

**European Community Directive  
on the Conservation of Natural Habitats  
and of Wild Fauna and Flora  
(92/43/EEC)**


**Second Report by the United Kingdom under  
Article 17  
on the implementation of the Directive  
from January 2001 to December 2006**

**Conservation status assessment for  
Species:  
S2494 - *Coregonus lavaretus* - Whitefish**

The information in this assessment corresponds to the "species fact sheet" submitted by the UK to the European Union in February 2008 (second and final submission). Please note that this is a section of the UK's report. For the complete report visit <http://www.jncc.gov.uk/article17>

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**Species Name: *Coregonus lavaretus***

<b>1. National level</b>	
Species Code	S2494
Member State	United Kingdom
Biogeographic regions concerned within the Member state	ATL
1.1 Range map	 A map of the United Kingdom showing the distribution of <i>Coregonus lavaretus</i> . The map includes the main islands of Great Britain and Ireland, as well as the Shetland Islands. Three specific areas are shaded in grey to indicate the range: a large area in the Scottish Highlands, a smaller area in the Scottish Lowlands, and a small area in the English Midlands.

## 1.2 Distribution map



## 2. Biogeographic level

### 2.1 Biogeographic region

ATL

### 2.2 Published sources and/or websites

BAGENAL, T.B. 1970. Notes on the biology of the schelly *Coregonus lavaretus* (L.) in Haweswater and Ullswater. *Journal of Fish Biology* 2, 137-154.

DAVIES, C.E, SHELLEY, J, HARDING, P.T, MCLEAN, I.F.G, GARDINER, R & PEIRSON, G (eds.) 2004. *Freshwater fishes in Britain. The species and their distribution.* Colchester: Harley Books

MAITLAND, P.S. 1994. Fish. In: *The Fresh Waters of Scotland: A National resource of International Significance.* (eds. P.S. Maitland, P.J. Boon & D.S. McLusky),. pp.191-208. Wiley & Sons Publ. Ltd. 639pp.

MAITLAND, P.S. 2004 *Keys to the Freshwater Fish of Britain and Ireland with notes on their distribution and ecology* . Freshwater Biological Association , Scientific Publication No. 62, 245pp.

MAITLAND P.S. & LYLE, A.A. 1990. Practical conservation of British fishes: current action on six declining species. *Journal of Fish Biology* (Suppl. A) 1, 25-54.

WINFIELD, I. J. 2001. A risk assessment for the gwyniad (*Coregonus lavaretus*) population in Llyn Tegid. CCW Contract Science Report No. 424. Final Report. Report to Countryside Council for Wales. WI/C01673/2. 32 pp.

WINFIELD, I.J., FLETCHER, J.M. & CRAGG-HINE, D. 1994. Status of Rare Fish: A Literature Review of Freshwater Fish in the UK. National Rivers Authority R&D Report No. 18, 58pp.

WINFIELD, I.J., FLETCHER, J.M. AND CUBBY, P.R. 1995. Further studies of the schelly *Coregonus lavaretus* in Haweswater. IFE Final Report WI/T11063i7/2 to North West Water Ltd., 47 pp plus tables and figures.

WINFIELD, I.J., ADAMS, C.E. & FLETCHER, J.M. 1996. Recent introductions of the ruffe (*Gymnocephalus cernuus*) to three United Kingdom lakes containing *Coregonus* species. *Annales Zoologici Fennici* 33, 459-466.

WINFIELD, I.J., FLETCHER, J.M. & CUBBY, P.R. 1997. Introduction of Haweswater schelly to Blea Water and Small Water. Final Report. Report to Environment Agency, North West Region and North West Water Ltd. WI/T11063z7/2. 22 pp.

WINFIELD, I.J., FLETCHER, J.M. & JAMES, J.B. 2003A. Gwyniad translocation project: Phase One – A condition assessment of the potential donor population in Llyn Tegid. CCW Contract Science Report No. 597. Final Report. Report to Countryside Council for Wales. WI/C02285/1. 52 pp.

WINFIELD, I.J., FLETCHER, J.M., JAMES, J.B. & LYLE, A.A. 2003B. Gwyniad trial translocation 2002-2003. CCW Contract Science Report No. 576. Final Report. Report to Countryside Council for Wales. WI/C01860/4. 33 pp.

WINFIELD, I.J., FLETCHER, J.M., & JAMES, J.B. 2004A. Monitoring of the schelly of Haweswater, April 2003 to March 2004. Final Report. Report to United Utilities. WI/C01512/8. 72 pp.

WINFIELD, I.J., FLETCHER, J.M. & JAMES, J.B. 2004B. Modelling the impacts of water level fluctuations on the population dynamics of whitefish (*Coregonus lavaretus* (L.)) in Haweswater, U.K. *Ecology & Hydrobiology* 4, 409-416.

WINFIELD, I. J., FLETCHER, J.M., & JAMES, J.B. 2006A. Monitoring of the schelly of Haweswater, April 2005 to March 2006. Final Report. Report to United Utilities. LA/C01512/12. 64 pp.

WINFIELD, I.J., FLETCHER, J.M., & JAMES, J.B. 2006B. SCM of fish in Loch Eck. Final Report. Report to Scottish Natural Heritage.

	<p>LA/C02852/1. 22 pp.</p> <p>WINFIELD, I.J., FLETCHER, J.M., &amp; JAMES, J.B. 2006C. SCM of fish in standing waters (Phase II). Final Report. Report to Scottish Natural Heritage. LA/C02256/4. 40 pp.</p> <p>WINFIELD, I.J., FLETCHER, JM. &amp; JAMES, J B. 2007. Llyn Tegid hydroacoustic surveys 2006. CCW Contract Science Report No. 763. Draft Final Report. Report to Countryside Council for Wales. LA/C03122/1. 42 pp.</p> <p>WINFIELD, I.J., FLETCHER, J.M., JAMES, J.B., BEAN, C.W. &amp; DUIGAN, C. (submitted, a). Setting reference values for lake fish abundance: observations from unexploited or lightly exploited vendace (<i>Coregonus albula</i>), whitefish (<i>C. lavaretus</i>) and Arctic charr (<i>Salvelinus alpinus</i>) populations in the U.K. In: Cowx, I. G. (editor) <i>Assessing the Ecological Status of Rivers, Lakes and Transitional Waters</i>. Oxford: Fishing News Books, Blackwell Scientific Publications,</p> <p>WINFIELD, I.J., FLETCHER, J.M., JAMES, J.B., DUIGAN, C., BEAN, C.W. &amp; DURIE, N.C. (submitted, b). Long-term case histories of ruffe (<i>Gymnocephalus cernuus</i>) introductions to four U.K. lakes containing native vendace (<i>Coregonus albula</i>) or whitefish (<i>C. lavaretus</i>) populations. <i>Archiv für Hydrobiologie</i>.</p> <p>Map Data Source</p> <p>Biological Records Centre - Database for the Atlas of Freshwater Fishes, via the NBN</p> <p>C. Bean (pers comm.)</p>
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### 2.3 Range of species in the biogeographic region or marine region

2.3.1 Surface range of the species (sq km)	1759
2.3.2 Date of range determination	1991-2001
2.3.3 Quality of data concerning range	Good
2.3.4 Range trend	Stable (=)
2.3.5 Range trend magnitude (%)	Not applicable
2.3.6 Range trend period	1994-2006
2.3.7 Reasons for reported trend	3 - Direct human influence;

### 2.4 Population

2.4.1 Population size estimation	Minimum	7	Maximum	7
	Units	Other Natural Sites		
2.4.2 Date of population estimation	2006			
2.4.3 Method used for population estimation	2 - Extrapolation from surveys of part of the population			
2.4.4 Quality of population data	Moderate			

2.4.5 Population trend	Decreasing (-)
2.4.6 Population trend magnitude (%)	Unknown
2.4.7 Population trend period	1994-2006
2.4.8 Reasons for reported trend	3 - Direct human influence;
2.4.9 Justification of % thresholds for trends (optional)	Not applicable
2.4.10 Main pressures	701 - water pollution; 910 - Silting up; 954 - invasion by a species; 966 - antagonism arising from introduction of species;
2.4.11 Threats	701 - water pollution; 910 - Silting up; 954 - invasion by a species; 966 - antagonism arising from introduction of species;
<b>2.5 Habitat for the species in the biogeographic region or marine region</b>	
2.5 Habitats for the species	
2.5.2 Area estimation (sq km)	97.59
2.5.3 Date of estimation	2007
2.5.4 Quality of data	Moderate
2.5.5 Trend of the habitat	Increasing (+)
2.5.6 Trend period	1994-2007
2.5.7 Reasons for reported trend	3 - Direct human influence;
<b>2.6 Future prospects</b>	
2.6 Future prospects for the species	Poor prospects_Species likely to struggle unless conditions change
<b>2.7 Complementary information</b>	
2.7.1 Favourable reference range (sq km)	1759
2.7.2 Favourable reference population	
2.7.3 Suitable Habitat for the species	Unknown
2.7.4 Other relevant information	
<b>2.8 Conclusions</b> <i>(assessment of conservation status at end of reporting period)</i>	
(2.3) Range	(FV) - Favourable
(2.4) Population	(U1-) - Inadequate and deteriorating
(2.5) Habitat for the species	(XX) - Unknown
(2.6) Future prospects	(U1) - Inadequate
Overall assessment	(U1-) - Inadequate and deteriorating