



Advisory Visit

River Teme, Berrington Anglers

8th May, 2009



1.0 Introduction

This report is the output of a site visit undertaken by Tim Jacklin of the Wild Trout Trust to the River Teme, Herefordshire / Worcestershire, on 8th May 2009. Comments in this report are based on observations on the day of the site visit and discussions with Frank and Michael Baylis of Berrington Anglers and John Bennett of the Teme Catchment Association.

Normal convention is applied throughout the report with respect to bank identification, i.e. the banks are designated left hand bank (LHB) or right hand bank (RHB) whilst looking downstream.

2.0 Fishery Overview

The River Teme is a major tributary of the River Severn and the Berrington Anglers' stretch is located on the middle reaches of the river upstream of Tenbury Wells. The reach is approximately 1½ miles long, and is fished by 12 members, hence angling pressure is light. The club stock with between 150 and 250 brown trout of 1¼ - 1¾ lbs annually; these are now sterile triploid fish in accordance with the Environment Agency's National Trout and Grayling Strategy.

The river is a mixed fishery and in addition to brown trout contains salmon, barbel, chub, grayling, dace, bream, tench and sea lamprey. There is a general perception amongst the club that the fishery has declined when compared to twenty or thirty years ago, and that small fish are less abundant than previously. Barbel have colonised the river since their first appearance in the early 1970s, and there is speculation that this may have contributed to the change in balance of the fish community within the river.

3.0 Habitat Assessment

The fishery can be broadly divided into the upper and lower sections, with the latter being generally deep and slower flowing, and the former having more shallow, fast-flowing areas. Large areas of the riverbed are dominated by bedrock, with shallow ledges giving way to precipitous drops into deep pools. The instream habitat is very good, with a diversity of depths and flows, and is characteristic of the middle reaches of a large river.



Photo 1 Deeper section of river at the downstream end of the fishery



Photo 2 Streamier water in the upstream section

There was little in the way of gravel of a suitable size for trout spawning, and where present it appeared to be in relatively thin layers. It is likely that wild trout present in the fishery breed in sidestreams or further up the catchment where habitat is more suitable. There were considerable amounts of fine sediment within the gravel and also, on the shallower rock ledges, large amounts of filamentous algae which had also trapped fine sediment. This is probably indicative of problems originating from land use within the wider catchment of the Teme. It is understood that there is extensive potato farming upstream which may account, at least in part, for the sediment and nutrient inputs to the river.

The river banks are well-vegetated with trees including willow, alder, poplar and sycamore. Up until about 25 years ago, the banks were regularly cleared of vegetation for flood defence purposes by the then Severn Trent Water Authority. Since trees have been allowed to mature, some natural large woody debris (LWD) has started to appear within the river creating some excellent instream habitats.

The presence of LWD has been shown to be extremely important in several respects:

- An increase in the variety of flow patterns, depths and localised velocities.
- Development of high in-channel physical habitat diversity
- Significant benefits to the control of run-off at the catchment scale. Woody Debris helps regulate the energy of running water by decreasing the velocity. Thus the 'travel time' of water across the catchment is increased.

LWD is a general term referring to all wood naturally occurring in streams including branches, stumps and logs. Rivers and streams with adequate LWD tend to have greater habitat diversity, a natural meandering shape and greater resistance to high water events. Therefore LWD is an essential component of a healthy stream's ecology and is beneficial by maintaining the diversity of biological communities and physical habitat.

Traditionally, many land managers and riparian owners have treated LWD in streams as a nuisance and have removed it; often with uncertain consequences. This is frequently unnecessary and harmful: stream clearance

can reduce the amount of organic material necessary to support the aquatic food web, remove vital in-stream habitats that fish will utilise for shelter and spawning and reduce the level of erosion resistance provided against high flows. In addition, LWD improves the stream structure by enhancing the substrate and diverting the stream current in such a way that pools and spawning riffles are likely to develop. A stream with a heterogeneous substrate and pools and riffles is ideal for benthic (bottom dwelling) organisms as well as for fish species like wild trout.

The club have 'hinged' some smaller trees into the margins of the river in selected areas to provide some cover. This has worked well, and could be extended to other areas, although the very high energy of the Teme (up to 5-metre rises in water levels during extreme floods) make it very difficult to engineer LWD structures in a river this size. It is therefore very important to sympathetically manage naturally occurring stable LWD, and retain as much as possible.

Himalayan balsam was present throughout the fishery. Himalayan balsam *Impatiens glandulifera* was introduced to the UK in 1839, and is now naturalised, especially on riverbanks and waste ground and has become a problematical weed. It is a tall, robust, annual producing clusters of purplish pink (or rarely white) helmet-shaped flowers. These are followed by seed pods that open explosively when ripe, shooting their seeds up to 7m (22ft) away. Each plant can produce up to 800 seeds.

It tolerates low light levels and, in turn, tends to shade out other vegetation, impoverishing habitats. Being an annual plant it dies back in winter leaving large areas of bare bank vulnerable to erosion. Its presence along riverbanks is therefore undesirable. Michael Baylis has been carrying out some control by cutting the plant before it flowers.



Photo 3 Large woody debris (LWD) – important habitat that should be retained



Photo 4 Low cover over the water is important habitat



Photo 5 The club have hinged some smaller trees into the margins



Photo 6 Himalayan balsam



Photo 7 Sidestreams may be the key to improving wild trout numbers on this section of the Teme

4.0 Recommendations

- Retain naturally occurring large woody debris (LWD) within the river channel wherever possible.
- Control Himalayan balsam by hand pulling or herbicide treatment before it has chance to flower (usually in late June). Note that use of herbicides alongside watercourses requires prior written consent from the Environment Agency and is restricted to certain types of herbicide.
- Find out about the side streams entering the river in the vicinity of the Berrington stretch. Consider their accessibility to trout, and the quality of spawning and juvenile habitat within them. Improvements here could make a big difference to wild trout numbers in the main river.
- Continue to use all-female sterile triploid trout for stocking purposes to protect native trout from the detrimental effects of inter-breeding with domesticated fish.
- Consider taking part in the Riverfly Partnership anglers' monitoring scheme. The Partnership provides simple training and a robust method of assessing fly life through periodic sampling of macro invertebrates. This is a simple and effective way of keeping a close eye on water quality performance. More information can be found at www.riverflies.org
- Support the Severn Rivers Trust (<http://www.severnriverstrust.org.uk/>) in tackling catchment-wide issues that threaten the quality of rivers.

It is a legal requirement that all the works to the river require written Environment Agency (EA) consent prior to undertaking any works, either in-channel or within 8 metres of the bank.

The River Teme is a Site of Special Scientific Interest (SSSI) (see citation: http://www.sssi.naturalengland.org.uk/citation/citation_photo/2000102.pdf) and certain activities may require the prior consent of Natural England (http://www.sssi.naturalengland.org.uk/special/sssi/sssi_details.cfm?sssi_id=2000102).

5.0 Acknowledgement

The WTT would like to thank the Environment Agency for supporting the advisory and practical visit programmes.

6.0 Disclaimer

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