



# Bedfordshire and Luton Species Action Plan: Great-crested Newt

May 2008



**Great-crested newt**  
***Triturus cristatus***

**National lead organisation(s):**

British Herpetological Society  
Froglife  
The Herpetological Conservation Trust

**County lead organisation(s):**

Bedfordshire Reptile and Amphibians Group

The great-crested newt (GCN) is the UK's most striking amphibian as well its largest newt. Average adult length is 14 cm with a maximum of 17 cm. During the breeding season the male has a high jagged crest which dips at the rear of the abdomen and then increases in height on the tail. There is a white flash on the side of the tail but this, and the crest, become much less visible outside the breeding season. Females lack the crest but have an orange or yellow line running continuously along the underside of the tail.

Like other amphibians GCN require both terrestrial and aquatic habitat. Adults arrive in breeding ponds in the early spring, during which time a female lays up to 300 eggs singly on folded leaves of water plants. After breeding the adults leave the pond and spend the summer on land, though some occasionally return to the water. The larvae take three weeks to hatch and about three months to metamorphose. They leave the water between late August and early October. They take two to three years to become mature. Hibernation of both young and adults occurs from mid-October to mid-February.

### Current status

#### **National status**

The GCN is found in at least 23 countries in central and northern continental Europe but the UK is one of its strongholds. It may be numerous locally in parts of lowland England and Wales but is absent or rare in Cornwall and Devon. It has a limited range in Scotland and is absent from Northern Ireland. There are an estimated 100,000 ponds in Britain with GCN in the 904 10km squares where they are known (Herpetological Conservation Trust date unknown).

The species appears to have suffered a decline in recent years although a lack of historic data makes the exact extent of the decline difficult to assess. Work in the 1980s indicated a national rate of colony loss of approximately 2% over five years (Nicholson and Oldham 1986). A more recent report (Atkins and Herbert 1995) suggests that 42% of GCN populations in the London area have been lost in 20 years. Assuming a 0.4-2% annual loss of ponds, and assuming 18,000 populations, then between 72 and 360 populations are being lost each year (Swan and Oldham 1993).





### Local status

The Victoria County History of Bedfordshire (1904) states the GCN is 'found in ponds all over the county' but there is no more detailed information either there or in any of the older literature.

The 1993 National Amphibian Survey noted approximately 60 site records for the county but many of these go back to the early 1980s. No attempt was made to verify the grid references and only 16 records give numbers of animals present. The only published distribution map (*Bedfordshire Naturalist* 41 (1986)) shows records from 27 tetrads mostly located in a band across the centre of the county with occasional records from the county peripheries. This probably reflects sampling bias rather than actual distribution. A new distribution map is included within this plan and shows **XX** tetrads with GCN recorded from them.

### Current factors affecting the great-crested newt

- Pond losses in agricultural areas are probably of key significance in the decline of GCN. The species has not benefited greatly from the creation of garden ponds and remains largely dependent on ponds associated with farmland or those created by quarrying activity.
- Poor or absent pond management leads to ecological successional changes that reduce the suitability of ponds for newts.
- Larval newts are sensitive to fish predation and so ponds that are seasonally ephemeral, and hence inhospitable to fish, can provide suitable breeding habitat. Stocking ponds with fish can eradicate newt populations.
- Chemical pollution and nutrient enrichment of breeding sites reduces the suitability of the sites for GCN.
- Unsympathetic terrestrial habitat management destroys hibernation sites and removes the cover required for adult and juvenile newts in their terrestrial phase.
- Degradation, loss and fragmentation of terrestrial habitat. Populations require suitable terrestrial habitat adjacent to their breeding ponds and long-term survival may depend on movement between neighbouring populations (or breeding ponds). Great crested newt dispersal abilities are limited (the maximum dispersal distance being little more than 1 km) so that closely-spaced ponds, or pond clusters (ponds within 500 m of each other), supporting metapopulations are important to long-term survival. A viable metapopulation requires a minimum of five ponds.
- Poor quality mitigation schemes including severance or isolation of GCN populations and suitable habitat, inappropriate aquatic to terrestrial habitat ratios, lack of appropriate planning and time needed to establish replacement/enhanced habitat.





## Current action

### Legal

The GCN is listed on Appendix II of the Bern Convention and Annexes II and IV of the EC Habitats Directive. It is protected under UK legislation through listing on Schedule 5 of the Wildlife and Countryside Act 1981 and its amendments, and Schedule 2 of the Conservation (Natural Habitats, etc) Regulations 1994 (Regulation 38) (as amended). The legislation makes it an offence to intentionally injure, kill or take a great crested newt or to intentionally or recklessly disturb, damage, destroy or obstruct access to its breeding or resting place. It is also an offence to possess or control any live or dead specimen, or part thereof. It is also a National Priority Species in the UK Biodiversity Action Plan.

### National action

A national Species Action Plan exists for GCN. The Herpetological Conservation Trust has a Great Crested Newt Conservation Officer. The role of the Conservation Officer is to ensure that the proposals in the National SAP are carried out, and provide information and support to that effect. The Conservation Officer also produces a twice-yearly newsletter and administers grants schemes from the BHS and HCT that support GCN conservation. Amphibian and Reptile Groups, affiliated to the Herpetofauna Groups of Britain and Ireland, are heavily involved in conservation activities.

### Local action

The Bedfordshire Reptile and Amphibians Group has organised training sessions on GCN surveying and recording, to help volunteers identify the county's GCN populations. Several important sites are maintained to prevent ecological succession, and pond surveys have taken place in the Marston Vale and Ivel Valley areas.

## Action plan objectives and targets

### Objective

Maintain and expand the range and population of Great Crested Newts in the Bedfordshire.

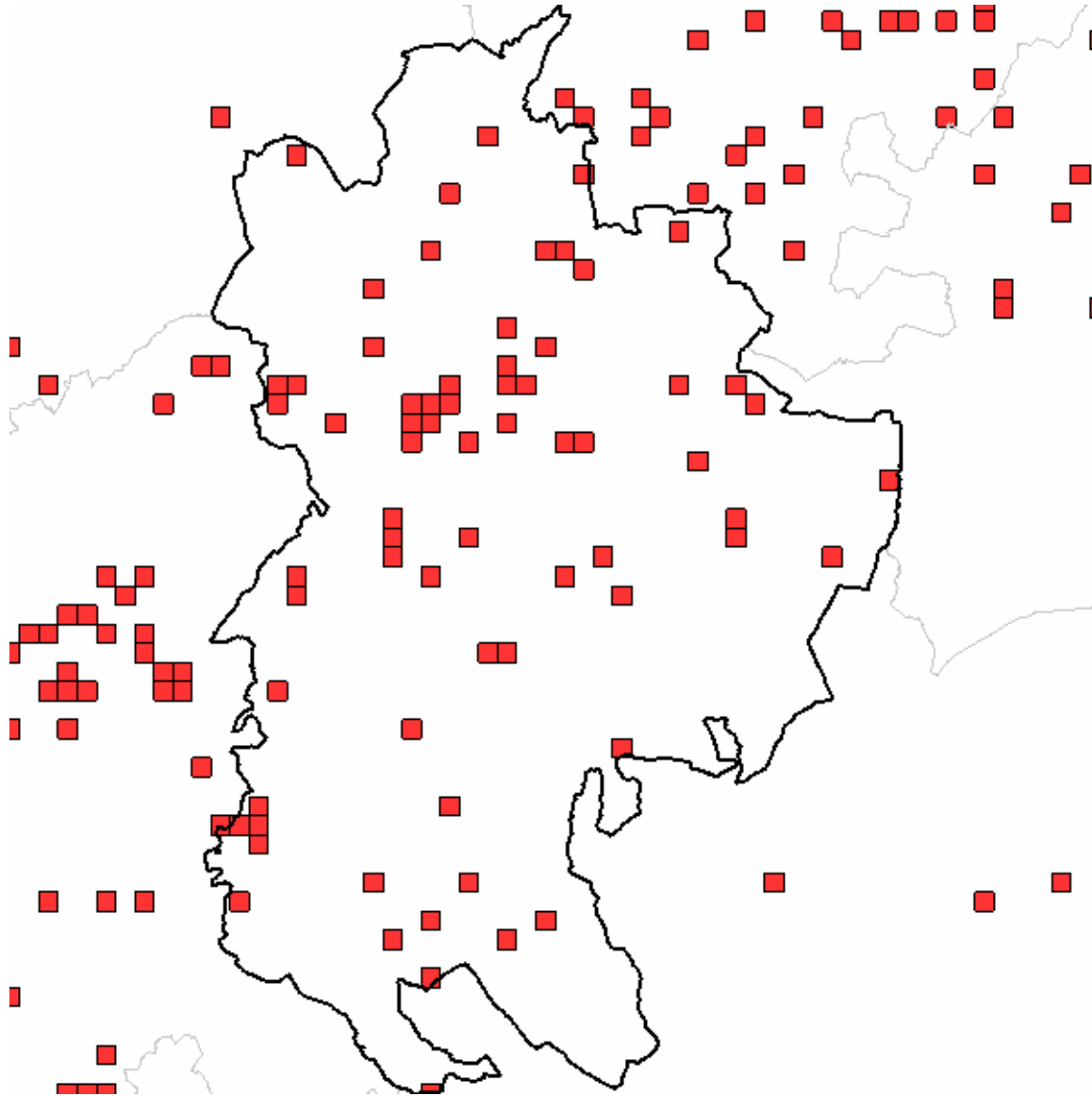
### Targets

- A. Maintain GCN in the currently known **X** 1km grid squares (see figure 1).
- B. Expand GCN occurrence from **X to Y** 1km grid squares by 2020 (see figure 1).





**Fig. 1 Current range of Great Crested Newts (*Triturus cristatus*) in Bedfordshire**



Source: NBN Gateway ([data.nbn.org.uk](http://data.nbn.org.uk)), using data provided by the Bedfordshire and Luton Biodiversity Recording and Monitoring Centre/Bedfordshire Herpetofauna (BNHS/BRAG) – 1973-2009.



## Proposed action

### Abbreviations

BRAG	Bedfordshire Reptile & Amphibians Group	EA	Environment Agency
BRCC	Bedfordshire Rural Communities Charity	WT	Wildlife Trust

Action	Implemented by
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### Policy and legislation

1. Ensure that all ponds known to hold GCN populations are identified in local plans or part II of unitary development plans by 2010, and that protection and enhancement of the ponds is taken into account in any developments.	
2. Ensure that local authorities are kept informed of developments in GCN conservation and that advice and information are readily available at all times.	

### Site safeguard and management

3. By 2009 produce lists of GCN sites: <ul style="list-style-type: none"> <li>• that would benefit from restoration;</li> <li>• that require management;</li> <li>• where new ponds can be created that are accessible by GCN from existing ones to enhance metapopulations.</li> </ul>	
4. Ensure positive management of 2 known GCN sites per year (including ponds and terrestrial habitat) by 2020.	
5. Restore 10% of sites on the restoration list per year by 2020.	
6. Create 5 new GCN ponds by 2010.	

### Advisory

7. Advise land owners and people involved in the management of GCN sites about management, the law, ecology of the species, and grants (such as Environmental Stewardship) by 2010.	
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### **Future research and monitoring**

8. Undertake surveys to identify new GCN populations by 2012.	
9. Undertake surveys to confirm the continued presence of GCN populations in known sites by 2012.	
10. Undertake surveys to establish the Habitat Suitability Index of 100 ponds in Bedfordshire and Luton by 2012.	





### Monitoring the Action Plan

The Bedfordshire Reptile and Amphibian Group will review this action plan on an annual basis.

### Complementary plans

There is a UK national action plan for the GCN by the UK Biodiversity Steering Group.

This action plan links to other Bedfordshire and Luton habitat action plans, in particular those for ponds, lowland meadow and lowland mixed deciduous woodland.

Cambridgeshire and Hertfordshire have also written SAPs for the GCN. Northamptonshire and Buckinghamshire include GCN conservation in their Habitat Action Plans for ponds and lakes.

### Acknowledgements

This Action Plan has been written by Richard Lawrence (BRCC), Marcus and Susan Phillips (Bedfordshire Reptile and Amphibian Group) and Heather Webb (Bedfordshire Biodiversity Partnership Coordinator). Draft versions have been commented on by Helen Muir-Howie (BNHS Herptile Recorder), Graham Bellamy (Wildlife Trust for Bedfordshire), John Comont (Bedfordshire County Council), Ruth Carey (Froglife), Chantal Hagan (Natural England), Amanda Proud (BRCC) and Dorothy Wright (Great Crested Newt Conservation Officer The Herpetological Conservation Trust).

### References

- Atkins W, Herbert C. 1995. Crested newt: survey of Greater London breeding sites (unpublished). London: London, Essex and Hertfordshire Reptile and Amphibian Trust.
- English Nature. 2001. Great Crested Newt Mitigation Guidelines. Peterborough: English Nature.
- Froglife. 2001. The Great Crested Newt Conservation Handbook. Halesworth, Suffolk: Froglife.
- Herpetological Conservation Trust. Date unknown. The Great Crested Newt Project [ONLINE]. <http://www.herpconstrust.org.uk/GCN.htm>. Accessed 19 September 2008.
- Nicholson M, Oldham RS. 1986. Status and ecology of the warty newt (*Triturus cristatus*). Report to the Nature Conservancy Council, HF3/05/123.
- Swan MJS, Oldham RS. 1993. Herpetile sites volume 1: National Amphibian Survey final report. Peterborough: English Nature.

### Further reading

The new standard work which deals with GCN on a European basis is

Thiesmeier B and Kupfer A. 2000. Der Kammolch: ein Wasserdrache in Gefahr. Laurenti Verlag: Bochum.

Valuable new research is published in





'Scientific Studies of the Great Crested Newt. Its Ecology and management. Proceedings of the BHS Symposium 5 December 1998'. *Herpetological Journal* 10(4) (October 2000).

On a more general level the latest addition to the Collins "The New Naturalists" series summarises recent work and has a full bibliography:

Beebee T and Griffiths R. 2000. *Amphibians and reptiles: a natural history of the British herpetofauna*. London: Harper Collins.

Possibly the most informative short study is

Atkins W. 1998. Catch 22 for the great crested newt: observations on the breeding ecology of the great crested newt *Triturus cristatus* and its implications for the conservation of the species. *British Herpetological Society Bulletin* 63: 17-26.

