

Duffield weir set to allow salmon to pass

A weir near the mouth of the River Ecclesbourne in Duffield, Derbyshire, is to be re-engineered so that fish can pass and allow salmon to return to their historic breeding grounds near Wirksworth for the first time in hundreds of years.

The project, led by river conservation charity the Wild Trout Trust, will open up 10 km of river which research suggests will support 200 'redds' - or breeding salmon nests - in the river bed.

Weirs and sluices present a 'brick wall' to fish trying to navigate river systems, preventing fish from freely navigating them. Without free access during their natural migrations, access to the places they can use for spawning, feeding and avoiding weather extremes like drought and flooding, are severely restricted. This can affect the whole fish community in the short and long term.

Fish passes, like the rock ramp at Duffield weir are vital in helping fish 'climb' past these man-made structures providing full access to the river and ensuring resilient fisheries for the future.

At a time when good publicity is thin on the ground for England's rivers, the return of salmon to some of their historic breeding grounds is one of the notable success stories. Fish passes installed to allow fish to overcome some of the River Derwent's weirs in the 2010s saw salmon returning to the spot where the Ecclesbourne meets the Derwent just below Duffield.

In 2017 a salmon parr (baby salmon) was found near the mouth of the Ecclesbourne indicating that salmon had bred there, but the weir at Snake Lane effectively shut off the rest of the river not just for salmon but for many other species of fish too.

The work to make the weir passable for fish begins on Thursday (21st July) in a project led by the Wild Trout Trust and funded by the Environment Agency. The engineering work will create a rock ramp fish pass - a series of boulder-strewn downward steps over a 120m length of the river. The roughly hewn rock and the variety of flows created will allow all species and sizes of fish to pass, from a salmon to a minnow, says the Wild Trout Trust's Project Manager Dr Tim Jacklin.

While salmon often get most of the attention, it is important that other fish are able to move up and down stream too. Small fish such as bullhead and minnows have a vital role to play in the whole river ecosystem, providing food for birds such as kingfishers, for instance. This is how a weir can affect the wildlife both in and around the river - there are currently 16 species of fish below the Snake Lane weir, but only 8 above, and two of those have been introduced by anglers as part of an agreed stocking plan.

At a time when only 16% of rivers are rated as 'Good' by the Water Framework Directive standards, the fragmentation caused by barriers such as the weir at Snake Lane pose a significant threat to the health of our rivers. Recent research has shown that on average there is one artificial barrier for every 1.5 km of stream in Great Britain and that only 3.3% of our total river network is fully connected. This lack of connectivity can have a serious impact on biodiversity.

Work will begin on 21st July and last for 8 - 12 weeks, while water levels are low. Then come the autumn, when the salmon return from their 2000-mile journey off the coast of Greenland to spawn in the Derwent and its tributaries, you may be able to hitch a ride on the Ecclesbourne Valley Heritage Railway and follow their progress up the river!

QUOTES:

The project is being led by the Wild Trout Trust. Project Manager Tim Jacklin said: "The rock ramps will allow free movement of all fish species present in the river which are currently blocked by the weir. There will be better connected habitats for breeding, feeding and refuge from flood and drought conditions. This means a more abundant and resilient fish community, with knock-on benefits for many other species which rely on them."

"This Ecclesbourne project builds on much hard work that has taken place to re-open our rivers to migratory fish, lost when migration routes were blocked with weirs following the Industrial Revolution. On the River Derwent, fish passes built in 2012-13 at Borrowash and Darley Abbey have allowed salmon to reach the river upstream of Derby and breed successfully. Salmon returning all the way from their ocean feeding grounds off Greenland now enter the River Ecclesbourne and swim through Duffield; opening up Snake Lane weir will give them access to a further 10 km of spawning and juvenile habitat."

"Further progress up the River Derwent itself is blocked by multiple weirs, all of high cultural significance being within the Derwent Valley Mills World Heritage site; this makes retrofitting fish passes a complex, long-term process, so opening up the Ecclesbourne, where there are lesser heritage concerns, is important to ensure the sustainability of salmon in the Derwent system."

"It is important that salmon can access as much of the river network as possible – more access equals more young fish produced, which in turn creates a sustainable and resilient population. And it's not just salmon that benefit – currently only eight fish species are recorded in the Ecclesbourne upstream of Snake Lane, compared with sixteen downstream, so the weir is clearly causing a bottleneck. Once removed, we should see not only improved fish populations, but a better environment for otters, herons, kingfishers and other aquatic wildlife."

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Dr Ryan Taylor, Catchment Coordinator for the Environment Agency said:

“Opening the River Ecclesbourne for all fish, including Atlantic salmon, will transform the river and its ecosystem. Atlantic salmon are a keystone species, meaning they help to shape the environment for the benefit of themselves and other species. The presence of Atlantic salmon will also bring greater environmental protection to the river.”

“Currently the Derbyshire Derwent only has 40km of available habitat to Atlantic salmon, this project will then open up a further 10 km of habitat, so it’s clear it will have an immediate and significant impact.”

“The work by the Wild Trout Trust on developing and getting this project to delivery has been fantastic and the support from the local community has been exceptional.”

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Dr Scott McKenzie, Senior Catchment Manager, Trent Rivers Trust, said: “The River Ecclesbourne is a real hidden gem in the Derwent catchment. However, it has been hampered by this major barrier preventing many fish species accessing it. There is so much quality habitat in the catchment that is able to support spawning fish – including salmonids - so to see that this habitat potential being utilised is wonderful. It’s been great to see this collaborative approach to project delivery – and I look forward to seeing salmon spawn on the Ecclesbourne over the next few years.”

NOTES FOR EDITORS

1)The project is led by river conservation charity the Wild Trout Trust and funded by the Environment Agency.

<https://www.wildtrout.org/>

<https://www.gov.uk/government/organisations/environment-agency>

2) Existing barrier databases underestimate stream fragmentation by at least 68%. There is at least one artificial barrier every 1.5 km of stream in Great Britain. Only 3.3% of the total river network of Great Britain is fully connected. Only 1% of the rivers in England, Scotland and Wales are free of artificial barriers.

From: ‘A comprehensive assessment of stream fragmentation in Great Britain’

https://amber.international/wp-content/uploads/2019/04/Jones_etal_2019.pdf

3) Salmon returning to the Derwent.

<https://environmentagency.blog.gov.uk/2016/05/26/salmon-returning-to-derbyshire/>

Salmon return to Derbyshire.

<https://www.gov.uk/government/news/salmon-in-derbyshire-river-a-first-since-industrial-revolution>

Salmon parr found in Ecclesbourne.

4) Ecclesbourne Valley Heritage Railway

<https://www.e-v-r.com/>

5) Contact Tim Jacklin, Project Manager, Wild Trout Trust for more information and interviews on:

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