

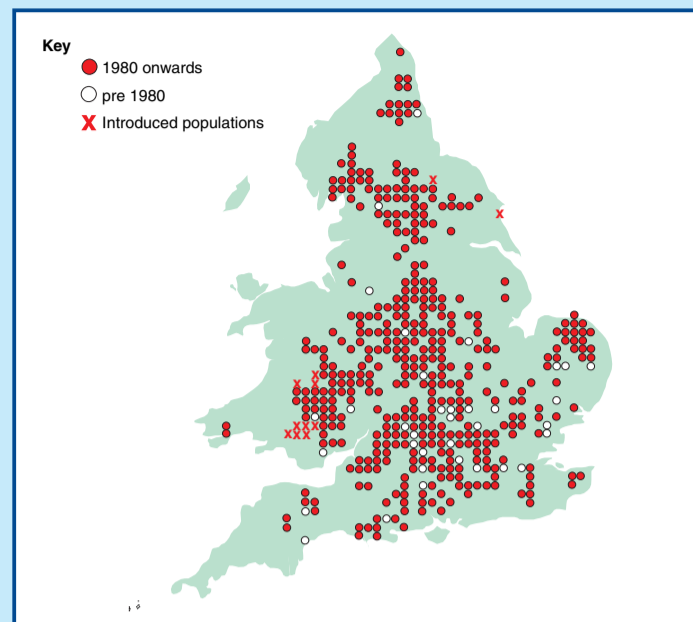
## Conservation of native crayfish

The white crayfish (*Austropotamobius pallipes*) is the only native crayfish to Great Britain. It is endangered across much of its natural range, and is the subject of international conservation efforts.

In Britain it is provided direct protection under both the Wildlife and Countryside Act 1981 and The Conservation (Natural Habitats, etc.) Regulations 1994; the latter made under EC Directive 92/43 on the 'Conservation of Natural Habitats and of Wild Fauna and Flora' (Stewart, 2000).

While this legislation provides protection for the animal against habitat loss and direct effects of human activities, it provides no protection against one of the major threats present in Britain, the non-native signal crayfish (*Pacifastacus leniusculus*).

In 1994, the Joint Nature Conservation Committee produced an action plan for the conservation of native crayfish (Palmer, 1994), which recommended among other things that the Government implemented legislative controls on the keeping of non-native crayfish, because of the threat posed by the signal crayfish.



Distribution of the native crayfish (*A. pallipes*) in England and Wales



The white clawed crayfish (*Austropotamobius pallipes*), Britain's only native crayfish

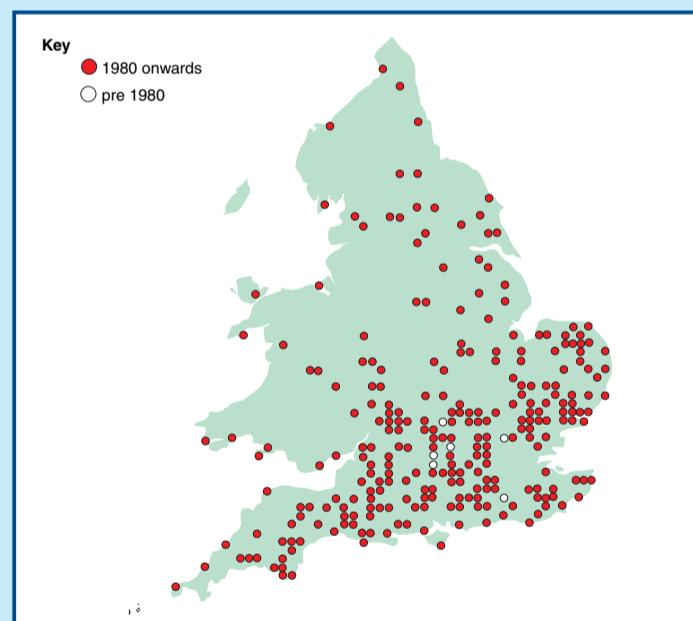
## Signal Crayfish

The signal crayfish was introduced into England for farming in the late 1970's. The potential impact of the introduction was never properly assessed and soon after its arrival this species began to migrate from the ponds into which it was introduced into surrounding natural watercourses.

The signal crayfish is able to displace and out compete the smaller and less fecund native crayfish, and can also carry a disease, the crayfish plague, caused by the fungus *Aphanomyces astaci*, to which our native crayfish has no defence.

Between 1981 and 1992 there were a number of crayfish plague outbreaks which led to the loss of native crayfish populations from many rivers in England, south of, and including the Trent catchment.

The spread of signal crayfish either naturally or through man's activities presents probably the biggest single threat to the health of the native crayfish in Britain, hence the development of legislation to control its keeping.



Distribution of the signal crayfish (*P. leniusculus*) in England and Wales



A signal crayfish (*Pacifastacus leniusculus*), showing the light coloured 'signals' on its claws

## The Import of Live Fish Act 1980 (ILFA)

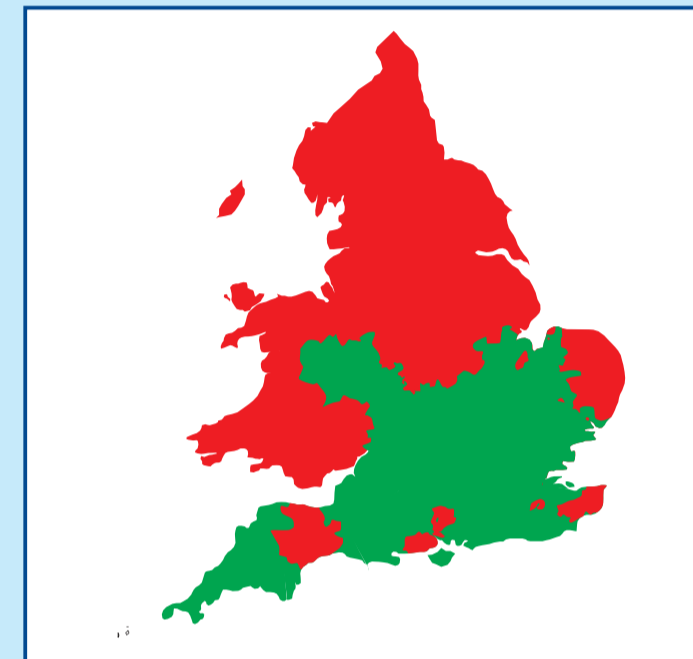
Following the JNCC crayfish action plan recommendations, the Government agreed to introduce new legislation to further control the keeping and spread of non-native crayfish. This legislation was intended to complement the existing provisions of the Wildlife and Countryside Act 1981, under which it is an offence to release any non-native crayfish to the wild in Britain, or to allow them to escape to the wild.

In England and Wales the Prohibition of Keeping of Live Fish (Crayfish) Order 1996, was established in May 1996, with parallel legislation introduced in other parts of the UK.

### 'Crayfish Order'

The 'Crayfish Order', as it is generally known, made the following provisions:

- It defined crayfish as all decapod crustacea belonging to the families *Astacidae*, *Cambaridae* and *Parastacidae*, except for *Austropotamobius pallipes*.
- It prevented people from keeping any live crayfish, in specified areas of England and Wales except under the authority of a licence granted by the Minister.
- It provided a derogation to (b) for the keeping of signal crayfish in certain parts of England and Wales where they are already widespread.



Map showing areas in England and Wales (Red) where signal crayfish can only be kept under licence ('no go' areas) and areas where a licence is not required

The implications of the order are:

- Licences to keep non-native crayfish in secure experimental facilities will be issued to allow the conduct of scientific research.
- Licences to keep non-native crayfish for farming will only be issued if the crayfish are to be kept in secure indoor systems. A clear business case will be needed in support of such an application.
- No licences will be issued to keep temperate non-native crayfish for ornamental purposes (eg Turkish, Yabbie and Red swamp crayfish).
- A general licence has been issued for the keeping of the tropical red claw crayfish (*Cherax quadricarinatus*) in heated indoor aquaria.
- A general licence has been issued enabling the keeping of non-native crayfish for direct human consumption in markets, restaurants and hotels. An advisory leaflet, Crayfish Alert, was produced for this trade.

A more comprehensive explanation of policy under the Order has been published (Scott, 2000), and is available from the author.



Turkish crayfish (*Astacus leptodactylus*)



Yabbie crayfish (*Cherax destructor*)



Red swamp crayfish (*Procambarus clarkii*)



Red claw crayfish (*Cherax quadricarinatus*)

## Enforcement problems and their resolution

There remain some limitations to the legislation:

- The sale of signal crayfish by suppliers in the unlicensed areas to persons in restricted ('no-go') areas who are unaware of the legislation.
- Dispersal via the food trade, by which route non-native crayfish might enter the ornamental fish industry. At present no licences to import temperate non-native crayfish for ornamental purposes are issued, on the basis that their subsequent keeping is illegal.
- Temperate non-native crayfish continuing to enter the ornamental trade, (imported under tropical fish licences).
- The natural spread of signal crayfish.

The Fish Health Inspectorate at CEFAS, supported by Fisheries Division II of the Department for Environment Food and Rural Affairs, aims to eliminate these problems by educating the trade and the public about the legislation and the broader aims of our crayfish conservation efforts.

CEFAS actively seeks to eliminate the trade in temperate non-native crayfish as ornamental animals, and provides advisory information on the legislation for crayfish farmers to pass on to potential customers.

Research programmes are currently addressing possible methods of preventing further spread of signal crayfish and for eradicating the species. However, no significant progress has been made to date,

## References

- Stewart (2000) White clawed crayfish, *Austropotamobius pallipes*, and the EC Habitats & Species Directive: The UK approach to its application. In Rogers D & Brickland J. Proceedings of the Crayfish Conference. Leeds, 2000.
- Palmer (1994) Action plan for the conservation of native freshwater crayfish *Austropotamobius pallipes* in the UK. JNCC report No 193 ISSN 0963-8091.
- Scott (2000) Crayfish conservation: Legislating for non-native species. In Rogers D & Brickland J. Proceedings of the Crayfish Conference. Leeds, 2000.

## Acknowledgements

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