



Briefing note on the invasive shrimp, *Dikerogammarus haemobaphes*, June 2013

Overview

The purpose of this briefing note is to give an update on the current situation regarding the recent discovery of *Dikerogammarus haemobaphes*, a relative of the shrimp, *D. villosus*. The first population of *D. haemobaphes* was confirmed in the River Severn in September 2012. An Interim Briefing note was published in November 2012.

Following the 'Invasive Non-Native Species Strategy for Great Britain' (Defra, Welsh Government and Scottish Government, 2008), the objective of the response is to slow the spread by encouraging water users to apply better biosecurity by following the guidance set out in the 'Check, Clean, Dry' approach (www.nonnativespecies.org/checkcleandry). This is important not only to help slow the spread of this species, but also other invasive species that might be present in our waterways.

While it is important to apply biosecurity measures in all cases when using our waterways, it is particularly important in areas where *D. haemobaphes* is found and of even higher priority at the four locations where the shrimp, *D. villosus* has been found, which is still relatively limited in its distribution.

Distribution

In response to the arrival of the *D. villosus* in 2010, surveillance efforts have been increased and further guidance issued on the identification of this and similar species. An alert system was established for the reporting of suspect sightings and the first record of *D. haemobaphes* was reported through this system.

D. haemobaphes has now been found in The River Severn and Trent catchments and associated canals; these locations are spread over a wide area and give an indication of the potential extent of the population. The species has also been found at sites on the Foss Dyke, on the River Witham and Grand Union Canal in Anglian Region and over a 12km reach of the Thames. The known distribution of this shrimp continues to increase; in March it was found in the Kennet and Avon Canal in South West Region. A distribution map is given in Annex 1. It is believed that the populations have been in place for some time.

Environmental risk

In response to the arrival of *D. haemobaphes* a rapid risk assessment has been produced by experts from Cambridge University, which concludes that the potential ecological risk from

the species is high (with high confidence). The assessment notes that the impact of this species in GB is likely to be high (with medium confidence), similar to that of *D. villosus*, and could result in marked ecological change, leading to decreased diversity in the invaded range by competing with or preying upon a broad range of invertebrates.

The assessment states that engaging with key stakeholders and promoting the Check, Clean, Dry process will help slow the spread. The assessment is in the process of being finalised and will be placed on the NNSS website at:

<https://secure.fera.defra.gov.uk/nonnativespecies/index.cfm?sectionid=51>

Communications

A communications plan, to promote the 'Check, Clean, Dry' (CCD) messages, is being implemented on behalf of the GB Programme Board. We are working closely with Non-Governmental Organisations, such as The Angling Trust and the Royal Yachting Association, to encourage better biosecurity amongst water users. We acknowledge the help of environmental NGOs including The Riverfly Initiative and Buglife in helping raise awareness.

Governance

The Invasive Shrimp Task Group has been advising on the response to *D. haemobaphes*. Members include Defra, Natural England, Welsh Government, SEPA, Natural Resources Wales (NRW), and the Broads Authority. The group has contributed to this briefing note.

Monitoring

Our existing monitoring might be expected to pick-up *D. haemobaphes*, where it occurs. This includes a national monitoring programme for *D. villosus* to survey around 300 still water sites selected on their habitat suitability. Natural England and NRW also carry out specific *D. villosus* monitoring. All other routine invertebrate sampling sites are also analysed for the presence of *Dikerogammarus* species.

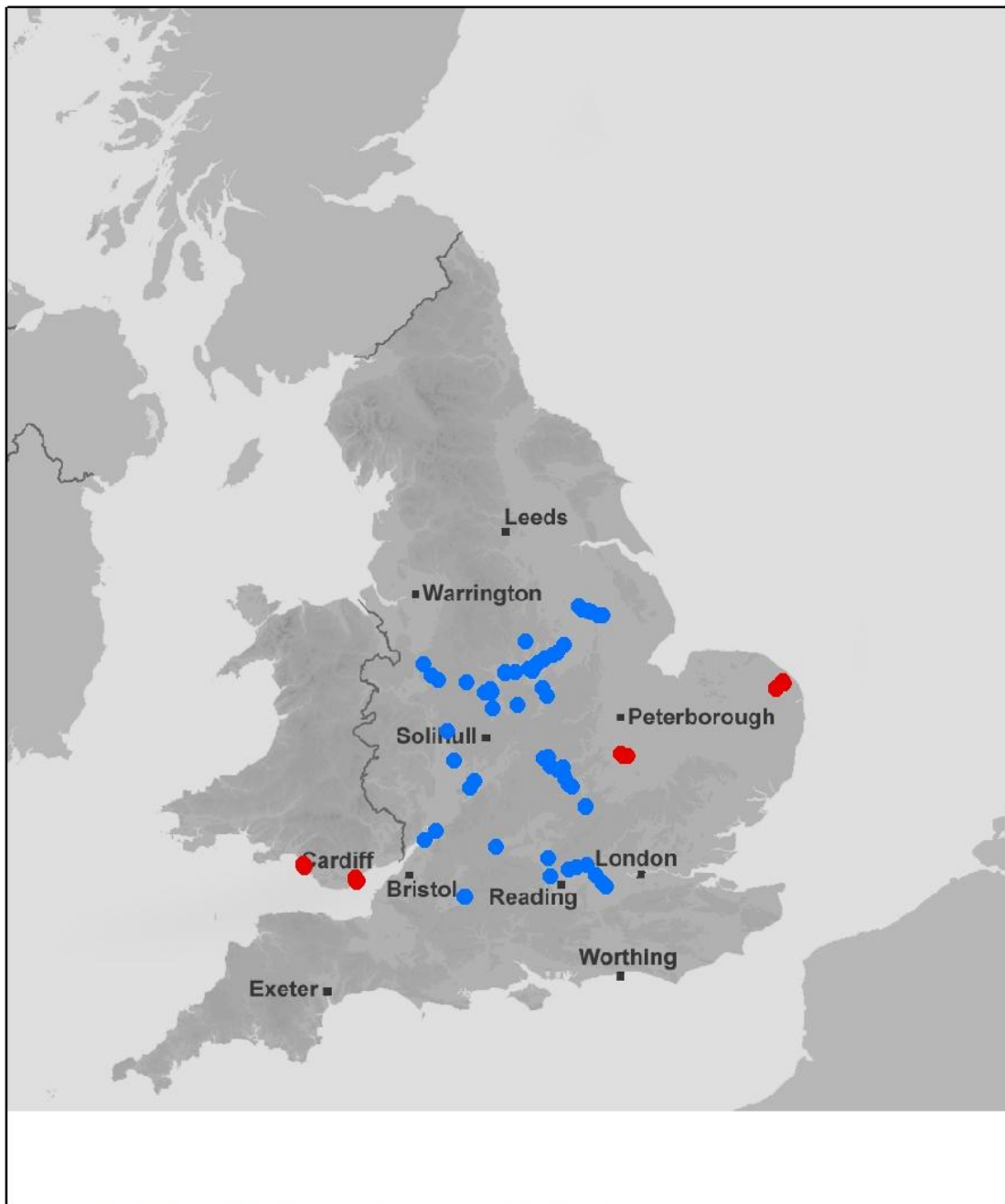
Emerging evidence is that the arrival and spread of *D. haemobaphes* was not spotted for a number of reasons. We do not routinely monitor canals, and do not sample in the deeper areas of large rivers or on hard structures. We have adapted our *Dikerogammarus* spp sampling programme to increase the likelihood of recording *D. haemobaphes*. To do this we are selecting some sites with habitats that are favoured by *D. haemobaphes* including canals, sites with soft sediments, and sites with mosses and plants, such as *Fontinalis* and *Myriophyllum*, as well as *Dreissena* (zebra mussels). We are also advising that the most effective sampling method involves sweeping vegetation and scraping hard surfaces with dip nets. However, we are continuing to use a combination of methods, including baited traps/ropes, kick/sweep sampling and searches.

We expect that more records of *D. haemobaphes* will be made in the coming months. Increased public awareness may result in new sightings, via the alert_nonnative@ceh.ac.uk email. More information on the identification of this and other invasive shrimp can be found in a guide published by the Freshwater Biological Association and funded by Defra: <https://secure.fera.defra.gov.uk/nonnativespecies/downloadDocument.cfm?id=720> .

Strategy

As we have no means of controlling *Dikerogammarus* species at this time, the strategy remains to slow the spread of both species by encouraging those who work and take their leisure in the water environment to observe good biosecurity, following the 'Check, Clean, Dry' approach. We should all apply 'Check, Clean, Dry' to reduce the risk of introducing and spreading all invasive non-native species. The excellent work of the public and stakeholders to slow the spread of the shrimp, *D. villosus*, from its four locations remains a particularly high priority.

Annex 1



Distribution of *Dikergammarus* species 22/04/2013

- *Dikergammarus villosus*
- *Dikergammarus haemobaphes*