

## News from Europe

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**8th Conference of the European Wildlife Disease Association, Rovinj, Croatia, October 2-5, 2008.** Registration for the conference opens on May 2nd 2008. The deadline for abstract submissions is June 20th 2008. For more information on the conference program and important dates please visit the conference website at <http://www.ewda2008.org>

### HPNAI H5N1 Wild Bird Surveillance in Europe

Highly Pathogenic Notifiable Avian Influenza (HPNAI) H5N1 continued to dominate wildlife disease during the first quarter of 2008. In Great Britain, HPNAI H5N1 was detected in ten wild Mute swans (*Cygnus olor*) and one Canada goose (*Branta canadensis*) in South Dorset during January and February. The carcasses were collected as part of routine, Defra-funded 'found dead' AIWBS from within the Fleet and wetland reserves along the adjacent South Dorset coast. This is part of the EC-mandated AIWBS programme conducted to provide an early warning of the presence of HPNAI H5N1 in the European Union (European Commission, 2007). During investigation of the wild bird incident in Dorset, no evidence of spread to the domestic poultry population was detected. Phylogenetic analyses indicated the causative virus to be related to contemporary HPNAI H5N1 viruses from continental Europe (Defra, 2008).

Elsewhere in Europe HPNAI H5N1 was detected from a live healthy common pochard (*Aythya ferina*) from Lake Sempach, Switzerland during February (OIE, 2008a). Genetic sequencing revealed the virus to show high homology to the viral sequences found in Eastern Europe during 2007. It was reported that since October 2007 some 200 live birds had been sampled and tested negative around Lake Sempach, with no clinical evidence of infection in wild or domestic birds in the five weeks following sampling in that, or other regions of Switzerland.

Disease due to HPNAI H5N1 was however more widespread around the Black Sea. Along the north coast of Turkey six poultry outbreaks were reported, the source of which has been attributed to wildfowl hunting activities, dressing of hunted carcasses and subsequent contact between wildfowl viscera and backyard chickens. Poultry outbreaks were also reported from the Crimea (Ukraine), and over the same time period HPNAI H5N1 was also detected in eight dead wild birds found in three coastal locations in that region. These findings suggest wild birds have played a role in the introduction of the virus into the Black Sea basin (OIE 2008b, FAO 2008, OIE 2008c).

### References

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### **Isolation of European bat lyssavirus type 2 (EBLV-2) in a Daubenton's bat found in Surrey**

On the 7<sup>th</sup> May lyssavirus antigen was detected in the brain of a bat submitted under the passive surveillance scheme to detect lyssaviruses in British bats. This scheme has been operating since 1987. Subsequent testing isolated virus and a multiplex real-time PCR amplification assay confirmed that the virus was European bat lyssavirus type 2. Genomic sequence derived from the virus nucleoprotein revealed that this virus was 100% identical to an earlier isolation of EBLV-2 from a bat in Staines, Surrey (Fooks and others., 2004, *Vet. Rec.*155, 434-435).

The bat was originally found injured, following a cat attack, by a member of the public in August 2007, in Bushy Park, Surrey. It was passed to a number of experienced bat handlers for rehabilitation, but required the amputation of one wing by a vet shortly after entering captivity. Over the winter months it appeared healthy but towards the end of April it became aggressive. It became progressively weaker and underwent euthanasia on May 2<sup>nd</sup> and sent to VLA-Weybridge on the 6<sup>th</sup>.

Investigations are ongoing but this could be the longest documented incubation period (>9 months) for EBLV-2. This case is the 7<sup>th</sup> isolation of EBLV-2 from English Daubenton's bats since 1996 and once again emphasises the need for ongoing surveillance of UK bats and the need for bat handlers to obtain anti-rabies vaccination.

Nick Johnson, Rabies and Wildlife Zoonoses Unit, VLA Weybridge.

### **Evaluation of carnivores and scavengers as sentinels for new and emerging diseases**

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The objective of this study is to evaluate, as a proof of principle, the concept that carnivore and scavenger species have the potential to act as sentinels for new and emerging diseases in the UK. Emerging infectious diseases have an enormous impact on public health, livestock economies and wildlife conservation, and many of these

diseases can infect multiple host species, including wild animals, which often act as reservoirs of infection. Innovative approaches are needed to meet the challenges of emerging diseases, particularly to overcome the difficulties associated with detecting infection in wild animal hosts. Carnivores may be useful sentinels for several reasons; they are susceptible to a wide range of human and animal pathogens (43% of all zoonotic pathogens infect carnivores), seroconversion without development of clinical disease has been observed for a wide range of pathogens, and they predate or scavenge multiple potentially-infected host species (e.g. rodents, rabbits, birds) thus acting as “samplers” and “bioconcentrators”. Therefore they may provide a sensitive, efficient, and cost-effective means of detecting infectious agents. The project is obtaining blood and tissue samples from carnivore/scavenger species (rural cats, foxes, and corvids) and prey species (rodents and rabbits), in selected study sites in northern England and Scotland. Evidence of infection with selected pathogens (*Leptospira* species, *Coxiella burnetii*, *Encephalitozoon cuniculi*, and rabbit haemorrhagic disease virus) is being evaluated and infection patterns compared in the carnivores and their prey, in order to attempt to answer the following key questions:

- Does sampling carnivores provide useful information about the presence and prevalence of infection in a given area?
- How can we identify suitable carnivore species for detection of different pathogens?
- How does carnivore sero-prevalence reflect overall prevalence of infection in a given area?
- Is it more cost-effective to sample carnivores rather than primary/reservoir hosts?
- How could carnivore sampling be incorporated into future surveillance programmes for endemic pathogens or those representing higher level threats?
- Does sampling carnivores provide additional information not available via sampling primary/reservoir hosts alone?

Anna Meredith, Royal (Dick) School of Veterinary Studies, University of Edinburgh

### **Study of Rabies in the Wild carnivores of Albania**

As a constituent part of the Western Balkans, Albania is rich in wildlife including many wild carnivores. Albania also is bounded on three sides by the neighbouring countries of Macedonia, Montenegro, Kosovo and Greece. It is presumed that neighbouring countries often serve as corridors for migratory wild carnivores (especially from Montenegro and Kosovo), including wolves, foxes, wild cats, jackals etc. This group of wild animals has created a risk for the outbreak of rabies, particularly in North Albania. A case of rabies was confirmed in 2006 near Morina village and a suspected case of rabies occurred in a cow from the village of Nikoliq, in the Has district of northern Albania. Between 1976 and 2000, cases of rabies have declined, and the country was classified as free from the disease, although in the neighbouring countries (Slovenia, Serbia, Montenegro, Croatia and Kosova) the disease was increasing. Rabies reoccurred in Albania in March 2001 in the Morina village, in the Kukes district, affecting a domestic dog. The dog was probably bitten by a wolf. Before this case, a study was initiated for rabies in wild carnivores in Albania.

Our study for evidence of rabies infection in wild carnivores in northern Albania, utilized the fluorescent antibody test and the mouse inoculation test. During 2002, 65 samples from wild carnivores were examined. The results are presented in table 1. (see Table1).

**Table 1. Samples obtained in 2002**

<i>Carnivores species</i>	<i>Number of samples</i>	<i>Positive samples</i>
Fox ( <i>Vulpes vulpes</i> )	26	1
Wolf ( <i>Canis lupus</i> )	15	0
Wildcats ( <i>Felis silvestris</i> )	2	0
Weasels ( <i>Mustela nivalis</i> )	2	0
Total	45	1

In November 2002 a Red Fox was diagnosed as rabies positive from Qereti village in the Puka district of northern Albania.

During 2003, further two foxes were found positive from Gjorica village in the Bulqiza district (northern Albania).

**Table 2. Samples obtained in 2003**

<i>Carnivores species</i>	<i>Number of samples</i>	<i>Positive samples</i>
Fox ( <i>Vulpes vulpes</i> )	33	2
Wolf ( <i>Canis lupus</i> )	12	0
Wildcat ( <i>Felis silvestris</i> )	1	0
Weasel ( <i>Mustela nivalis</i> )	5	0
Total	51	2

In May 2004, two wolves were found to be positive for rabies in the village of Helshan, Zahrishte in the Has district(northern Albania) see Table 3

**Table 3. Samples obtained in 2004**

<i>Carnivores species</i>	<i>Number of samples</i>	<i>Positive samples</i>
Fox ( <i>Vulpes vulpes</i> )	17	0
Wolf ( <i>Canis lupus</i> )	11	2
Wildcat ( <i>Felis silvestris</i> )	2	0
Weasel ( <i>Mustela nivalis</i> )	7	0
Total	37	2

In 2005 there were no rabies cases reported.

**Table 4. Samples obtained in 2005**

<i>Carnivores species</i>	<i>Number of samples</i>	<i>Positive samples</i>
Fox ( <i>Vulpes vulpes</i> )	23	0
Wolf ( <i>Canis lupus</i> )	14	0
Wildcat ( <i>Felis silvestris</i> )	0	0
Weasel ( <i>Mustela nivalis</i> )	4	0
Total	41	0

In 2006 one fox were found positive for rabies, and this coincided with an outbreak in Nikoliq village in the Has district(northern Albania) see Table 5

**Table 5. Samples obtained in 2006**

<i>Carnivores species</i>	<i>Number of samples</i>	<i>Positive samples</i>
Fox ( <i>Vulpes vulpes</i> )	21	1
Wolf ( <i>Canis lupus</i> )	12	0
Wildcat ( <i>Felis silvestris</i> )	1	0
Weasel ( <i>Mustela nivalis</i> )	2	0
Total	35	1

In 2007 rabies cases were not reported. See table 6

**Table 6. Samples obtained in 2006**

<i>Carnivores species</i>	<i>Number of samples</i>	<i>Positive samples</i>
Fox ( <i>Vulpes vulpes</i> )	22	0
Wolf ( <i>Canis lupus</i> )	3	0
Wildcats ( <i>Felis silvestris</i> )	0	0
Weasels( <i>Mustela nivalis</i> )	4	0
Total	27	0

#### Conclusions

1. This is the first study of its kind into rabies in wild carnivores in Albania. Despite the fact that the study was prompted by the emergency situation of rabies in the surrounding countries, it provides us with some background information and paves the way for other studies.
2. Confirmed rabies cases were identified in the villages Morine(Kukes), Qereti (Puka), Gjorica (Bulqiza) Perolaj (Has)and Nikoliq (Hasi). All the villages are in northern Albania
3. The outbreaks of Rabies in northern Albania depend on the circulation of wild carnivores between neighbouring countries where rabies is a problem.
4. We will continue with the examination of wild animals to check if they are infected with rabies as this may allow epidemiological interventions.

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#### **Mass mortality in harbour seals and harbour porpoises in the Baltic caused by an unknown pathogen.**

A recent article in the Veterinary Record (Harkonen et al) describes the increased mortality in European harbour seals (*Phoca vitulina*) and harbour porpoises (*Phocoena phocoena*) observed in Denmark and Sweden in the summer of 2007. In 1988 and 2002, outbreaks of phocine distemper virus (PDV) caused mass mortality in harbor seals, and as an increased mortality was seen in 2007, another outbreak of PDV was feared. The mortalities in the outbreaks of 1988 and 2002 were estimated at 10,000 seals in total. The gross findings in the dead seals examined in 2007 were similar to the lesions seen in 1988 and 2002, but PDV was not detected. Histopathological examinations on a small number of seals suggested a viral infection, and virus sequencing is underway at the National Veterinary Institute in Uppsala, Sweden. In Denmark, 163 dead seals were washed ashore in Denmark, and another 122 seals

along the west coast of Sweden together with 28 harbour porpoises. Observations of around 100 seals described the animals as having a disturbed dorsal silhouette, with intermittent hump formation in the shoulder region. Seals in the final stages suffered from severe dyspnoea and sometimes coughed up blood. The increased mortality can may be caused by a previously unrecognized pathogen.

Harkonen T, Bäcklin BM, Barrett T, Bergman A, Corteyn M, Dietz R, Harding KC, Malmsten J, Roos A, Teilmann J. "Mass mortality in harbour seals and harbour porpoises caused by an unknown pathogen." *Vet Rec.* 2008 Apr 26;162(17):555-6.

### **European Student Chapter of the Wildlife Disease Association Promoting Shared Knowledge**

Several excellent web sites have been set up by the Student Chapter of the WDA and the EWDA. These are listed here but a better description of the purposes of the sites is given in **the EWDA Bulletin**.

- Tool #1: the EWDA discussion E-list  
([http://groups.yahoo.com/group/EWDA\\_discussion](http://groups.yahoo.com/group/EWDA_discussion))
- Tool #2: the EWDA electronic journal club  
(<http://ewdaeic.blogspot.com>)
- Tool #3: the EWDA Student Chapter Mentor Network  
([http://spreadsheets.google.com/pub?key=pau5lnp6RSL6bvjYK\\_PP0YQ&gid=0](http://spreadsheets.google.com/pub?key=pau5lnp6RSL6bvjYK_PP0YQ&gid=0))

Lastly, to further promote shared knowledge across Europe, the EWDA Student Chapter is developing a **network of Country Representatives** whose role is to promote the activities proposed by the Chapter and the involvement of wildlife health students in their countries.

Please visit our website to learn more about the EWDA Student Chapter, its objectives and activities, and become a member! [www.ewda.org/studentchapter.html](http://www.ewda.org/studentchapter.html)

### **European Section**

Material for publication in *News from Europe* can include recent wildlife disease outbreaks and new diseases in Europe, short case and meeting reports; job and scholarship announcements. We encourage submissions, and will help with the English language if required. The deadline for the next issue is August 2008.

Please mail, fax or e-mail submissions to, Paul Duff, VLA Diseases of Wildlife Scheme (VLADoWS), VLA Penrith, Merrythought, Calthwaite, PENRITH, Cumbria, CA11 9RR, United Kingdom, e-mail [p.duff@vla.defra.gsi.gov.uk](mailto:p.duff@vla.defra.gsi.gov.uk). Fax ++44(0)-1768-885314 /phone ++44(0)-1768-885295.