



WILD TROUT TRUST

AUTUMN 2021 NEWSLETTER



WTT ANNUAL RAFFLE 3 DECEMBER

Fabulous prizes, see page 32. Do please buy a ticket or two.

In this issue: updates from the Conservation Team plus Beaver Consultation, Trout in Trees, What Trout Eat and the 'Accidental Activist'

A review of WTT's 20/21 year

Wild Trout Trust Director, Shaun Leonard



Practical work on the River Mimram in Hertfordshire. Still possible, with care, despite Covid

The core of what we do is providing expert technical advice and doing practical work to improve river habitat. We are emerging from the Covid crisis in better shape than perhaps we could have dared hope when it began. The major impact on our activity during the year was that, for much of it, we were unable to work practically in the river with groups of volunteers.

We managed to complete a huge amount of advisory and practical river improvement work. Our project expenditure was £696,000 against a pre-Covid forecast of £706,000 - a variance of just -1.5%.

It has been a time of enforced learning, and some of the new working practices we have put in place will carry over once this pandemic is behind us. The blend of home working, online meetings and recorded training material as a package to complement face to face meetings will find a place in a new, low carbon future, for instance.

Overall, in 20/21, we led on or contributed significantly with

partners to 57 projects, up from the 52 projects of 2019/20, but below the 5-year average of 67. These varied in size from small-scale habitat improvement days with a few people, through to large-scale river restoration projects, reprofiling the river and reconnecting it to its floodplain; about half could safely involve small numbers of experienced volunteers, working socially distanced in full compliance with Government Covid guidelines. You'll read examples of some of these projects from the reports of our Conservation Officers, elsewhere in this newsletter. Notable in much of this work was the ongoing and highly productive partnership with the fisheries teams of the Environment Agency.

A good deal of our normal work could continue through the year, other than in the tightest lockdown restrictions. As a result, we completed 226 advisory site visits on rivers and lakes across much of England, 9% more than last year and 8% above the 5-year mean of 209. Field work

elsewhere than England proved impossible, though, as you'll read in Gareth Pedley's report, once travel restrictions eased with Ireland, he's carried out some great work across the water.

Spreading the word

Largely as a response to the Covid restrictions, we devised and delivered 44 tailored presentations to angling clubs and conservation groups across England.

Many of these events focused on trout ecology, factors impacting rivers (and their trout) and what might be done to help life in and around the river, including tackling impacts from agriculture, the water industry and climate change.

We also delivered our annual 2020 Get Together as a 'virtual' one with films and videos, many of which are still available on our YouTube channel, accessible through the WTT website.

Beavers

We did a huge amount of work around the subject of beavers. We highlighted both the opportunity they present for river conservation and the potential impact on trout populations if fish migration is blocked by dams. We have spoken with many people and organisations within the UK, across Europe and as far afield as Canada, creating a resource hub on the WTT website which is designed to provide some much-needed balance to inform a debate that is too often polarised into 'for' and 'against' camps.

We are getting involved at a practical level with Nick Lawrence and Theo Pike sitting on regional beaver management groups. We also carried out a pre-beaver introduction fish survey for Derbyshire Wildlife Trust, and hope to be part of research to look at beaver/trout interactions in a UK context. See pages 6 and 7 of this newsletter for more on beavers and the current beaver consultation in England.

Science

Through Research and Conservation Officer Professor Jonny Grey (who is also part time Professor in Practice at Lancaster University), we continue to have close links to research and academia, including supervising research projects on trout and aquatic ecology.

Our website blog is used by early career researchers to describe their work and our annual journal, *Salmo Trutta*, includes articles where

academic research is translated into the practical realm.

Last word

In the 20/21 year, our staff team consisted of a Director of Operations, seven Conservation Officers, a Research and Conservation Officer, a Trust & Data Manager, a Communications Officer, a Fundraising Events Officer and a Company Secretary.

We at the Wild Trout Trust have

always prided ourselves that we have an impact beyond that which our charitable means might suggest. This last year will always be remembered as the Covid year and it presented us with unprecedented challenges. We hope that by devising new ways of working, we have risen to those challenges and shown some of the resilience we so often see in the rivers in which we work. Huge thanks to our Board of Trustees for their absolute surety when things looked ropey and to our supporters for your loyalty.



YOU CAN HELP US TO HELP WILD TROUT IN ONE EASY CAST... SIGN UP A FRIEND!

More people love wild trout and rivers than there are members of the Wild Trout Trust. So be a trouty champion... tell a fishing pal about the great work we do and the benefits of being a member (events, journal, camaraderie) and sign him or her up as a member. It really does make a difference: the more members we have, the more work we can do and the more our voice matters.

Challenge yourself to signing up a new member via our shop at www.wildtrout.org or by asking Christina to email or post a membership form (office@wildtrout.org / 023 9257 0985) THANK YOU.

News snippets



WTT 3 Fly Fundraiser nets £3000

In its 11th year, WTT's annual fundraiser, the Three Fly Challenge at Meon Springs Fishery in Hampshire, took place in mid-June. Covid limited the numbers fishing to 25, but it did mean that the rods had plenty of space and plenty of fish to aim at. The fishing was excellent, and as ever the craic was mighty; it's as much about meeting friends as it is about fishing and raising funds for WTT.

After a furious battle among the leading pack, Graham Brown returned to the winner's podium, having been the very first winner in 2011, well clear of second-placed Neil Mundy, never far from the gongs. Graham received the booty, including a Sage rod, from WTT's Shaun Leonard.

The Three Fly Challenge is held each year in memory of Pasco James, an avid fisherman, whose life ended tragically early in 2010 at the age of 22. The £3028 raised will contribute to WTT's work on the big issues in our world, such as sewage pollution and the interaction between beavers and trout.

Huge thanks to Neil Mundy and Greg Adlam for organising the day, to Meon Springs Fishery for hosting, to all the rods who contributed to the day, to Selectafly (www.selectafly.com) for supporting us with all the flies for the day and to Sage for the rod prize.

The 2022 Three Fly Challenge will take place on 18 June. Register your interest with Neil at ncmundy@hotmail.co.uk

Haddon Trout Weekend

Despite warm temperatures and low flow conditions, the WTT Haddon Fishing Weekend was a big success again this year, raising £1725 to support our vital conservation work around the country. 17 WTT members fished on the Derbyshire Wye, Derwent and lower River Lathkill.

We are very grateful to the Haddon Estate, the Peacock FFC and Jan Hobot, the Head Riverkeeper for the continued support of this event and we hope to run a similar members' weekend in 2022, with a curry in Bakewell on Saturday night (Covid permitting).

WTT Auction 18 to 27 March 2022

Thank you to our 2021 donors and buyers and we are grateful to the donors who have kindly carried forward 2020 and 2021 lots due to Covid-19 restrictions.

We are just starting to gather donations for 2022 and repeat lots are very welcome. If you haven't donated before but would like to, that would be very much appreciated.

Guided lots are always popular but don't feel it is essential to include guiding (or refreshments, or anything else). Many winning bidders are happy to explore by themselves having been given some advice beforehand and this will be reflected in the lot description. Christina would be delighted to hear from anyone able to donate a lot, preferably before Christmas or in early January, via office@wildtrout.org or 023 9257 0985 so that the catalogue can be assembled and posted to members in February together with our Spring News Update.

www.auction.wildtrout.org



Wendy's Wish Charity Day

WTT friend and supporter, Chris Ward, lost his beloved wife, Wendy, in December 2019. In Wendy's honour and to raise funds for The Rosemary Foundation Hospice @ Home, Chris is running a day of savagely competitive fishing at Meon Springs Fishery, Hampshire on 6 November 2021, with Charles Jardine leading the lunchtime auction. More at www.meonsprings.com

Chalk Stream Restoration Strategy

WTT co-founder and passionate river campaigner and mender, Charles Rangeley-Wilson, has written and collated the CaBA Chalk Stream Restoration Strategy 2021, chairing advisory groups including WTT's Andy Thomas. It is a simply staggering piece of work, drawing together in one place the complexity of factors impacting our unique chalk streams and proposing actions to address water quantity, quality and physical habitat. Critical to the Strategy will be its underpinning Implementation Plan, due out in 2022, that will attach actions to people, organisations and deadlines. The Strategy document is an excellent reference document, detailing not only what ails the chalk streams but also what makes them simply amazing river types.

Fishing in Wales website

Wales has some fantastic wild brown trout fishing to offer. The upland llynns are like Scottish lochs without the midges, many reservoirs are wild trout only and the rivers (with very few exceptions) are all wild trout too. The Fishing in Wales website has all the information you need to plan a trip. Fishingwales.net

River Batherm

Following the article about the River Batherm by Michelle Werrett in Salmo Trutta earlier this year, WTT member Michael Malyon wrote this letter:

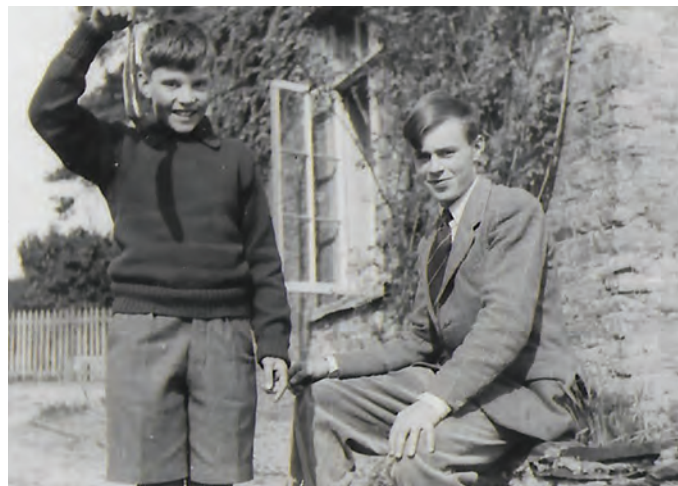
Dear Michelle,

I am just writing to say how much I enjoyed your article on the Batherm. It is rare in such an august publication to have knowledge of some of the rivers described.

In 1955 when I was a boy of 8 we spent all our summer holidays at Keens House near Morebath. At that time my father was a fairly impecunious Lloyds broker who had married my widowed mother after the war, along with 3 children. However his great wartime friend Frank Rothwell who owned the Morebath Estate lent us this wonderful house where we had idyllic childhood holidays.

It was a different age. There was no electricity until about 1959. We collected our milk every day from Loyton Farm, played in the Ben Brook, in which there were crayfish, put pennies on the railway line, visited Exmoor, rode our ponies and, of course, went fishing. My father caught salmon on the Exe at Cove and my older brother went to the Taw and caught platefuls of peal (sea trout). My poor mother said in her old age that she never wanted to see another fish!

But also we spent a huge amount of time on the lovely River Batherm to which we bicycled with wicker creels and our rods tied to the crossbars. We fished from Hukeley Bridge upstream. Even then it was hugely overgrown and sometimes I wonder how we coped with our old greenheart rods. But we caught lots of fish, none more than about a pound or two and it gave us huge



pleasure. We fished mainly dry fly as the river was very clear and the favourite flies were the Coachman or Beige. These we purchased from Fred Tout in Dulverton. On the way back my father always said he needed refreshment so we usually stopped at the Carnarvon Arms and often admired large salmon displayed on the slab.

Although I now live and farm in Hampshire, I love Devon and still fish the Exe and the Taw. But I have not visited the Batherm for some years. I think the last time was when my brother Francis died and I stood on Hukeley Bridge and dropped a Coachman (de-barbed of course) into the river in his memory.

Thank you for a lovely article and highlighting all the river's problems. It always amazes me how with a little bit of TLC they can return to their former state. You must encourage your farmer friends to take up fishing.

With best wishes,
Michael Malyon

Swapping seats

Many WTT supporters will know Bruno Vincent, through his role in running our auction and the excellent Virtual Get Together 2020. Bruno is taking on a different role now, as a part-time Conservation

Officer for south west England. Bruno's well placed, living near Plymouth, to hook up with the mighty Westcountry Rivers Trust and the many clubs and riparian landowners of Devon and Cornwall. Bruno's auction-running role has

been picked up by Chrissy Bryant who many of you will know very well, helming WTT's office.

In fact, this is a return to an old seat, since Chrissy ran the WTT auction in many of its early years.

Beaver reintroduction & management

Defra's consultation for England

Defra have launched a consultation about beavers in the wild in England, following the River Otter Beaver Trial report, a five-year study of a population of wild beavers in Devon. There are licensed, enclosed beavers and other wild populations in England - maybe 600, even 1000 animals, in total.

The consultation's objective is 'to seek views on the cautious release and management of beavers into the wild'.

There are plans to give beavers legal protection in England, making it an offence to deliberately capture, kill, disturb or injure beavers, or damage breeding sites or resting places. The proposed protected status for beavers is not part of the current consultation but a management 'hierarchy' is within it, licensed by Natural England.

Three options ('Approaches') to future releases are considered in the consultation:

1. No further releases of beavers into the wild, except to augment the River Otter population in order to increase genetic diversity.
2. Beavers reintroduced at a measured pace to locations where it is possible to maximise their environmental, social and economic benefits and minimise risk of conflict with local communities and business interests.
3. Beavers reintroduced at a faster pace potentially anywhere in England where the criteria of the Defra Code for Reintroductions and Other Conservation Translocations in England can be met.

The consultation documents state that Natural England recommends Approach 2, to '...allow the positive changes resulting from the presence

of beavers to be realised and allow habitats and species to adapt to the presence of beavers. A measured pace will give people time to get used to living alongside beavers and maximise the chances of success by providing the opportunity to address evidence gaps, together with building knowledge and capability to manage negative impacts.'

Based on our discussions with various parties, statements made by the Minister and the Government's 25 Year Plan for the Environment, Approach 1 (no further releases into the wild) is extremely unlikely. On the other hand, there will be considerable pressure from some groups for Approach 3 - 'faster pace' beaver reintroduction.

The issues regarding fish passage are mentioned in the consultation papers: *'In some circumstances, particularly for some migratory species, there is also the potential for negative impacts (from beavers), including the passability of dams, local changes in habitat structure, prey availability, predation and thermal regimes.'*

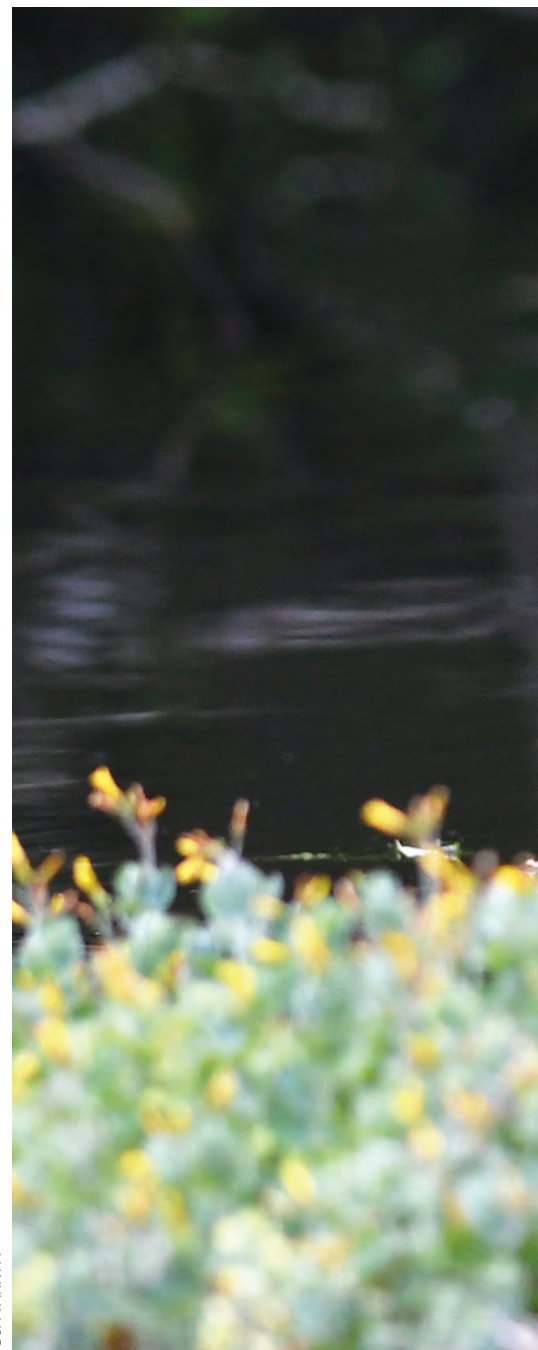
Our view

We will, of course, be responding to the consultation and we will publish our response in good time for interested members to read and make their own responses.


For the past 18 months or so, we have been reading the available science on beavers and fish, talking to many people and, more recently, we've visited wild beaver sites in Devon and Scotland and an enclosed site in Cornwall, to see for ourselves the dams that beavers build and their likely impact on fish passage both

up and downstream. One important note here: beavers do not build dams in rivers wider than about 10m and deeper than around 0.7m; in such places, they will burrow into the riverbank. But, of the 10 dams or so that we've seen in rivers, we judged only one dam passable for trout on the day - that dam had been abandoned and a by-pass channel had cut around it.

We accept that beavers are here to stay and we believe that they do deliver wider benefits for our environment and wildlife, especially where space exists or is made for the beavers to live their lives and



JOSH PARKYN

A close-up photograph of a beaver swimming in a river. The beaver is partially submerged, with its head and back above water. It is holding a green leaf in its mouth and appears to be eating it. The water is dark and reflects the surrounding environment. In the foreground, there are some out-of-focus yellow flowers.

It is vital that WTT, EA Fisheries Officers, other fish conservationist groups and anglers are directly involved in beaver management and that our views are respected and acted upon

for the river to respond to their work. Aside from the work they do, they are simply amazing animals in their own right. Beavers in a river will attract much interest from local communities and just maybe more people will care when that river is polluted, sucked dry or dredged. We believe that beavers are not wholly good or wholly bad for trout – their effects will vary in time and space. For us, beaver dams could affect the migration of unique trout populations, both up and downstream, though, again, this will vary with location and time; there's wide agreement that the science is

lacking on this aspect. Whilst more science is always valuable, our focus is on ensuring that we have the right management processes (and funding) in place to ensure that in reintroducing and protecting beavers, we do not inadvertently impact our precious trout populations.

We will continue to be objective

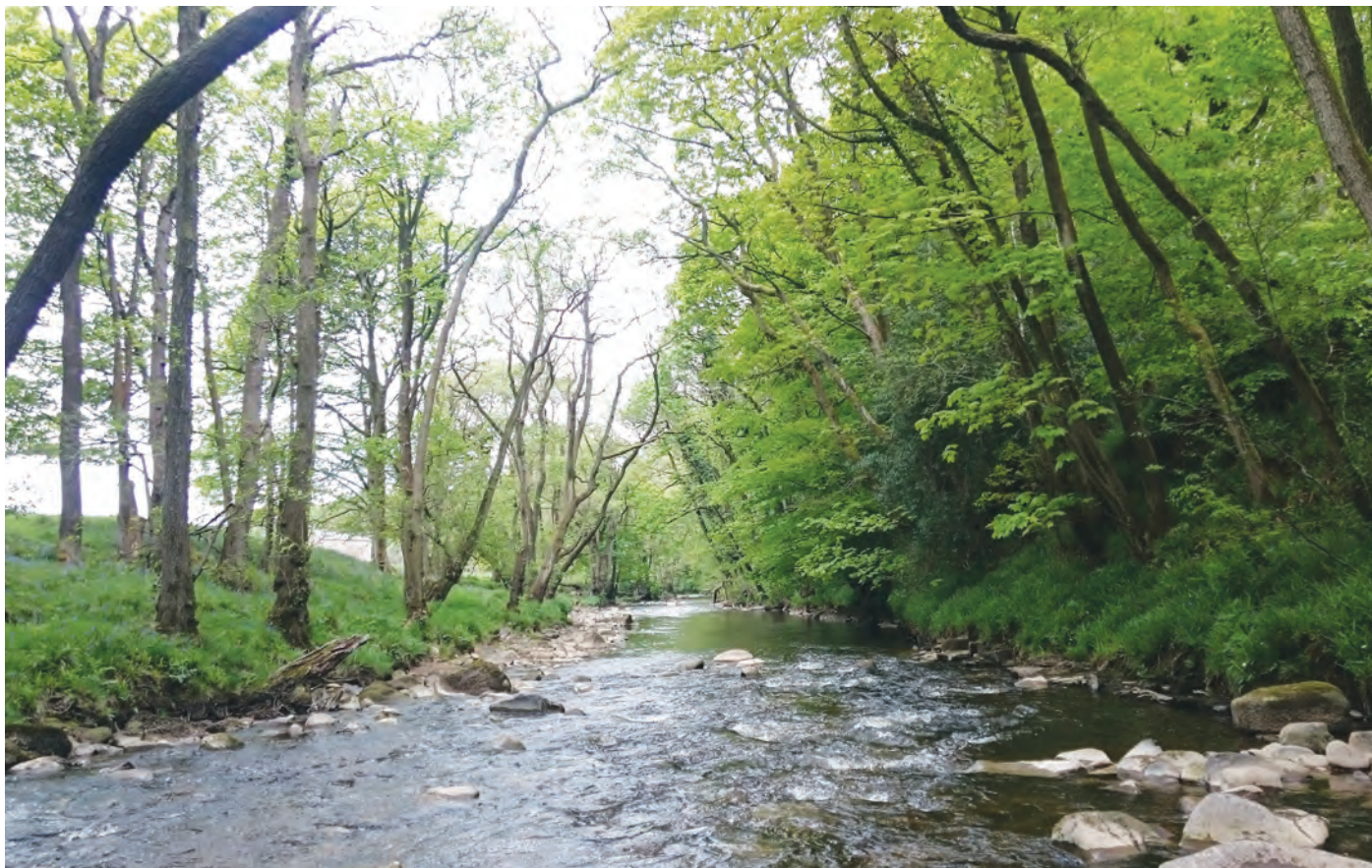
BEAVER CONSULTATION

There is a link to the consultation and (in due course) to the WTT's response here: www.wildtrout.org/news/beaver-consultation-in-england The consultation closes on 17 November 2021.

and led by both the available science and our experience on fish habitat and fish passage. It is vital that WTT, EA Fisheries Officers, other fish conservationist groups and anglers are directly involved in beaver management and that our views are respected and acted upon.

WTT VIEW ON BEAVERS

We recognise that beavers are in our rivers, they are popular and can bring benefits, but we do want pragmatic, effective and equitable management intervention where fish populations are, or are likely to be, impacted by beavers.



“...arguably, the ‘pristine state’ of most of our rivers and streams should be wooded right to the channel edge.”

Trout in trees

Jonny Grey, Research and Conservation Officer North

I like edges. Edges are where ecology happens...

They are dynamic, unpredictable... edgy even. As someone who has always been fascinated by the ecology of freshwaters, I have spent an inordinate amount of time with my back to the water.

I look out at the landscape, trying to understand how that influences what I find beneath the surface behind me. My view should be obscured by trees because, arguably, the ‘pristine state’ of most of our rivers and streams should be wooded right to the channel edge.

Did you know, trout grow on trees?

Not literally of course, but directly and indirectly, trout grow from feeding on invertebrates that fed

upon trees. It could be via tiny aphids that have been sucking on a sycamore and haplessly fallen into the stream below in a sappy stupor. Or it might be more circuitously, via shrimps that have shredded and chomped upon the leaf litter tossed into the water on autumnal winds.

Energy arising from trees on land can be transferred via a plethora of ecological pathways to end up fuelling food webs underwater.

But trees should give so much more to trout...

Our native species, the brown trout needs a mosaic of habitats to get through its life cycle: clean gravel in which to lay eggs, refuges from predators and flow for the weak swimming fry, shallow riffles of fast water as growing juvenile ‘parr’, and

deeper pools as larger adults.

So, trout don’t live in trees, but trees should be contributing to that mosaic. Natural treefall into rivers diverts water flow over, under and around, thereby making faster, slower, shallower and deeper patches on the quilt of the riverbed.

Tree roots bind the bank soils together and twist into the water providing hidey-holes. Trailing branches trap flotsam creating cover and shade.

The trout is a cold-adapted species...

Its eggs bake low-and-slow in river gravel over the winter months to hatch with the first flushes of spring and capitalise on unwary invertebrates.

Trees in the catchment should ‘slow-



“That’s because far too many of our rivers are effectively bald!”

the-flow’, taking the sting out of winter floods that otherwise ravage our rivers and disturb the slumbering eggs.

Trees along the banks should keep our rivers cool in summer. The water temperature of shallow, narrow streams when exposed to direct sunlight can be almost 10°C warmer compared to beneath a leafy canopy, and that’s not good for trout nor anything else that needs oxygen from the surrounding water.

I’ve focussed on trout but trout are just a sentinel, a canary in a coalmine as it were. A healthy population of wild trout indicates a healthy, functional river, that should be home to their prey and their predators. And ‘should’ has crept up far too often in this article.

That’s because far too many of our rivers are effectively bald!

If there are trees, they are generally standing tall but tired, a linear straggle of ageing canopy, a fragile

fringe only one tree deep. Succession has been nipped in the bud, quite literally, by browsing livestock.

Working part-time for the Wild Trout Trust, I meet with landowners, local communities, rivers trusts, government agencies and angling clubs to offer practical advice and

guide hands-on habitat improvement projects.

In many instances, all rivers need is a good dose of trees, and I am delighted that The Conservation Volunteers recognise angling clubs as community groups and grants them access to the I Dig Trees programme.

The stereotypical view of a fly angler taking a fish for supper is thankfully fading...

Generally, such anglers don’t take at all but give instead; time, energy and money invested into improving habitat, restoring rivers, reporting pollution... generally working with and looking after rivers as a natural resource.

OK, I’m biased by my fetish for freshwater, but if you are going to plant trees anywhere, along rivers must bring about the biggest-bang-for-buck in terms of environmental benefits.

The Conservation Volunteers has the ambition to plant a further half a million trees in the next year with the help of community groups, corporate sponsors, and people like you.

This article originally appeared as a blog post for TCV (The Conservation Volunteers)



Anglers give time, energy and money to improve river habitat



The River Sheppey emerges from one of many long culverts under Shepton Mallet

A new TWIST for the Sheppey

By Theo Pike, Trout in the Town's man in the South



This is the kind of story that many of us know.

A spring, or a line of them, bubbling and gushing out of a rocky hillside. Tumbling downhill, meandering through an upland meadow where trout and bullheads dart above the gravel, and human huts are built beside the clear water. Then over and down the contours again, gathering force, carving a valley that curves and steepens before bursting out onto the plains and wetlands below.

Centuries pass, and the huts get bigger, growing into mills that tame the river's flow. Quarrymen's fire and dynamite shatter the faces of the gorge, gouging out freestone and rubble for the construction of dams, diversions, roads and even more buildings that loom over the river and turn its currents dark with pollution.

Eventually the mills fall derelict,

and the water runs clear again. Here and there, the banks of the leats and millponds are tidied and gardened for the ornamental value they add to old mill houses and new loft apartments; more often, the river flows unnoticed except in times of flood, or unusually toxic pollution from one of the factories that still stand upstream. Sometimes a curious angler leans over a bridge and asks where the trout went: the authorities shrug and say 'too many weirs, we'll never get migratory fish back...'

This is a story that many of us do know well - and in this case it's all about the River Sheppey.

Rising at St Aldhelm's Well near Doulling, the Sheppey flows down from the Mendips to meet the main River Brue on the Somerset Levels through a pretty, winding limestone valley that often reminds me of somewhere in Slovenia.

The area's long history of

cloth and cider milling has left a complicated legacy, including at least 35 weirs and other barriers to fish passage; channel simplification and straightening, to deliver a smooth and consistent flow of water to the mills, and make room for the road down the valley, have also steepened the gradient of the river and shortened the length of its channel. Most of the river's course through Shepton Mallet was built over by pre-Victorian developers, and now, when heavy rainfall and runoff overcharge the old culverts (such as during Storm Alex in October 2020), modern residents sometimes find the Sheppey coming up to see them through their floors. Pollution has always been a nagging problem - most recently when something knocked out the sewage works between Shepton and Croscombe in August 2019, and caused a 15km fish kill that reached all the way



out into the Somerset Levels. Local people were outraged, and we're still waiting for the results of the EA's investigation, and maybe an eventual prosecution.

If you think all this sounds like perfect territory for a Trout in the Town project, you're right. Thanks to some well-timed funding from the EA and Somerset Catchment Partnership for the new TWIST (Transforming Waterways in Somerset Towns) project, I spent several weeks last winter assessing the urban reaches of the Sheppey and Axe catchments, documenting the results in a suite of reports, and starting to recruit local people as riverfly monitors to keep an informed eye on areas where no current data seems to exist at all.

Trained in July this year, these keen volunteers have already started to produce some interesting findings. And all this revival of interest in the

Sheppey has led to a new project partnership of the EA, WTT, FWAG, Westcountry Rivers Trust and Mendip District Council's flood consultants, to focus on the river's multiple challenges.

A very recent site meeting with the owner of one of the valley's redundant weirs suggests that we've already found a possibility for restoring fish passage whilst also protecting vulnerable infrastructure. After that, with useful lengths of habitat properly reconnected, we might even be able to talk about translocating a new population of wild trout into this area – crucially, well upstream from the constant threat of Shepton's sewage works.

After such a lot of twists and turns, can we dare to dream of a happy ending for the Sheppey's story? We've only just started writing this new chapter for the river... but yes, maybe I think we can...

Above: Keen new riverfly monitors being trained by Bristol Avon Rivers Trust. Below: Community engagement: discussing a possible fish passage project at Darhill on the Sheppey



FIND OUT MORE

Read the TWIST project reports. Visit <https://www.wildtrout.org/wttblog/twist-reporting-live-from-somerset>

Yet more sewage, slurry and abstraction

WTT Director, Shaun Leonard

In our Autumn 2020 newsletter, I described our role in campaigns for improvement to water quality (especially sewage and slurry) and to reduce abstraction. In summary, we generally do not campaign in the media - that territory is very well covered by a good number of expert individuals and organisations. We do, however, lobby directly with those responsible for making change (for example, senior managers in the Environment Agency, Defra and water companies) and we do support grassroots community groups to fight for their river - see, for example, Andrew Griffith's article on page 18.

The media coverage and campaigning about water quality continues unabated. Since the last newsletter, we have had a Panorama programme about sewage (April 2021), an independent documentary about pollution of the River Wye

(Rivercide, July 2021), numerous newspaper articles, petitions, multiple reports including a report on the Environment Agency's performance (Guy Linley-Adams), investigations on sewage pollution by the Commons Select Committee for the Environment, a Defra task force on sewage pollution, a consultation from OFWAT and a £90 million fine for Southern Water. In two successive days in September, coalitions of NGOs published the damning reports, *Troubled Waters*

WEBSITE NEWS & BLOG

Our website news and blog will continue to report significant events (progress or otherwise) in this important area. In the meantime, we will continue to campaign directly to decision makers based on our on the ground (in the river) experience and support our partner organisations such as the Rivers Trusts with their work.

Pollution in the River Sett, Derbyshire



and *Blueprint for Water: Water, People, Nature*. WTT founding father, Charles Rangeley-Wilson, has chaired the group and authored the excellent *Chalk Stream Restoration Strategy 2021*, launched in October. We could fill this newsletter 10 times over and not cover all the activity!

Has it made a difference? Too early to tell, is the short answer. The issues with our sewage systems, for example, will take a long time and billions of pounds of investment to properly put right. Some things seem clear - the water companies, OFWAT and Government and its agencies are feeling the heat and beginning to respond, or at least make some of the right noises. It seems too from the *Troubled Waters* report that public knowledge is lacking about the state and threats to our rivers - much work for all of us to do to more effectively spread word and win supporters.

But, the EA has been given more budget to increase farm inspections for compliance to Farming for Water and related regulations. OFWAT has written to the water company CEOs reminding them they have the power to enforce compliance and reporting on storm overflow discharges.

As I write this, the Environment Bill has been amended by the House of Lords to include a duty to ensure that sewage is not discharged. This is good news but, as the Windrush Against Sewage Pollution (WASP) group point out, we don't lack legislation, it's been there for years; we lack enforcement and meaningful consequences for companies who break the law.



DIYSON FARMING



DIYSON FARMING

Above: Aerial view of the site before work. Right: Aerial view of the same site post works. It will green up quickly!

Dunston Beck project

Tim Jacklin, Conservation Officer for the Midlands

In February 2021, I project managed a large-scale project on the Dunston Beck in Lincolnshire, putting this arrow-straight river into a more natural shape, together with lots of floodplain features.

Work on the 3 hectare site turned a former arable field into diverse floodplain wetland and meadow habitat allowing wildlife to thrive. The work involved collaboration between the landowner, Dyson Farming Ltd, the Environment Agency, the Lincolnshire Rivers Trust and the Lincolnshire Wildlife Trust. Not only will the project benefit fish species such as brown trout and aquatic plants and invertebrates, but the back channels and ponds will be great for bird species such as snipe.

The project grew from an initial WTT advisory visit in 2014, followed up by a lot of discussion with landowners and the local community. Several ideas and sites were explored before this project crystallised, but as is the nature of these things, the delivery has kindled enthusiasm for more of the same and we are currently working on 'phase 2' which will be delivered in the coming months. Vital components in the success of these projects have been financial

support from the Environment Agency (EA) and provision of the land and practical assistance from Dyson Farming Ltd. The long-term commitment and support of staff from the EA Lincoln office has also been tremendous.

Creating more natural areas alongside our rivers and streams has so many benefits. As well as making them simply nicer places to be, it provides more space for water and better wildlife habitats, making our landscapes more resilient to climate change and boosting biodiversity. It will be great to see this site develop as the wildflower seeding and native planting becomes established.

The Lincolnshire Limestone Becks are an important local habitat. Historically, they have been supplied by consistent flows of high-quality groundwater water from the limestone aquifer. They are isolated and unique, and where in good condition, support a rich aquatic fauna and flora rarely found in Eastern England. As with the other Lincolnshire Limestone Becks, from its source, the Dunston Beck would have historically meandered its way down from the higher ground of the Lincolnshire ridge to low lying fenland areas in the east. Habitat

would have been varied, with back channels, wetlands, clean gravel beds and pool and riffle sequences. This variation is vital in supporting an abundant and diverse range of wildlife but as with many of our watercourses in the UK, this has been lost due to historic alterations. This project has helped to restore an area of this lost habitat.

Large amounts of topsoil were stripped from the site to reconnect the floodplain to the beck, allowing it to inundate more frequently and connect with the scrapes, ponds and back channels created. The wetter areas have been planted with wetland plants of local provenance provided by Lincolnshire Wildlife Trust and the drier areas have been seeded with a native wildflower meadow mix. Fencing has been installed to allow the site to be managed by conservation grazing.

As well as the flood plain features, the beck channel was made more sinuous and gravel riffles installed which will benefit the wild trout population. Not long after completion, trout were observed in the pools below the new riffles. Interestingly, pre-project investigations revealed the Dunston Beck once held burbot (there is a record from 1915), a fish species now extinct in the British Isles. Look out for an article on this subject in the next issue of WTT's annual journal, *Salmo Trutta*.



What do trout eat?

By Denise Ashton

One of the central skills of fishing for trout is to understand what they eat. If you find a feeding fish, you are a good way down the road to catching it. Dry and 'damp' fly anglers know that trout eat flies on and in the surface. Nymph anglers know they eat invertebrates below the surface and especially close to the river-bed. Streamer anglers know they eat small fish, leeches and might (if you are lucky) aggressively attack something that looks like nothing they will have ever eaten. The trout fishing calendar is full of iconic (sometimes seemingly mythical) trout feeding events starting with LDOs (large dark olives) and March browns, mayfly time, BWO (blue winged olive) spinner

falls, flying ants and daddy long legs.

As a fully paid-up member of the trout fan club, I think the variability of trout diet and feeding behaviours is yet more evidence of their remarkable adaptability. This article is a short summary of that huge variation in diet and behaviour of river resident trout. An article on feeding habits in lakes and in the sea is for another newsletter.

Aquatic invertebrates

We'll start with the obvious - aquatic invertebrates, the staple diet of many trout and most fly anglers' fly boxes. The various upwing flies, caddis flies, midges, stoneflies etc are commonly eaten by trout on the river-bed, in

the water column, and either in or on the surface film as failed hatchers or adults. Some important food items such as *Gammarus* live on the river-bed all their lives; many more hatch into flying insects. How much of the trout's diet is from the surface and how much sub surface? A widely accepted generalisation is that trout mainly feed below the surface. Peter Hayes and Don Stazicker, in their e-book 'Trout and Flies - Getting Closer' do their best to debunk the mythology (or 'woozle effect' whereby repetition of information not based on evidence becomes accepted as 'true') - but still conclude that in most places, most of the time, most trout seem to get most of their food from below the surface.

Terrestrials

However, in some habitats (particularly those poor in nutrients), terrestrial prey landing on the water

surface can contribute 50-90% of trout diets during summer. Research using stable isotopes, which tracks the flow of energy through the food web, shows that almost all trout everywhere are at least 50% terrestrial in biomass composition.

Terrestrial prey tend to be bigger than aquatic invertebrates - earthworms, daddies, moths, grasshoppers - so perhaps it is not surprising that trout get fat on these food items. Trees and shrubs on the river bank provide more insects than grassland. Another example of trees on river banks being good for trout.

The ecological term for this supply of nutrient from outside the aquatic realm is *allochthonous* - as opposed to *autochthonous*, nutrient supplied from within the river. Another good (and easier to pronounce) term is 'subsidy'. The aquatic food web is subsidised by food webs in the riparian zone. That's everything from a maggoty dead sheep in the river to an aphid falling from a sycamore leaf. Which leads us to the Allen Paradox.

A study by Allen (1951) showed that the aquatic invertebrate production in the Horokiwi stream in New Zealand appeared to be insufficient to sustain its brown trout population. There were more



A rather greedy trout, apparently choked on its prey

trout in the river than the available food would suggest was possible. This is the Allen Paradox. Hunt (1975) suggested that it is extra food provided by terrestrial invertebrates that explains the paradox.

Ergo, more trees on the river bank might mean more, perhaps bigger, trout.

Piscivory

What about fish eating trout in rivers? The received wisdom (more wozzles?) seems to be that once fish get over a certain size, they become piscivorous. What trout eat is partly a function of their 'gape' - what they can get into their mouths, so it stands to reason that bigger fish are able to eat bigger prey. And if they eat bigger prey, they can grow

larger. This can be true, but not all large trout are piscivorous all the time. They may be opportunistic and feed on fry when they are easily available, but on invertebrates most of the time. Huge numbers of small prey can lead to bigger trout too. The trout in the River Laxa Myvatynssveit in Iceland swim in fly soup for three months of the year, eating tiny blackflies (*Simuliidae*) and midges (*Chironomidae*), plus the occasional terrestrial. They regularly reach 7 to 10lbs.

Other food

Examples of other sources of food that allow trout to grow large include mice (the fabled 'mouse years' in New Zealand where plagues of mice are a feast for trout) and, less spectacularly, signal crayfish. The huge numbers of this invasive crayfish in some of our rivers can provide a protein boost and result in surprisingly large trout.

Members who have been reading these newsletter articles about trout will spot a theme here. The answer to most questions about trout is not simple because they are remarkably adaptable, live in a very wide range of habitats and can eat a very wide range of things. The answer to questions about trout is very often 'it depends'.

A little 'stocking filler' book from the WTT

In the Spring 2021 newsletter, we asked members to write some 'very short stories' about their wildlife experiences whilst fishing. The response was tremendous, and we have now published them in a 'little book' along with lots of bite sized facts about wildlife and trout. The book is called 'Not Really Fishing - A Little Book of Riverside Moments'.

If this little book is successful, we may produce another volume for Christmas next year. If you feel inspired to write a short story of 160 words or so, please send to Denise Ashton dashton@wildtrout.org.

Copies of the book are available now to buy from the WTT website shop or from Amazon. (We make more profit from sales via the web shop, whilst our stocks last).

The price is £5.99 plus £1.60 postage if ordered via our website. Profits will go to support our work in making river habitat better for fish and all wildlife.

Please share widely, and order in bulk to give to friends or sell at your fishing club AGM!

Not Really Fishing

*A little book of
riverside moments*



*Edited by
Denise Ashton and Theo Pike*

Resilient rivers

Bruno Vincent considers a future for our rivers as our climate changes

Our work at WTT has always centred around natural river function; with the desperate need for resilience against the inevitable changes in climate, our remit remains unchanged and is perhaps even more necessary.

Take a weir as an example. It creates two large sections of unnatural, homogenous habitat: upstream, the impoundment slows the flow to a mirror calm; under the surface, a desert of deposited silt in a uniform layer. Below the weir, the sediment-starved bed may hold only cobbles and boulders too big to be washed away: a different but equally monotonous habitat. Yes, each habitat might support a few fish, but if conditions change for the worse, is there anywhere for those fish to go in a hope of maintaining their existence? The same can be said for the multitude of angular sectioned, revetted, straightened and even concrete-lined channels across the country.

Our underlying principle is that building back diversity in 'micro niche' habitats, using tried and tested techniques such as woody material, weir removal, gravel augmentation and re-meandering, will help to create or maintain all the various habitats needed for our native species to survive in a changing climate.

We might look at a river reach and exclaim 'terrific trout habitat', but that accolade is earned under the surface by diversity at a macro level: juvenile habitat riffles, runs and glides and deep pools for that elusive lunger. This was created by the power of water, gravity and the absence of human interference to fragment, dredge or 'tidy up' the channel.



CHARLES RANGELEY-WILSON

Looking at habitat at a reach or species level ignores the tiny and increasingly important micro niches that provide the resilience we are already beginning to need.

Yes, shading the river with trees is important to keep them cool, buffer zones to attenuate run off in an immense downpour essential, and reducing abstraction to keep something wet in the channel in times of drought. This much is obvious. We just need to take a closer look beneath the surface and make sure the landscape of the channel is as diverse as possible.

Try imagining a river with all the water taken out - worryingly easy in some parts of the country. Too many rivers and streams would look like a motorway: efficiently straight, all the lumps and bumps removed, cutting

through hills, rather than taking the long way round. Like overly engineered rivers, motorways are not a place for life; they're a place for us to move things somewhere else, as fast as possible. The empty river should look more like a model of the Peak District: hills and intermingling valleys, stands of woodland with a variety of trees, habitats for all resident species, and never organised into a confined, geometric box.

Aside from abstraction and increasing water temperatures, rivers' resilience to the unknown, but likely extreme, changes in our climate are the same foundations that gave them life in the first place. We just need to put as many of those foundations back from where they were taken.

The fish I call 'The Sergeant'

Nick Lawrence, Conservation Officer for the South



The Sergeant: above in 2020, below in 2021



Here in southern England, there is a river with large wild trout: I've been lucky enough to encounter two fish over the last two seasons that were 5lb and 5lb 13oz.

This story starts on 20 May 2020. After being locked up at home for a month or so, the desperation to go fishing was intense. I found myself on a warm evening, thick with mayfly spinners, walking the banks of this particular river looking intently for fish rising. Much ground needs to be covered if large fish are to be found.

Finally, I found a rising fish in a slack behind a fallen willow. I watched for a while and realised it was probably the largest trout I have ever fished for. My heart started pumping. He was swimming around freely eating mayflies. I settled myself and cast to this monstrous trout. He

did not notice the fly on my first cast but with the second cast I intercepted his cruising pattern and he took the fly. There then ensued a frantic fight and a struggle to get into a position to land the fish. Wild 5lb trout in the south of England are like hens' teeth.

As a bit of bravado (not sure why I did this) I posted the picture on social media. A message from a random chap came into my inbox, 'I think I caught that fish 10 days ago. Exactly the same markings. I will take the location to my grave. You weren't fishing XXXX were you?'

We had never met, but to my amazement he sent me some pictures. We had a chat and realised we had indeed caught the same fish, 10 days and 400 yards apart.

Roll forward to the 2021 season and I am keen to get out to find

another big wild trout from the same fishery. I meet another angler on the bank and he asks if I am Nick – it's my new social media chum. We have a chat about the fish we caught last year, both still in awe at the size of it. He mentions that he caught a monster a few nights ago and shows me the photo. I am amazed at the size and secretly slightly annoyed that he has caught another big trout! I said, 'I must get on and go fishing'. I find myself in the upper part of the beat, late for my daughter's cricket lesson, when I see a trout rise in a 'boss' place. I venture in, nearly drowning as it is a really tough spot. Get a fly over it, hook the thing and know it's a beast. Play it to the net and think 'wow this one is bigger than last year'. Get a few snaps, put it back and rush off to the cricket lesson, ringing my new friend to tell him the news. I send him a few pictures when I get home and he sends a message back: 'We have done it again!' We've each caught the same fish, again. It had moved 400 yards upstream of where it was first caught! Then we look back at the pictures from the year before and realise it was the same fish that we both caught last year, now just 13oz heavier. The weights are a bit 'give or take' as it was my McLean weigh net but the fish was definitely bigger than 2020.

Subsequently my new friend did some searching of old photos and he thinks he also caught the fish in 2019 when it was around 3-4lbs.

It is amazing that a trout like this can dominate a reach of river for so many years and be caught multiple times with no apparent ill effects. It says so much for the value of good catch-and-release techniques. I have called him 'The Sergeant'. The search goes on for his wife.



The Accidental Activist

By WTT supporter, angler, naturalist and writer Andrew Griffiths

For some it is a noble calling, for others it is anger, for others still it may be a 'last straw' that after many years of build up finally calls them to action, but for me it was much more British than that: in fact it was terribly British as with a clearing of the throat and an exclamation of 'Gosh! This is actually pretty awful, a poor show!' I decided it really was time I did something.

It began last February. Like many reading this I am an angler, and for years now I have been in the splendid position of having two rivers running within a few hundred metres of me, through the sandstone gorge of my midlands mill town.

They are both - or were both -

lovely little trout streams. What's more, this is largely a coarse fishing area so there wasn't much interest in fly fishing the rivers. The smaller river in particular I practically had to myself. If I saw more than two other anglers in a season I considered it crowded. I do not exaggerate. This was *my* river. There are maybe four or five of us who feel like that.

In February of this year my fishing idyll came to an abrupt end with the fracturing of a mains sewage pipe and the subsequent release of raw sewage into my stream. I was a tad miffed about this (terribly British again) and it was with real, aching sadness I watched the dippers go, the grey wagtails, and the

kingfishers not raise a family in the bank just below the site of the spill for the first time I can remember. I didn't need to kick-sample to know what was going on down there.

It was pretty awful actually and looking back, with the benefit of hindsight, the activist was beginning to stir.

Then came the incident on the Goyt. But I need to give you a bit of background first.

I live in the small town of New Mills, on the Derbyshire - Cheshire border. It was a mill town, and like all once-mill towns is struggling to find a new role for itself and is settling on tourism as playing a significant part in its future. It is not



Left: The River Goyt in happier times. Above: Post-regulatory soup: Take one batch of red tape, dice finely, add to summer lows and simmer gently until right consistency of gelatinous mass is reached. Add layer of thick, brown diatomaceous paste to taste - and enjoy!

badly placed for this as the Goyt is a main corridor out from the urban sprawl of Manchester and nearby Stockport to the beautiful high ground of the Peak District.

During the Covid crisis, the lockdowns and their partial easings, many people discovered this escape route for the first time. And I mean *many*. There were often more people on these riverbanks than my friend who lives in Manchester assured me were in the centre of town.

For my part, I am the miserable, lonesome angling-type (you know the sort) so I stayed away from the crowds. But when I finally did venture down to the Goyt, during the hot spell with low water, I was horrified to find sewage fungus multiplying all down the river. This was a known 'industrial pollution' discharge that had steadily got worse over the years (Oh Environment Agency, wherefore art thou?) but I

had never seen it anything like this - this was awful.

I cleared my throat, coughed awkwardly, and the accidental activist was born.

A spot of research revealed that the 4 CSOs around the town had cumulatively discharged almost 1,500 hours during 2020/21 which goes a long way towards explaining the algal crud covering the bed and the declining quality of the fishing in recent years.

There are probably some reading this thinking 'huh - is that all'? And in a way that is the point - I know there are rivers in a worse state than this but that doesn't mean that the decline of this one doesn't matter - this recovered from a very low baseline to become one of the finest urban trout streams in the country, and it would be a tragedy for that progress to be lost.

An Advisory Visit from Dr Paul

Gaskell of the Wild Trout Trust gave great advice and reassured me that I wasn't making a fuss over nothing and that yes, we did have real problems. So thanks for that Paul - I think.

If any good can come out of these things, then one is the community engagement we have managed to achieve with our river: people really do care when the issues are explained to them - there is a lesson there.

So where are we now? We are in the process of setting up a Friends of the Goyt group, working in partnership with the Wild Trout Trust, Mersey Rivers Trust and Derbyshire Wildlife Trust. We are currently raising an army of river monitors. Hopefully we will make a difference and turn these rivers round before they are allowed to go too far down the other side - be that by accident or design.

To be continued, as they say.

Mayfly in the Classroom - a new book from the WTT

Dr Paul Gaskell, Trout in the Town Programme Manager North

‘Mayfly in the Classroom’ is a very cheap, simple way to engage children (and grown-ups) with their local streams by collecting nymphs, looking after them in plastic drinks bottles and watching their transformation into adults. Paul Gaskell explains how this simple concept has been developed into a new guide book for teachers and parents.

‘Mayfly in the Classroom’ is a new book developed as part of the Trout in the Town project. Though, it might have been more accurate to call it ‘Upwings in the Classroom’ since it extends well beyond the classic insect

of Duffers’ Fortnight...

Following on from the publication of ‘The Urban Rivers Toolkit’, the time seemed right to re-vamp and do justice to the resources developed to support the Mayfly in the Classroom (MIC) initiative. Over many years, a collection of instructions, fact-files, lesson-plans and case-studies had been created and used to promote instant, affordable aquarium kits. The associated activities help engage kids, parents and teachers with their local streams. As well as using upcycled plastic bottles to create aquaria (and rescue those vessels from the ‘single-use’ category), these activities are also far cheaper and much less technically

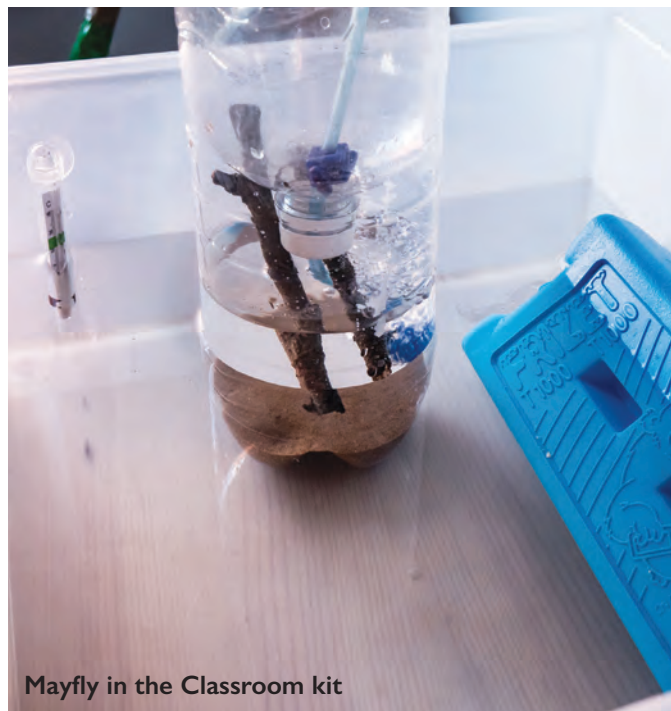
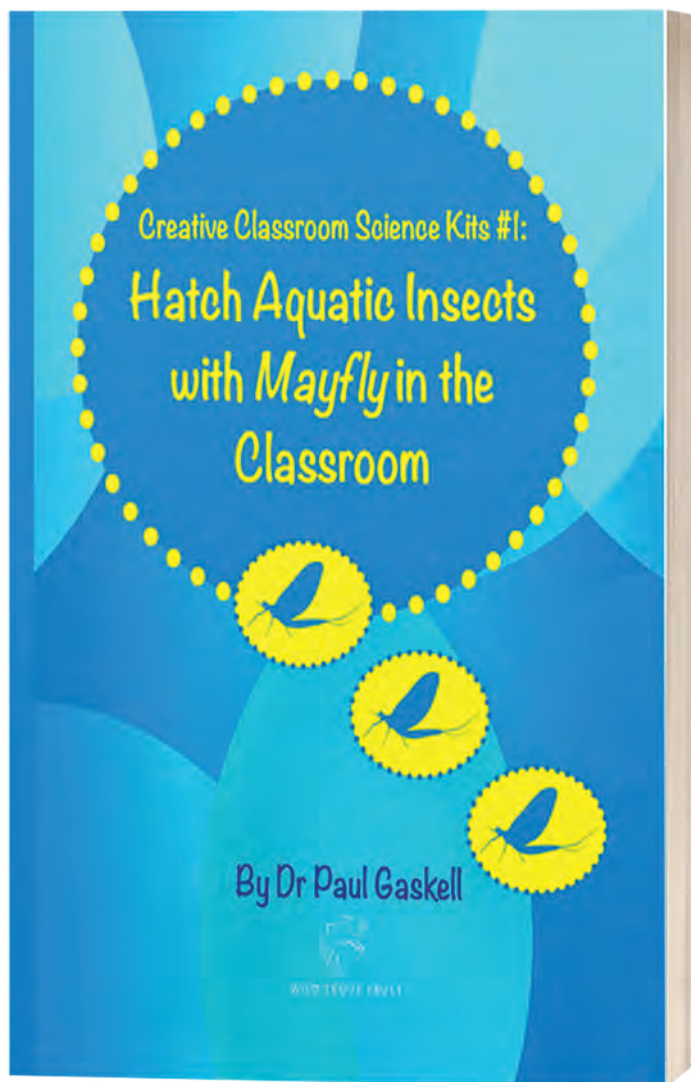
demanding than equivalent Trout/Salmon in the Classroom projects.

However, since MIC was one of the very first ideas I worked on after joining the Trust in 2008, we’ve all learned a lot in the intervening years. The sheer volume of truly fascinating natural history associated with the high-speed sex-and-death Shakespearian (or alien sci-fi) lifecycles of the insects themselves was probably undersold in the original content.

Digital camera technology and (more gradually) my abilities as a photographer have certainly

Boys and bugs!





MAYFLY IN THE CLASSROOM

Do You Know a club, community group or school who need this book?

To order a copy, just go to the Amazon website and type in "Mayfly in the Classroom by Dr Paul Gaskell". A proportion of the retail fee (£14.99 plus P&P) is paid to the WTT as a royalty for each purchase - which is another simple way to support the WTT, with our great thanks.

improved. In parallel, the world of self-publishing and print-on-demand has changed out of all recognition compared to 2008.

This combination of circumstances, supported by EA funding, led to us being able to address one of the core difficulties of sharing MIC with disparate groups of people. Since the potential benefits of Mayfly in the Classroom far exceed simply going through the motions of using the apparatus, the broader scope needs careful presentation to avoid overwhelming recipients. A collection of online instruction sheets, in most cases, required a good deal of additional WTT staff support to enable groups to run a successful project. By carefully introducing key details in the correct sequence within a book format, the whole MIC experience can become far more accessible at a much wider scale

without the need for WTT staff hand holding.

In addition to my expansion and re-writing of the collated material (and lots of new photography), it has been a pleasure to work with Rebecca Hawtrey as the designer of the book. As you can appreciate, it's not only the content of a message - the presentation of that information is crucial for maximum effect.

So what about the messages in MIC?

Since upwing flies (just like trout) reflect their environment, all our core messages about trout stream habitat and its custodianship can be directly appreciated by participants using their local river as an outdoor classroom. By 'borrowing' vital elements of that river's aquatic foodweb (mayfly nymphs), and with the right presentation of the reasons

why (and not just how) to run MIC, the challenges facing our rivers are brought indoors for a period of weeks to live alongside the students and their teachers.

To close the circle, after the miraculous double moulting from nymph to dun and from dun to spinner, the adult flies that were borrowed from a river are returned to the bankside vegetation to pass on their genes to the next generation. Along the way, everyone involved in MIC has the chance to become much better acquainted with the workings of their local river, the surprising beauty on their doorstep (at micro and macro scales), what these aquatic populations require to survive and the threats they face.

Not bad for some discarded drinks bottles and a handbook that's only printed, transported and stored when it's actually needed.

Tarmac donating locally sourced limestone gravel for spawning bed augmentation on the Skirfare



TROUT news from Yorkshire

Jonathan Grey, Research & Conservation Officer North

TROUT is working! Well, at least at the sites where I have managed to get habitat improvements underway. It is a 5-year project after all. To remind you, Tackling Resilience On Underperforming Tributaries (TROUT) was designed to tackle bottlenecks to spawning and fry production by improving gravel as well as instream and riparian cover, particularly shade. The project is supported by Yorkshire Water and the West Yorkshire Branch of Salmon & Trout Conservation. This has been extended at specific sites via leveraged funding from other sources such as the EA's Fishery Improvement Programme or donations of material like Tarmac contributing 25 tonnes of spawning gravel for tributaries at Halton Gill on the Skirfare.

The graph on the page opposite is from the 2020 newsletter article about Dauber Gill but updated with data from 2021. The trout are clustered into size bins so the first 'peak' of fish between 40-80mm represents young-of-year or YOY, my target for improvement in numbers. Dauber Gill is where, with Nidderdale AC, I have added woody

deflectors to retain and sort gravel and then added 20 tonnes of gravel annually before the spawning season. The different colour bars represent the different years and the take home message is as follows. In standardised catches, YOY trout have increased from ~30 in 2019 (prior to gravel addition) to ~60 in 2020, and >100 in 2021. One bottleneck apparently broken.

What is also interesting to note, the YOY fish are typically smaller than last year. This could be an indication that food resources may be limiting: more fish means less food each. However, it could simply reflect the ridiculous weather we've had this year: very warm in late March and very cold in late April / early May, and the relatively low flows this part of Yorkshire has experienced, hampering their growth. Something to look out for in subsequent years.

Members sometimes ask 'where is the evidence for this type of thing working?' It's part of my role to ensure that we have sound science and data to underpin our work. Eight project sites where I have made some sort of intervention, be it a weir removal, gravel addition

or large woody material addition, have all demonstrated a boost to fish numbers: between 1.3 and 5.1 times the number pre intervention. These data have contributed to the thesis of Lizzie Thomas, a current Early Career Researcher at Imperial, undertaking a meta-analysis of how habitat restorations benefit trout populations - keep a weather eye for the outcome of her work on the WTT Blog.

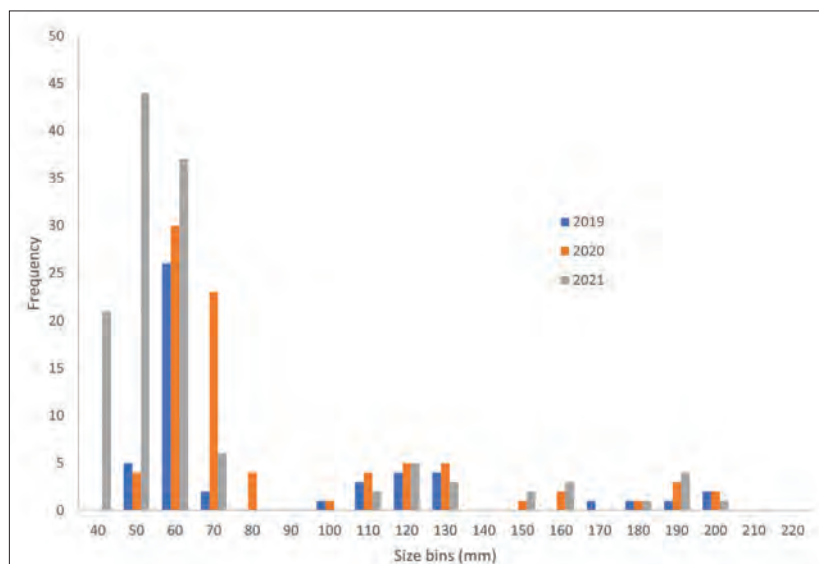
Below: A new 'old' channel for Lothersdale Beck





Above: How old are you?

Right: Trout abundance over time in Dauber Gill, pre (2019) and post (2020-) habitat improvements



I had hoped to have more of my control streams monitored in time for the newsletter, but new projects have cropped up meaning the monitoring of a few older sites has slipped. However, it seems my fears for the wider trout production based upon the 2020/21 winter weather (and spate flows recorded) may be unfounded. Trout YOY numbers have been up on the past 2-3 years across all my sites so far. So, good news, even in the streams that have yet to receive some TLC. Let's hope plenty of those little fish make it through this winter, wherever they end up.

I say that because received wisdom is that the majority will make their way downstream as they grow to find suitable habitat to accommodate their

needs. One tiny TROUT site caused me to reflect on that this summer. Last year I caught YOYs at ~70mm, some 1+ fish at ~115mm, and a single fish of 170mm that I assumed to be 2 or 3+ and maybe trapped in the short spring fed reach as flow dropped over the summer. This year I caught YOYs and 1+ fish and 'another' single fish of 170mm from exactly the same spot. If it was the same fish, and it is not growing anymore, then goodness knows how old it might be, eking out a living in a beck one can step over at any point along its length. I'll be paying close attention to that caudal fin next year, with its unusual nick (image above)!

Variety, as ever, is the spice of life, and my current project portfolio

is diverse. I've reconnected a short paleo-meander on my local (straightened) Lothersdale Beck to try and reintroduce some sinuosity and 'slow-the-flow'. It has only experienced one rainfall event so far and if you are stuck for 4 minutes, then check out the slug and snail activity as water flowed down the new 'old' channel for the first time in decades: https://youtu.be/K6cq8_V0jtI

But the clock is ticking for in-river works and I still have to remove a culvert, remove a weir, drop 12 ash trees into a river, and all sorts of other bits and bobs before the end of September!

Below: Target acquired: a redundant and dilapidated weir, ripe for removal



Good for the Granta

Rob Mungovan, Wild Trout Trust Conservation Officer for the East

April 2021 saw major work completed along ~1km of the River Granta at the Babraham Research Campus (Cambridgeshire). The work has improved habitat for brown trout, of course, and the river's increasing population of water voles.

One of the main drivers for the work was floodplain re-connection. Typical of rivers that have been realigned for milling or water meadows, the river has been moved to the edge of the floodplain and an area of woodland is now growing at the lowest point of the valley, where

the channel should be. The removal of levees together with careful bank re-grading and the creation of a few runnels now allows the river to spill onto its floodplain. More space is available to hold flood water, reducing the flood risk to houses. It also reduces the wash-out effect on



Gravel reintroduction. Gravel was carefully redistributed within the channel and topped with clean, 20mm stone to provide new spawning riffles for trout and minnows.



Levee removal. Mounds of previously dredged material on the river bank were removed to allow the river to connect with the floodplain. Gravel material from the levees was put back into the channel.



Placement of very large woody material. Felled trees were fixed across the river not only to initiate bed scour, but also to obstruct the flood flows and encourage the river to come out of bank and spill onto the floodplain.



Tree hinging. A technique to provide cover for trout, to deflect flows and protect banks from erosion. In this case, folding hawthorn trees into the channel in line with the bank also prevented dogs creating 'slides', helping reduce the amount of silt entering the river which was smothering the gravel bed.

juvenile fish associated with high flows, and once the water is on the floodplain it has the chance to soak into the ground, aiding aquifer recharge. The River Granta is badly affected by low flows as a result of many different licensed abstractions, so any chance to put excess water to better use is a great outcome.

The work followed a WTT Advisory Visit after the Babraham Research Campus sought help on how it could optimise river habitat.

A plan was conceived, and the EA found funding through its Flood and Coastal Risk Management function. The local EA Fisheries Officer smoothed the path of the permit which meant that from the point of refining the plan in Dec '20, machinery was on the ground by April '21.

The Granta flows for ~29km through Linton, the Abingtons and Babraham before joining the River Cam. There are community groups that established as a response to

drastically reduced water levels, a product of recent drought and abstraction. WTT, together with other conservation groups, is supporting these community groups to take action to improve river habitats and secure better flow. It is hoped that this phase of work will act as a catalyst to show what can be done for Cambridgeshire's chalk rivers.

We use a number of different techniques in this project - see below:



Bank re-grading.

Sections of the river bank were reshaped where the river was deeply incised. Vertical banks and tunnels of brambles were hiding the great potential of this unseen chalk river. Bank re-grading at a popular bridge has improved access and has made the river more resilient to people (and dogs), and hopefully steers them away from more sensitive parts of the river, such as spawning shallows.

Above: Before re-grading, the river was hidden behind a fence and brambles. **Below:** After re-grading, the river is able to flood into the adjacent woodland through an excavated low spot (red arrow)



News from the North

Gareth Pedley, Conservation Officer for the North revisits a local project and reports on work in Ireland

West Cumbria - Black Beck restoration update.

In our Autumn 2020 newsletter (p19) I described a habitat improvement project on the Black Beck in Cumbria. This work took place in between lockdowns in the summer of 2020 and involved channel restoration, replacement of two undersized culverts to reinstate free fish passage, buffer fencing and other improvements to adjacent agricultural land to reduce diffuse pollution. A year on, the habitat improvements have really started to settle in and the importance of these small streams as both spawning and nursery areas becomes amazingly apparent.

As early as the first visit back to the site this spring (April 2021) hundreds, if not thousands, of 'young of year' trout were found in a new section of river which was open pastureland only seven months previously. This is by no means an isolated experience. Most river restorations I am aware of produce similar rapid results, with spawning usually occurring in the first winter. It's always great to see, though. Build it and they will come!

What was a straightened and uniform cobble bedded channel has been swapped for a sinuous and diverse channel with a range of substrate sizes, clearly capable of supporting the full trout lifecycle. Aside from the habitat quality improvement, the length of river channel was increased by 40m. The increased width variability compared to the original channel has created a far larger wetted area. While that is not always an improvement (erosion and over-dredging can create over-capacity channels, for example),



in this instance the discrete areas of increased width have facilitated far better retention of gravel than was possible on the overly steep, uniform width, straightened channel it replaces. With these improvements, a far broader range of habitat niches have been created for fish and invertebrates.

So, to anyone that would question why you would bother restoring, or even carrying out fish passage works on a stream you can step over, there is your answer! The exact contribution such streams make (or should do on natural watercourses) to both trout and sea trout populations is difficult to accurately quantify, but it is usually considerable. Those small streams are naturally the prime areas for recruitment.

Ireland

In addition to the project work and local Advisory Visits I am involved with on a day to day basis, opportunities sometimes arise for excursions further afield, with two visits to Ireland being undertaken so far this summer (both having been postponed for 18 months owing to Covid).

Above: Black Beck (September 2021) in its new, sinuous channel. 12 months previously this shot would have just shown a field. Below: In April 2021, just seven months later, this baby trout was living in the new channel.



Co. Mayo

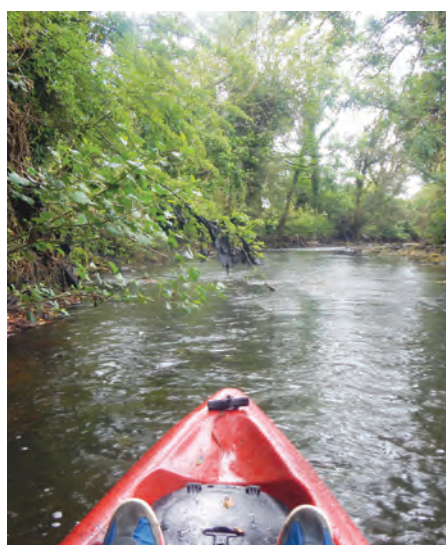
The first of the Irish visits was to the River Pollagh, a sub-catchment of the River Moy in Co. Mayo. When this visit was being planned, my host had greatly underestimated the distance to be surveyed - an easy thing to do on an unfamiliar area as the bends and meanders mean a lot more channel to look at than a straight line on a map would suggest. The time and resource allocated wasn't going to be enough to cover the distance required, especially with

the difficulties of negotiating regular field boundaries and overgrown riverbanks. With this in mind, an alternative solution to the traditional walkover was required, and the kayak-over was devised by my host,

land use, particularly on incised and/or embanked watercourses. Nonetheless, for the purposes of the Pollagh assessment, where the majority of the watercourse was buffer fenced with a well-vegetated



Above: In-channel dredging on the Mill River during the visit. Below: Kayak surveying on the River Pollagh



along with the kayaks.

This alternative surveying method worked incredibly well and actually resulted in us finishing ahead of time. It also highlighted another potential habitat assessment option in the WTT Conservation Officers' arsenal. It does come with a few caveats; a regularly impounded river may not prove so easy to navigate and permissions may not be obtainable on many rivers. There is also the issue of reduced field of view, as being low down to the river prevents assessment of the adjacent

riparian zone, the kayak survey proved very handy. The watercourse is not without its issues, including dredging, incision into the underlying bedrock, straightening, disposal of vast amounts of silage wrap into the watercourse, and significant inputs of fine sediment and excrement at drinking bays, but these were all perfectly identifiable from the water.

Inishowen, Donegal

A busy week in Donegal, beginning with an Advisory Visit on the Mill River to assess habitat and a combination of natural bedrock (modified) and man-made obstructions. In-channel dredging of the river bed was taking place during my visit, so the damage could be witnessed first-hand - a common issue in Ireland and also on some river systems nearer my Cumbrian home.

Days two and four were walkovers of small coastal 'spawning streams' that would almost certainly have been good spawning and juvenile habitat for sea trout originally, but a long history of straightening and dredging has resulted in very degraded streams that appeared barely capable of

supporting trout. They do present an opportunity for significant improvements if agreements for habitat project work can be gained.

The other two days were spent delivering riverside workshops. Not the traditional practical workshops that we often deliver, but theoretical workshops to cover a wider range of sites and situations. The first looked at fish passage issues around a range of different structures, discussing potential solutions from the best option of removing the offending structure, right down to the cheap and simple easements that could at least assist fish passage if feasibility, cost or a lack of permission are prohibitive to removal. The second day was spent looking at bankside and in-channel woody material to discuss the range of benefits to habitat quality. It is very easy to overlook the ongoing improvements to channel morphology, and therefore trout and invertebrate habitat, created by increased structure from woody material in the channel. It is not only the structure and flow diversity at one point in time, but also the associated scour and deposition in a range of flows over a period of time that helps to create and maintain a varied bed profile.

The final day was spent delivering a large woody material workshop. We visited a range of sites to look at the existing structure, the value it provides, and to assess where or when such habitat may require adjustment within the channel. This is a difficult one to call, as in an ideal world the answer would almost invariably be 'never - leave it alone!' but with constraints of flood risk, angling and even local residents' perception, sometimes compromises have to be made. That said, I would always make a strong case for leaving well alone wherever possible as woody material usually finds a natural balance within a channel, coming to rest in a safe place, inappropriate man-made infrastructure aside.



There is a river in here somewhere

Tapping into your rod licence money!

Andy Thomas reports on his latest project

In September 2021 we completed a project on Hampshire's delightful River Lyde, in partnership with the Gresham Angling Society. The Lyde is a chalkstream near Basingstoke and the Gresham members fish a good long stretch of both the Lyde and the Loddon. The project opportunity came in the usual manner - via a WTT site visit. The club, in the shape of the super-efficient and well organised Brigadier Mike Wharmby came to us for suggestions on how to manage a section of the river at Hartley Westpall. The stream channel here is deeply incised, courtesy of some zealous dredging work carried

out at some time during the last century. The dredging lowered the bed of the river and created a deep, narrow channel with a fringe of reeds that has steadily encroached into the river from both margins. During high summer the reeds, rushes and grasses almost meet in the middle, necessitating frequent maintenance work by the club just to keep the river fishable.

The EA allocate some of our rod licence money to fund work to improve fisheries under the cunningly titled Fisheries Improvement Programme. Most of our project funding tends to

materialise on the back of the ecological needs of trout rather than to improve rivers and streams for angling, although we would argue the two opportunities are usually mutually inclusive.

Following the site visit I devised a plan which we shared with the Gresham and with Adrian Bicknell and Stuart Mainwaring from the EA's Thames Region fisheries department. The plan was to use a tracked excavator to pull back the encroached fringe and raise the bed of the stream with 160 tonnes of imported flint gravels. We initially targeted three short (30 metre) sections to create





DREDGING

Many of our rivers have been (and some still are) dredged for gravel which results in an over deep, silty, slow channel robbed of its natural pattern of shallow fast water, deeper pools and clean gravel for spawning. The slow flow and silty bed make a perfect home for marginal vegetation such as branched burr reed, canary grass and reed sweet grass. In small areas this may not be a bad thing, until the marginal vegetation takes over the whole channel for long reaches. The key for us in our habitat projects is to ensure the river has a natural diversity of habitat and flow to support all life stages of trout and other wildlife.



Left: An undredged section of the Lyde. This is what the river should - and will - look like! Above: The boat-as-wheelbarrow technique for moving gravel

some much-needed diversity in channel shape and flow patterns. We have often been involved in narrowing stream channels to help increase flow velocities but in this case we aimed to do this by making the section shallower and faster. Which is exactly what we achieved!

In creating pacey flow characteristics, we fully expect to change the nature of the aquatic plants, encouraging flow-loving submerged species such as water crowfoot (*Ranunculus*), rather than reeds. This will keep the channel open for fly fishing and cut down

on expensive and unsustainable maintenance work. The habitat created is also better for juvenile trout, so will help to maintain good trout populations in this unstocked reach. If the project is deemed a success, then the club will have a blue-print of how to improve much longer sections of the Lyde where the stream channel has been heavily dredged. At this stage, I should say a big thank you to Martin Moore and the Loddon Fisheries and Conservation Association who were very supportive of the project, especially as the scope of our ambition was very near to the limit of

our available budget!

FIP projects tend to be small scale, requiring budgets usually less than £10,000 and are a great way of getting your club involved in habitat improvement projects, provided the project can also hit the angling buttons required to qualify for rod licence funding. Your local WTT Conservation Officer will have access to EA fisheries personnel for local projects, so if you think your club might have an opportunity to plough some of your hard-earned rod licence money back into your local club waters then why not explore the possibilities with us?

Tales from the South

Nick Lawrence, WTT Conservation Officer



Left: The unfenced brook, looking upstream of the GCT fenced section. Poor habitat. Right: The fenced GCT study site abundant in habitat diversity and trout!

Despite Covid, we've been extremely busy down south with advisory work. In my patch, from Hampshire to Devon, no less than 8 project proposals and 12 Advisory Visit reports have been delivered in the last 12 months. Requests for my help have come from landowners, fishing clubs, wildlife and rivers trusts and we have had good feedback on progress and actions following the visits. Here are a couple of examples:

The Axe Vale Rivers Association (AVRA), a keen conservation group on the Devon Axe, requested a visit as they were eager to improve their river and the catchment; this is a river that has been heavily abused over the years, 'abandoned to agriculture', to quote the EA. There is some positive recent news as my visit has helped to focus local efforts and AVRA are very optimistic that improvements are indeed happening. Our report sparked the local EA geomorphologist to write a report focusing on the river's health and local land use, which has unified AVRA and riparian owners into greater effort. The infamous Axe report of 2020, which detailed horrific agricultural pollution and a lack of enforcement of regulations, has helped 'encourage' the Government

to significantly increase funding of EA's agricultural compliance team.

I will go back to the Axe to survey an important nursery and spawning tributary for sea trout. AVRA have been very proactive and rallied all the landowners and farmers on this tributary, gaining permission for me to visit and help understand the actions needed to maintain a healthy spawning and nursery stream.

The next site of interest is the Devil's Brook, a tributary of the famous Dorset chalk stream, the Piddle. The Devil's Brook is an important trout nursery and provides spawning for sea trout in its lower reaches. Much of the river has been straightened and moved to the edge of the floodplain and is heavily impacted by large herds of cattle. There are very few fenced reaches and trout struggle in greatly degraded habitat.

After visiting 5 farms under a project coordinated by the excellent Farming and Wildlife Advisory Group (FWAG), I was asked to find opportunities to improve prospects for trout and other fish.

Historically, some of the lower reaches of the brook were the subject of some innovative work by the then Game Conservancy Trust (now the

Game and Wildlife Conservation Trust, GWCT) who undertook a lengthy study into the impact of stock fencing on trout populations. The results of this research led to the publication of guidelines promoting the use of stock fencing to protect and improve in-channel habitat. The exclusion of livestock increases the abundance of juvenile salmon and brown trout, as a result of changes to the river's width, depth, flow and vegetative cover.

A new section of the Devil's Brook was fenced in 2020. Electrofishing subsequently carried out by Wessex Water in August 2021 on fenced and unfenced reaches showed similar results to the earlier GWCT work: fencing clearly helps preserve and enhance salmonid habitats where cattle poaching is heavy. Very limited data on this reach, but persuasive. These results have been shared with the farmer and he is keen to fence another section and add some large woody material to enhance the habitat. So, progress is being made, although there is much still to do. These case studies and the associated data will provide the information for farmers to change their practices for the improvement of the Devil's Brook.



CHRISTMAS GIFT MEMBERSHIP

Retired membership £23 or life £300, Individual membership £44 or life £400. Recipients will receive 2021 and 2022 publications plus a membership card and car sticker as usual. Life members also receive an enamel badge. From October to January, a cloth badge will also be included for all new members. Membership will be valid until 30 April 2023.

ENAMEL MUGS £9 (plus £3.30 p&p, UK)

Big enough for a good cup of tea but small enough to take fishing, camping or just into the garden. Made of steel with an enamel coating in cream with a green rim and etched with the WTT logo. Dishwasher-safe and oven-safe up to 530°F / 270°C.



CAR STICKERS £1.95 (including p&p, UK)

A car sticker displaying the WTT logo and website address.



WTT CAPS £15 (plus £3.30 p&p, UK)

Ideal to keep the sun out of your eyes and mute enough not to scare the fish. Dark green, soft needle-cord 100% cotton corduroy with an adjustable strap & buckle, embroidered with the WTT logo.



TEA TOWELS £6.25 (plus £1.60 p&p, UK)

Who doesn't need tea towels? 100% premium cotton tea towels printed with the WTT logo and a scenic trout illustration. Super absorbent, full wash colour fastness and with a hanging loop.



CHILLY'S BOTTLES £20 (plus £3.30 p&p, UK)

Perfect on the riverbank whatever the weather. 500ml, matte green bottle etched with the WTT logo. Airtight screw-top lid, leak-proof, BPA-free, 24 hours cold, 12 hours hot. Vacuum-insulated to remain condensation-free.



ENAMEL PIN BADGES

£3.95 (including p&p, UK)

A hard enamel badge displaying the WTT logo with a butterfly clutch pin fastening.

ORDER via our shop at www.wildtrout.org/shop; or by sending a cheque payable to Wild Trout Trust Ltd (allow 5 working days) to 'Freepost Wild Trout Trust' (this is a complete address and does not require a stamp); or by phoning the office on 023 9257 0985. Please place Christmas orders no later than 10 December but preferably as soon as possible to allow for stock requirements and Royal Mail which generally takes longer at this time of year. Thank you.

WTT ANNUAL DRAW - FRIDAY 3 DECEMBER 2021

Do please buy a ticket or two or more... and encourage your friends and colleagues to do likewise.

Tickets cost £1 each. We have some lovely prizes as listed below and all proceeds are used wisely in our habitat restoration work. Thank you for your support and good luck!

1ST PRIZE KINDLY DONATED BY SAGE, WORTH APPROXIMATELY £1000+

A Sage Single-Handed Fly Rod of your choice from the range current at the time of the draw to which will be added an appropriate reel and line.

2ND PRIZE KINDLY DONATED BY THE PEACOCK AT ROWSLEY & HADDON FISHERIES, WORTH £620

One night's accommodation in a large double/twin room for 2 people with 3-course dinner and buffet breakfast, plus 2 low-season

tickets to fish the Derbyshire Wye, 2022 season.



3RD PRIZE KINDLY DONATED BY THE ARTIST, MARTIN JACOBS, WORTH £395

A framed, original painting, 'Chalk Stream Delight'. Mixed media on Two Rivers handmade acid-free paper, measuring 12in x 8in plus frame.

4TH PRIZE KINDLY DONATED BY GEORGE & ANN EATON, WORTH £120

A day for 2 or 3 people (can be parent and child) to watch wildlife from a 'high seat' in a tree at Rectory Farm (in Bucks) to see badgers, muntjac deer, hares, owls and foxes. Summer 2022.

5TH PRIZE KINDLY DONATED BY THE AUTHOR, DICK HAWKES, WORTH £30

A new, hardback copy of: *Chalk Streams: A Unique Environment Worth Conserving*.

ORDER via our website: www.wildtrout.org/shop until 5pm on 3 December. Or use this form but please ensure we receive it by 1 December (allow 5 working days). We will complete the counterfoils and send the corresponding tickets by post or numbers by email, whichever you prefer.

EVENTS

BFFI '22

Hopeful of a happier winter than recent winters past, we'll be at the British Fly Fair at Stafford County Showground on 12 & 13 February 2022. More at <https://bff.co.uk>

WTT 3 FLY FUNDRAISER

Meon Springs, Hampshire, 18 June 2022. A great day out, friendly

fishing for top prizes and valuable funds for WTT. More at <https://www.meonsprings.com/three-fly-challenge.html>

WTT TROUT WEEKEND '22

We'll aim to run a WTT members-only trout weekend on the hallowed waters of the Haddon Estate, likely in July or August 2022. Keep an eye

out for further news early next year.

WTT GRAYLING WEEKEND '22

We will run a WTT members-only grayling weekend in the autumn of 2022 on the southern chalkstreams. Again, look out for news early next year.

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