

## **Pathological findings in 66 wild European otters (*Lutra lutra*) in Scotland: 2007-2008**

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## **The Scottish Otter Mortality Study**

### **Wild European (Eurasian) otters: *Lutra lutra***

- Located throughout Europe including UK
- Sentinel species: Top of their food chain
- Coastal and riverine environments
- Monitoring causes of mortality in wild otters is an important component of population studies to assess the conservation status of this species

## The Scottish Otter Mortality Study

### 2007-2008: 66 Wild Otters

- Isle of Skye
- Shetland Islands
- Loch Lomond and the Trossachs National Park
- Other areas of mainland Scotland

## Causes of Death in Adult Otters

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• Trauma		52
<b>Motor vehicle accidents</b>	<b>51</b>	
<b>Gun shot wound</b>	<b>1</b>	
• Septic infection of wounds		3
• Inanition		3
<b>Ageing; Dental attrition</b>		
• Aspiration pneumonia		1
<b>Accidental inhalation of plant material</b>		
• Undetermined		3
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	Total adults	62

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**Otter: Trauma: Road traffic accident**



**Otter: Trauma: Haemothorax**





**Male Otter: Found dead in Moray by mouth of River Spey**



**Otter: Examination of teeth**



**Otter: Bite wound: Cellulitis**

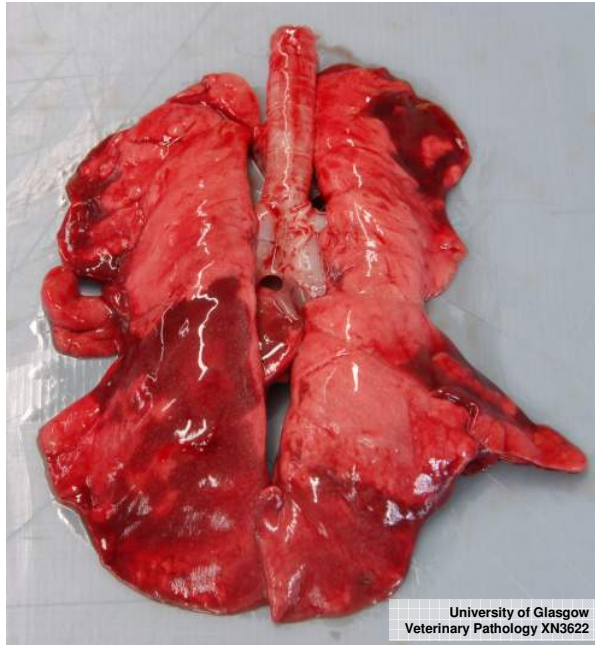


**Otter: Tracking cellulitis: Purulent exudate in mediastinum**

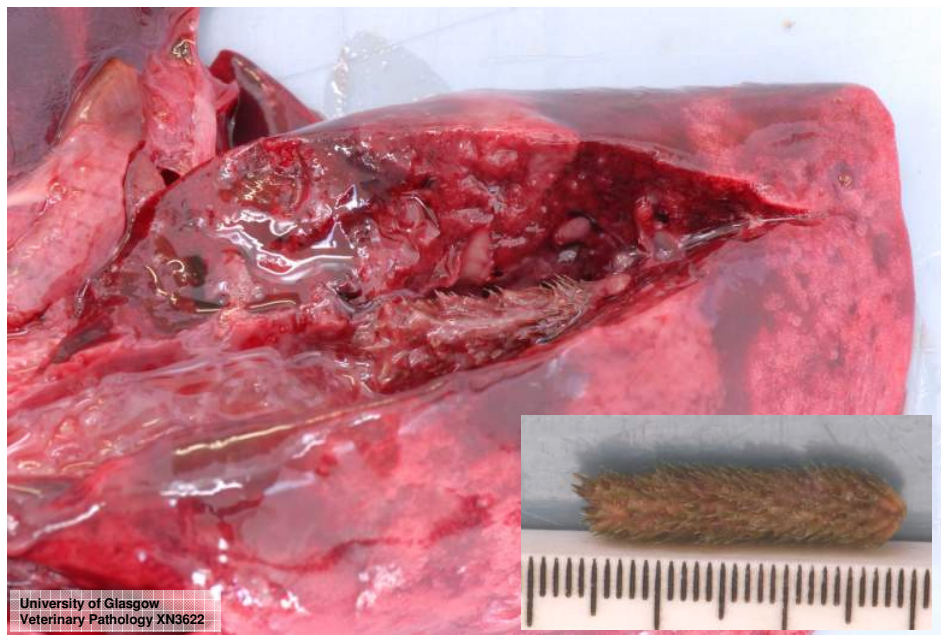




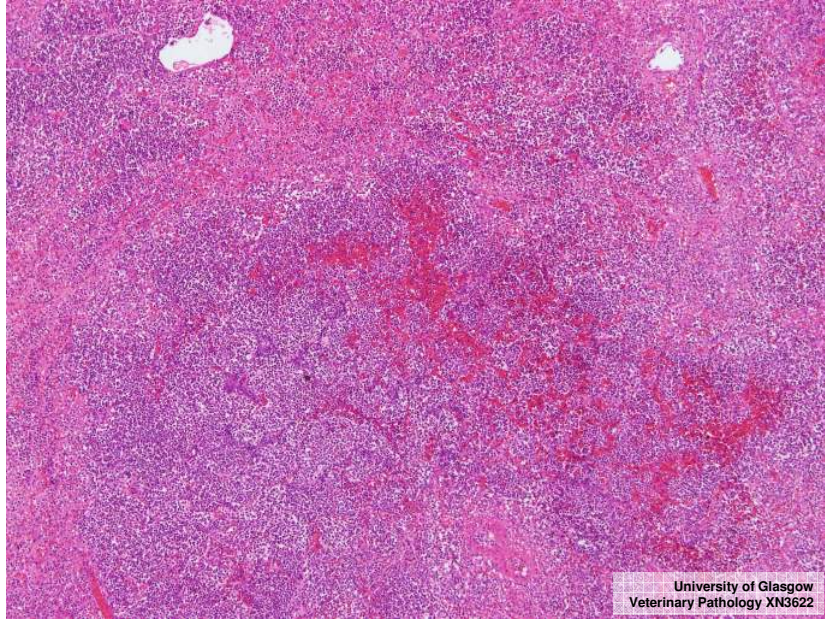
**Otter: Lungs: Consolidation**



**Otter: Aspiration pneumonia: Inhaled reed**



### Otter: Aspiration: Suppurative bronchopneumonia



### Causes of Death in Otter Cubs

• Died in rescue centres	3
“Stressed otter syndrome”	
• Undetermined	1
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	Total cubs
	4

**“Stressed Otter Syndrome”: Gastric haemorrhage**



**Pathology in Otters**

**Incidental findings**

- Healed fight wounds
- Foot lesions: Abrasions, Cuts
- Adiaspiromycosis: Pulmonary mycosis
- Gastric nematodes



## Otter: Foot lesions



### Infectious diseases

- Bile fluke
- Viral infections
  - Infectious canine hepatitis
- Bacterial infections
  - *Brucella*
  - *Salmonella*
  - *Yersinia*

## **Non-infectious diseases**

- **Urolithiasis?**
  - **Common in captive Asian short clawed otters**
  - **Appears to be rare in wild otters**
- **Anomalies of eye development?**
  - **Retinal dysplasia?**



Otter: Eye

## **Collection of Samples**

- **Genetic analysis**
- **Pesticide residue analysis**
- **Stomach contents**
- **Intestinal contents**
- **Spleen**
- **Teeth**

**Otter: Uterus: Pregnant**

