

Signal Crayfish, *Pacifastacus leniusculus*



Overview

Short description of *Pacifastacus leniusculus*, Signal Crayfish

The signal crayfish is lobster-like in appearance and reaches a maximum size of 16-18cm. It is much larger than the native white-clawed crayfish and its claws have red undersides with a small turquoise/white blotch on the upper surface at the claw hinge.

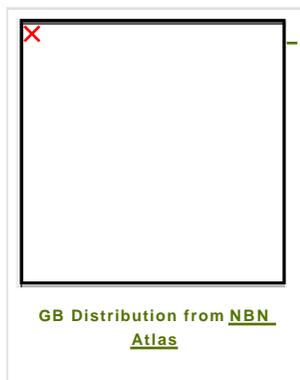
Description of *Pacifastacus leniusculus*, Signal Crayfish status in GB

The signal crayfish is well established in England and Wales, especially in the south-east of England. Not as prevalent in Scotland but several well-established populations have been recorded.

Habitat summary: *Pacifastacus leniusculus*, Signal Crayfish

Signal crayfish are found in streams, canals, rivers, lakes and ponds, and are also able to survive in brackish water.

Distribution map



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We try to keep these factsheets up to date, however if you notice any issues please contact us

Overview table

Environment:	Freshwater
Species status:	Non-Native
Native range:	Northern America, British Columbia
Functional type:	Omnivore
Status in England:	Non-Native
Status in Scotland:	Non-Native
Status in Wales:	Non-Native
Date of first record:	1975

Invasion history: *Pacifastacus leniusculus*, Signal Crayfish

Origin

The signal crayfish is native to western North America.

First Record

First introduced in 1976, and then spread rapidly throughout the 1970s and 1980s.

Pathway and Method

The signal crayfish was introduced to be farmed for food, but escaped through water courses and across land, quickly spreading across GB.

Species Status

Signal crayfish have been introduced into over twenty countries in Europe since the 1960s. After escaping from farms in the 1970s they are now widespread across England and Wales, especially southern England. Thames, Anglian and South West water regions reported a 43% increase in occurrence between 1997 and 2001. Distribution in Scotland is limited, but populations have become established at several locations since 1995.

Ecology & Habitat: *Pacifastacus leniusculus*, Signal

Crayfish

Dispersal Mechanisms

Signal crayfish are able to disperse up and downstream, cross most natural and artificial barriers and travel over land to reach water bodies nearby. Dispersal distances of 341m in 2 days, and several hundred metres over land in one night have been recorded. Dispersal is also aided by human transfer and release of individuals, although this is now illegal.

Reproduction

Mating takes place in autumn and females carry a dense clutch of 200-400 eggs on the underside of their tail over the winter. Once hatched, the young remain attached to the females until release in May-June. The young resemble adults and are able to feed on most animal and plant food. Signal crayfish are sexually mature at the age of 2-3 years and can live up to 20 years

Known Predators/Herbivores

Known predators include otters, mink, predatory fish such as grayling, pike, perch, Atlantic salmon, brown trout and eel.

Resistant Stages

Adults shelter in riverbank burrows in winter and enter a state of torpor.

Habitat Occupied in GB

Signal crayfish are found in streams, canals, rivers, lakes and ponds, and are also able to survive in brackish water.

Distribution: *Pacifastacus leniusculus*, Signal Crayfish

Impacts: *Pacifastacus leniusculus*, Signal Crayfish

Environmental Impact

Signal crayfish are driving native crayfish towards extinction through the spread of crayfish plague and competition for resources (refuges in particular). Signal crayfish grow faster, are more fecund, more aggressive and are tolerant of a wider range of conditions than the white-clawed crayfish, and therefore out-compete the native species. They feed on fish and amphibian eggs, tadpoles, juvenile fish, aquatic invertebrates, detritus and aquatic vegetation and so may reduce populations of native species and affect food webs. Signal crayfish eat more than white-clawed crayfish and have reduced the number of invertebrates and are partly blamed for amphibian declines. Community diversity and richness are lower, and food webs are altered at sites containing signal crayfish.

Health and Social Impact

None known.

Economic Impact

Crayfish burrowing can cause erosion of riverbanks. Burrows can be up to 2m deep, with many inter-connecting tunnels that weaken the bank. This can contribute to problems with flooding, livestock safety and stability of structures built on the banks. Crayfish also take refuges from salmonid fish and predate fish eggs, which could reduce the value of commercial fisheries.

References & Links: *Pacifastacus leniusculus*, Signal Crayfish

Identification

www.nonnativespecies.org – Signal crayfish factsheet produced by Olaf Booy, Max Wade and Vicky White

Biology, ecology, spread, vectors

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