

11<sup>th</sup> Sept 2015: Abby Stancliffe-Vaughan (MPhil) – involved in signal crayfish control in England since 2004

I would like to offer my first-hand experience of signal crayfish control in Britain and urge the Scottish Government to take urgent concerted action to reduce the signal crayfish population in Loch Ken.

**A summation of Petition PE1558:**

Loch Ken has had a population of non-native signal crayfish (*Pacifastacus leniusculus*) for some years. This is affecting the biodiversity and habitat of the loch itself as well as the livelihoods and pastimes of local people. The situation is not improving.

Signal crayfish are capable of significant population growth and movement, are excellent climbers and are able to survive out of water for weeks at a time. They are omnivorous (eating both plant and animal material) and cannibalistic so there are currently no limiting factors meaning that unchecked populations are extremely likely to continue to increase in size and range. Research on the River Lark in Suffolk appears to indicate that invertebrate losses and bank erosion can be slowed by signal crayfish control but if control is delayed the system is less able to recover. Earlier control will have a far more beneficial effect.

Trapping is currently the only feasible control method for signal crayfish in Loch Ken. It has the advantage of being self-funding with a large degree of control possible over how the trapping is managed and publicised. Other benefits may include local jobs/ involvement leading to a greater awareness of the issues. [attached with this submission: Crayfish Information leaflet 'Reduce Don't Introduce' leaflet]

Work with the Lark Angling and Preservation Society (LAPS) on trapping to control signal crayfish (Suffolk, UK) began in 2002 and has continued with a mixture of professional and community trapping effort subsequently. When we began the research and management work the debate around trapping was mainly focused on whether removal with traps did reduce the size of signal crayfish populations. Now that the evidence that trapping does reduce signal crayfish populations is growing (with no research showing that trapping doesn't work) criticism of trapping is now directed at the "what if's" of allowing trapping.

It is certainly true that people have assisted with the spread of signal crayfish in Britain (starting with Government and now added and abetted by the 'general public') but as this has happened in both England and Scotland this cannot be attributed to the legislative framework. Trapping has been disapproved of and blocked for over a decade 'in case' it encourages people to move crayfish around. However, I believe the impact of expanding signal crayfish populations exceeds the impact of any people mediated actions (which will always happen, regardless of any best efforts). Additionally the current policy of 'do nothing' frustrates and confuses those paying attention and does nothing to promote positive activity.

Annex 1: SNH and SEPA response to the issues raised by the committee on 26 May 2015

This 27 page document details meetings, drop-ins, FAQ's, options, plans, surveys, biosecurity stations, posters, promotion of the clean-check-dry (CCD) message, signs, leaflets, information and face-to-face sessions, online updates (social media and websites), action on other Invasive non-native species (INNS), fisheries plans, management plans, fish surveys, CCD monitoring, the Crayfish Order, other legislation and scientific research. Whilst these actions undoubtedly have their place they do nothing to actually control non-native crayfish populations. And this is the issue here – a large and expanding population of signal crayfish in Loch Ken that is affecting the Loch and local people.

## **A response to Lennart Edsman's submission from Sweden.**

**I have enormous respect for Lennart as a researcher and a colleague but am troubled that a national from a country that consumes both native noble crayfish and non-native crayfish (and imports signal crayfish caught in the UK) is suggesting that the UK do not eat any crayfish at all! No suggestions are given on how to control/ manage our non-native crayfish populations. It easy to say what not to do but what should we do?**

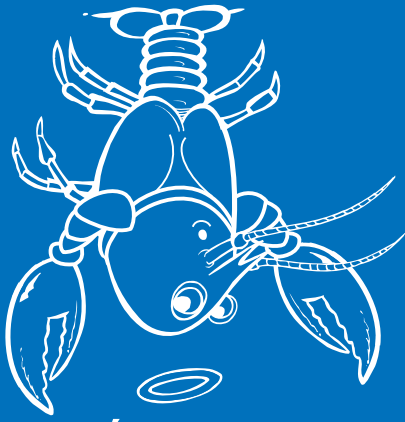
There are a number of differences between the UK and Sweden. Sweden has a rich cultural tradition of eating crayfish with signal crayfish introduced from America to replace declining native noble crayfish stocks. The UK followed their lead though we had no widespread historical tradition of crayfish consumption. In the UK native crayfish are currently experiencing massive declines due to, amongst other factors, crayfish plague. Strenuous efforts are being made to safeguard native crayfish but plague will continue to be a threat if there is a commercial/ professional fishery or if there isn't due to large and expanding populations of signal crayfish. They will continue to spread all by themselves with or without our help.

Signal crayfish population collapses are being reported in both Sweden and Finland and though other factors may be in play the fact remains that these areas are being trapped (hence the collapses being observed and worried about – the focus in Sweden is on a sustainable crayfishery). Currently demand cannot keep up with supply in Sweden so non-native crayfish trapped in the UK are being exported there to ensure there is sufficient crayfish party fodder. In both countries eradication is perhaps only possible in small enclosed waterbodies. In areas that are unsuitable for costly biocide treatment (maybe 99% of situations are unsuitable for biocide treatment) what is to be done? If we don't reduce these populations they will continue to grow and spread. Better to accept that we have non-native crayfish and try and mitigate damage and educate than continue with the current fractured situation and discord.

One of the key issues in Sweden is the attempt to maintain native crayfisheries when signals have been promoted as more robust. As the cultural tradition is so strong people view access to crayfish as a right and if native stocks are diminished will take action to ensure that they can get crayfish. Undoubtedly issues will arise in the UK whatever is done or not done. What does Sweden suggest we do about declining biodiversity in our invaded freshwaters and habitat degradation? What will happen to these populations of signal crayfish – should everyone just leave them alone? Are we giving up?

The real problem here is that for your average human it is more logical to eat a damaging invader (that is on sale for consumption pretty much everywhere) than to demonise and disapprove of it. If the view of those in power is out of step with what 'the man or woman in the street' thinks policy will change nothing. The belief that regulating the trapping profession will bring further illegal introductions in my view is missing the point. Doing nothing will definitely lead to increased population growth and spread and introductions with no clear message to the 'general public' about how they are supposed to behave and what is the best course of action. We are demonstrating the opposite of a common sense approach currently and wasting a lot of time.

# Conserve native white clawed crayfish Protect our freshwaterers



**WHAT TYPE OF CRAYFISH DO YOU HAVE IN YOUR LOCAL RIVER, LAKE OR STREAM?**

Use the identification guide overlaid to find out.

Native white-clawed crayfish and their habitats are protected by law and must be left undisturbed.

Native white-clawed crayfish have been present in our UK waters for hundreds of years. The invading alien species were introduced in the 1970's and 80's.

Alien non-native crayfish are aggressive and invasive and must be controlled.

They are now killing our native species by being more aggressive, faster breeding and carrying crayfish plague. They also damage riverbanks by burrowing into them.

Our native white-clawed crayfish likes clean, flowing waters. If you have native crayfish in your river then you have a healthy environment.

That's good for humans and for the plants and animals that live in our waterways.



## Help protect our native white-clawed crayfish. PREVENT THE SPREAD OF NON-NATIVE/ALIEN CRAYFISH

Native white clawed crayfish cannot compete with alien crayfish which are now found in over 87% of river catchments. These introduced crayfish breed faster, damage riverbanks, eat lots of other river species and travel further than our native white-clawed crayfish. If people continue to help these alien/non-native crayfish move to new areas efforts to control them may not be in time to save the native white-clawed from extinction.

It is illegal to disturb native white-clawed crayfish. The introduction of alien/non-native crayfish to ANY waters is illegal. All fishing must be under Environment Agency licence and crayfish must not be used as bait. Saltwater fish are suitable for use as bait in freshwaterers as they will not have been exposed to crayfish plague.

Please contact the organisations listed on the back page of this booklet if you have any information that may help protect our native white-clawed crayfish.

**CRAYFISH PLAGUE**  
*Aphanomyces astaci*

Crayfish plague is caused by a fungus; it is carried by alien crayfish but kills our native white-clawed crayfish. Spores of the crayfish plague can be carried on fish, nets, lines, wellies & boats.

ALL river users can help by sterilizing their equipment before using it in another river.

Wet equipment can be sterilised by drying in bright sunlight and/or rinsing in dilute iodophore solution (or dilute bleach: 1 part bleach to 10 parts water) and then drying outside. Drying for 24 hours in the outdoors is the best and easiest method.

All movement of fish and damp equipment must be avoided between rivers.

**PROTECT ME!**  
White-clawed Crayfish

## IMPORTANT HEALTH & SAFETY INFORMATION

- Take care near water especially with children
- Cover all cuts, scratches and abrasions
- Avoid rubbing your eyes, nose and mouth during water-based activities
- Wash your hands THOROUGHLY using soap and water after activity
- DO NOT EAT OR DRINK UNTIL YOU HAVE THOROUGHLY WASHED YOUR HANDS
- Clean clothing, footwear and equipment after use
- Flu-like symptoms (raised temperature/chills and pains in joints or muscles) can indicate **WEILS DISEASE/LEPTOSPIROSIS**. Diagnosis is through laboratory investigations so medical staff need to be aware that you are at risk through water-based activities.

## CONTACT DETAILS

**Environment Agency**  
www.environment-agency.gov.uk  
Environment Agency Hotline: 0800 807060  
"Fishstoppers" Hotline: 01480 483023

**Lark Angling & Preservation Society**  
admin@lark-angling.co.uk  
www.lark-angling.co.uk

abby.standcliffe-vaughan@anglia.ac.uk  
www.anglia.ac.uk/abbystandcliffe



*Austropotamobius pallipes*



**NATIVE WHITE-CLAWED CRAYFISH IDENTIFICATION**  
Usually less than 10cm long (can be up to 12cm). Brown to olive colour, pitted appearance  
**CLAWS**  
Underside dirty pinky white.



*Pacifastacus lenisculus*



**ALIEN AMERICAN RED SIGNAL CRAYFISH IDENTIFICATION**  
Average 15cm long (can be up to 30cm) Reddish brown colour  
**CLAWS**  
Underside bright red, turquoise/white patch on upper claw junction



*Astacus leptodactylus*



**ALIEN NARROW CLAWED/ TURKISH CRAYFISH IDENTIFICATION**  
Average 15cm long (can be up to 30cm)  
**CLAWS**  
Long and narrow, underside same colour as body  
Photographs by David Holdich

# ALIEN CRAYFISH

# REDUCE DON'T INTRODUCE

**Introduced alien crayfish are destroying our rivers:**

- Reducing biodiversity and eroding riverbanks
- Out-competing native white-clawed crayfish populations and carrying crayfish plague
- Spreading through waterways and across land to damage more and more areas

**87% OF RIVER CATCHMENTS ARE NOW AFFECTED.**  
**We must STOP alien crayfish being introduced illegally into our rivers and do what we can to monitor and control the spread of alien crayfish.**

**THE LAW**

- Crayfishing can only be carried out under Environment Agency licence with the permission of the landowner
- The use of crayfish as bait is illegal
- The introduction or reintroduction of alien crayfish to any waters is illegal. **Once caught they must be removed and humanely killed by freezing or boiling and then securely wrapped and disposed of in domestic wastebins.**
- Native white-clawed crayfish are a species protected by law and **MUST** be left undisturbed.

