\)](#) has recently launched a **new initiative to expand and modernise its long-standing UK-wide efforts to track environmental health through birds of prey.**

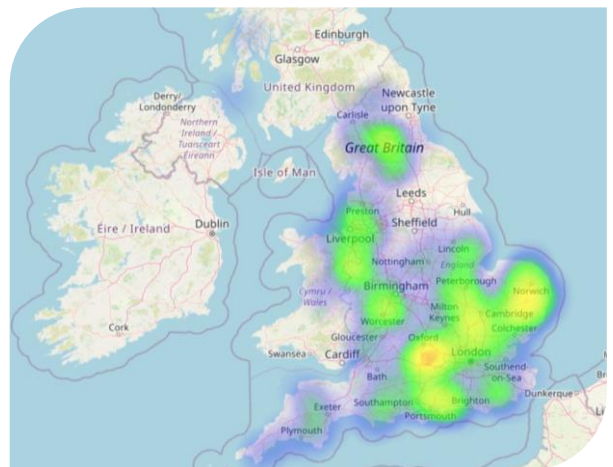
This project aims to **develop a UK-wide network of trained PBMS volunteers supporting the collection of valuable biological samples.** Central to the initiative is increased regional engagement, higher-quality bird submissions and the long-term sustainability of the PBMS's internationally significant tissue archive.

The PBMS is a **long-term monitoring system designed to measure chemical contaminants in wildlife through predatory birds**, supported by bird carcass submissions from the members of the public. **The new initiative comes after a major disruption caused by bird flu restrictions, which temporarily halted public bird submissions**, leading to reduced sample numbers and limiting the scope of its scientific studies. This underlines **the need for more resilient engagement approaches.**

The project rollout is delivered in phases, beginning with volunteer identification and training, followed by implementation, expansion, and a long-term sustainability assessment. UK Centre for Ecology & Hydrology (UKCEH) colleagues are working alongside wildlife organisations and members of the public to build a strong, connected community of contributors. New multimedia communication strategies, training materials and online resources are also being developed to support participation and knowledge sharing.

Planning and early delivery have been supported by the NC-UK Stakeholder Engagement Fund, which has enabled protocol development, structured communications planning and both online and in-person volunteer training. The fund is helping PBMS reach more diverse audiences while improving sample collection and data sharing for long-term monitoring.

Founded in the 1960s, the PBMS has been playing a key role in environmental regulation and policy, using predator species as sentinels of chemical contamination. With more than 100,000 samples collected to date, **the scheme continues to innovate by building new partnerships, incorporating participant feedback and focusing on long-term environmental impact and sustainability.**



Above: Heat map representing the bird submissions and sample sets in 2025. The sample number decreases from orange (high) to purple (low); clear areas had no submission within 30km. The PBMS aims to target areas with no or low bird submissions for regional training of new volunteers. Map by gridreferencefinder.com

Predatory Bird Monitoring Scheme (PBMS)

Presentations at UK Exposure Science Meeting 2026

The work of the PBMS team featured in this year's Royal Society of Chemistry Exposure Science conference. Held at the UKCEH Lancaster research facility on the 21st and 22nd of April 2026, the conference brought together experts and regulators focused on the human and environmental exposure to chemical contaminants and its consequences.

Lee Walker gave a key-note speech on 'The Predatory Bird Monitoring Scheme: Citizen Science that helps us to understand contamination in raptors and our shared environment.' This presentation covered the aims of the scheme and how it works practically. Lee also gave examples of how monitoring by the PBMS has been used for evidence based chemical management, such as the instigation of the UK Rodenticide Stewardship Scheme.



Above: Lee Walker presenting the PBMS at the UK Exposure Science Meeting on the 22nd of April 2026 at the UKCEH Lancaster site



Above: Dr Shinji Ozaki presenting the PBMS work at the UK Exposure Science Meeting

Dr Shinji Ozaki also presented our recent work, funded by Natural England, on 'Season as a significant factor in detecting trends of multiple chemicals in terrestrial raptors'. Furthermore, **two posters were presented from PBMS team members**; Elaine Potter on 'Restoring apex predator monitoring after the impact of bird flu', and Shinji Ozaki on 'Rodenticide threshold values for predatory birds: Application of a probabilistic modelling approach to bird specimens found dead'.

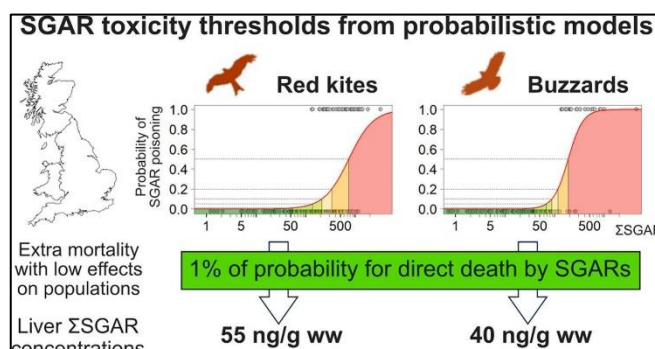
"This was a fascinating couple of day with presentations and discussion highlighting some shared challenges between human and environmental monitoring." Lee comments, "There is also an opportunity to share approaches and methods that can tackle those challenges and make the most of our monitoring."

Recent publications from the PBMS

The PBMS team has published **two peer-reviewed papers in the first half of the year 2026.**

Ozaki et al., 2026a. Probabilistic approach reveals the toxicity threshold values of free-living raptors in Great Britain, United Kingdom, for the lethal effect of second-generation anticoagulant rodenticides.

In this paper, we estimated the threshold for **Second-Generation Anticoagulant Rodenticides (SGAR) using a probabilistic modelling approach based on our collection of red kite (*Milvus milvus*) and common buzzard (*Buteo buteo*) carcasses collected in the field.** The results of this study, which determine liver SGAR residue concentrations associated with various probabilities of death due to anticoagulant-induced coagulopathy, **help researchers better interpret the concentrations of rodenticides they find in their samples.**



Above: Graphical abstract from Ozaki et al., 2026a

Ozaki et al., 2026b. Per- and polyfluoroalkyl substances (PFAS) and heavy metals in the egg of peregrine falcon (*Falco peregrinus*) populations in West England, United Kingdom.

This paper focuses on **Per- and polyfluoroalkyl substances (PFAS) and heavy metals in eggs of the peregrine falcons (*Falco peregrinus*) collected in West England.** This study demonstrates PFAS contamination in a terrestrial predatory bird in decline in the UK. The results show **differences in PFAS residues across several English counties**, each of which illustrates a different landscape: coastal, inland, and suburban areas, which contributes to fill the knowledge gap on PFAS exposure of terrestrial predatory animals in England.



Above: Peregrine eggs (image from two co-authors of the paper, Richard Sale and Steve Watson)

WILD Animal Health



Launched as a consultancy in October 2025, [Wild Animal Health](#) supports the health of free-living wild animals in conservation interventions.

Presentation at the APHA conference

Wild Animal Health, in collaboration with UKCEH, **presented research findings on the threat posed by secondary poisoning from second-generation anticoagulant rodenticides (SGARs) to birds of prey and other predators/scavengers** in the UK at a conference at the Animal and Plant Health Agency on the 24th of April 2026.

Cases of toxicity associated with SGARs in mustelids, canids and birds of prey have been described in the literature, but **the population-level effects are less well known.** Free-living wild Norway rats (*Rattus norvegicus*) form a high proportion of the diet of red kites (*Milvus milvus*), a reintroduced species in England, and red kites will consume rats killed with SGARs. **Recent research has identified the toxicity threshold for SGARs in red kites using a probabilistic approach (Ozaki et al., 2026a), and it is hoped that this important information can be supported by a population model in the future,** so that the impact of SGARs on this species can be better understood. Other species known to be at risk from the widespread use of SGARs for rodent control include barn owls (*Tyto alba*) and kestrels (*Falco tinnunculus*), and there is published evidence that the decreasing abundance of kestrels is correlated with increasing SGAR residues. **Mitigation measures to attempt to reduce secondary SGAR poisoning are being driven through the Campaign for Responsible Pesticide Use (CRRU-UK),** although the success of this campaign is yet to be fully evaluated. CRRU-UK is a stewardship scheme, in place in England, for professionals carrying out rodent control, such as gamekeepers and pest control agents, who are obliged to follow the CRRU-UK Code of Best Practice.



Above: Dr Tony Sainsbury from Wild Animal Health speaking at the APHA conference on the 24th of April 2026

GB Wildlife Health Partnership

The GB Wildlife Health Partnership is made up of the following organisations: Animal and Plant Health Agency (APHA), Scotland's Rural College (SRUC), Institute of Zoology (IoZ), National Wildlife Management Centre of APHA (formerly part of FERA), The Centre for Environment, Fisheries and Aquaculture Science (CEFAS), The Wildfowl and Wetlands Trust (WWT), Natural England (NE), Forestry England (FE) and Veterinary Medicines Directorate. Input is provided from policy customers: Defra Animal Health and Exotic Disease Policy, Defra Biodiversity, Scottish Government and Welsh Government.

The GB Wildlife Health Partnership publishes reports. Quarterly and Annual GB wildlife surveillance and emerging threats reports are accessible on the [GOV.UK website](#).

[National Fish Tissue Archive](#)

New paper: Short communication on river macroinvertebrate biodiversity in England and Wales

Johnson et al., 2026. What has happened to river macroinvertebrate biodiversity in England and Wales over the past 30 years?

In this short communication, led by a member of the National Fish Tissue Archive team, **available evidence on changing macroinvertebrate biodiversity in UK rivers, focusing on trends in England and Wales over the past 30 years is summarised. An aggregate increase in several measures of biodiversity** has been confirmed. However, there are also local or regional departures from this aggregate trend, in some cases linked to nutrient pollution and climate change. This paper also highlights **a significant decline in government agency monitoring effort over the last 15 years**, and argues that **continued monitoring is critical for detecting and diagnosing changes in invertebrate diversity and for identifying solutions.** Furthermore, the paper proposes that **measures of biodiversity should be more prominently reported** to aid researchers' understanding of, and better communicate to the public, the impacts of pollution and related pressures at the national scale.

Presentations at UK Exposure Science Meeting 2026

The work of the National Fish Tissue Archive team was presented in this year's Royal Society of Chemistry Exposure Science conference held at the UKCEH Lancaster on the 21st and 22nd of April 2026.

Monika Jürgens gave a presentation entitled 'Metal concentration trends in English freshwater fish from of the National Fish Tissue Archive.' This presentation covered the aims, the archived samples, and the holding data of the scheme. Monika also demonstrated the temporal trend of various metals, including mercury, cadmium, and lead, in fish tissues as an example of the contribution of their activities to filling the gaps in UK freshwater health.



Above: Monika Jürgens presenting the National Fish Tissue Archive at the UK Exposure Science Meeting

[Cardiff Otter Project](#)



The Otter Project is a UK national scheme collecting otters found dead in England, Scotland, and Wales to investigate contaminants, disease, and population biology. They collaborate with researchers from other institutions and disciplines to maximise the usage of the otter archive. They are keen to collaborate, sharing data and samples and encourage potential postgraduate researchers to approach them with research ideas.

Return to post-mortems

After a long pause in otter post-mortem examinations due to Highly Pathogenic Avian Influenza (HPAI), **the Otter Project routinely conducts its lab work activities and has completed 150 post-mortems since mid-September 2025.**

Welcoming new staff

Solveig Pelloie is a French veterinary student who has been visiting the Otter Project for the last month, **carrying out research on congenital malformations in otters** and assisting with an interesting otter we recently received— **an otter born without hind limbs or a pelvis.**

Interesting Lab Find

Otter #4801 is a juvenile found dead near Oxford. This otter was estimated to be **approximately 2 months old, but lacked any development of hind limbs or pelvis**. We are exploring next steps to **investigate the potential cause, which is most likely to be a genetic abnormality, but could potentially be teratogenic chemicals**.



Right: Approximately 2-months old otter without hind limbs or pelvis, found dead near Oxford, UK

New paper: Otters reveal rising levels of banned PCBs in Wales

du Plessis et al., 2026. Recovering whole mitogenome sequences from Eurasian otter (*Lutra lutra*) spraint samples: a metagenomic approach.

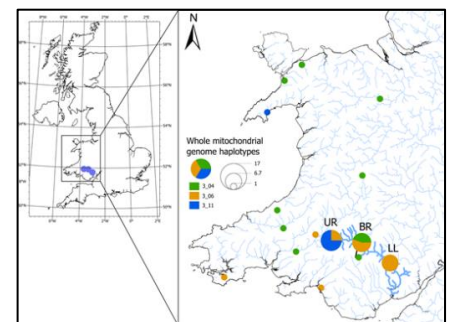


Above: Jenny sampling spraint on River Usk

Our latest research, which features **former PhD student Dr Sarah du Plessis and former masters (now PhD) student Jenny Smith as first authors**, details a **new method used to study the genetics of Eurasian otters without disturbing them, using spraint (otter faeces) found in Wales**.

They used a modern genetic technique called '*metagenomic shotgun sequencing*' to characterise the whole mitochondrial genomes of the otters who left these spraints behind, as well as the fungal and bacterial diversity.

The results didn't show any new mitochondrial haplotypes but did **improve our overall understanding of the geographic distribution of the known otter haplotypes in Wales**. The method was shown to work better in spring than winter and for fresh (<24hr) samples but more data is needed to confirm this.



Right: Sample locations of spraints and whole mitogenome haplotypes of the otters in Wales

Be a Scientist!

Recently, **members of our team, Chloe, Sophie, Sorrel and Jacob ran a tabletop activity for the "Be a Scientist" event**. This event aimed to **introduce children and young people to a range of scientific disciplines**. There were 645 attendees in total on the day. The children were able to get hands on with our anatomical otter model as well as our taxidermy otters to be able to learn about the species inside and out as well as topics such as bioaccumulation. We received great feedback from both children and parents in attendance such as *"You got to learn about different animals and what they have inside of them and how they're different to humans. It was really good!"*

We were even the joint most loved topic by children, tied with "Science" with 13.7% of votes. A big thank you to the Impact and Engagement team at Cardiff University for arranging a brilliant event.



Above: Sophie and Chloe talking to young aspiring scientists at the Be a Scientist! event

Zoological Society of London (ZSL)

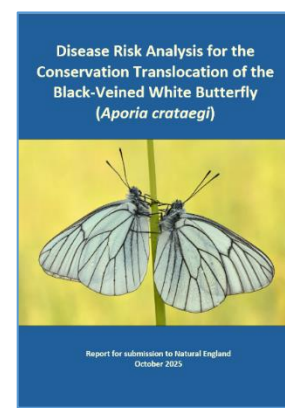
Over the last few months, [the disease risk analysis and health surveillance \(DRAHS\) team](#) at ZSL has undergone some significant changes. Two groups within the Institute of Zoology (IoZ), DRAHS and Decision Support Hub for Species Recovery, supported by ZSL's Wildlife Health Services, have combined to form one integrated team focused on improving practice and accelerating the delivery of better conservation translocation outcomes. **This new team is led by Professor John Ewen (IoZ) and Dr Amanda Guthrie (ZSL Wildlife Health Services)** following the departure of Dr. Tony Sainsbury from ZSL.



They offer decision support and risk assessment for all components of conservation translocation and broader species recovery planning. For disease risk analysis, they have developed a streamlined framework that integrates risk assessment, risk management, and post-release monitoring within an adaptive management approach. Their science-led model emphasises better practice from the fields of reintroduction and population biology, decision science and wildlife health, with a species-focused delivery that will help achieve recovery for those species and provide applied scientific outputs to continue improving practice. Their new team officially started in October, and they have completed their first DRA using the new approach supporting planning for black-veined white butterfly reintroductions to England.

The services they can provide are:

- Decision support & species recovery planning
- Adaptive management
- Disease risk analysis including updated approach applying advanced decision analytic tools
- Wildlife disease diagnostics including increased in-house capacity for diagnostic tests, a dedicated board-certified wildlife pathologist, ecotoxicology and chemical monitoring
- Species prioritisations
- Conservation translocation guidance



The team is currently being brought together under a new group name and a new website. As this transition progresses, the team will share further updates and look forward to continued collaboration with the WILDCOMS partners. In the meantime, if you have any questions or would like to collaborate on a project, please feel free to get in touch with us at DRAHS@zsl.org or Georgina.gerard@ioz.ac.uk.

Garden Wildlife Health (GWH)

Garden Wildlife Health (GWH) is a collaborative project between the Zoological Society of London, the British Trust for Ornithology, Frog life, and the Royal Society for the Protection of Birds, which **aims to monitor the health of, and identify disease threats to, British wildlife.** GWH focuses on garden birds, amphibians, reptiles, and hedgehogs, counting on the help of the public to submit reports of sick or dead wildlife of these species and to submit specimens for analysis.

The GWH team conducts post-mortem examinations on garden wildlife and routinely collects an archive of samples from each investigation for potential use in the future. Their national archive comprises 10,000s of frozen and fixed tissues, combined with parasite and culture collections, some of which date back to the early 2000s. These samples are often used to support collaborative projects, and the GWH team is interested to hear of research proposals that could facilitate optimal use of this resource in the future.

To report death or illness in garden wildlife, visit their [website](#).



GWH have produced a wealth of advice on creating a healthy environment for your garden. See [Amphibians](#), [Birds](#), [Hedgehogs](#), [Reptiles](#) and [Wildlife friendly gardening](#).

[Wildlife Incident Investigation Scheme \(WIIS\)](#)

The WIIS makes enquiries into the death or illness of wildlife, pets and beneficial invertebrates that may have resulted from pesticide poisoning. The scheme has two objectives:



1. To provide information to the regulator on hazards to wildlife and companion animals (usually cats and dogs) and beneficial invertebrates (honeybees, bumble bees and earthworms) from pesticide use;
2. To enforce the correct use of pesticides, identifying and penalising those who deliberately or recklessly misuse and abuse pesticides.

WIIS Quarterly Reports

Quarterly data for WIIS is available on the HSE pesticides website [WIIS Quarterly Reports - HSE](#) and this currently includes investigations up to January 2025. The laboratory analysis of samples for incidents in England is conducted at [Fera Science](#). The laboratory routinely analyses samples from a wide range of species of chemicals such as rodenticides.

Raptor persecution report – trial date postponed to October 2026

One incident of alleged raptor persecution was presented to Lincolnshire Magistrates' Court initially in May 2025, in a case involving the unlawful storage of a carbamate insecticide, aldicarb. However, in a highly unusual move, the accused intended to apply for a judicial review of the District Judge's decision. As a result, the original trial, expected in October 2025, has been delayed, with the current trial date set for October 2026. For the details, see article [here](#).

[WIIS-Scotland \(SASA\)](#)



The results from [WIIS-Scotland](#) are also published quarterly. **The results for incidents from 2025** have been published in full on SASA website. The results can be found at [Animal Poisoning Reports | SASA \(Science & Advice for Scottish Agriculture\)](#) (note that due to the nature of some incidents and the investigations relating to these, information may be limited or in some cases be excluded until released by the police). **SASA staff continue to survey rodenticide usage on behalf of the Scottish Government.**

Recent WILDCOMS and featured publications

- du Plessis et al., 2026. [Recovering whole mitogenome sequences from Eurasian otter \(*Lutra lutra*\) spraint samples: a metagenomic approach](#). Royal Society Open Science 13, 251299. <https://doi.org/10.1098/rsos.251299>
- Johnson et al., 2026. [What has happened to river macroinvertebrate biodiversity in England and Wales over the past 30 years?](#) Journal of Environmental Management 401, 128954. <https://doi.org/10.1016/j.jenvman.2026.128954>
- Ozaki, S. et al., 2026a. [Probabilistic approach reveals the toxicity threshold values of free-living raptors in Great Britain, United Kingdom, for the lethal effect of second-generation anticoagulant rodenticides](#). Environment International 208, 110099. <https://doi.org/10.1016/j.envint.2026.110099>
- Ozaki, S. et al., 2026b. [Per- and polyfluoroalkyl substances \(PFAS\) and heavy metals in the egg of peregrine falcon \(*Falco peregrinus*\) populations in West England, United Kingdom](#). Ecotoxicology 35, 96. <https://doi.org/10.1007/s10646-026-03076-x>

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