



## Wildlife Disease & Contaminant Monitoring & Surveillance Network

NEWSLETTER: Number 10

### Spring SPOTLIGHT 2014

#### Spotlight - Wildlife Crime

The **Wildlife Incident Investigation Scheme (WIIS)** and its counterpart in Scotland (**WIIS – Scotland**) are involved in wildlife crime investigations as illustrated by the following two case studies.

The WIIS was involved in the investigation of a pigeon fancier from Sunderland who was fined after pleading guilty to using and storing a banned pesticide. The investigation followed intelligence handed to police by the RSPB. A plastic container, supposedly containing a pigeon multi-vitamin supplement, was recovered during a search of the offender's home. Forensic tests by the Food and Environment Research Agency (Fera) confirmed the substance was carbofuran. The offender claimed that he had been given the substance to use as a rodenticide and applied it to chocolate in order to poison mice on his allotment. Storing pesticides out of their original containers and using unknown compounds is illegal, while combining pesticides with edible material can result in poisoning of people, companion animals and wildlife. The WIIS and partner agencies work together to investigate and prosecute such incidents. Suspicious incidents can be reported to WIIS on Freephone 0800 321600 and information relating to bird of prey persecution should be reported to local police by calling 101 or Crimestoppers (0800 555111).

The aims of WIIS – Scotland have been highlighted previously (WILDCOMS Quarterly Report July 2013). The **Science and Advice for Scottish Agriculture (SASA)** also provides analytical chemistry analysis and evidence in support of Scottish investigations into illegal activity, wildlife crime and the enforcement of pesticide and environment related legislation. One recent Scottish investigation resulted from a member of the public observing a distressed buzzard and a nearby pheasant carcass contaminated with blue granules. On investigation, the police found the buzzard dead and the pheasant bait. These were examined by the veterinary services of Scottish Agricultural College (SAC) Consulting, a division of Scotland's Rural College (SRUC) and samples were tested by SASA. The analysis revealed that the buzzard died from ingesting the poisoned bait (carbofuran). Subsequent investigation of a local gamekeeper's premises revealed several containers that SASA analysis confirmed contained pesticide formulations that were illegal to possess. The gamekeeper admitted four contraventions under the Wildlife and Countryside Act 1981 and was fined.



Buzzard carcass on an autopsy grill (courtesy of SASA - subject to Crown copyright protection)

#### **Predatory Bird Monitoring Scheme (PBMS).**

Investigating suspected poisoning incidents. The PBMS monitors the levels of selected priority pollutants in raptors that have died from any cause whereas the Wildlife Incident Investigation Scheme (WIIS) specifically investigates mortalities where the suspected cause of death is pesticide poisoning. When either scheme is contacted by a member of the public who has found a dead bird, any known circumstances about the carcass (for instance, if it was found dead next to a road and so a likely victim of road traffic) are discussed and the caller is then asked to send the carcass to the appropriate scheme. Sometimes, it is only apparent at post-mortem that a bird may have died from pesticide poisoning. When this becomes apparent during PBMS post-mortems, tissues from that bird

are sent to the WIIS for analysis. This collaboration helps ensure that there is no duplication between the PBMS and WIIS and that both can operate most effectively to meet their objectives.

Estimating persecution incidents. The PBMS receives between 300 and 400 birds per year and each is examined principally to determine a probable cause of death and collect tissue samples for our chemical monitoring. If any evident injuries are consistent with the bird having been shot, this is recorded and reported on an annual basis to the RSPB for inclusion in their Birdcrime reports (<http://www.rspb.org.uk/ourwork/policy/wildbirdslaw/wildbirdcrime/index.aspx>). Through this collaboration, the PBMS contributes to estimates of bird persecution within the United Kingdom.

### Cardiff University Otter Project (CUOP).

Most otters we receive are found dead as a result of road traffic accident (88% in 2013) – but a small proportion are illegally killed. Of these, the most common cause is illegally set fish traps (5/203 in 2013). By law, all fyke nets or crayfish traps with an entrance >95mm must be fitted with an [otter guard](#). Occasionally, we receive otters that have been shot (only 10 of >2000 otters examined so far), and just once we received an otter killed in a snare. It is likely that illegal killings are under-reported, however, and conflict with a vocal minority of the angling community is growing. We work closely with police wildlife crime officers to report illegal killings.



Lead shot from Yorkshire; Snared otter from east Anglia (courtesy of Liz Chadwick (CUOP)). Four otters found in one net on the river Winster in Cumbria (courtesy of John Martin)

The **Disease Risk Analysis and Health Surveillance Programme (DRAHS)** carries out forensic investigations on endangered species found dead in England for example red kites, *Milvus milvus*, and hen harriers *Circus cyaneus*, in collaboration with PBMS, WIIS, The National Wildlife Crime Unit, Natural England, and RSPB Investigations. Red kites, which were reintroduced to England from 1989, can be victims of baits laced with pesticides and, although these baits may have been laid to target other species, measures to reduce pesticide abuse are needed. For example, we reported 12 red kites, of 146 examined, found with toxins such as mevinphos, alpha-chloralose, carbofuran, aldicarb or strychnine and associated with their death (Molenaar et al., 2008). These birds were found in very good body condition, had just eaten, did not show other signs of disease, and were believed to have died suddenly.

In a recent case, suspected ballistic fragments were detected by radiograph in a satellite-tracked hen harrier found dead in Yorkshire. Scanning electron microscopy with energy-dispersive x-ray spectroscopy (SEM-EDX) was used to confirm (i) the composition of a suspected ballistic remnant and (ii) that the remnant had been projected into and had damaged the bone (Hopkins et al., 2013). Although SEM-EDX has been used to detect microscopic gunshot residue (GSR) in human forensic medicine where a gross ballistic remnant was absent, as far as we are aware, this is the first time SEM-EDX has been used to confirm illegal shooting of wildlife.

The population of hen harriers in England has been reduced dramatically by human persecution and the current population is very low, with no more than 23 nesting attempts being recorded in any one year in the period 2002-2008, one successful breeding pair in 2012 and no successful pairs in 2013 (Natural England, unpublished data). There have been 45 confirmed incidents of shooting of hen harriers since records began (RSPB unpublished data) and therefore, shooting represents a threat to the population. Natural England's Hen Harrier Recovery Project is continuing to monitor the numbers of breeding hen harriers using radio and satellite tags.



Two red kites found dead beside bait laced with pesticide (courtesy of Ian Carter)

Hopkins et al., 2013. Shooting of a hen harrier (*Circus cyaneus*) confirmed through advanced imaging and spectroscopy. British Veterinary Zoological Society Proceedings and Molenaar et al., 2008. Environmental toxins: a threat to reintroduced red kites in England (1989-2007). Proceedings of the 8th Conference of the European Wildlife Disease Association Conference.

## Scheme News

**WIIS-Scotland** - the latest results for 2013 have been published and can be viewed at <http://www.sasa.gov.uk/document-library/wiis-quarterly-reports>. Data are presented in a new format that lists results of all incidents reported to SASA in a searchable spreadsheet which now identifies whether the pesticides found in an incident were the principle cause of the incident or present at background or trace levels only. This new reporting format will replace SASA publication of the annual Pesticide Poisoning of Animals Report – A Report of Investigations in Scotland.

**WIIS** - the quarterly updates for WIIS investigations have been changed. This is to improve the accuracy of the reporting of the results from this Scheme. Please see the latest update: <http://www.pesticides.gov.uk/guidance/industries/pesticides/topics/reducing-environmental-impact/wildlife/WIIS-Quarterly-Reports.htm>

**GB Wildlife Disease Surveillance Partnership** - latest report is available on the link: <http://www.defra.gov.uk/ahvla-en/publication/wildlife-survreports/>

Recent wildlife related publications with **AHVLA** authors:

Entry of H5N1 highly pathogenic avian influenza virus into Europe through migratory wild birds: A qualitative release assessment at the species level. <http://onlinelibrary.wiley.com/doi/10.1111/jam.12489/abstract> <http://www.ncbi.nlm.nih.gov/pubmed/24592908>

Louping Ill virus: An endemic tick-borne disease of Great Britain. <http://vir.sgmjournals.org/content/early/2014/02/18/vir.0.062356-0.short> <http://www.ncbi.nlm.nih.gov/pubmed/24552787>

Avian welfare: Mass mortality of starlings in Somerset, Alex Barlow, Alison Sparkes Veterinary Record 2014;174:8 202-203 doi:10.1136/vr.g1639

Assessing the risk of Nipah virus establishment in Australian flying-foxes. <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=9161752> <http://www.ncbi.nlm.nih.gov/pubmed/24580962>

The Scottish Environment Protection Agency (SEPA) has joined the stakeholder group who fund the **Predatory Bird Monitoring Scheme**, along with the Natural Environment Research Council, Defra, Natural England (NE), Scottish Natural Heritage (SNH), the Royal Society for the Protection of Birds (RSPB) and the Campaign for Responsible Rodenticide Use (CRRU).

## WILDCOMS news

The WILDCOMS Annual Report was published in January 2014 and can be accessed via the website [Reports tab](#)

The WILDCOMS schemes held the most recent partners meeting via teleconference in March 2014.

**CONTACT US:** If you would like to see a particular topic in the “spotlight” section of the WILDCOMS quarterly bulletin, or would like to contact us about other WILDCOMS related matters, please e-mail the WILDCOMS coordinator, Dr Gloria Pereira ([mdgds@ceh.ac.uk](mailto:mdgds@ceh.ac.uk))