



Virtual Fisheries Forum 27/01/21 – Improving the River Pang

Q&A Session with Adam Hilliard

Q. The Kennet is plagued by signal crayfish. Is there any work being done to deal with this on the Pang?

A. Adam Hilliard: The main mechanism we have to deal with signal crayfish is through our permitting system. This enables us to look at locations, numbers of traps and returns. In reality there are two schools of thought for reducing crayfish numbers in a stretch of river. You can either trap very intensively, removing as many crayfish as you can, or leave them to their own devices. By trapping you generally remove the larger individuals, these more aggressive crayfish would predate on other smaller crayfish. By removing these you end up with a population of smaller crayfish and fewer predators of them. This small crayfish then grow and the population can spread out a lot more quickly as a result.

Q. What metrics do the EA use to track and monitor the benefits of these improvements?

A. Adam Hilliard: A series of fish surveys before and after the improvements is usually the best way to measure success. In an ideal world, we would always have formal surveys that demonstrate our improvements are working, but this isn't always possible – so we often turn to techniques such as redd counting, as well as catch returns and feedback from anglers on the river. In this case, the benefits of our work was clear to see, and could be physically observed with the numbers of smaller, wild trout increasing versus stocked fish.

Q. What was the original purpose of the weirs?

A. Adam Hilliard: The original purpose of the weirs was as a means to provide slower, deeper pools which stocked trout were once thought to prefer – though we now know that impounding water in this way does not benefit trout of any kind. There were no industrial or land-use reasons for these particular ones to be built.

Q. Did you have any problems in getting past residents who may have had concerns about flood risk?

A. Adam Hilliard: Because the volume of water remains the same as when going over the weirs, whether they are there or not doesn't make much difference and is

therefore not a flood risk concern. In this case the concrete was so big that it was left in but was winched at an angle to alleviate some of the impounding affect, although some of the additional parts of the weirs were removed. The key thing to remember is to keep in touch with your local fisheries officer who will advise.

Q. Predation of signal crayfish using eels or other stocked fish has been shown to be an effective control method. Is there any chance this could be adopted as a proof of concept on a stretch of river like the Kennet?

A. Adam Hilliard: Due to their shape, eels find it easier to get into crayfish burrows and eat them, so it is something we've thought about– the issue however is acquiring eels. They are caught in certain places to restock other rivers but there are difficulties around this. There is currently lots of work being done to understand how populations are moving, so catching them from one river and moving them to another presents an obvious problem in terms of our understanding of their natural movements through waterways.

Q. Do you aim for general ecological enhancement when doing this work rather than just target fish? Multi benefits are always better.

A. Adam Hilliard: Generally, improving a small river like this for fish will improve habitat for other species too. A greater diversity and biomass of invertebrates for example is not only great for fish, but for a range of animals. By trying to get the river back to a more natural state for the fish and making that population more resilient, there are gains for other species, whether that is inverts or things like water voles that will welcome more lush fringes off the river.

Q. What is the best way to clean the gravel to help with fish to spawn?

A. Adam Hilliard: There are various techniques for cleaning gravel. Generally our preferred method is to use a 2" petrol pump and a rigid pipe on the outlet. A venturi system is the best as it seems to aerate anaerobic silt, but is not essential. This is then fired into the gravel and any silt is blown out. Gravel cleaning is a great short-term way of helping fish to spawn more successfully, but you should look at why the gravels are getting silty in the first place. Is it because the channel is too wide and not able to clean itself, or is there a problem upstream that is releasing silt into the stream? I would recommend contacting your local fishery officer as they will be able to help out.

Q. Is there any funding groups i can talk to about funding weir removal?

A. Adam Hilliard: Speak to your local fishery officer and they should either be able to help or put you in contact with someone who can.

Q. Do you sometimes use large rocks/stone rather than LWD? Do people move them about/mess with them? Should create good diversity, holding points etc and not rot away.

A. Adam Hilliard: We have used large rocks in the past, especially on shallow fast runs. They do work but tend to offer a holding spot for one fish rather than having a big impact on the whole channel.

Q. What is the best way to contact your local fisheries officer?

A. Adam Hilliard: Please phone 03708 506 506 or email enquiries@environment-agency.gov.uk . Ask to be put in touch with your local fisheries team and they will be happy to help.

Q. With regard to stillwaters, was argulus particularly worse last season and is it because of summers getting hotter?

A. Adam Hilliard: Argulus is indeed becoming more of a problem with hotter summers and climate change, particularly in the South. One really effective way to control it is by using 'argulus pipes' which are removed every couple of weeks and cleaned of eggs to disrupt the parasite's life cycle. There are some coarse fisheries which have also employed this method to great success.

Q. Why wont the EA enforce the removal of weirs on small rivers. Most riparian owners I have spoken to will not voluntarily remove them?

A. Adam Hilliard: A lot of this is cost – the weirs in this presentation were quite easy to remove for us by hand. A lot of people also like having the depth of water which weirs create. It's worth pointing out however that you don't necessarily have to remove a whole weir to mitigate it's impacts, although it is obviously best to if you can.

Q. Is it correct that there is no legal obligation on landowners with obstructions to fish passage to have them removed?

A. Adam Hilliard: There is no legal obligation to remove an existing legal weir and we would not enforce its removal. The EA would always work with partners and landowners to look at weir removal, to enhance fish passage and habitat.

Funded by fishing licence income and
delivered in partnership with the



If you haven't already done so, buy your licence [here](#)