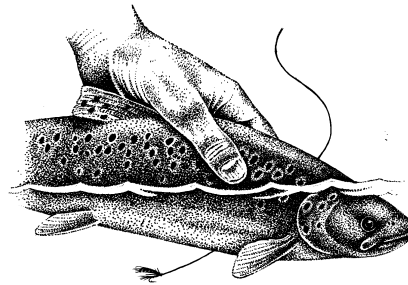


Dr Nick Giles & Associates,
50 Lake Road,
Verwood,
Dorset,
BH31 6BX.
Telephone 01202 824245
Fax 01202 828056
email nickgiles@cix.co.UK



Consultants : Freshwater Fisheries, Conservation & Wetland Ecology



Advisory visit report

The Shreen Water

November 2nd, 2003

Introduction

Nick Giles walked the Shreen Water just south of Mere in the good company of Fred Scourse and John Williams on October 11, 2003. The fishery is split into three beats A,B,C with a gap between B & C, running through the grounds of Woodlands Manor. Beat A runs from just north of the hamlet of Huntingford up to Hinckes Farm (Mr A. Morton). Beat B runs upstream from the farm, past Swainsford Fish Farm to the Woodlands Manor lower boundary. Beat C runs from just downstream of the Mere STW at Rook Street up to the edge of the town.

The Shreen Water rises as springs at Burton at the base of Charnage Down. Despite the prolonged spell of dry weather the stream, although running low, still had a good clear flow, boding well for typical future flows under more usual weather conditions. The surrounding land use is grazing pasture and the stream bed is clay based with a shallow covering of sands and gravels. The bed was silted in many areas but this impression may have been enhanced because of the prevailing low-flows and poor scouring of the bed.

Periodically the stream appeared to be running slightly coloured; this is most likely to be due to cattle drinking and stirring up the clay bed. Clay remains suspended in water for long stretches before settling-out under virtually still conditions, usually along the margins. The stream margins grow profuse water cress beds and, in-stream, the water supports Ranunculus (crowfoot) and Callitriche (starwort) beds, especially where the stream is well-lit.

Wild brown trout were seen in all three beats but numbers, especially of parr, were low. Some large trout (larger than 0.5kg) were seen. Bullheads are abundant throughout all beats. Kingfishers nest on Beat B.

Invertebrate samples indicate quite good water quality at the top of Beat C (abundant shrimps, Baetis nymphs, varied caddis larvae, river limpets, ramshorn and other snails, water beetles, some Asellus, and chironomid midge larvae). Below the STW there appeared to be fewer ephemeropteran nymphs but shrimps were still very abundant and some caddis larvae were still present - water quality was still fairly good (especially under the prevailing low-flow conditions). It is likely that the extensive cress beds help both to filter suspended sediment and to absorb nutrients from the water.

On beat B, invertebrate samples taken at the outlet of the trout farm indicated typical localised enrichment of the stream bed with large numbers of oligochaete worms and Asellus present on the gravel shallow at the outlet. Under higher flow conditions this impact would be less apparent. It is possible that further enrichment of the water occurs in the vicinity of Hinckes farm because of the presence of the cattle and their feed. Invertebrate populations on Beats B and A were not as good as on beat C and, overall, water quality on the lower Shreen Water was only moderately good.

The Shreen runs deep in its channel - this could be due to natural erosion of the clay soils and/or past land drainage works. Physical cover (undercut banks, deadwood, tree roots) is abundant over much of the water but there are areas on Beats B and C where it could be augmented to good effect. There is great potential to use this fishery as a demonstration and educational site for the Wild Trout Trust to 'spread the word' about sustainable fishery management and good conservation practice.

Observations from the river walk

Shading

The Shreen Water is, in many areas, over-shaded. This leads to the following effects:

- Poor in-stream weed growth.
- Poor invertebrate populations.
- Lower fish stocks.
- Killing of bank side grasses and erosion of soils leading to silting and over-wide channels.

Careful lopping of boughs, pollarding and coppicing of suitable species lets in light to reverse the above effects. This is a high priority on this fishery. Also, there is great scope to set up an experimental sky-lighting project for educational purposes. The key elements for this would be:

- Development of a cyclical tree pruning programme.
- Choice of sites to maximise benefits.
- Leaving matched control stretches for future comparison of results.
- Monitoring weed growth, fly life and fish stocks to measure success.
- Analyse results and publish them so as to educate interested people.

If a broader-scale habitat improvement project is undertaken, this, too could be monitored for success and duly reported on.

Spawning habitat

The gravel covering the bed of the Shreen is generally shallow and silty (very silty in places). It is recommended that some new gravel riffles are built on stretches B and C. These should be sited so as to represent good new spawning habitat and shaped so as to represent minimal increased flood risks. Environment Agency consents are essential for this work which would need careful planning and implementation. Benefits would include:

- Better trout spawning habitat.
- Better bullhead habitat.
- Better Ranunculus habitat.
- Better invertebrate habitats.

Cover

Physical cover from undercut banks, tree roots, dead wood and rocks is good over much of the fishery. There are, however, long open stretches which would benefit from the placement and secure staking of cover logs to provide year-round sanctuary for wild trout. Logs would, of course, be available from the tree pruning works. This work requires EA consent.

Physical habitat

Whilst the Shreen has quite a varied series of riffles, glides, meanders and pools there are quite a few open sections which would benefit from some low-profile current-deflectors. If correctly designed and sited they would hardly impede flows and would scour a series of new pools - good for adult wild trout.

Bank poaching

Cattle have poached the banks of the Shreen in a number of places and some drinks have become enlarged and very muddy, introducing unwanted sediment into the water. It would be beneficial to extend the existing electric-fencing system or to build some permanent fencing to keep the livestock out of the river. Drinking water could then be supplied either via self-actuated pumps or from a small number of purpose-built drinks with hard beds suitable for cattle hooves.

Recommendations

1. Access to the stream is generally difficult as the water is well below bank level under summer flow conditions. This could be improved via tree pruning and allowing wading when fishing.
2. Cattle have poached the banks over areas on all three stretches - fencing (permanent or electric) would allow the banks to recover but this should be combined with a reduction in shading from trees to promote the regeneration of secure grassy banks.
3. Much of beat A and areas on B and C are tunnelled by trees. This over-shading should be reduced through extensive pruning to promote a mixed mosaic of light and dappled shade along the river.
4. Spawning gravels on all beats are sparse and silty. New gravel (20-40mm washed) could be imported to build some new spawning riffles on beats B and C. These and other riffles should be kept relatively silt-free by gravel-jetting in future years.
5. In-stream cover could be improved by staking logs parallel to the banks adjacent to relatively deep water on some of the more open stream sections on beats B and C. Remember that, once the cress beds have disappeared after the first hard frosts there may be little cover left for trout over the winter period.
6. Some of these more open sections would benefit from low-profile upstream-V current deflectors which would scour a series of new pools, enhancing the natural physical diversity of the stream bed.

Remember that Environment Agency Land Drainage Consents are essential for much of the above recommended work and must be obtained prior to any work taking place.

Nick Giles Associates would be keen to help plan in detail and to implement these habitat improvements. Help with educational aspects of the project would also be available.