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The Conservation of the Great Crested Newt *Triturus cristatus* in the UK

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Summary

Great crested newts are widespread in Great Britain (though absent from the island of Ireland) and are believed to occur on around 18,000 sites. Though it can be locally abundant, the species and its pond habitats are declining nationally. Causes of decline are numerous and result from habitat loss, over-management and neglect of aquatic and terrestrial habitats and introduction of fish.

Conservation of the species requires the integration of politics and ecology. Protection measures at national and European level have helped safeguard habitats and have ensured mitigation where populations have been deliberately destroyed or damaged. However these have done little to promote the action necessary to conserve the species. New legislation and policies are increasingly developing conservation (rather than simply 'protection') measures, most notably through the development of Biodiversity Action Plans.

Relatively few *Natura 2000* sites have been identified for the species in Great Britain; there are few sites known to hold significant populations. Twenty six sites/ areas have been notified primarily for the species, and a further 26 sites/areas notified primarily for other reasons have the species identified as an additional feature. This level of protection is only adequate if this forms part of a wider suite of measures.

In developing the national Species Action Plan, we have attempted to develop further the concept of 'favourable conservation status', this being used to set an overall 'goal' to direct the Action Plan. The plan covers the full range of issues from the political, through species and habitat protection and management, to science and education. The plan is implemented at both national and local levels, though co-ordination between the two levels is poor. There is limited funding and a reliance on volunteer effort and so there has been limited progress. Improvements in monitoring are needed to reliably measure changes in status. However the development of this Species Action Plan could provide the framework for integrating a range of actions and polices necessary for achieving a favourable status of the species at a national level.

Key words: great crested newts, conservation, Species Action Plans, *Natura 2000*, Favourable Conservation Status, Great Britain, United Kingdom.

Schutz des Kammolches *Triturus cristatus* im Vereinigten Königreich

Zusammenfassung

Der Kammolch ist in Großbritannien mit Ausnahme von Irland weit verbreitet. Es wird angenommen, dass er an etwa 18000 Lokalitäten vorkommen. Obwohl er lokal häufig sein kann, sind die Art und seine Gewässerhabitate landesweit im Rückgang begriffen. Die

Rückgangsursachen sind zahlreich und resultiert aus Habitatverlusten, Übernutzung und Fischbesatz.

Der Schutz der Art macht eine Integration von Politik und Ökologie notwendig. Schutzmaßnahmen auf nationaler wie europäischer Ebene haben zum Schutz von Habitaten beigetragen und haben Ausgleich gesichert, wo Populationen vorsätzlich zerstört oder geschädigt wurden, haben jedoch wenig zur Förderung des Artenschutzes getan. Neue Gesetzgebungen und Politikansätze entwickeln verstärkt Schutzmaßnahmen insesondere durch die Entwicklung von Biodiversitätsprogrammen.

Relativ wenige *Natura 2000*-Gebiete wurden in Großbritannien für den Kammolch ausgewiesen. Es sind nur wenige Gebiete mit bedeutenden Populationen bekannt. 26 Gebiete wurden speziell für den Kammolch ausgewiesen und bei weiteren 26 Gebieten wird der Kammoch als zusätzliche Art angegeben.

Bei der Entwicklung des nationalen Artenschutzprogrammes wurde versucht, ein Kozept des "günstigen Erhaltungszustand" als übergeordnetes Ziel des Schutzprogrammes zu entwickeln. Das Programm umfasst alle Problembereiche, wie Politik, Arten- und Habitatschutz, Wissenschaft und Erziehung. Das Programm ist auf nationaler sowie lokaler Ebene verankert. Die Koordination zwischen den Ebenen ist jedoch gering. Es gibt nur eine begrenzte Finanzierung und setzt ehrenamtliche Arbeit voraus. Deshalb gab es bislang nur geringe Fortschritte. Beim Monitoring sind Verbesserungen notwendig, um verlässliche Aussagen zu Veränderungen im Status der Art zu erzielen. Trotzdem könnte die Entwicklung dieses Artenschutzprogrammes den Rahmen für die Integration vielfältiger Aktionen und Initiativen bilden, die notwendig sind, einen günstigen Erhaltungsstand der Art auf nationaler Ebene zu erhalten.

Schlagwörter: Kammolch, Schutz, Artenschutzprogramme, Natura 2000, günstiger Erhaltungszustand, Großbritannien, United Kingdom.

Introduction

Conservation in the United Kingdom

The United Kingdom comprises of four countries; England, Scotland and Wales (collectively known as Great Britain) and Northern Ireland. Although it is the UK that is member of the European Union and signatory to international conventions, the respective roles of the different countries with regard to environmental matters is becoming more complex as government is becoming increasingly devolved to the separate country level. Scotland, Wales and Northern Ireland have their own elected assemblies (England does not) and each have separate Government Departments and Statutory Conservation Advisers dealing with nature conservation. Implementation of the EU Directive is progressing at different rates in the different countries though there are efforts to ensure that the different countries are working to common standards. Consequently presenting an overview for the 'United Kingdom' is difficult.

The great crested newt in Britain: distribution and ecology

The great crested newt *Triturus cristatus* is widespread through Great Britain (it is absent from the island of Ireland). Nationally there is an estimate of about 18,000 sites (SWAN &

OLDHAM 1993); however this is based on extrapolation from localised 'blanket surveys' and only about 3,000 sites are actually known (sites vary in size and there is no consistent approach to defining these – some sites may contain many ponds; other 'sites' may represent 'sub-divisions' of larger sites). Unpublished estimates of total population size vary between 400,000 adults to in excess of 3 million adults – though the methods used to obtain these figures are questionable.

The majority of population on these sites are small or more often have not been quantified. There are a few sites known to hold large populations with a single exceptionally large population (with an estimated 15,000 – 60,000 adults) being known in central England associated with an old brick-clay works. The species can be locally quite common, though throughout much of its range it would appear to be less abundant. In general the species becomes less common in the west of Britain. In Scotland survey effort has been good and has identified approximately 90 sites.

There are three species of newt native to Britain (the others being the palmate newt *T. helveticus* and smooth newt *T. vulgaris*). As the only large newt species *T. cristatus* does not suffer from problems of competition or hybridisation as it does in some areas elsewhere in its European range (the exception being a few locations where *T. carnifex* has been introduced).

The species occupies a wide range of habitats; with greatest densities apparently being associated with open woodland, abandoned mineral workings and rough, lightly grazed pastures. However it also occurs on many other habitats including sand dunes, coniferous woodlands, golf courses, gardens and arable farmland. It tends to require slightly larger ponds than the other native newt species, and ideally these should be provided in a mosaic of ponds less than 250 m apart. While it is interesting to speculate what its truly natural distribution would have been, it is likely that the species was at it most abundant when small mixed farms were widespread and each field had ponds for providing water to livestock.

Decline and threats

Anecdotal evidence has suggested that the great crested newt, like many other formerly common features of the countryside, was becoming rarer. BEEBEE (1975) undertook a questionnaire survey asking for views of informed people about the status and change in status of great crested newts. While acknowledging the methodological shortfalls (the survey may only have considered 3 % of populations in Britain), and the possible bias in sampling, the conclusion was clearly that the species had declined. Extrapolating the results to a national level indicated that perhaps in excess of 50 % of the breeding sites in Britain had been lost between 1966 and 1975 (= 5 % p.a.). Long term studies have shown that there has been considerable losses of ponds; SWAN & OLDHAM (1997) analysed pond surveys undertaken over the last 200 years; most showed losses (even up to 90 % in some areas) with a median value of 33 %. Most losses have occurred since the 1940s. WILLIAMS et al. (1999) suggested that 75 % of ponds present in 1900 would be lost by 2000 (= 0.75 % p.a.) with many remaining ponds being in a late stage of succession and therefore of low value to newts.

Work by OLDHAM & NICHOLSON (1986) indicated that nationally great crested newt sites were being loss at a rate of 2 % in 6 years (0.4 % per annum). The rate of loss was greater than for other species of amphibian. There is evidence of continuing declines. ATKINS & HERBERT (1996) re-surveyed great crested newt ponds in London and showed a 42 % decline in 20 years (=2.1 % p.a.) and in a re-survey of Hertfordshire (a county to the north of London) the same authors identified a 25 % decline in 11 years (=2.2 % p.a.) respectively (ATKINS & HERBERT 1998). BEEBEE (1997) found a 67 % loss of great crested newts in the Sussex Downs (south of England) between 1977 and 1996 (= 3 % p.a.) though this is based on a small sample size (n= 9).

Conservation: 1. the 'political frame work'

Conservation is a combination of Ecology and Politics. It is important to influence the political environment, both to ensure that legislative measures and policies directly help conserve wildlife, but also to ensure that people are willing to support conservation and that resources are there to do it. Ecological input ensures that information is available for influencing the political environment and also for directing activity subsequently.

'Protective legislation':

Triturs cristatus was first protected in Britain through national legislation in 1981 (the *Wildlife & Countryside Act 1981*) which was the legislative instrument used to implement the Council of Europe's *Convention on the Conservation of European Wildlife and Natural Habitats* of 1979 (the Bern Convention). These gave strict protection to the species and certain features of their habitats. The *Wildlife & Countryside Act* also added to earlier national legislation that required the designation of protected sites (called Sites of Special Scientific Interest (SSSI)) which has been used to a limited extend to designate sites for great crested newts.

The European Union *Directive on the Conservation of Natural and Semi-Natural Habitats and of Wild Fauna and Flora* 92/43/EEC of 1992 (also known as the 'Habitats Directive) introduced further requirements for protection, with subtly different wording to that in the *Wildlife & Countryside Act 1981*. Some new national legislation was needed to implement the Directive (and this came in the form of the *Conservation (Natural Habitats, etc) Regulations 1994*). Policies and Planning Guidance evolved from Government at national and local levels and we have gradually started to see explicit requirements for safeguarding protected species being included in local development plans, etc.

The main changes that the Directive brought about though were the introduction of Special Areas of Conservation (SACs) to create the Natura 2000 series and listing the great crested newt on Annex II meant that sites needed to be designated for this species. The Directive also introduced the concept of achieiving a favourable conservation status (FCS); thereby introducing the idea that Member States had to conserve, rather than simply protect, their wildlife.

However it has never really been very clear exactly what the Natura 2000 series is really aiming to achieve. The absence of firm guidelines, both on the numbers and extent of

sites that should be notified (given that they require strict protection), and on the link between FCS and Natura 2000 has meant that different countries have aimed to meet their obligations in very different ways.

Sites have been identified for inclusion in the Natura 2000 series in the UK on the basis that they:

- reach at least the standard for 'national status' given in the guidelines for selecting SSSIs (Nature Conservancy Council 1989) (i.e. a torch count (or similar) of over 100 newts in each of three years), and
- that they provide a representative selection on the basis of habitat types, and
- that they provide a representative selection based on geographic location.

There are around 3,000 sites known in Britain (and an estimated 18,000 in total). The list of candidate sites for submission to the European Commission has not yet been completed and is subject to a period of consultation. There is still therefore some possibility of changes to the site list or to the boundaries of the sites. However to date 26 sites or areas have been identified that meet these criteria. Of these 17 sites/areas are regarded as being 'excellent' or 'good value' (classified A or B) for the conservation of great crested newts while a further 9 sites/areas are considered to have a 'significant value' to the conservation of the species (classified C). On a further 26 sites/areas, great crested newts have been recorded on sites designated for other purposes, and newts are identified as an 'interest feature' (classified as D). The sites/areas vary in size from just over 1 ha to in excess of 55,000 ha. Where newts are the only feature boundaries have been defined to include good terrestrial habitat. More usually larger areas are identified and the newt ponds and terrestrial habitats are not separately identified within the boundary of the area selected. In some cases the designated SAC may include separate discrete areas (perhaps being made up of a series of smaller sites) and within the SAC only some of these smaller units might contain newts. It is therefore difficult to assess exactly how many ponds or populations are being proposed but it will certainly be well in excess of the 54 implicit by adding the total of A, B, C and D category 'sites'. A separate mapping exercise will really be required to see how the boundaries and localities of known newt populations relate to each other. What is clear is that the best known populations have been identified.

Major constraints on the designation process were imposed by a deficiency of quantitative data to allow sites to be assessed, and the list has therefore been derived from a very poor sample of sites. Furthermore there is some ambiguity as to whether all of the sites in category C meet the SSSI standard or whether they have been designated primarily for other interest features. In the UK the Natura 2000 series for great crested newts will not, in isolation, achieve FCS for the species nationally. We believe that this is appropriate for widespread species provided that there is a range of other measures in place to conserve the species. This we believe requires more resources to ensure that positive conservation measures are taken and that breeding ponds and terrestrial habitats are both protected and managed. There seems little evidence that this package will be forthcoming in the near future. It will be interesting to see how the EU considers the approach taken by the UK Government; if FCS is supposed to be achieved through Natura 2000 sites alone we

would expect that many hundreds (if not thousands) more sites will need to be designated!

There are shortfalls with 'protective measures':

- Are the prohibited activities the main threats to the species? Killing and collecting are not as important as habitat loss and fragmentation.
- Legislation prohibits 'activities' and therefore does not cover 'passive' damage such as deterioration of habitat due to lack of management or neglect.
- Legislation often covers only intentional or deliberate damage: proving 'intent' to do harm can be hard and how is damage that is incidental to lawful activities covered, such as farming or development?
- Enforcement can be difficult:
  1. Interpretation can be difficult and hard to apply to situations on the ground. In one case, for example, it was difficult to precisely define 'breeding site and resting site' on a site that was destroyed.
  2. Collection of evidence can be difficult
  3. Gaining support from law enforcement agencies and an appreciation of the importance of wildlife crime amongst the judiciary is difficult
- Protection is not the same as conservation. Protection merely safeguards what you have got. Conservation differs in two ways. Invariably an enhancement of status is needed and therefore we need to see an improvement from the 'status quo'. But conservation also recognises the dynamics of systems and can be more amenable to accommodating changes.

It is therefore important to develop legislative mechanisms to take on board conservation, rather than simply protection.

Conservation legislation, policies and the Biodiversity Action Plan

The Convention on Biological Diversity, signed by the UK in Rio in 1992, has changed the way that Government and policy makers have looked at conservation. The UK Biodiversity Action Plan (Anon 1995a) has been endorsed by the Government. National plans have been prepared for 391 species and 45 habitats, these include a plan for the great crested newt. As well as national plans, Local Biodiversity Action Plans are being prepared. Of 71 Local Plans that we are aware of, 37 have included plans for great crested newts, 20 are undecided whether to include them or not and 14 have excluded the species. Of these some discounted the species because work was already adequately underway or because they would be conserved through 'habitat' initiatives.

Co-ordination between the national and local level, though, has been poor. The two initiatives were set up at about the same time but without sufficient direction to ensure they worked together. The absence of a clear statutory basis for the plans, or a statutory requirement to produce them at a local level, has meant that there is no explicit duty on public authorities to take the plans forward. This has been a main area for Non-Governmental Organisation lobbying and it is hoped that new legislation passing through Parliament at present will provide a statutory basis for the plans at a National level (through the *Countryside and Rights of Way Bill*) and at a local level (through the *Local Authorities*

Bill). Once these Bills become law, we would hope that new Policy Guidance that is due to be produced by Government, will put conservation on a better footing in future.

The national Species Action Plan for the great crested newt was published in 1995 (ANON 1995b). This is a brief document that includes the following headings:

- Background information
  - Current status
  - Current factors causing loss or decline
  - Current Action
- Action Plan objectives and targets
- Proposed action with lead agencies
  - Policy & legislation
  - Site safeguard & management
  - Species management & protection
  - Advisory
  - Research
  - Communications & publicity

For each plan there is a Governmental 'Contact Point' (for great crested newts this is English Nature) who oversees the implementation of the plan and 'Lead Partners' who for the great crested newt are three Non-Governmental Organisations (The Herpetological Conservation Trust, Froglife and the British Herpetological Society). Lead Partners organise work plans, programmes and report on the implementation. They do not necessarily undertake all the work themselves. The plan for such a widespread species is complex and so a full time Co-ordinator post has been appointed (Ruth Carey) who is based at Froglife.

One of the main activities of the Lead Partners has been to produce an Implementation Plan; following the same headings as the Species Action Plan, but giving more detail to the actions and identifying a wider range of organisations to be involved with the plan. The Lead Partners have also attempted to define a target status for the species which describes a goal that will serve to make an appropriate contribution to FCS in Europe. There is also a project 'Steering Group' consisting of the Contact Point and Lead partners, other statutory bodies and national organisations with a key role in implementing the plan.

One of the key objectives of the plan is to bring about 100 re-colonisations each year. While some of these can be achieved by natural re-colonisation, the majority is likely to require translocation. This aims to bring the newt back to areas where it has previously occurred or extend the range of an existing population. Additional habitat creation or management inside the existing range of a population is not counted towards this total. This is intended to at least offset the estimated national losses each year through neglect; we would expect any 'new' habitat creation as mitigation for development to be in addition to the work done through the Action Plan.

Conservation 2: Action 'on the ground'

While the Lead Partners and Steering Group are well placed to engage in discussions on national issues, such as providing input to discussions on national policy and producing national level guidance, conservation activities that most directly affect great crested newts will occur at a local level. Many Local Biodiversity Action Plans identify the species as a target for conservation and the national network of volunteer Amphibian and Reptile Groups often champion this species for their actions.

Co-ordination between the national and local level is difficult; there is no consistency in content or style of local plans, little direction as to what they should contain and can be at Regional, County, District, Parish, National Park levels, etc. Sometimes plans cover all levels, in some areas plans have not been produced at all. It is therefore especially difficult for national steering groups to become involved with the production of local plans while, with the several hundred priority species and habitats that may appear in any locality, it is difficult for the local planners to gain national level advice and involvement. To add further complication many organisations, especially statutory bodies (such as the state forestry service, defence ministry, water and environmental regulators, privatised water companies, etc.), are producing their own plans. Consequently it is also difficult to keep a national picture of the activities that are occurring at the various different levels.

During the early years of the Action Plans more effort was expended on organising and planning than undertaking conservation action on the ground. This will hopefully start to change as plans have been produced and start to be implemented. One advantage of the complexity of the organisation is that there are many potential sources of funding, man-power or other resources. However there is still a need for further funding to ensure that more can be done 'on the ground' to conserve the great crested newt. There is limited government finance and there is an expectation that many of the necessary resource will come through sponsorship, e.g. from industry.

Development remains a significant threat to the species despite legal protection. Inadequate survey (and insufficient funding for Records Centres) has meant that many developments are still affecting newt populations. We are seeking significant changes in the Development Planning processes to allow an earlier assessment of wildlife interests where developments do not require Environmental Assessments. Where permission is granted to develop a site resulting in damage to a known (or discovered) population, usually mitigation measures are required. The standard of these and their effectiveness in the long term varies, but provided sufficient habitat is provided and subsequent management undertaken many of these proposals could succeed. Where animals need to be moved out of the way a licence, in line with the derogations under Article 16 of the EU's Habitats Directive, must be issued.

Conservation 3: Science and monitoring

It is important that lack of complete knowledge does not hinder conservation effort, and the Species Action Plan has taken a pragmatic approach to setting goals and undertaking conservation work. However there are certain applied ecological questions that need to be answered and the successes (or otherwise) of conservation projects needs to be assessed.

Particular guidance is needed on the design and management of amphibian habitats and an understanding of pond density and associated terrestrial habitats. Notably this is important in ensuring connectivity of areas and the functioning of metapopulations in the long term. Areas for research therefore are:

- Metapopulation dynamics
- Dispersion potential / use of corridors
- Minimum Viable Population Size/ Population Viability Analyses
- Terrestrial habitat use – value of different habitats and how to manage for structure and for best mix of vegetation

Conservation effort has been handicapped by insufficient information about distribution and local abundance and more survey is needed. Some work has been undertaken to try to standardise survey methods for amphibians (GRIFFITHS & RAPER 1994; GRIFFITHS et al. 1996: GRIFFITHS & INNS 1998). However the nature of survey and monitoring effort will vary depending on the requirements of the data:

- Survey: aim to locate where newts are (and if negative results submitted, where they are absent). This has a conservation application in allow conservation and site protection work to be directed towards known populations or used to 'fill gaps' in distribution. Large area to be covered. Currently 'ad hoc'. Levels of recording are inadequate and more investment is needed in local and national recording centres.
- Quantitative survey. Including some measure of population size, allow the best sites to be identified. This would help with designation of key populations.
- Monitoring status and changes in status to allow a measure of the species status nationally. This is likely to rely on 'blanket surveys' of representative areas; looking at all ponds including ones that have newly created. This is likely to require a stratified sampling technique. A pilot scheme being investigated (hopefully to begin in January 2001)
- Monitoring the condition of Natura 2000 sites and other designated sites. The relationship of sites being in a 'favourable status' and the contribution of these to achieving FCS needs to be determined. The approach being promoted at present by the Statutory Conservation Agencies relies on an assessment of habitat features, but records no measurement of the newt population (not even presence/absence). This makes assumptions about a complete understanding of habitat needs/ requirements.
- Recording conservation activity and progress of the implementation of the Species Action Plan.

All of these survey and monitoring activities will provide different information for assessing the Conservation Status of the species nationally.

Conclusions: what we have done and what we need to do next

Conservation of widespread species requires different action and a wider involvement of different organisations to that required for more localised species. Site protection and involvement of relatively few organisations may achieve everything necessary for species found on relatively few sites. For the great crested newt, this is not the case. The species

cannot achieve and be sustained at a favourable conservation status through site protection alone: we are looking to a full package of measure that cannot be achieved only by the Natura 2000 series. These measures need to address both political and ecological issues. We have seen considerable amounts of activity in the promotion of national and local Biodiversity Action Plans. Legislation and policy are slowly beginning to take on board conservation objectives and therefore provide a better environment for taking forward conservation action.

Undoubtedly work, such as surveys and habitat creation and management, is happening 'on the ground'. However we need to see much better co-ordination of the action plans and clearer guidance on the relationship between the national and the local levels. This requires the Biodiversity Action Plan to have statutory backing, only then will the need for co-ordinated action be fully taken on board by statutory organisations. This may be addressed by new legislation. While much can be achieved through volunteer effort, there has been a tendency to over-rely on this in the UK for achieving priority actions. Additional resources are required to help ensure that this valuable resource is assisted and, where it is unable to undertake work, to provide professional involvement instead.

Further surveying and monitoring effort is required to better understand the species and to monitor its status. Different methods are needed for different objectives and, again, professional support and further resources will be needed to achieve this.

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