



# Addendum to “Anticoagulant rodenticides in predatory birds 2009: a Predatory Bird Monitoring Scheme (PBMS) report

L.A. Walker, N. R. Llewellyn, M.G. Peréira, E.D. Potter, A.W. Sainsbury\* &  
R.F. Shore<sup>1</sup>

Centre for Ecology & Hydrology, Lancaster Environment Centre, Library Avenue, Bailrigg,  
Lancaster, LA1 4AP, UK

\*Institute of Zoology, Zoological Society of London, Regents Park, London NW1 4RY, UK



---

<sup>1</sup>Corresponding author: RF Shore, Centre for Ecology and Hydrology, Lancaster Environment Centre, Library Avenue, Bailrigg, Lancaster, LA1 4AP, UK. E-mail: [rfs@ceh.ac.uk](mailto:rfs@ceh.ac.uk). Website: <http://www.ceh.ac.uk/>

**This report should be cited as:**

Walker, L.A., Llewellyn, N.R., Pereira M.G., Potter, E.D., Sainsbury, A.W. & Shore, R.F. (2010). Addendum to “Anticoagulant rodenticides in predatory birds 2009: a Predatory Bird Monitoring Scheme (PBMS) report”. Centre for Ecology & Hydrology, Lancaster, UK. 5pp.

**Centre for Ecology and Hydrology Project Number:** NEC04288

**Suggested keywords:** Annual report; Birds of prey; Rodenticide, barn owl, kestrel, red kite, difenacoum, bromadiolone, brodifacoum, flocoumafen, monitoring; United Kingdom (UK)

**E-copies of this report:** This report can be requested through the Natural Environment Research Council’s Open Research Archive <http://nora.nerc.ac.uk/> or can be downloaded directly from the PBMS website

<b>Table 1. Concentrations of anticoagulant rodenticides in the livers of barn owls received in 2009.</b>											
<b>Bird</b>	<b>Vice-County</b>	<b>Age</b>	<b>Sex</b>	<b>Concentration of rodenticide (µg/g wet wt.)</b>							
				<b>SGARs</b>				<b>Other anticoagulant rodenticides</b>			
				<b>Difen</b>	<b>Brom</b>	<b>Brod</b>	<b>Floc</b>	<b>Warf</b>	<b>Coum</b>	<b>Chloro</b>	<b>Diphac</b>
16107	North-east Yorks.	Juvenile	F	ND	0.078	0.004	ND	ND	ND	ND	ND
16108	Bedfordshire	*	M	0.006	0.006	0.008	ND	ND	ND	ND	ND
16110	East Norfolk	Juvenile	F	0.024	0.003	0.008	ND	ND	ND	ND	ND
16114	Surrey	*	M	ND	0.011	ND	ND	ND	ND	ND	ND
16117	Staffordshire	Juvenile	M	ND	0.004	ND	ND	ND	ND	ND	ND
16127	South Essex	Juvenile	M	0.061	0.013	ND	ND	ND	ND	ND	ND
16128	South Essex	Adult	M	0.094	0.330	0.007	ND	ND	ND	ND	ND
16136	West Sussex	Adult	F	0.034	0.067	ND	ND	ND	ND	ND	ND
16137	North-east Yorks.	Adult	*	ND	0.109	ND	ND	ND	ND	ND	ND
16138	Cambridgeshire	Adult	M	0.027	ND	ND	ND	ND	ND	ND	ND
16143	East Ross	Adult	M	0.007	ND	0.511	ND	ND	ND	ND	ND
16148	Mid-west Yorks.	Juvenile	F	ND	ND	0.585	ND	ND	ND	ND	ND
16185	South Lincolnshire	Juvenile	F	ND	ND	ND	ND	ND	ND	ND	ND
16186	South Lincolnshire	Adult	F	0.017	0.003	0.007	ND	ND	ND	ND	ND
16193	South Lincolnshire	Adult	F	0.099	0.008	0.020	ND	ND	ND	ND	ND
16195	South Lincolnshire	*	M	0.010	0.002	ND	ND	ND	ND	ND	ND
16203	Staffordshire	*	M	0.015	0.015	0.010	ND	ND	ND	ND	ND
16204	Worcestershire	Juvenile	M	0.035	0.049	ND	ND	ND	ND	ND	ND
16205	Oxfordshire	Juvenile	M	0.007	0.006	ND	ND	ND	ND	ND	ND
16214	Buckinghamshire	Adult	F	0.013	ND	0.006	ND	ND	ND	ND	ND
16217	East Suffolk	Adult	F	0.045	0.019	0.009	ND	ND	ND	ND	ND
16218	Anglesey	Juvenile	M	0.005	0.007	ND	ND	ND	ND	ND	ND
16219	Anglesey	Juvenile	M	ND	ND	0.010	ND	ND	ND	ND	ND
16229	S. Northumb'land	Juvenile	F	ND	ND	0.003	ND	ND	ND	ND	ND
16230	South Somerset	Juvenile	M	0.003	0.083	0.003	ND	ND	ND	ND	ND
16244	West Cornwall	Adult	M	ND	0.005	ND	ND	ND	ND	ND	ND

ND = Non-Detected; Difen – difenacoum; Brom – bromadiolone; Brod – brodifacoum; Floc – flocoumafen; Warf – warfarin; Coum – coumatetralyl; Chloro – chlorophacinone; Diph – diphacinone.

<b>Table 1 contd. Concentrations of anticoagulant rodenticides in the livers of barn owls received in 2009.</b>											
<b>Bird</b>	<b>Vice-County</b>	<b>Age</b>	<b>Sex</b>	<b>Concentration of rodenticide (µg/g wet wt.)</b>							
				<b>SGARs</b>				<b>Other anticoagulant rodenticides</b>			
				<b>Difen</b>	<b>Brom</b>	<b>Brod</b>	<b>Floc</b>	<b>Warf</b>	<b>Coum</b>	<b>Chloro</b>	<b>Diphac</b>
16245	East Cornwall	Adult	F	0.003	ND	ND	ND	ND	ND	ND	ND
16266	Cambridgeshire	Adult	M	0.019	0.066	0.004	ND	ND	ND	ND	ND
16350	East Cornwall	Juvenile	M	ND	ND	ND	ND	ND	ND	ND	ND
16355	Huntingdonshire	Juvenile	F	ND	0.013	ND	ND	ND	ND	ND	ND
16357	South Northumberland	Juvenile	F	ND	0.061	ND	ND	ND	ND	ND	ND
16358	South Northumberland	Juvenile	U	ND	ND	ND	ND	ND	ND	ND	ND
16362	Oxfordshire	Juvenile	F	ND	ND	ND	ND	ND	ND	ND	ND
16364	East Suffolk	Juvenile	F	0.040	0.046	ND	ND	ND	ND	ND	ND
16370	Northamptonshire	Juvenile	M	ND	ND	ND	ND	ND	ND	ND	ND
16371	South-east Yorkshire	Juvenile	M	0.006	ND	0.007	ND	ND	ND	ND	ND
16372	Hertfordshire	Adult	F	ND	0.003	0.009	ND	ND	ND	ND	ND
16373	Warwickshire	Adult	F	0.034	ND	0.009	ND	ND	ND	ND	ND
16374	Huntingdonshire	Juvenile	M	ND	ND	ND	ND	ND	ND	ND	ND
16386	South Hampshire	Juvenile	M	0.003	0.002	ND	ND	ND	ND	ND	ND
16390	Cambridgeshire	Juvenile	M	ND	0.005	ND	ND	ND	ND	ND	ND
16396	East Cornwall	Juvenile	M	ND	ND	0.003	ND	ND	ND	ND	ND
16402	Staffordshire	Adult	F	0.072	0.005	0.023	ND	ND	ND	ND	ND
16403	Berwickshire	Juvenile	M	ND	0.002	ND	ND	ND	ND	ND	ND
16405	Cambridgeshire	Juvenile	M	0.004	0.004	ND	ND	ND	ND	ND	ND
16406	South Lincolnshire	Juvenile	F	0.037	0.003	ND	ND	ND	ND	ND	ND
16411	South Lincolnshire	Juvenile	F	ND	ND	0.004	ND	ND	ND	ND	ND
16414	North-west Yorkshire	Adult	F	ND	0.021	0.004	ND	ND	ND	ND	ND
16418	*	Adult	M	ND	0.002	ND	ND	ND	ND	ND	ND
16429	Cambridgeshire	Juvenile	F	ND	0.075	0.005	ND	ND	ND	ND	ND
16432	Northamptonshire	Juvenile	F	ND	0.042	ND	ND	ND	ND	ND	ND
16446	South Lincolnshire	Juvenile	F	0.070	ND	ND	ND	ND	ND	ND	ND

ND = Non-Detected; Difen – difenacoum; Brom – bromadiolone; Brod – brodifacoum; Floc – flocoumafen; Warf – warfarin; Coum – coumatetralyl; Chloro – chlorophacinone; Diph – diphacinone.

<b>Table 2. Concentrations of anticoagulant rodenticides in the livers of red kites received in 2009.</b>											
<b>Bird</b>	<b>Vice-County</b>	<b>Age</b>	<b>Sex</b>	<b>Concentration of rodenticide (µg/g wet wt.)</b>							
				<b>SGARs</b>				<b>Other anticoagulant rodenticides</b>			
				<b>Difen</b>	<b>Brom</b>	<b>Brod</b>	<b>Floc</b>	<b>Warf</b>	<b>Coum</b>	<b>Chloro</b>	<b>Diphac</b>
16393	Berkshire	Adult	M	0.050	ND	0.220	ND	ND	ND	ND	ND
16394	Northamptonshire	Juvenile	M	ND	ND	ND	ND	ND	ND	ND	ND
16397	S. Northumb'land	Adult	M	0.447	ND	0.066	0.001	ND	ND	ND	ND
16398	Mid-West Yorks.	Juvenile	M	0.174	ND	0.487	ND	ND	ND	ND	ND
16622	Mid-West Yorks.	Juvenile	M	0.293	0.061	0.005	ND	ND	ND	ND	ND

ND = Non-Detected; Difen – difenacoum; Brom – bromadiolone; Brod – brodifacoum; Floc – flocoumafen; Warf – warfarin; Coum – coumatetralyl; Chloro – chlorophacinone; Diph – diphacinone.