

**Amphibian Atlas**  
**Of North East England**  
**2016**



Produced by  
J L Durkin MSc. MIEEM  
[durkinjl@aol.com](mailto:durkinjl@aol.com)  
[www.durhamnature.co.uk](http://www.durhamnature.co.uk)

## **Introduction to the atlas, credits, conventions.**

This is the fourth edition of the Atlas in this format, replacing the earlier editions of 2008, 2010 and 2013.

The species covered are the five native amphibian species found in this area, Common Frog, Common Toad and the three newt species, Great Crested, Palmate and Smooth.

“Escapes” of more exotic species have also been recorded, mainly Alpine Newts in suburban areas. There were old introductions of Natterjack Toad and Pool Frog in Northumberland, lasting perhaps only a few years.

**The area covered** is the modern counties of Northumberland, Tyne and Wear, Durham and Tees Valley. A small number of records are outside this area.

### **The records.**

All available records, about 8000, have been considered and compiled, from “Recorder”, from “The Record Pool”, from the Great Crested Newt database and from several individuals’ records. Keith Cunningham has processed much of the data that was held on Recorder. The North Pennines AONB Partnership’s Wildwatch Project has contributed many records from previously less recorded areas. Ian Bond has compiled the records from the Tees Valley area. A large number of people have recorded the North-east’s amphibians, with Dave Green still accounting for 10% of the records.

### **The text and compilation**

The records were compiled and the text written by John Durkin.

### **The artwork**

Some of the amphibian illustrations reproduced here were drawn by Dave Green in the 1980s for a survey of the County’s amphibians that he carried out, employed by the Durham Wildlife Trust. Others are reproduced from out-of-copyright publications via Archive.org. The photographs are by John Durkin.

### **The maps**

The maps were drawn with DMAP from records held on Mapmate and on other sources.

The records appear as square dots of two kilometre sides, centred on the grid reference- note that these are not tetrads, as in the 2010 edition of the Atlas. The base grid is ten kilometres. Records from 2000 onwards are dark green squares, 1990 to 1999 with lighter green, and earlier records in yellow.

Where records are doubtful or very old, this is indicated in the text.

### **Searches**

The raw data is available on the NBN “Consultants Portal” and on “The Record Pool”. At present, you have to check both sources to get all of the records. This data is far superior to that held on the general NBN website, or on “ERIC”. And is available immediately and free of charge.

The data has GPS eight-figure grid references derived from aerial photographs, and is much more accurate than the data previously available.

## **Conservation**

This Atlas is intended as an aid to the conservation of our amphibians. Some are particularly vulnerable to changes in land use, especially the Great Crested Newt. Despite its protection under the Wildlife and Countryside Act, sites continue to be lost, mainly by the introduction of fish.

Planning applications for changes in land use such as wind turbines or open cast mining within the main distribution areas should include a suitable amphibian survey, assessment and mitigation.

## **Use**

Use for research, conservation or planning purposes is welcomed. The source should be acknowledged.

New records are welcome, and can be sent direct to me, at [durkinjl@aol.com](mailto:durkinjl@aol.com) or to the Record Pool, or the NBN Consultants Portal.

## **North East Amphibian and Reptile Group**

NERAG was set up in the Autumn of 2007 by members of staff from the EYE project based at the Hancock museum in Newcastle upon Tyne and several other people with a passion for herpetofauna.

The aim of the group is to identify and record existing and new populations of herpetofauna throughout the North East of England. These records will hopefully be accessible to those with an interest in wildlife management, habitat enrichment and conservation as well as developers and land owners.

NERAG is affiliated with ARG UK.

Members come from a variety of different backgrounds such as wildlife trusts, reserve wardens from local councils, herpetologists, ecologists and keen volunteers in the conservation world.

Indoor and outdoor meetings are regularly organised.

Contact by e mail at [Nerag@yahoo.co.uk](mailto:Nerag@yahoo.co.uk)

**This Atlas is dedicated to Dave Green,  
who pioneered the study of amphibian and reptile  
distribution in North-east England**

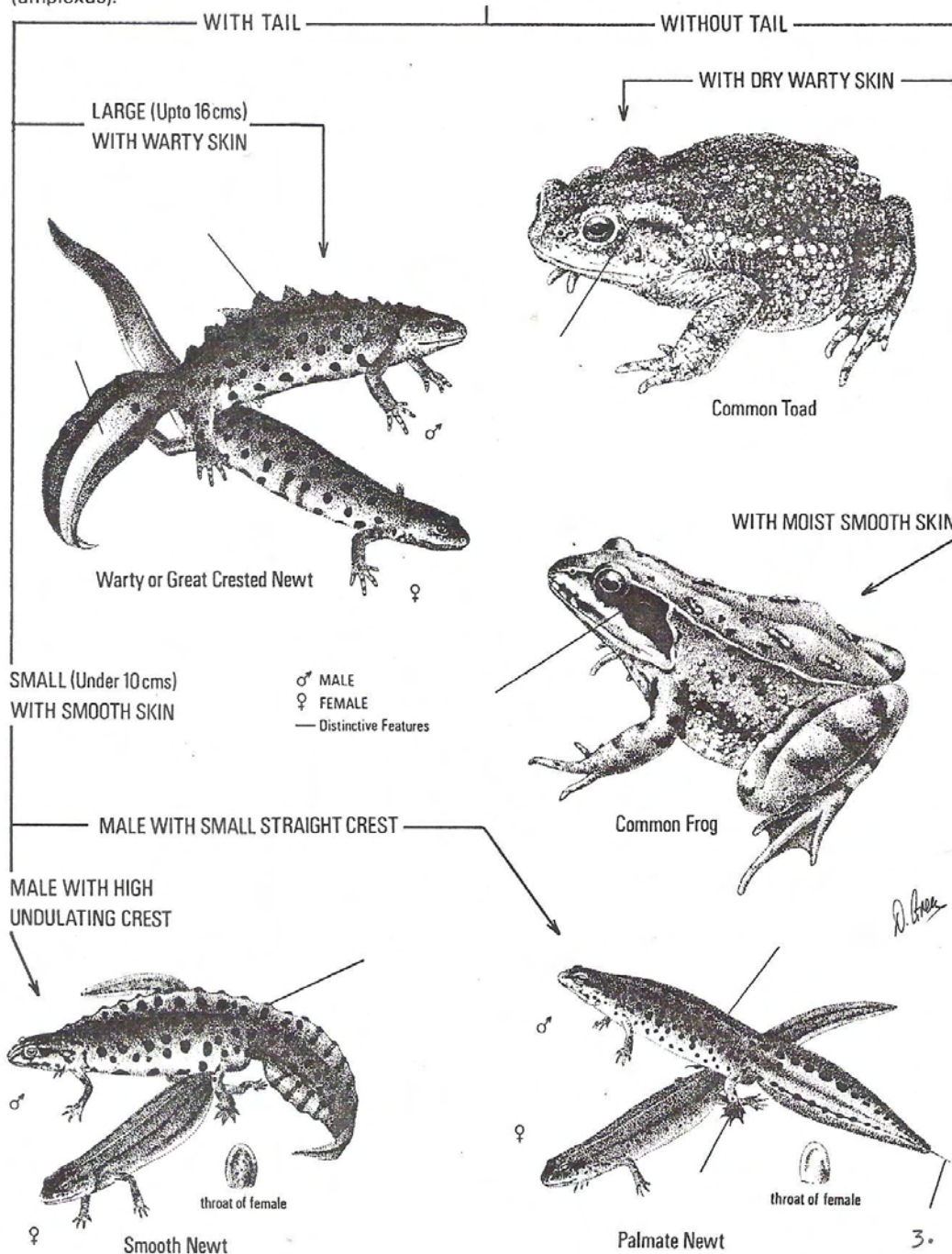
# AMPHIBIAN KEY

This sheet is an identification guide to the five local amphibian species. By following the options of the key and studying the illustrations it should be possible for you to identify your catch.

The newt species are often confused though the Warty Newt, on account of its large size, warty skin and deeply serrated crest and silver tail stripe of the male, is the most characteristic. The Smooth and Palmate Newts are not so easily told apart. The male Palmate lacks a high crest and on closer inspection has the toes of the hind feet more or less fully webbed as well as adorning a thin black filament at the end of its tail. The females of the two species are very similar and can only be told apart by the female Smooth *usually* having a spotted throat whilst that of the Palmate Newt is without spots. Palmate Newts rarely exceed 8 cms in length.

Outside the breeding season newts lose many of their characteristics (crests, etc.) and are therefore very difficult to identify.

Unlike the newts, the males of frogs and toads do not adorn crests though they do develop dark horny pads on their fingers, which are necessary for clasping on to the back of the larger females during mating (amplexus).

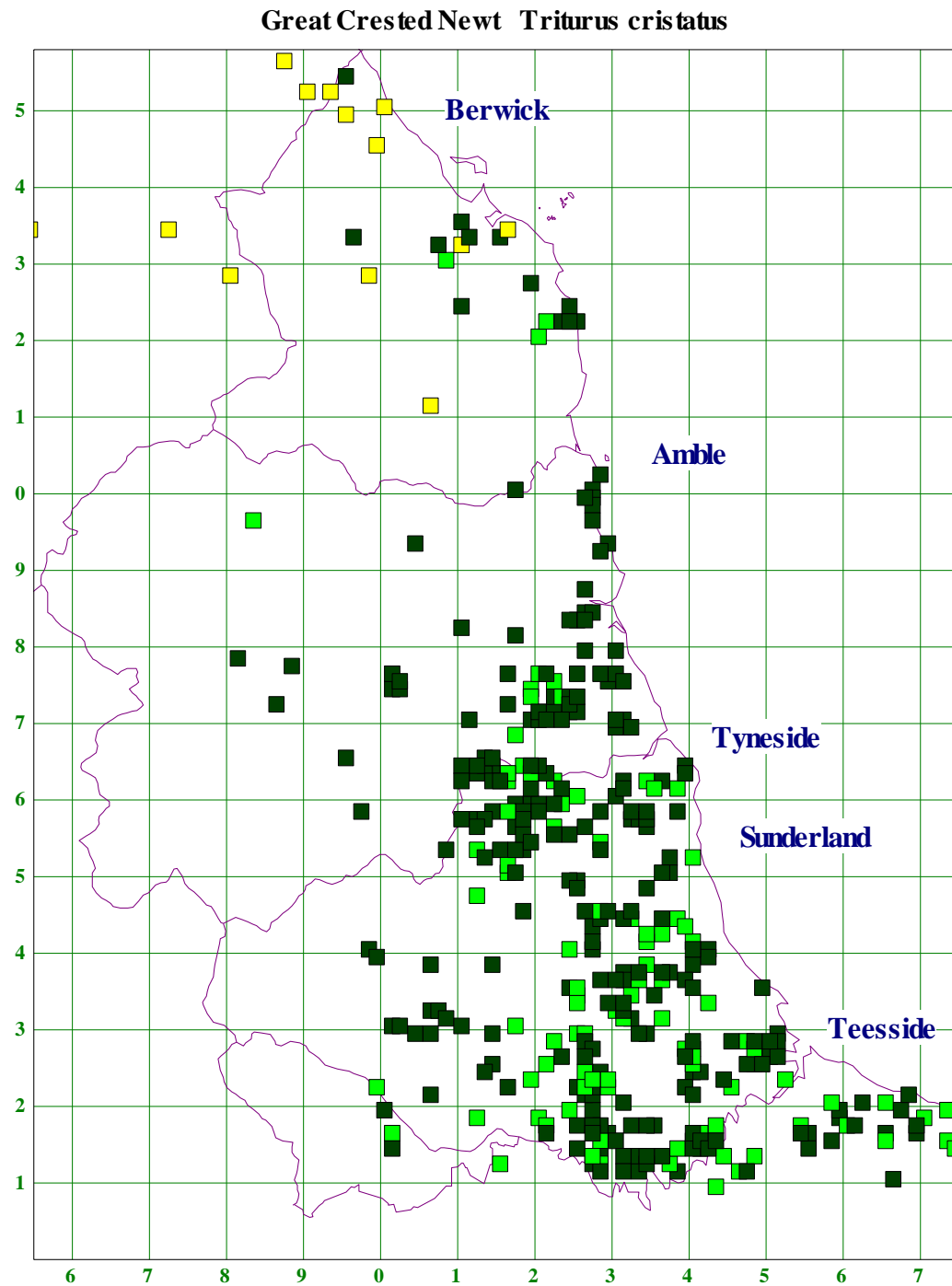




### Great Crested Newt, *Triturus cristatus*

The Great Crested Newt is known from around 800 ponds in the region, mainly in eastern lowland areas, but occasionally on higher ground in more western areas, particularly in limestone quarries.

Great Crested Newts are well recorded because of their legal status. Consequently, they appear from the maps to be proportionately more frequent compared with the other newts than they really are. The overall distribution area is, though, probably quite accurate.



### Northumberland/Newcastle/North Tyneside

Distribution mainly follows the coastal plain, and is best recorded in the south east of the county. There are probably many other sites further north, and in the Tyne Valley area. This edition of the Atlas includes several “new” Tyne Valley sites. The north, in particular, and the Scottish side of the border, need some survey work.

### Durham

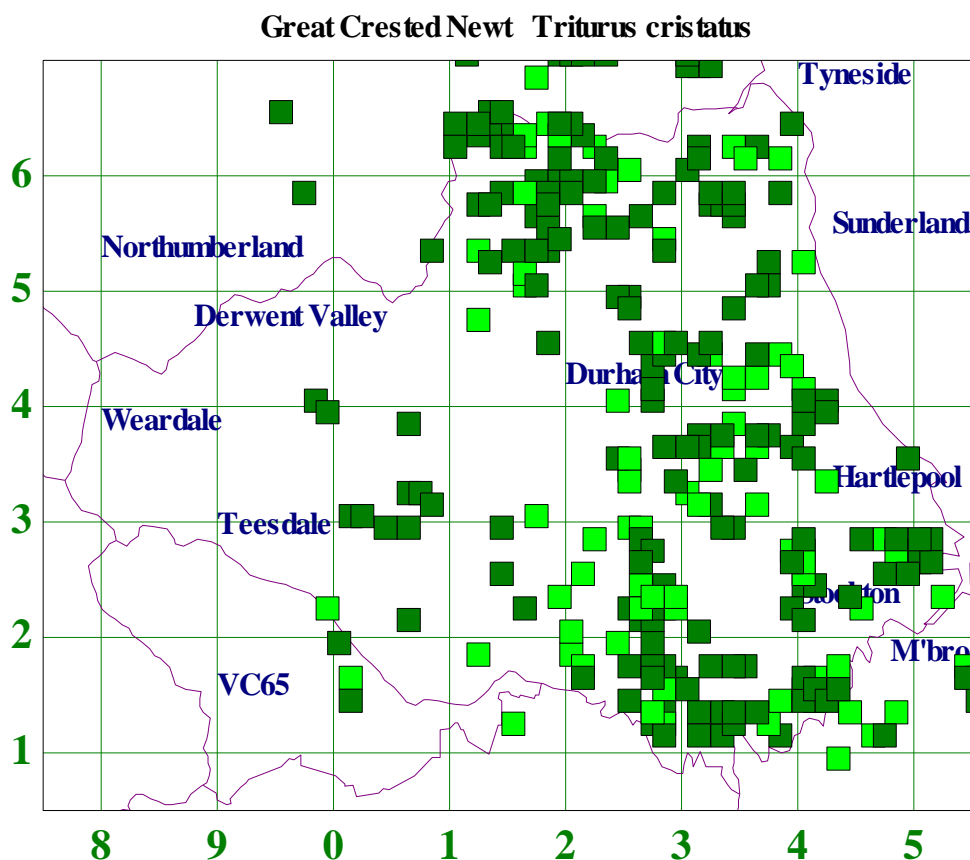
The eastern area is the main, dense distribution, broadly between the A68 and the A19. The western area of thin distribution includes some unusual upland colonies, at over 300 metres in altitude.

In urban areas, extinction due to urban expansion is being reversed by colonisation/introduction to garden ponds.

The coastal area of Easington and Peterlee which is blank reflects the scarcity of ponds there.

Great Crested Newts are probably absent in the upland western blank area, but there is still the possibility of other moorland populations being found.

For planning applications which affect Great Crested Newts, in the whole of the local government districts of South Tyneside, Gateshead, City of Sunderland, Easington, Hartlepool, Stockton, City of Durham, Chester-le-Street, Sedgefield, and Darlington, if there are ponds, there is a good (>25%) probability that Great Crested Newts are present.



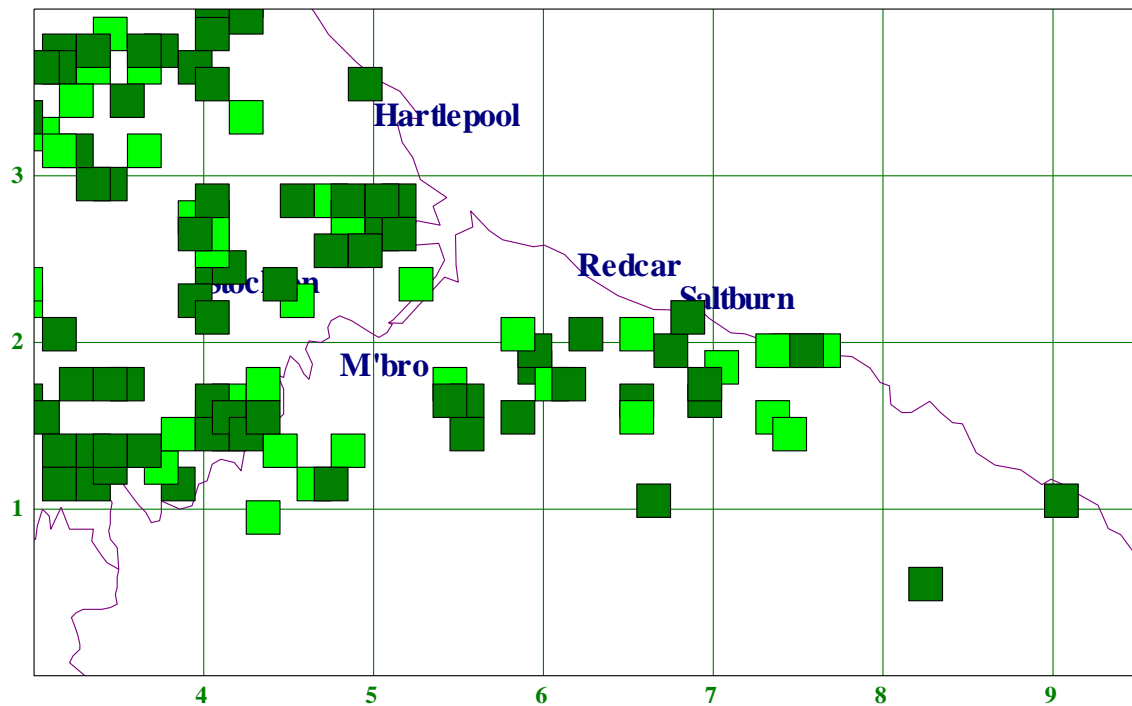


GCN eggs on *Myosotis*

## Tees Valley

Widespread in the Tees Valley area, except in some urban/industrial areas. For planning applications which affect Great Crested Newts, surveys should always be carried out in the whole of the local government districts of Hartlepool, Stockton, Middlesbrough and Redcar and Cleveland.

### Great Crested Newt

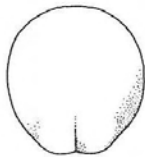




# LARVAL DEVELOPMENT (1)



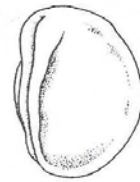
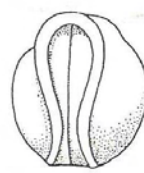
days 1-3



day 4



day 5



day 6



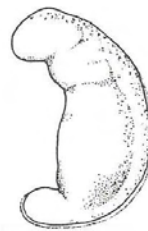
day 7



day 8



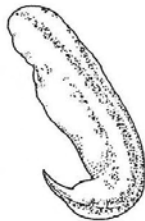
day 9



day 11



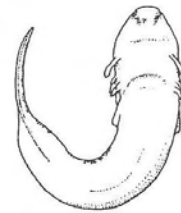
day 12



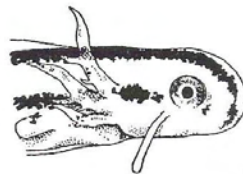
day 13



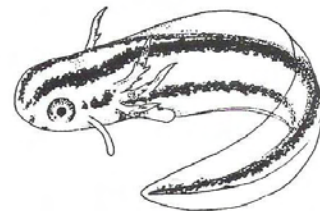
day 14



day 17



day 21

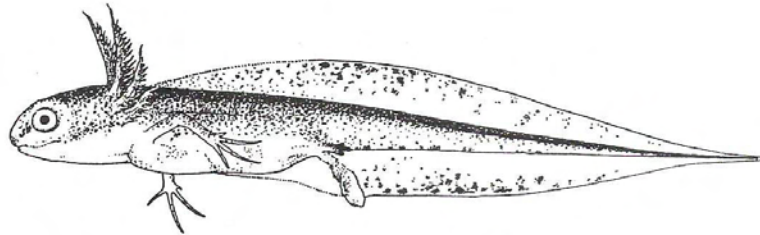


*D. Green*

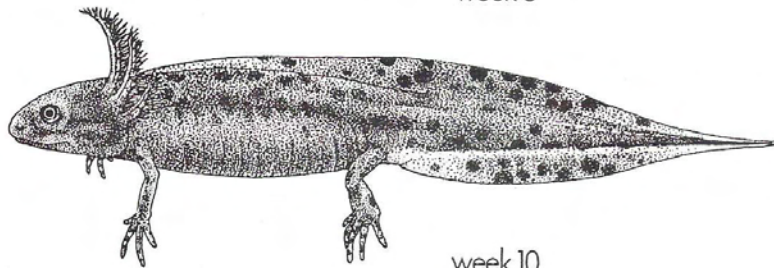
## LARVAL DEVELOPMENT (2)



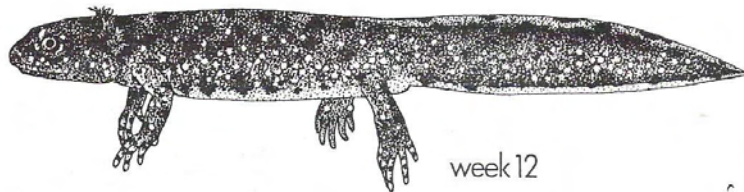
week 4



week 6

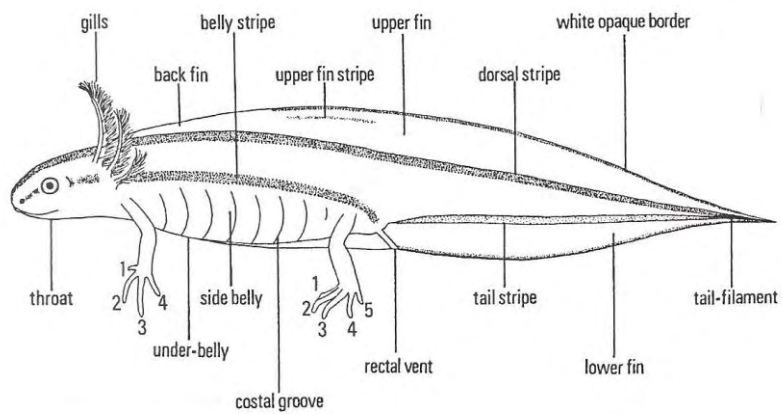


week 10



week 12

*R. Jan*



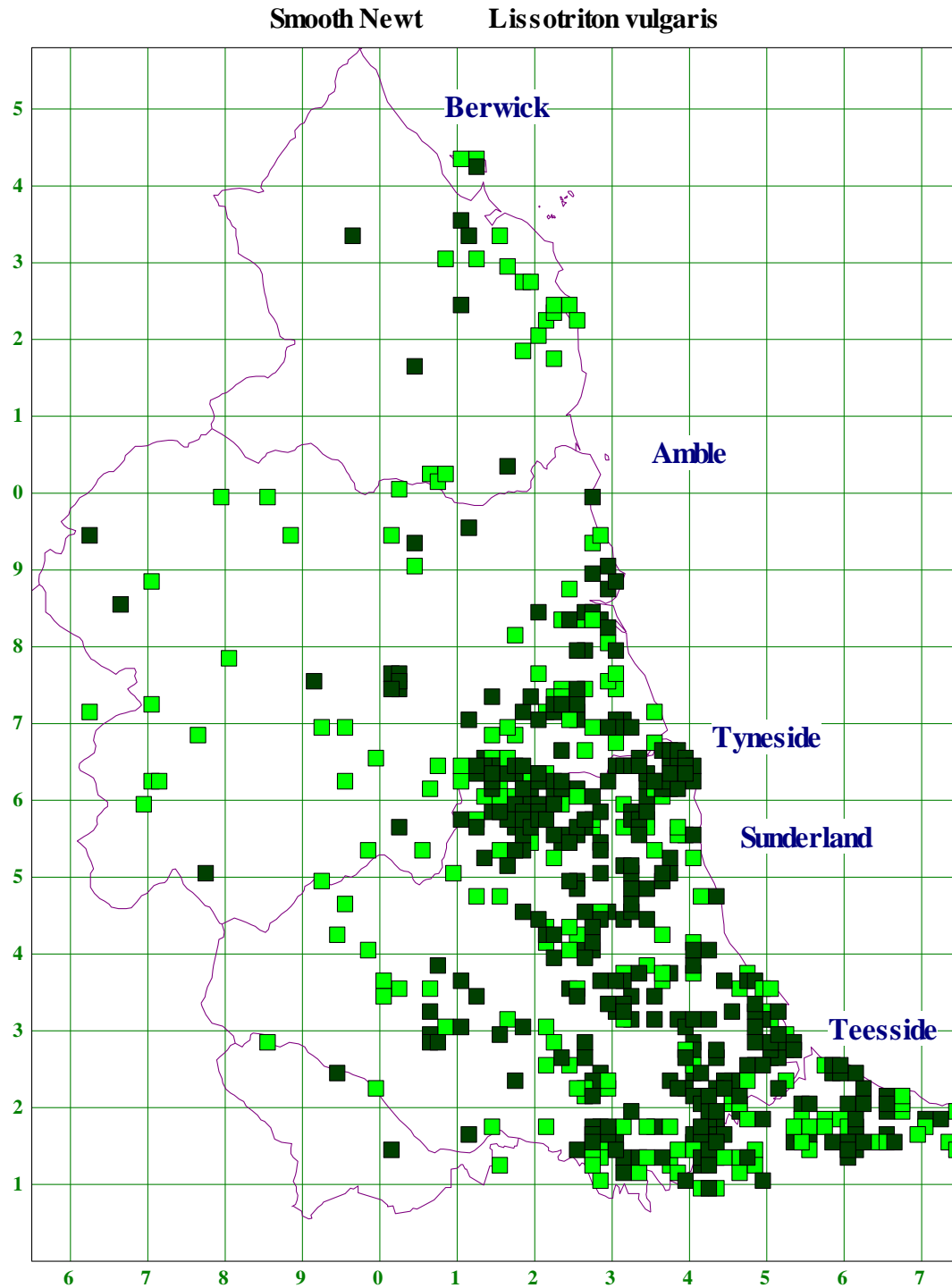
## LARVAL TERMINOLOGY

**Smooth Newt, *Lissotriton vulgaris* (formerly *Triturus vulgaris*)**

The commonest newt in the lowlands, most ponds will have this species.

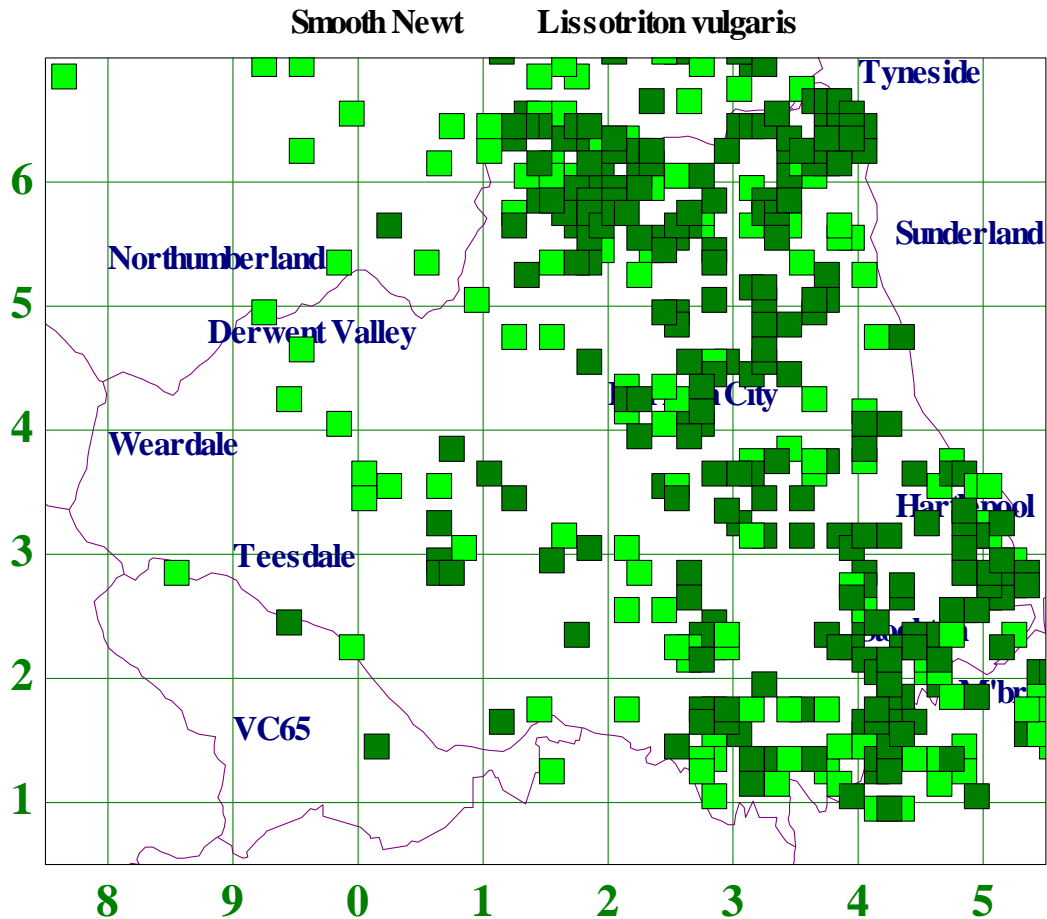
**Northumberland/Newcastle/North Tyneside**

Smooth Newts in Northumberland are mainly found on the coastal plain and along the main river valleys, particularly the Tyne. They are also found on Lindisfarne.



## Durham

Smooth Newts are well distributed in most suitable ponds in the eastern half of the county, mainly east of the A68. West of the A68, distribution follows the river valleys. Some of the most western dots may be errors for Palmate Newt.



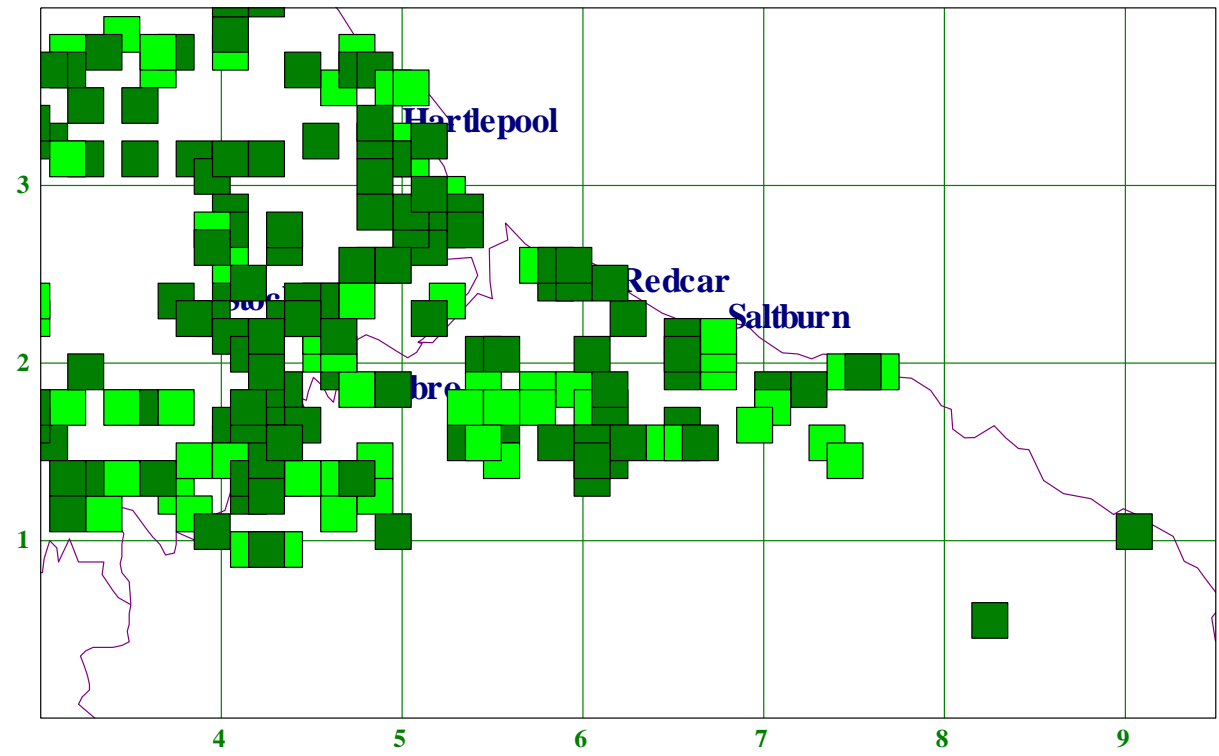
Terrestrial adult at the end of the breeding season, showing the remains of the crest.



## Tees Valley

Smooth Newts are widespread in Tees Valley, though scarcer in the upland areas of Redcar & Cleveland.

### Smooth Newt

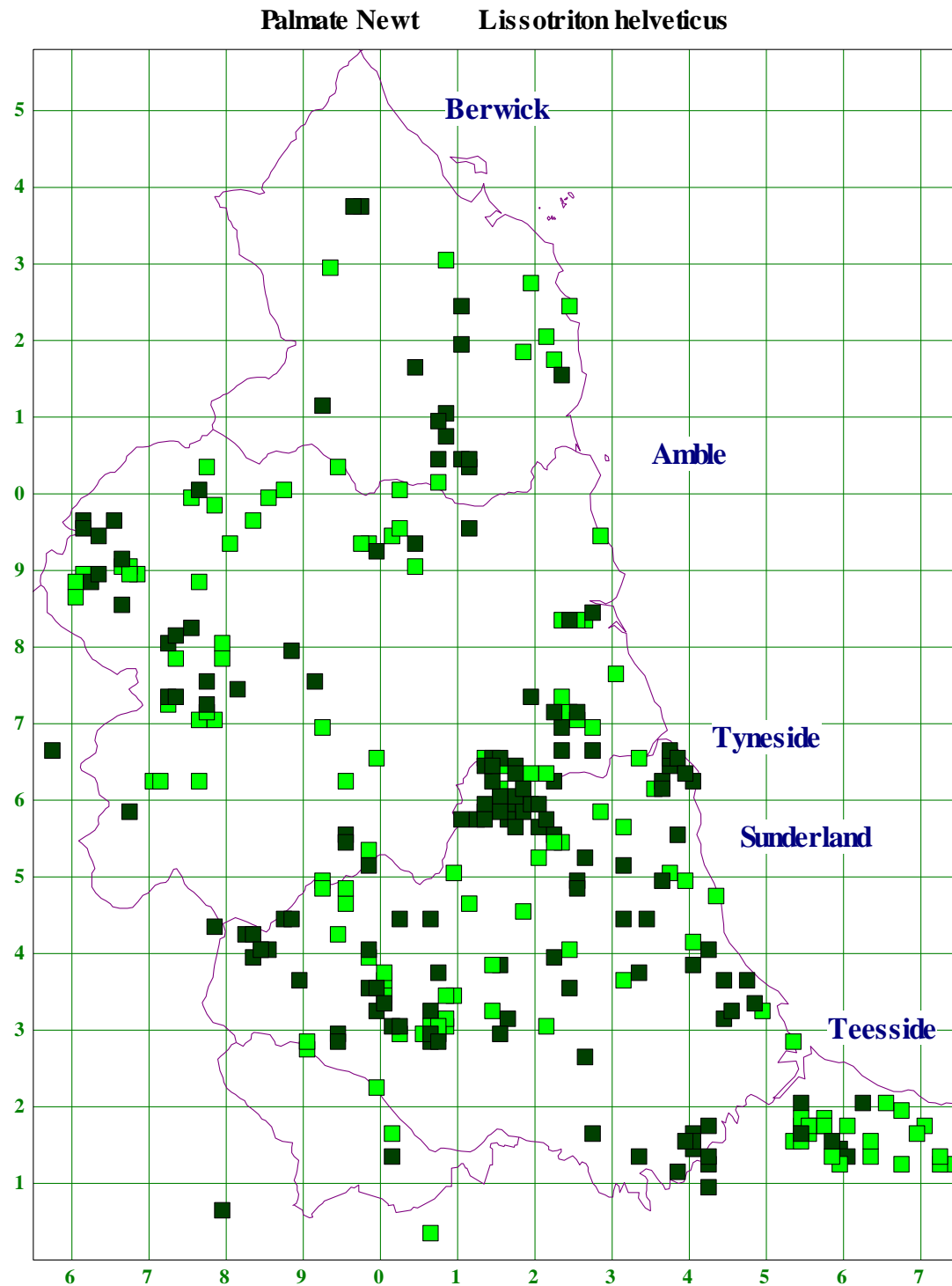


**Palmate Newt, *Lissotriton helveticus* (formerly *Triturus helveticus*)**

The Palmate Newt is mostly the upland, western species in the North East of England.

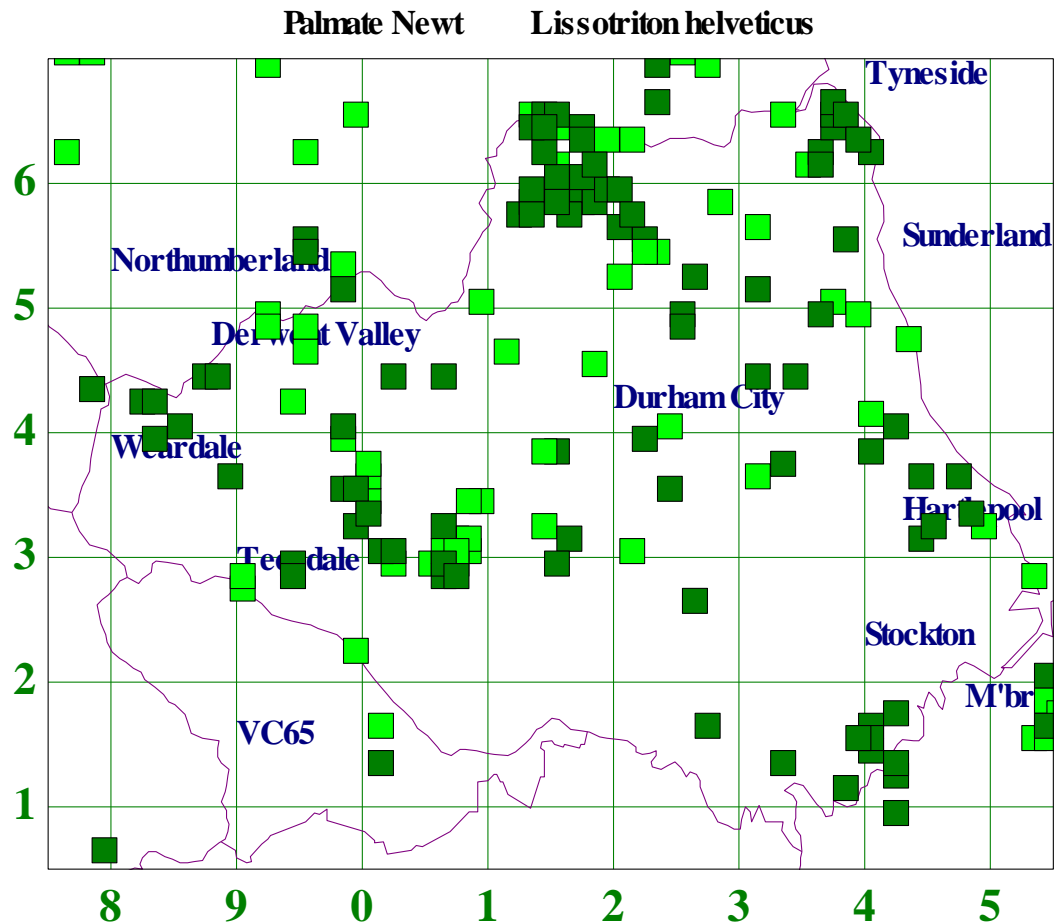
**Northumberland/Newcastle/North Tyneside**

Most frequent in the upland west of Northumberland. There is a cluster of records around Gosforth Park, but few other lowland records.



## Durham

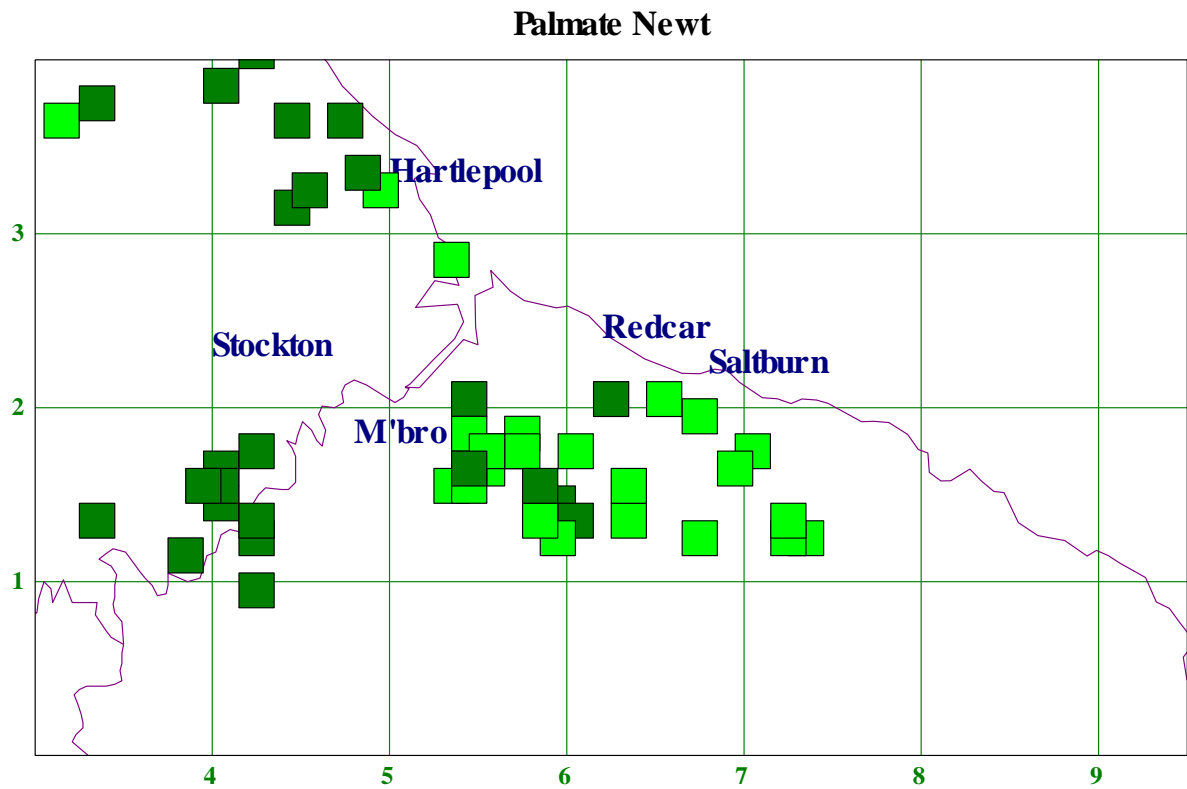
Palmate Newts are the scarcest of the three newt species, with most of the records from the western half of Gateshead and from Hamsterley Forest. They are often the numerically dominant species in slightly acid ponds on the moors and in disused quarries. They are probably the least well recorded amphibian species locally. The lowland distribution is very sparse, though introductions, particularly in south Tyneside, have clouded this distinction.



Detail of male tail filament

## Tees Valley

Palmate Newts are scarce north of the Tees and in the urban areas. The main area of distribution is in the upland area of Redcar and Cleveland.





### **Common Frog, *Rana temporaria***

The most widespread and frequent amphibian, probably found in almost all kilometre squares. Survey coverage in the region as a whole is now 34%, a considerable increase on the 2008 figure. This is mainly due to intensive surveys in Tees Valley, South Tyneside and Kielder Forest.

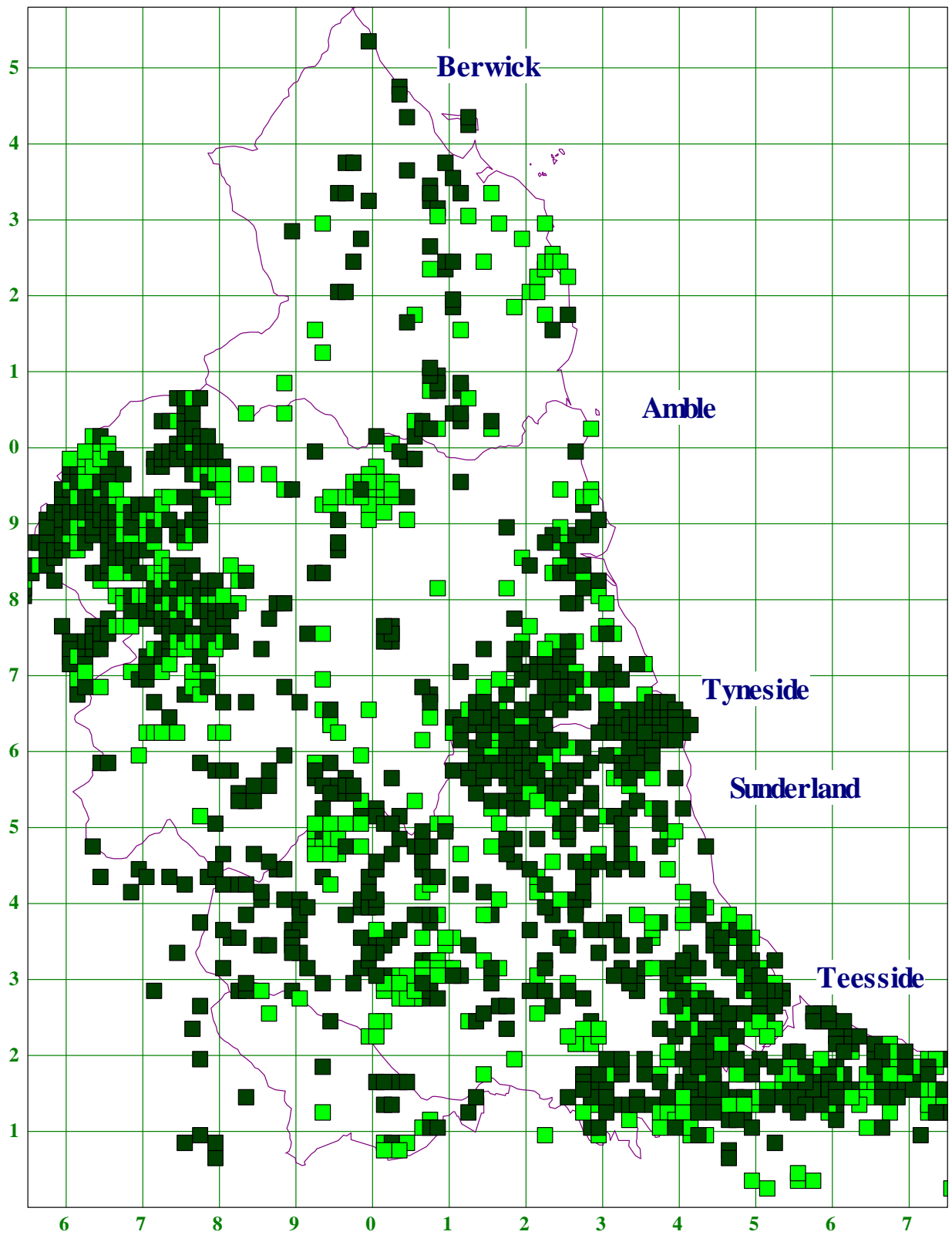
#### **Northumberland/Newcastle/North Tyneside**

Widespread, from the Kielder Fells to Lindisfarne.

Since this species probably occurs in all 2km tetrads of the mapped area, the actual number of tetrads recorded provides a measure of current recording activity, namely 23%, an amazing improvement on 2010's 13.5%, which was a small improvement on the 2008 figure of 12%. This is still the thinnest coverage of the North-east counties, with strong concentrations of recording in Kielder, Newcastle and North Tyneside. North Northumberland has the lowest survey coverage, with only 11% coverage north of the River Coquet ("VC68").



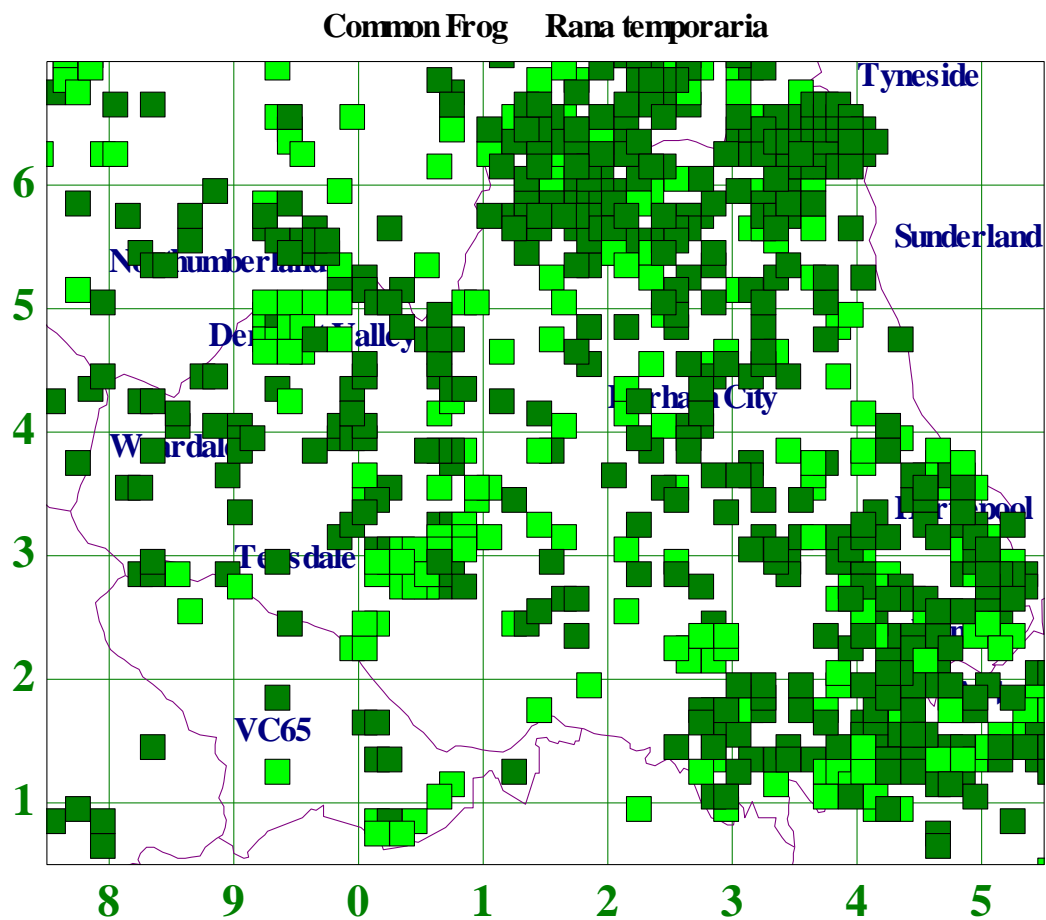
Common Frog *Rana temporaria*



## Durham

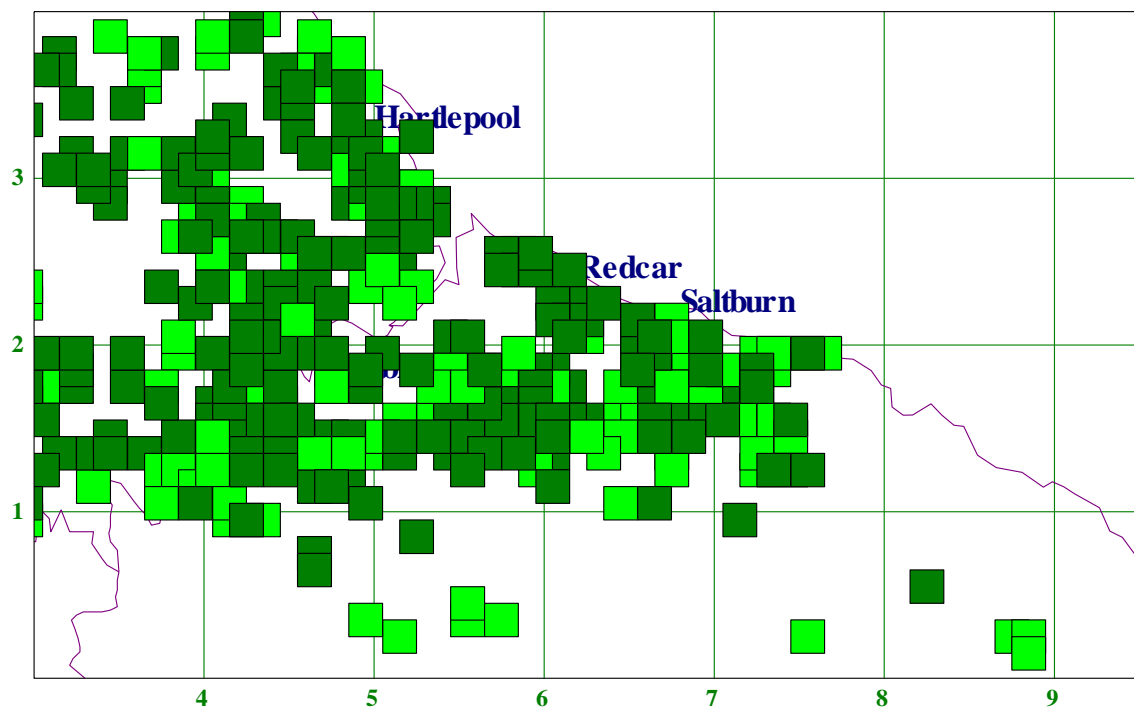
Common Frog is the most frequently recorded species, and the best distributed. Gateshead is the best recorded area for this species and for many other plant and animal groups. South Tyneside is now well-recorded following a major survey in 2009.

Since this species probably occurs in all 2km tetrads of the mapped area, the actual number of tetrads recorded provides a measure of current recording activity, namely 43%, an improvement on the 2010 figure of 36% and the 2008 figure of 30%. This varies considerable between the west (NY) part of the area, 18%, and the east (NZ), 44%.



## Tees Valley

### Common Frog



Since this species probably occurs in all 2km tetrads of the mapped area, the actual number of tetrads recorded provides a measure of amphibian current recording activity, namely 80%, an improvement on the 2013 figure of 77%, the 2010 figure of 72 % and the 2008 figure of 65%. This is the most thorough coverage in the North-east counties, and possibly the best in the UK.



Frog tadpoles, brown, not often seen like this in groups or in the open.



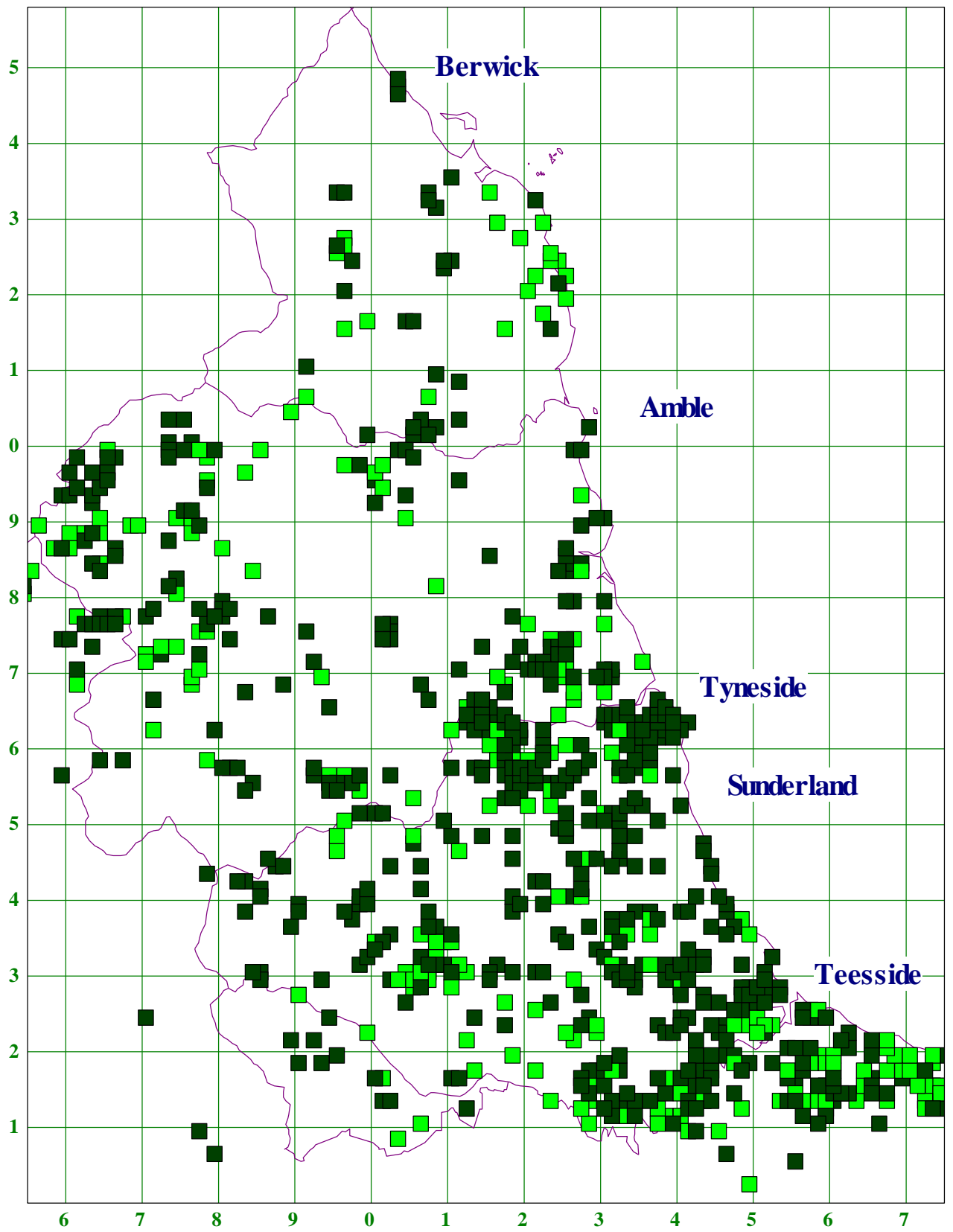
## **Common Toad, *Bufo bufo***

### **Northumberland/Newcastle/North Tyneside**

Toads are widespread in Northumberland, absent only from areas of acid upland bog. Recording is very poor in the north of the county. Toads also do better than the other amphibian species in dune slack pools and other slightly saline ponds. About 5% of records are from rivers and streams. There are ten ten-kilometre squares with no records at all.

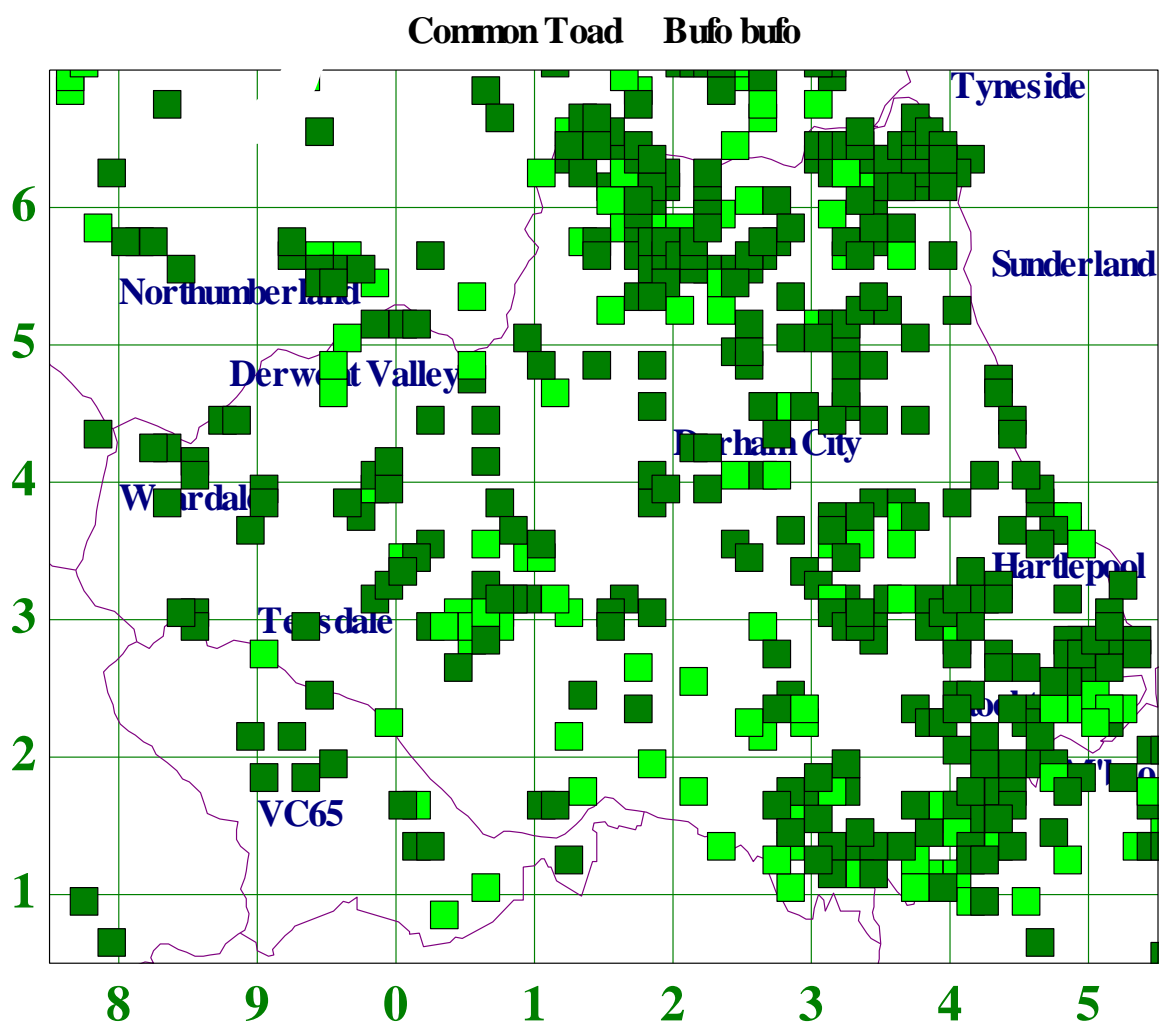


Common Toad *Bufo bufo*



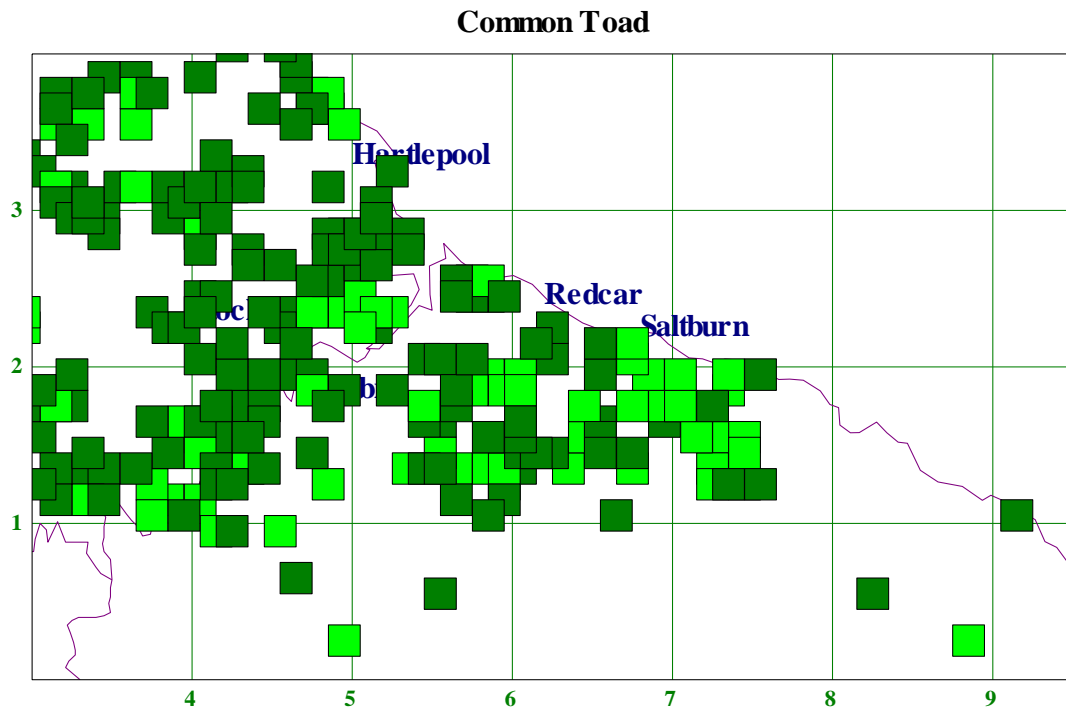
## Durham

Common Toads are well distributed in the mapped area, in all areas except the highest moors. They are able to breed in waters where other amphibians cannot survive, such as in ponds stocked with fish and in river braid pools and channels. Slight salinity is also tolerated.



## Tees Valley

Toads are widespread in Tees Valley, absent only from some urban/industrial areas.

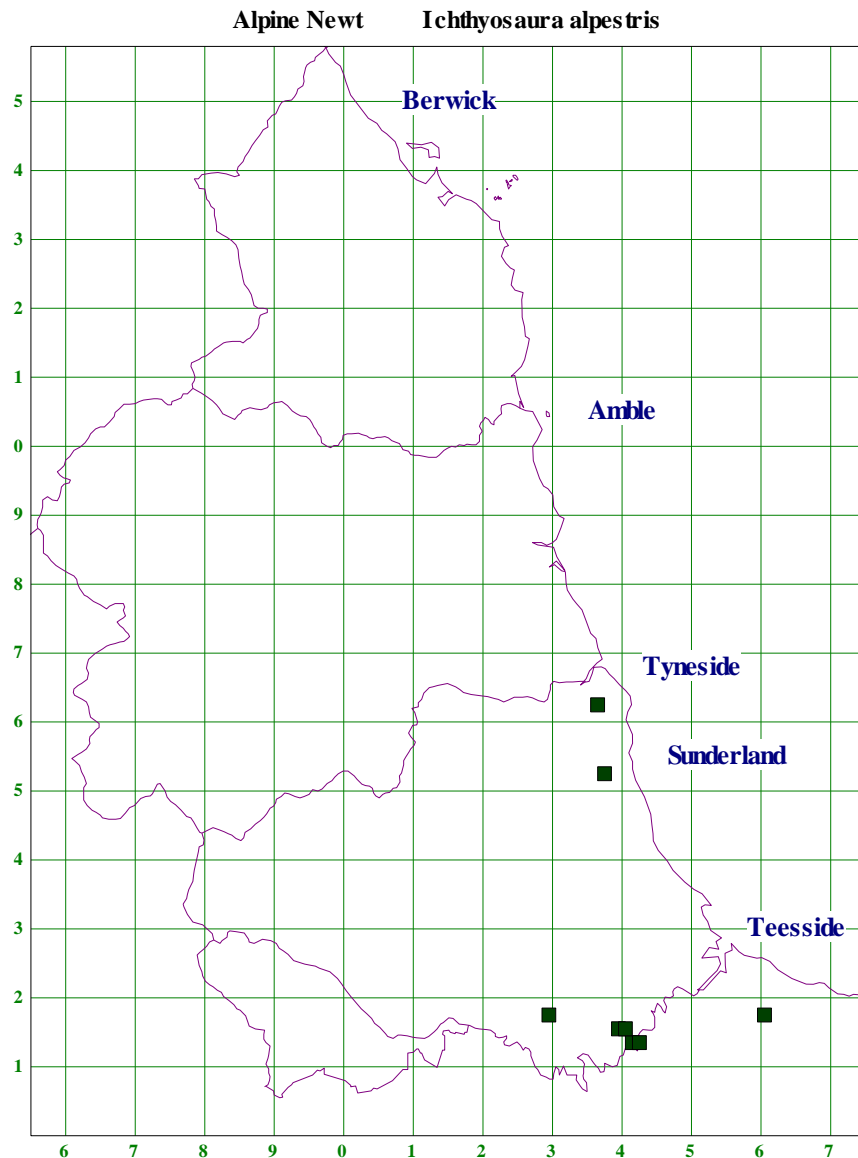


Toad tadpoles, black, often seen in swarms in warm, shallow water.

## Introduced Amphibian Species

### **Alpine Newt, *Ichthyosaura alpestris* formerly *Triturus alpestris***

Introduced and established in a few suburban ponds around Sunderland, South Shields and Eaglescliffe. The Eaglescliffe population covers tens of ponds and thousands of individual newts. Present in Sunderland (mainly Doxford Park Lake) from 1984 to at least 2013.



### **Italian Great Crested Newt *Triturus cristatus carnifex* or *Triturus carnifex***

A male bottle-trapped at Pity Me Carrs LNR in 2006 and a female trapped the following year may have been of this introduced related species or sub-species, or may have been colour varieties of the native species.



**Edible Frog, *Pelophylax kl. esculentus* formerly *Rana esculenta***

A 19<sup>th</sup> century newspaper natural history columnist, "JA" wrote –  
"An attempt was made in 1850 to introduce it to a marshy pond near Newton Hall, Newton-by-the-Sea. The frogs moved themselves to quarry ponds at nearby Newton Barns Farm (possibly NU224244 ?). "  
They survived until at least 1861.



**Natterjack Toad, *Epidalea calamita* formerly *Bufo calamita***

Natterjacks were recorded in a newspaper wildlife column written by "JA" in 1881. He described them as present in an area of north Northumberland including Belford, Beal, Adderstone, Haggerstone, Twizell, Newlands Estate and Mousen Estate. These are mapped below.

They were probably introduced, and if the account is to be believed, became established for some years, from 1840 until at least 1881, before dying out.

