

## Activities of the Wild Trout Trust in 2018/19



*WTT volunteers & staff in action...*

### **Our highlights**

In our 2018/19 year, WTT...

-  ran 82 practical demonstration events, helping people make their rivers better
-  carried out 240 advisory visits to rivers and lakes, over 80% resulting in beneficial, practical action
-  worked on at least 480km of river, with over 4,000 volunteers in 23,000 hours of practical work
-  facilitated improvements to aquatic habitat, evidenced by physical and biological change and in how people manage their river
-  worked with a range of institutions on post-graduate projects & widely disseminated ongoing research on aspects of freshwater science pertinent to our work
-  spread messages on aquatic conservation through a variety of media to an audience of many thousands of people.

## Practical help and advice

WTT works with river/lake and fishery interests across Britain and Ireland in our core role: to provide practical help and advice to local community groups and landowners, through demonstration events, the drawing-up of technical proposals and advice on habitat improvement techniques.

In 2018/19, we carried out 240 visits to sites across much of Britain and Ireland, an increase of 37% on 2017/18 and compared to a 5-year mean of 166. During these visits, we offer expert advice to landowners, angling clubs, other community groups and local and national Government officers, to identify good and bad habitat and opportunities for improvement. Feedback from a significant sample of those site visits (see Box 1 below) suggests that all recipients were very happy with their interaction with WTT and that our officers' advice led to beneficial action for the river in 82% of responding recipients (n=36): river-side fences were erected to exclude damaging livestock grazing and poaching, weirs were removed, and gravel and woody material introduced to create diverse habitats that benefit not only fish, but much other wildlife in and around the river. In many cases, we have influenced more sensitive management of rivers, for example encouraging less drastic lopping of riparian trees and a reduction in (or cessation of) stocking with farm-reared trout. Some of the site visits were to very short river reaches, less than 200m, but in other cases, such as a series of walkovers on the River Aire catchment in North Yorkshire, our Conservation Officer walked and reported on c122km of stream!

### **Box 1: Examples of feedback on WTT Advisory Visits 2018/19**

*We are investigating removing the weirs. We have stopped removing wood. We are making greater efforts to clear litter and other rubbish. We are now removing invasive plants from the banks. We are more aware of the need to report pollution incidents and how to do so. We have a good understanding of the misconnection issue.... We were given a dream to aspire to that there could be trout in the Trym. Alex Dunn, Sustainable Westbury-on-Trym*

*Faultless. 10/10. Exactly what we'd hoped for. Educational, enjoyable and for me personally, an eye-opener. If any other club asked me if it was worthwhile for them to involve the WTT, I'd tell them to grab the opportunity ASAP! Anthony Pearson, Harrogate AA*

*Our dealings with WTT are always fantastic. The partnership that we have developed over the last 3 years continues to go from strength to strength. WTT continue to be a source of inspiration for us and a great deal of thanks is in order for providing us with the belief that we could deliver hugely beneficial, low cost habitat works to support our catchment. On a personal note, the work I have done whilst working with WTT has provided me with a continuous programme of development, allowing me to vastly improve my knowledge of rivers, natural processes and conservation techniques. Tom Myerscough, Wyre Rivers Trust*

*Excellent, it is practical and informative in a language that normal people can understand. [WTT has] had a huge influence on how we manage the river that we own. Con Meaney, Waltonians FFC*

*WTT has been of great assistance to the committee in coming to forward thinking decisions about the future management of the upper reaches of the river Nidd...WTT has responded quickly to requests for help and advice. [WTT]'s knowledge of how to deal with the requirements of the various official bodies involved in these improvements has been extremely welcome, as has [its] ability to raise funding wherever possible. Michael Pattinson, Nidderdale AC*

*We have taken everything on board as suggested and put it all into action...placing narrows in the river later this year and we have undertaken a fair amount of tree work to get some sunshine and light to our river to help it come alive. We have begun cleaning the silt and gravel where we can with rakes and forks and are hopefully planning to add more gravel as suggested. Sam Crosse, Heckfield Place*

We organised and ran 82 practical events or projects, from single-day River Habitat Workshops through to significant river restoration projects, an increase in output of 28% relative to 2017/18 and comparing favourably to the 5-year mean of 63. The Workshops, held this year on rivers from Cornwall to Donegal, are led by our expert Conservation Officers, demonstrating and implementing with groups of volunteers simple but effective habitat improvement techniques for the river: bank repair and reinforcement using natural materials, removal of small weirs and introduction of gravel and wood (see Figure 1 below). There is evidence that those involved benefit greatly from the days (see Box 2 below), for example in expanding their knowledge of riverine ecology and how to make things better, safe working practice and use of hand tools, but also gaining in aspects of health and wellbeing. Many of our partners and volunteers further apply the knowledge they gain through Advisory Visits and Habitat Workshops in caring for their own river reaches, with feedback (examples in Box 1 & 2) indicating that this and an ongoing dialogue between our Conservation Officers and those partners is a well-received feature of WTT's working.

**Box 2: Examples of feedback on WTT River Habitat Workshops 2018/19**

*The Big Project Working Party... 13 members and their pairs of hands turned up... to help construct a brushwood and faggot ledge and two flow deflectors in the river... it was a wonderfully productive day... very rewarding and satisfying. I learnt new woodcraft skills and river work, saw new river life with the lampreys and had a thoroughly enjoyable day with the company of club members and guests and their banter and a sense of achievement on completing this task and all done in warm spring sunshine!!* Andrew Howarth, Secretary, Welland Mayfly Fishers

*Absolutely brilliant day learnt lots and what a brilliant result. So enjoyed working with all, many thanks to [WTT] and [Moors Valley Country Park] for organising a great session.* Mike Phillips, Moors Valley Country Park volunteer

*On behalf of WDAC I would like to thank the WTT... for the huge effort in making the project on the River Stour at Wimborne happen. It has been fantastic to work in partnership with your team... I very much look forward to working with you in the not too distant future.* Stuart Hitchman, Secretary, Wimborne & Dist AC

*We installed around 8+ woody debris structures including brash ledges and large deflectors to narrow channel. I have worked with WTT on nearly all of my river/wetland related projects and there is no doubt in my mind that they have all been greatly improved with this involvement. I am very grateful for WTT guidance on river enhancement/habitat works.* Tim Precious, Warks Wildlife Trust

*[WTT] gave us an outstanding day... I cannot speak too highly of the way [WTT] taught us and led by example. We all worked hard, but Andy was tireless. It was a really valuable day, giving us skills we can transfer to all our beats.* Mark Weldon, Chairman, Baden-Powell Bentley Fly Fishing Association

*...thank you [for] the delivery of a Habitat Restoration Project on my section of the river Avon. The level of workmanship, passion, commitment and team coordination was exemplary... [with] a team of helpers, who in two weeks, have installed 57 separate structures in my 1.68km of river.* Geoff Wilcox, Fishery Manager, Snake Bend Syndicate

Figure 1: people working with WTT Conservation Officers to learn new skills and make our rivers better



Our larger-scale projects, working with excellent partners such as the Environment Agency (EA), have involved removal of weirs to release constrained rivers, so that they can function as they should: fish, other aquatic organisms and riverbed materials can all move freely and more naturally along the river. We do this kind of work in an extremely cost-effective way; for example, the removal of a 19m wide, 1.4m high weir on the River Aire was completed for less than £8,000, opening up 20km of upstream habitat. We have also created habitat variety by introducing woody material (branches, logs, even whole trees) and gravel into the river (see Figure 2 below). Again, significant habitat gains are made at low cost, exemplified by a project on the Hampshire Avon, installing fifty-seven habitat structures over four weeks, mostly site-won wood, along 1.68km of river, at a total cost of £11,000.

All this advisory and practical work has improved habitat on at least 480 km of river, involving an estimated 4,100 volunteers in more than 23,000 hours of activity; in the summer of 2018, just one of the WTT Conservation Officers delivered projects on eight rivers, with fifty volunteers from five fishing clubs working for c640 hours, in partnership with three EA area teams, two wildlife trusts, two rivers trusts and one District Council.

There is evidence that we are making a difference to our rivers and the wider environment, not only for how those rivers function but also for their wildlife and the people that enjoy them (see below, *The Impact of WTT's Work*).

*Figure 2: larger-scale river habitat improvement projects*



*River Aire weir: there (left), then gone (below).*



*River Dove: ponded upstream (above left); weir removed (above middle) and river released (right).*



*Improving the rivers Taw, Avon & Owler*

## The Impact of WTT's Work

We assess the impact of what we do by

- gathering feedback from many of our partners, indicating that, for the majority, input from WTT changes the way they manage their river reaches. 82% of our surveyed advisory visit recipients say they have acted on our recommendations, producing beneficial change for our environment (Boxes 1 & 2 provide some examples);
- looking at physical alterations in the river and its habitats (e.g. with fixed point photography) – see Figures 2 and 3;
- in some cases, by measuring biological response e.g. whether there are more trout in a river after input from WTT and its partners.

Much of WTT's work produces dramatic differences in the way a river looks and functions, not only ecologically but sometimes too in terms of its resilience to flood, drought and pollution. There's visual evidence in Figure 2 above, with the rivers Aire and Dove looking and functioning very differently (beneficially) after weir removal. Figure 3a below depicts dramatic and immediate changes in the River Gwash in Lincolnshire, in a partnership project involving the Gwash Fly Fishing Club and the local EA team: the river has moved from its reed-filled, overgrown former self to something looking and behaving much more like a proper, habitat-rich stream. Sometimes and predictably, recovery takes a little time after habitat work, as plants establish, water flow patterns shift and the river's structure and ecology respond, as the River Allen example in Figure 3b below illustrates. Here, 'vegetation clearance' had denuded the river of essential habitat and variety. WTT, again working with local partners and volunteers, added woody material, which, over a number of years, has colonised with plants, creating a now habitat-rich, diverse river reach. Figure 3c shows a reach of the River Meon in Hampshire, flowing through a village: it was an ecological desert but, working with volunteers from the South Downs National Park, WTT has (re)introduced gravel and plants; villagers now report seeing bullheads, sticklebacks (no trout yet), a range of aquatic invertebrates and even hunting kingfishers.

*Figure 3a: the River Gwash: top left, a reed-filled stream and clockwise, machines and people open it up, add gravel and produce a more functional river. Note the landmark tree top right of three photos.*



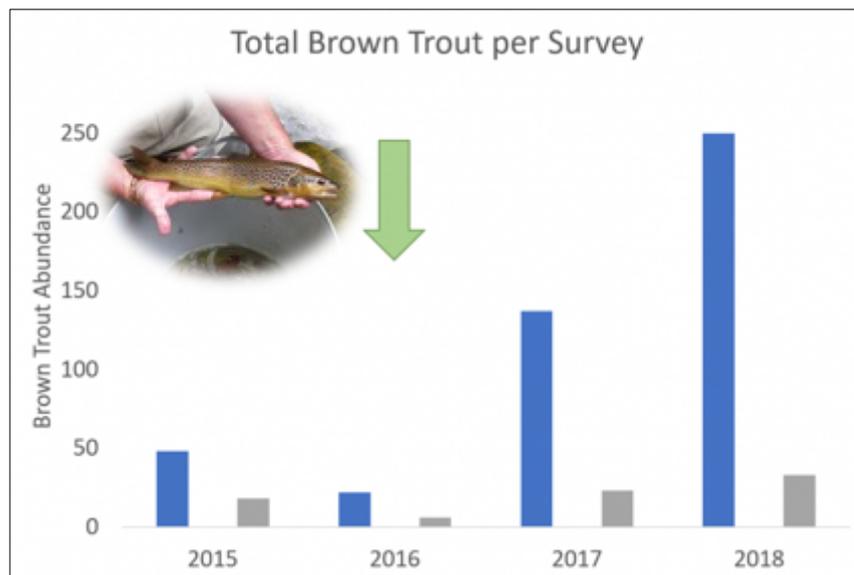
Figure 3b: the River Allen: top left in 2014, devoid of habitat; top right, volunteers adding woody material and lower, in 2018, a functioning river reach.



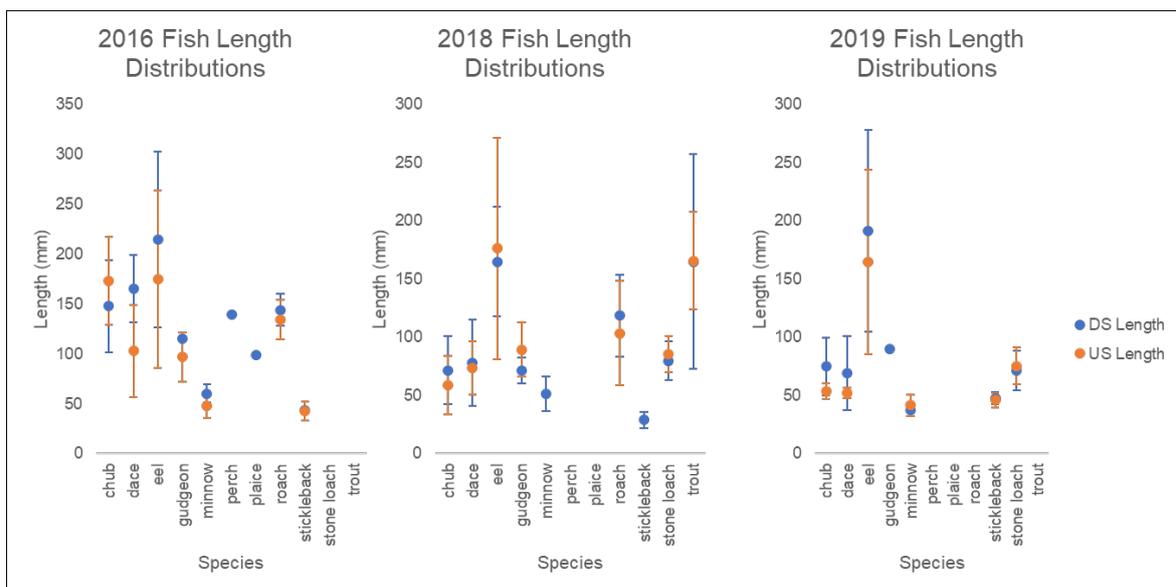
Figure 3c: the River Meon: top left in 2014, then volunteers add gravel and plants and, lower middle, summer 2018 sees a much more ecologically-rich stream.



Measuring biological responses to river habitat improvements is notoriously difficult and can be very expensive; we help and encourage our partners to carry out less costly methods such as monitoring invertebrate populations or using rod-and-line catch data for the fish populations. In some cases, we use electric fishing to try and show what difference our work makes. For example, in a tributary of North Yorkshire's River Aire, removal of barriers to fish passage in 2016 (green arrow in the diagram below) seems to have led to five times more trout in such places (the blue bars) compared to those (grey bars) where barriers have not been removed. The huge floods of 2015/16 show a dip in the numbers of trout in both places, perhaps because fish were physically washed downstream and out of the beck.



A 2016 project with Wyre Rivers Trust (WRT) on the Woodplumpton Brook aimed to improve fish passage through road culverts, fitting wooden baffles to the culvert floor. Subsequent years' fish surveys by MSc students at Queen Mary University of London and Lancaster University (under the supervision of a WTT staff member) and WRT suggest that the range of fish species has improved around the culvert after the baffles were fitted. Further, the fish length distribution graphs below illustrate that the sizes of fish above and below the culvert are now more similar, indicating that all sizes of fish can pass up- and downstream.



The habitat improvement techniques that we advocate and apply are tried and tested and supported by evidence; we'd like to do more formal and longer-term pre- and post-monitoring of our work, but funding and spending deadlines rarely allow for it.

## Research and Spreading the Word

WTT's Research and Conservation Officer is also a Professor with the University of Lancaster and, through him and other staff members, we retain links to a number of research institutions, offering the WTT website as a noticeboard for post-graduate students working in relevant fields e.g. [www.wildtrout.org/wttblog/plant-invasions-and-trout-rations](http://www.wildtrout.org/wttblog/plant-invasions-and-trout-rations). We continue to contribute to both ongoing and proposed research projects e.g. a partnership with the University of Roehampton, CEFAS & WTT to investigate the effects of restored river woody habitats on fish dietary niches', funded by the Fisheries Society of the British Isles; an application by Loughborough University staff to the Natural Environment Research Council aimed at understanding complex flow-vegetation interactions in rivers.



In March 2019, we part-sponsored and presented at an international gathering of Early Career Researchers, held with the University of Glasgow ([www.wildtrout.org/wttblog/nowpas2019](http://www.wildtrout.org/wttblog/nowpas2019)) and in April 2019, we also sponsored and presented at a Wild Trout Workshop, with the Wester Ross Fishery Trust ([www.wildtrout.org/wttblog/wester-ross-workshop](http://www.wildtrout.org/wttblog/wester-ross-workshop)).

Our annual (and much acclaimed) journal, *Salmo trutta*, and newsletters spread word of relevant research outcomes, including articles translating academic research for a lay audience. Throughout the year, we presented at over fifty events, from international conferences (including one in Chile) through to local angling club meetings, with an estimated total audience exceeding one thousand people. We have an active web presence, driven not only through a busy website (with c20,000 unique visitors per month) but also increased social media presence and penetration on Facebook and Twitter, with >4,000 and >7,600 followers, respectively.



## Staff and Volunteers

In the 2018/19 year, WTT's staff team consisted of a Director of Operations, seven Conservation Officers, a Research and Conservation Officer, a Trust & Data Manager, a Fundraising & Communications Officer and a Company Secretary.

WTT is nothing without its volunteers, people who help maintain our presence across various media, are deeply involved in fundraising, man stands at shows, provide technical input through advisory panels and work with the Conservation Officers in practical delivery of riverine habitat enhancements. We are proud to work so effectively with these people and with so many, diverse partners: fishing clubs, other conservation volunteer groups, sister NGOs, landowners, government bodies (especially the Environment Agency) and business, most notably the water companies of Anglian, Severn Trent, Thames and Yorkshire. Good job: many thanks to you all.