



**Hampshire &
Isle of Wight**

In partnership with



**Environment
Agency**

Crayfish and River Users

© Andy Sands / naturepl.com

Adult white-clawed crayfish

Guidelines for Specific Interest Groups

Practitioners – page 7

Angling – page 8-9

Recreation – page 9

Aquaculture – page 10-11

Landowners – page 12-13

Food and Retail – page 14-15

Please report your crayfish sightings

Tel: **01489 774446** Email: WildLine@hwt.org.uk

Web: www.hwt.org.uk/pages/wildline.html

White-clawed Crayfish

Latin Name: *Austropotamobius pallipes*

Origin: Only crayfish species native to Britain. It is found across Europe, and is at the northern and western edge of its range in Britain.

Body Length: Up to 12cm (excluding claws), although usually no more than 10cm.

Colour: Usually pale-dark brown to olive.

Claws: Underside off-white colour¹, may be pink in juveniles.

Habits: Generally docile.

Habitat: Streams, rivers, lakes. A widespread but localised distribution in north England, increasingly rare in the south. Declining throughout Europe.

Diet: Omnivorous – feeding on macroinvertebrates, carrion, calcified plants and detritus.

Adult white-clawed crayfish



It can be **difficult to distinguish between** crayfish species, particularly when young. If you **see or catch** a crayfish, please **contact** the Hampshire and IOW Wildlife Trust or Environment Agency for **advice** on identification and disposal of signal crayfish.

Signal Crayfish

Latin Name: *Pacifastacus leniusculus*

Origin: Native to North America, but introduced to Britain from Sweden in the 1970s for harvesting to supply the Scandinavian food market.

Body Length: Up to 30cm (excluding claws), though more often 15cm.

Colour: Bluish-brown or reddish-brown.

Claws: Very large and heavy, red underside² with a turquoise or white patch³ on the upperside.

Habits: Aggressive and invasive.

Habitat: Lives in similar habitats to the native species but will also burrow extensively into the banks, often resulting in localised bankside failure. Widespread in England, particularly in the south, having escaped from crayfish farms and live food markets.

Diet: Omnivorous - will eat the native crayfish species and in large populations will predate heavily on fish eggs.



Underside and front view of an adult signal crayfish

Why they need our help

Threats to our Native Crayfish

The greatest threat comes from the **signal crayfish**.

The signals, and other non-native North American species, carry a virulent fungal disease - **crayfish plague** - that is deadly to our native species. This disease can be transferred between rivers on fish, aquatic vegetation and equipment.

The fungal spores can remain **viable** for **6-22 days without a host** under wet or damp conditions.

Signal, and some **other non-native crayfish species** (e.g. red swamp crayfish), are larger and more aggressive than our native species and will out-compete and even feed on them.

Other serious threats include **habitat degradation** and **pollution**.



© Chas Spradbery

Adult signal crayfish can readily move down and upstream

This booklet aims to highlight the potential **threats** that different groups of **river users** pose to our **native crayfish**, and the steps that can be taken to **minimise any potential risks**.

What we can do

Crayfish in Hampshire

Native crayfish were formerly widespread in Hampshire's chalk rivers but, following the introduction of signal crayfish, are now restricted to three small populations as a result of competition and mass mortalities from crayfish plague.

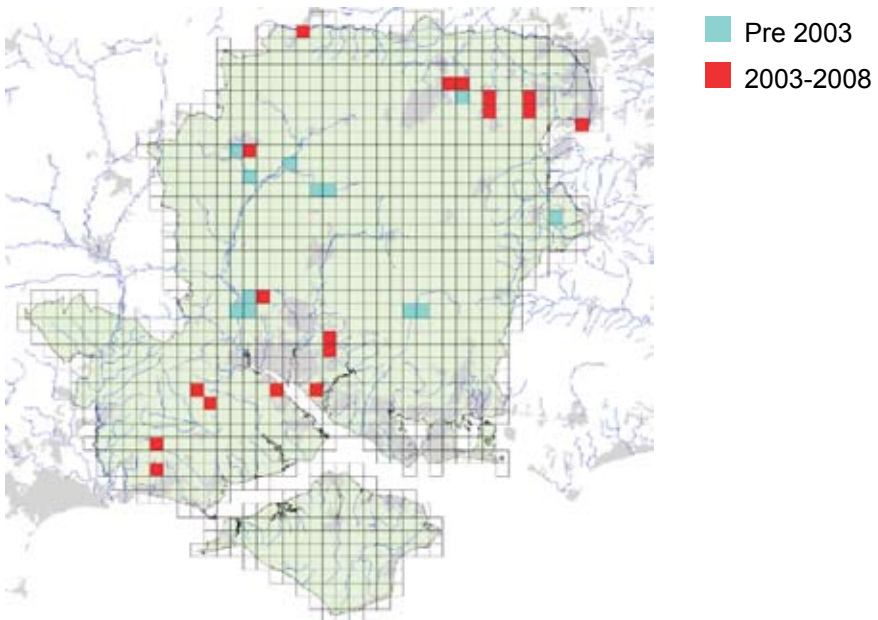
Signal crayfish are widely distributed throughout Hampshire (see map).

The Hampshire and Isle of Wight Wildlife Trust, in partnership with the Environment Agency, is seeking to protect our native populations through the **Chalkstream Invertebrate Project**. This will involve:

- Surveying / monitoring both native and signal crayfish
- Assisting the Environment Agency with habitat enhancement
- Raising awareness

Reporting your crayfish sightings to the Hampshire and Isle of Wight Wildlife Trust will help inform our conservation strategy for the native species and help protect it from the threat of signal crayfish and crayfish plague.

Map showing the recorded distribution (by 2km grid squares) of signal crayfish (*Pacifastacus leniusculus*) in Hampshire



Crayfish and the Law

White-clawed Crayfish

Native crayfish are **protected** under European (**EU Habitats Directive**) and UK (**Wildlife and Countryside Act, 1981 as amended**) legislation.

As a consequence, it is **illegal** to '**take from the wild** or **offer for sale**' native crayfish without a licence.

In England, a **licence to handle** native crayfish must be obtained from Natural England, and **trapping of any species of crayfish** requires licensing from the Environment Agency.

Non-native Crayfish

Signal Crayfish were introduced into the UK from Sweden in the early 1970s for farming, to supplement the declining Scandinavian crayfish market. However, since the early 1980s the keeping of any species of non-native crayfish has been subject to strict regulation in England.

Under the **Wildlife and Countryside Act 1981** (as amended), it is an **offence to release, or allow to escape**, any non-native species into the wild in the UK except under licence.

The **Prohibition of Keeping of Live Fish (Crayfish) Order 1996** (as amended), made under the **Import of Live Fish (England and Wales) Act 1980**, makes it an **offence to keep any crayfish** in England and Wales, except under licence (with specific exemption areas for signal crayfish).

These **laws** are **discussed** in more detail throughout this booklet in the **context** of different **interest groups**.

Anyone undertaking crayfish farming must register their business with The Fish Health Inspectorate, CEFAS*. For an application form or information on the cultivation / import of crayfish please contact:

The Fish Health Inspectorate,
CEFAS Weymouth Laboratory,
Barrack Road,
The Nothe,
Weymouth,
Dorset, DT4 8UB
Tel: 01305 206673

* Centre for the Environment, Fisheries and Aquaculture Science



© Dennis Bright

Surveyor looking for signs of water vole *Arvicola terrestris*

Public and Private Bodies

A number of **commercial** (such as water companies, environmental consultancies) and **public** bodies (such as the Environment Agency) work in and around rivers. Likewise, many **charitable Trusts** (such as Wildlife Trusts) and local action groups work on aquatic projects.

This can involve regular trips to a number of different rivers or streams within or across catchments, and these groups are therefore at high risk of transferring **crayfish plague**. This risk is minimised by following the '**Golden Rules**' set out on the back of this booklet.

Furthermore, where there is **volunteer**, **out-posted staff** or **contracted staff** involvement, it is essential that these personnel are provided with an **appropriate** level of **training** and **caution** is exercised in the sites they are allocated to.

In addition, any organisation working directly with either native or non-native species must ensure that they have obtained the **relevant approvals** and **licences**.

Angling

River Management

In stretches where angling clubs **manage** the river and the river bank, a number of opportunities exist to manage these habitats for the **benefit** of both the **target fish** species and native **crayfish**.

Survival from juvenile to adult life stages of both **crayfish** and **brown trout** *Salmo trutta* can be **enhanced** by the **presence** of a range of **habitat features**. These include bankside features such as areas of overhanging tree root systems, and in-channel features such as gravel and cobble refuges and a combination of open and vegetated areas.

It is important to note that any in-channel or bankside works will require **consent** from your local **Environment Agency** office, and you should **contact** your local **Natural England** office to check that the site is not subject to special designation. Advice can also be sought from the Wild Trout Trust. Consultation with these organisations from the outset is strongly advised.



Large flint piles provide shelter for crayfish and trout

Angling and Recreation

Anglers / Angling Shops

The principal risk anglers pose to native crayfish is through the transmission of **crayfish plague** via equipment and footwear. This risk is minimised by following the '**Golden Rules**' set out on the back of this booklet.

In addition, the use of **crayfish as bait** in any form is **illegal**, as even dead and liquidised signals can continue to carry crayfish plague.



© Dennis Bright

Fishing is very popular on many of Hampshire's rivers

Walking and Watersports

As has been highlighted throughout this booklet, **crayfish plague** can readily be **transferred between sites** on wet boots, shoes, vehicle tyres and animal fur. You and your pets should **avoid moving between sites** in a watercourse where **crayfish** are present.

The risk of transferring **crayfish plague** is heightened in activities that involve extensive amounts of time on or in the water, such as kayaking and rowing.

Where activities and equipment are being used across different sites (within or between rivers / streams), it is essential that the '**Golden Rules**' set out on the back of this booklet are followed.

Aquaculture

Aquariums and Water Gardens

Under the **Crayfish Order**, the **keeping** of any non-native crayfish (with the exception of one tropical species) **without a licence** is an **offence**.

Since licences to keep non-native crayfish are rarely issued, the keeping of crayfish as ornamental animals is effectively prohibited.

If you have any concerns about the keeping or selling of non-native crayfish please contact The Fish Health Inspectorate on 01305 206673 or email fish.health.inspectorate@cefas.co.uk (in strict confidence).



Adult noble crayfish *Astacus astacus* in aquarium

Watercress Farms

Watercress farms pose a risk to native crayfish in two ways. Firstly by the transfer of **crayfish plague** from an infected to an uninfected watercourse via equipment and personnel. This risk can be minimised by following the '**Golden Rules**' set out on the back of this booklet.

Secondly, like many other agricultural practices (see page 13) watercress farms may pose risks of organic **pollution** and the resulting reduction in water quality. This risk will be regulated by the Environment Agency as part of the 'consent to discharge'.

Aquaculture



© Environment Agency

Adult brown trout

Fish Stocking

Fish stocking can pose risks to native crayfish since live **non-native crayfish** can be collected within the catch and **crayfish plague** can be carried on the scales of fish and on the equipment used in their transport.

The addition of large adult fish into river systems can also have adverse effects on the balance of freshwater life and may lead to an increased level of predation on juvenile white-clawed crayfish.

Under **Section 30** of the **Salmon and Freshwater Fisheries Act 1975**, the Environment Agency regulates the movement of fish within all inland waters in England and Wales.

Although an assessment of the risk to native crayfish is included within this process, it is still recommended that the '**Golden Rules**' set out on the back of this booklet are always followed.

Landowners

Bankside Habitat

Riparian (river bank) landowners can provide great benefits for both native crayfish and other wildlife through **sympathetic management** of the river banks.

Riparian features such as vegetated margins, areas of overhanging vegetation or tree root systems and undercut banks provide habitat for fish, crayfish and a number of other invertebrate species.

It is strongly recommended that you **contact** an advisory body such as your local **Natural England** office, the Wild Trout Trust or the Wildlife Trust at the outset for **advice** and **support**. In addition, it is possible that your enhancements may qualify for financial assistance under Natural England's **Environmental Stewardship schemes**.

It is important to note that any bankside works will require **consent** from your local **Environment Agency** office, and consultation with the Environment Agency from the outset is also strongly advised.



Bankside and marginal habitat enhancement using temporary fencing to allow the vegetation to establish

Landowners



© Environment Agency / Wildlife Trusts

Bank failure can occur due to over-stocking

Adjacent Land-use

The management of land adjacent to a watercourse can greatly influence **habitat** and **water quality**. This can be particularly true for some farming practices and industrial works, and can adversely affect white-clawed crayfish populations.

The major risk to water quality stems from diffuse (surface run-off, drainage) and point (direct) **pollution** from industrial waste or discharge, the use of fertilisers, pesticides, sheep dip and silage.

Cattle, intensive management and **vehicular access** to the river banks can cause serious damage or destroy habitat features essential to crayfish development. By avoiding a high stock density and limiting vehicle access to the banks, you can not only minimise bank damage but can improve the diversity of bankside habitat, vegetation and species without the need for fencing.

If you have a **pond or lake** within your land, it is important to note that under the **Crayfish Order** the **keeping** or allowing the **release of** any non-native crayfish **without a licence** is an **offence**.

It is recommended that you **contact** an **advisory body** such as your local Natural England or Environment Agency office for **advice** on how to minimise these risks. In addition, it is possible that your enhancements may qualify for financial assistance under Natural England's **Environmental Stewardship schemes**.

Food and Retail

Suppliers

Only signal crayfish can be **trapped** and **traded commercially**.

Under the **Crayfish Order**, anyone **farming/holding** non-native crayfish must hold a licence and be registered with The Fish Health Inspectorate.

However, the Crayfish Order includes a list of areas where you may keep signal crayfish without a licence (see www.defra.gov.uk/fish/freshwater/pdf/licreq.pdf).

Anyone wishing to **trap** signal crayfish from the wild must obtain a trapping **licence** from their local **Environment Agency** office.

If you have any concerns about the keeping or selling of non-native crayfish please contact The Fish Health Inspectorate CEFAS on 01305 206673 or email fish.health.inspectorate@cefas.co.uk (in strict confidence).



A licensed crayfish trap with catch of adult signal crayfish

Food and Retail



© Ben Rushbrook

Crayfish is becoming an increasingly popular dish

Restaurants and Fish Markets

Restaurants, hotels and fish markets are **exempt** from the **licensing** requirements provided they hold crayfish for **direct human consumption** only.

Releasing crayfish without a licence, or **allowing** them to **escape**, is a **criminal offence**. The signal crayfish remains the major threat to our native species.

Crayfish are master escape artists! Transfer animals quickly and in **secure water-tight containers**. If necessary, ensure any re-packaging takes place indoors, away from rivers and ponds.

Never give away surplus stock. Where possible return them to your supplier. If this is not possible, make sure all animals are humanely killed and, to minimise the risk of crayfish plague transmission, seek advice on suitable disposal (see back cover for contact details).

Ensure that **staff** who handle crayfish are **aware** of these guidelines and the legal requirements associated with crayfish. Treat crayfish with care. Crayfish are subject to the normal provisions of animal welfare.

Golden Rules

Avoiding the Transmission of Plague

Remember:

Spores of the crayfish plague can remain active for around 6-22 days without a host and are lethal to native crayfish.

Disinfect and dry:

Wet equipment and mud will harbour spores, so ensure boots / waders and equipment are thoroughly cleaned, disinfected and where possible allowed to dry. For more detailed information on disinfection procedures please visit www.hwt.org.uk.

Plan visits:

Be aware of the distribution of crayfish and plan any visits (such as surveys) to minimise the risk of spreading plague. If possible, visit native sites first and signal sites afterwards. For information on the location of crayfish populations, contact the Wildlife Trust.

Work downstream:

If possible work in a downstream direction, rather than risk infecting upstream native sites with spores.

Donor site:

If undertaking fish stocking or habitat enhancement works (such as planting marginal vegetation), consider the donor site carefully as fish and plant material can harbour plague spores. Plants may even conceal young crayfish.

Contact Details



Hampshire &
Isle of Wight

Hampshire and IOW Wildlife Trust

'Beechcroft', Vicarage Lane, Curdridge,
Botley, Hampshire, SO32 2DP

Tel: 01489 774400

Website: www.hwt.org.uk

Feedback: feedback@hwt.org.uk

Wildlife queries: wildline@hwt.org.uk



In partnership with
Environment
Agency

Environment Agency

Colvedene Court, Wessex Way, Colden
Common, Hampshire, SO21 1WP

Tel: 08708 506 506*

Incident Hotline (24hr): 0800 807060

Website: www.environment-agency.gov.uk

Email: sossd@environment-agency.gov.uk

For more information on the biology and conservation of white-clawed crayfish, visit www.ukbap.org.uk.

* Weekday daytime calls to 0870 numbers cost 8p, plus up to 6p per minute from BT Weekend Unlimited. Mobile and other providers' charges may vary.