



Wildlife Disease & Contaminant Monitoring & Surveillance Network

NEWLETTER: Number 3

Summer SPOTLIGHT 2012

Emerging Hazards and Risks

Cardiff University Otter Project (CUOP).

Contaminants can significantly affect health, including susceptibility to disease. Over the coming year, the Otter Project is broadening the list of contaminants analysed and assessing their health impacts. Preliminary data suggest that contaminant concentrations may be reflected in parasite load. We are currently screening otter blood samples for a range of tick-borne pathogens (in collaboration with R Birtles, Salford) and for *Toxoplasma gondii* (with Dr E Guy, Toxo Reference Unit), investigations that are providing an insight into transmission mechanisms and epidemiology of significant zoonoses, as well as linking contaminant status with health.



Wildlife Incident Investigation Scheme (WIIS). Anticoagulant rodenticides are essential for the control of rodent infestations and there is currently a lack of effective, alternative products. **WIIS** has reported some non-target animal mortality that is attributed to anticoagulant rodenticides in the UK. However, through this scheme and the **Predatory Bird Monitoring Scheme (PBMS)**, there is increasing evidence for widespread contamination of non-target species with anticoagulant rodenticides. Non-target species affected by this include predatory birds, particularly the red kite. However, although we are and will continue to monitor and accumulate tissue residue data for a range of species, there are some uncertainties that we hope to understand through the collaboration via **WILDCOMS**. This uncertainty is principally around the interpretation of some residue levels of anticoagulant rodenticides in the liver of a range of non-target species and the impact that this may have, both for the individual and the population. The recent SETAC conference in Berlin and the session on rodenticides (The use of rodenticides, a nagging issue on effectiveness and risks) was a useful opportunity to bring together scheme partners and experts in this area from many countries.

Wildlife Incident Investigation Scheme (WIIS)-Scotland has recently been made aware that "Trodat", a veterinary medicine used for the treatment of fascioliasis in cattle and sheep, is allegedly being used in Scotland in the illegal poisoning of birds of prey. Nitroxynil, the active ingredient in the product is not a pesticide and consequently is not included in the **WIIS-Scotland** target analyte suite. In order to rectify this we have undertaken strategic method development to include nitroxynil as one of the target analytes in a simple multi-residue method. The new method has eliminated the need for several single analyte procedures and now gives an efficient and cost effective means of screening for several commonly used poisons from a single extract. The method has been fully validated in-house and is now in routine use. To date no residues of nitroxynil have been detected in the tissues analysed. Data have been submitted to United Kingdom Accreditation Service (UKAS) for scrutiny with the intention that the method will be added to our scope of accreditation.

Scheme News

The **DRAHS** Programme has recently published a paper on analysing the risk of disease outbreaks associated with translocations (including reintroduction programmes): Sainsbury AW, Vaughan-Higgins RJ. 2012. Analyzing disease risks associated with translocations. *Conservation Biology* doi:10.1111/j.1523-1739.2012.01839.

The latest report is available from **GB Wildlife Disease Surveillance Partnership**.

A letter reporting *Cryptosporidium baileyi* in wild red grouse with 'bulgy eye' featuring analyses performed by **AHVLA** has been published in the *Veterinary Record* 2012;170:603-604 doi:10.1136/vr.e3940

Scientists from **AHVLA** have been involved in the discovery of a new type of rabies virus and have published the results in *Emerging Infectious Diseases*. Full article available Ikoma Lyssavirus, **Highly Divergent Novel Lyssavirus in an African Civet**. Further information is available on the website of the **Global Alliance for rabies control**.

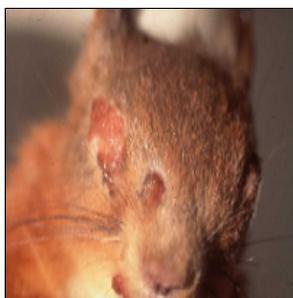
PBMS were asked to comment by Nature.com on a recent Environmental Science & Technology article entitled Standardization of Egg Collection from Aquatic Birds for Biomonitoring - A Critical Review (doi: 10.1021/es204314p). The Nature news item is entitled **Call for standards in egg bio-monitoring by Daniel Cressey**.

PBMS report on concentration of flame retardants in otters from England & Wales. This is the first report on the findings of a collaborative study between the **PBMS** and the **CUOP** in which PBDEs were determined in the livers of Eurasian otters (*Lutra lutra*) found dead in 2010.

PBMS is to present its work at the Veterinary Association for Wildlife Management (VAWM) one day symposium

The Disease Risk Analysis and Health Surveillance Programme (DRAHS).

Translocations of wild animals increase the risk of the spread of pathogens across ecological and geographical barriers with resultant disease in immunologically naive populations. Serious disease outbreaks have occurred as a result of translocation, for example, chytridiomycosis, which has been associated with the extinction of several species of amphibian. The number of translocations of wild animals is staggeringly high, for example the legal trade in wild animals numbers over 2 million per annum but wild animals are also moved for hunting, rehabilitation and conservation purposes. The Disease Risk Analysis and Health Surveillance Programme have recently published a method for analysing the risks of disease associated with translocations for conservation purposes. The paper proposes using the method before each and every translocation so that the risks to both translocated and recipient populations is fully evaluated before going ahead. The method is integrated with disease risk management and specific mitigating measures to reduce the risk of disease.



Animal Health and Veterinary Laboratories Agency (AHVLA) research into Pathogens with Pandemic Potential.

AHVLA epidemiologists will be developing a risk assessment framework that will consider the possible routes of introduction of bat-borne zoonotic viruses with pandemic potential into the EU. Human travel, fruit and pig imports, and illegal bushmeat trade will be considered as possible routes of introduction. The viruses that will be considered include:

Nipah virus, which was responsible for a devastating epidemic in pigs in Asia in 1999 and the death of over 100 people, Ebola and Marburg viruses, which have shown their pandemic potential in multiple spillovers from animal to human populations, and SARS-like coronaviruses. In 2003, SARS (Severe Acute Respiratory Syndrome) demonstrated how quickly a zoonotic virus can spread around the world. See the links [AHVLA News Release](#) and [ANTICIPATING THE GLOBAL ONSET OF NOVEL EPIDEMICS \(ANTIGONE\)](#) for further information.



Predatory Bird Monitoring Scheme (PBMS)

monitoring has been quantifying the extent of contamination of biota with polybrominated diphenyl ethers (PBDEs) which have been widely used as flame retardants. Recent studies on long-term trends in a marine sentinel species the Northern gannet (*Morus bassanus*) have demonstrated that PBDE concentrations have fallen from peak levels in the mid 1990s (Crosse *et al.*, 2012. Environmental Pollution 161 93-100). This reflects the success of legislation that has prohibited the use of some of these compounds, although new data that we are currently working on suggests that this decline may not have occurred in terrestrial systems. Newer compounds have replaced many of the PBDEs as flame retardants and the PBMS has started to examine whether these are also found as contaminants in biota. Some compounds (e.g. hexabromocyclododecane (HBCD), hexabromobenzene (HBB) and dechlorane plus) have recently been detected in the livers of some otters (a freshwater sentinel species) that were analysed in conjunction with the CUOP ([Report on PBDEs in Eurasian otters collected from Britain in 2010](#)). The PBMS intends in the future to extend its monitoring of these emerging compounds to other species that are sentinels of terrestrial and marine ecosystems.



on Wildlife diseases and conservation in London, November 2012. For more information please navigate to the [PBMS website](#)

WILDCOMS news and events

The next **WILDCOMS** partners meeting will take place in London on July 17th 2012.

Prof. Richard Shore acting as a representative for **WILDCOMS**, attended the six monthly meeting of the GB Wildlife Disease Surveillance Partnership. The purpose was to provide more information about the role and functioning of **WILDCOMS** and to explore how **WILDCOMS** can interact with, support and disseminate knowledge about the Wildlife Disease Surveillance Partnership.

WILDCOMS has facilitated linkage between the **PBMS** and the screening of wild birds for West Nile Virus (WNV) that is carried out by the **AHVLA** laboratory at Weybridge. Samples from birds submitted to the PBMS will be shared with the AHVLA to supplement the current extent of WNV screening in wild birds.

Members of the **WILDCOMS** network will be attending the Joint WDA EWDA conference on Convergence in wildlife health in Lyon, France between July 22-27, 2012.

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).