

The Spined Loach

Introduction

Skulking away in the mud at the bottom of the ditches in the Great Fen lives a survivor from when there was a land bridge between Britain and the rest of Europe 10,000 years ago. The spined loach *Cobitis taenia* is a relatively small, inconspicuous, bottom-dwelling fish.

Very few people have been lucky enough to see this intriguing species. Due to its small size, the species is mainly nocturnal to avoid the risk of predation. Anglers rarely catch it and traditional monitoring methods do not work well for this species, as it hides in the silt and vegetation by day (Perrow and Jowitt, 2000).

The spined loach gets its name from the downwards pointing spine-like protrusions found underneath its eyes; these are thought to be used in courtship (Perrow and Jowitt, 2000). This species is scarce in Europe and is listed on Annex II of the EC Habitats and Species Directive, affording it some protection (English Nature, 1998).

Some of the reserves where it can be found

- Woodwalton Fen
- Paxton Pits
- Great Fen
- Ouse Washes

Distribution and habitat of the spined loach

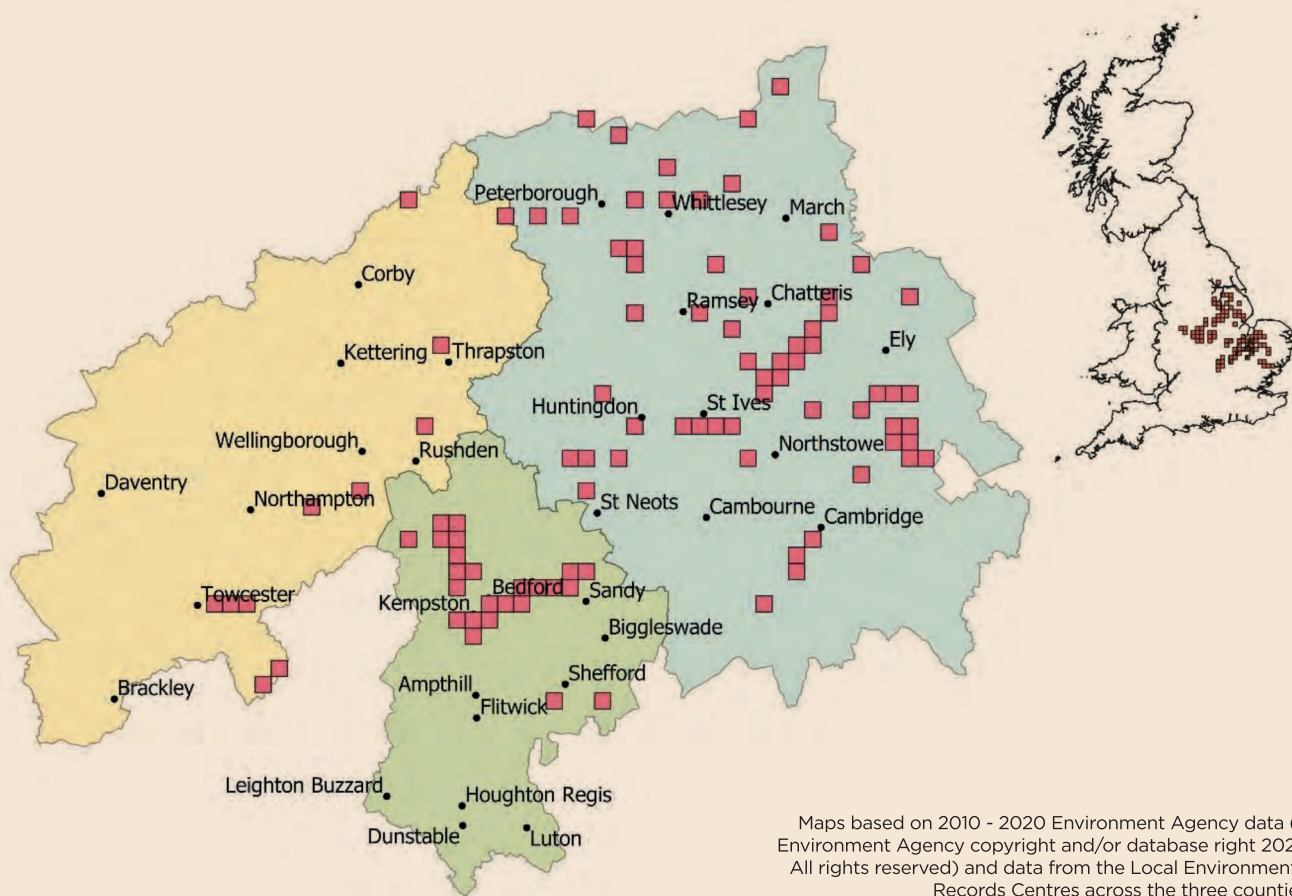
This species swam across Europe, via the continental Rhine system, and into Britain before the North Sea was formed at the end of the last ice age (10000 years ago). Since then, it has been confined to these waterways (Perrow and Jowitt, 2000). In Britain, this species is only found naturally in five east-flowing river systems and their associated waterways (English Nature, 1998). These are the Trent, Welland, Witham, Nene and Great Ouse. Further north, the rivers are too cold for this species and are often not silty enough for it to survive (English Nature, 1998). This distribution has been maintained by a lack of angler interest in the species and consequent lack of artificial spread by man.

The Bedfordshire, Cambridgeshire and Northamptonshire area covers a significant proportion of the spined loach's range. It can be locally abundant in its restricted range but seems to have a particular need for a sandy substrate with patchy dense aquatic plants (English Nature, 1998). These sandy substrates are needed due to the fish's specialised feeding mechanism and are needed for breeding (English Nature, 1998). There is little or no gene flow between individuals in different waterways, which has led to the populations in Trent/Whitham and Welland/Nene/Great Ouse being genetically distinct from one another; they may even be on their way to becoming separate subspecies or even species (Culling and Côté, 2005). Therefore, the species must be conserved across the whole of its range.

The spined loach *Cobitis taenia* is a small bottom dwelling species of fish. This species swam across Europe via the continental Rhine system and into Britain before the North Sea was formed at the end of the last ice age 10,000 years ago. Since then, it has been trapped in these waterways. Photo © Brian Eversham



The distribution of the spined loach in Great Britain and across the three counties.



Fenland ditches

Fenland ditches can be especially important for this species, and the spined loach is listed on the Fenland Special Area of Conservation designation. These ditches provide similar habitat to rivers but often do not suffer from the same catastrophic flooding events (Comont and Denham, n.d.). Fenland ditches like those in the Great Fen need to be managed to ensure that they remain suitable for this species and a whole suite of other species too. This sympathetic management is carried out in a variety of ways, with wider corners and pools at ditch junctions created where possible (P. Beckenham, 2020, pers. comm.). This works alongside a generally sensitive approach to drain management, providing the species with quiet, sediment-rich areas in which to rest, feed and spawn.



A fenland ditch at Woodwalton Fen Wildlife Trust reserve highlighting the range of habitats that one ditch can contain, essential for a wide variety of species including the spined loach. Photo © Brian Eversham

Summary

Our area is particularly important for this fascinating and often overlooked fish species. We must work to ensure that our waterways are kept in good ecological condition for our wildlife to thrive. If the spined loach is lost from our area, it is more likely to become extinct in Britain.

Acknowledgements

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References

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The spined loach is a scarce species which is protected at the European level. Several Special Conservation Areas have been designated to protect populations of this species in Britain. Photo © Jack Perks

