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Mr H. Scott-Dalgleish
Longstreet House
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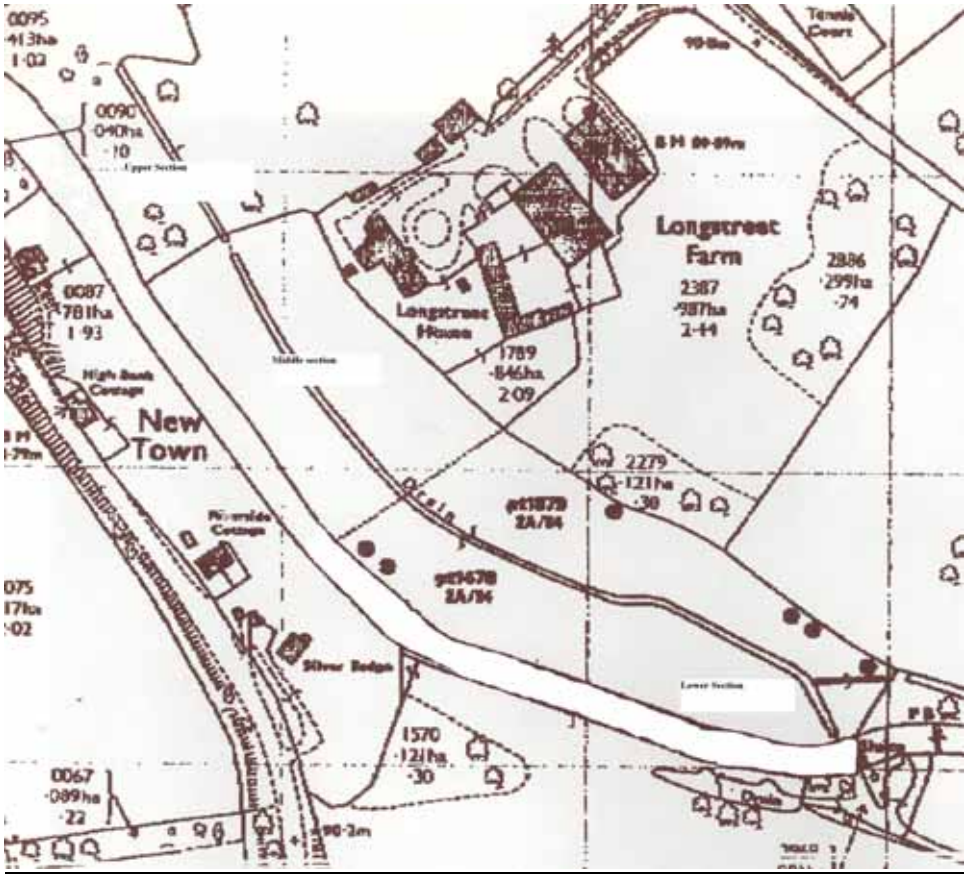
Report on Advisory Visit to River Avon, Longstreet House, June 2004

Summary



1. Nick Giles walked the Longstreet House water, River Avon on June 13th in the good company of Mr Hamish Scott-Dalgleish. The fishery covers three distinct sections of river referred to below as the top, middle and bottom sections. There is a good head of grayling, a few small brown trout which may be naturally spawned or may have been stocked up- or downstream and large numbers of stocked brown trout (in the lower section, only), including many large fish. Mr Scott-Dalgleish is keen to improve river habitats and to encourage wild trout spawning.

2. **Top section**: this is a lovely, wide, shallow, gravel-bedded section of river with good in-stream growths of aquatic plants and abundant aquatic invertebrate populations. The following recommendations are suggested:

    - De-silting carefully-selected areas of gravel to promote brown trout spawning, using a high-pressure water jetting apparatus. Timing: October. In order to keep the gravel riffles in good condition, it is recommended that they are re-jetted every two or three years.
    - Building a series of small, low-profile upstream-V current deflectors to scour some shallow pools which will both hold adult trout and produce further areas of clean gravel for spawning. Timing: Summer / early Autumn.
    - Adding staked dead wood cover to protect brown trout and grayling year-round.
    - Trimming-back of willows on the left hand bank to increase light levels reaching the river bed and promoting plant, invertebrate and fish stocks. Timing: Winter.
    - The agreement of neighbours and prior consent from the Environment Agency would be required before any in-stream works are carried-out.

3. **Middle section**: this section is deeper than the top section, has a more varied bed including gravel, sand and silted areas and has good growths of submerged aquatic plants. Current speeds are, generally, moderate. Some channel-narrowing with woven hazel structures has been undertaken in the past and these areas show better ranunculus growth and a cleaner gravel bed. The following recommendations are suggested:

    - New sections of woven hazel revetments, creating a sinuous channel could be built. The agreement of neighbours would, of course, be required and the design must ensure that any additional flood-risk is minimized.
    - Dead wood cover structures should be constructed to increase year-round cover for both brown trout and grayling.

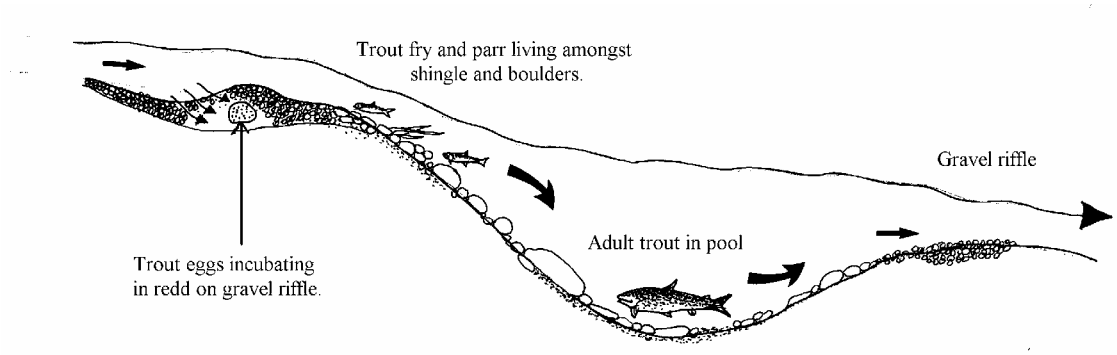
4. **Lower section:** this section is affected by the impoundment of sluices at the Mill downstream and is relatively deep, with generally slow current speeds, silted areas of bed and very little ranunculus growth. The following recommendations are suggested (they require agreement with appropriate neighbouring owners):

    - A sluice management regime which allows the upstream section of river to keep flowing briskly would improve habitat quality for aquatic plants, invertebrates and fish.
    - The block stone/concrete weir which has been constructed across most of the channel is causing a deep scour hole on the left hand bank and should be either dismantled or re-built so as to stop imminent bank erosion which it is causing.
    - Most of the main river channel is devoid of dead wood cover for trout – this is a vital component of habitat quality, especially for wild trout, but also for stocked fish. It is recommended that large amounts of suitable dead wood are staked securely to areas of the river bed where they will provide shelter for trout and be out of the main force of flood flows. Environment Agency permission is required before any in-river habitat work is attempted.
    - The recent capture of large numbers of pike indicates a continuing need to control numbers, reducing predation pressure on both wild and stocked trout and grayling.

Background notes.

Wild trout habitat

Brown trout need good, clean water flows, relatively silt-free gravel for spawning, abundant cover from predators and a nice varied sequence of shallow riffles, weedy glides and deeper pools. The diagram below shows how a short section of good habitat can provide everything a wild trout needs throughout its life cycle:



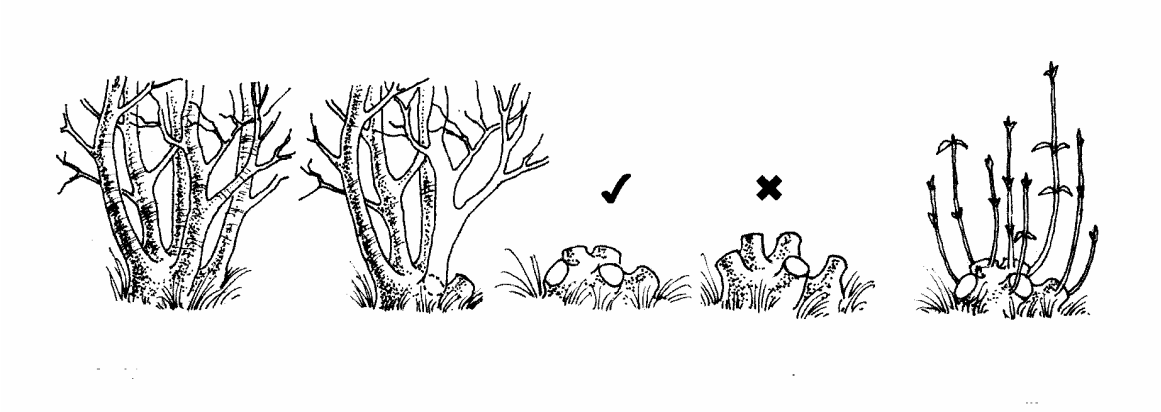
Siltation of spawning gravels

Wild trout are certainly adversely affected by a river bed which is silted, providing a poor environment for incubating fish eggs. This can be helped by a thorough water-jetting of suitable areas of gravel early each autumn, before the trout spawn in early winter. These cleaned areas will also be of value to grayling, bullheads and lampreys which spawn in the spring. Fly life will also be boosted by the opening-up of the formerly clogged river bed which will be re-colonised by a wide range of aquatic invertebrates. Larger flints uncovered during the water-jetting will be used by bullheads for breeding and cover and by trout fry and parr for cover. Sediments disturbed during the jetting process will re-deposit downstream in areas such as inner bends where they will produce habitats for various burrowing invertebrates (eg *Ephemera* mayfly nymphs) and for lamprey larvae.

Over-shading

Some of the fishery is over-shaded by trees and it is recommended that a tree management programme is instigated. Much of the timber produced can be used for in-stream habitat improvement and to revet eroding banks with live willow.

Good coppicing practice:

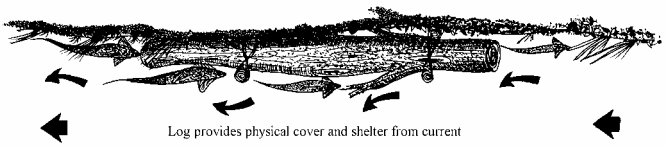


Old growth Correct coppice Spurs too long Useful re-growth

Physical cover

Trout parr (fish of up to a year's age) need relatively shallow water with cover from weed beds, boulders or deadwood (logs) staked securely along the margins. Adult trout continue to seek out habitat where year-round secure cover is available. Whilst weed beds offer good summer cover, they die back in winter leaving fish stocks vulnerable in open water to a range of potential predators. These predators include herons, cormorants, pike, mink and otters. Pike can seriously affect wild trout stocks on small rivers and should be removed from the river by angling each winter (or by properly conducted electric-fishing). Trout streams with abundant cover hold much higher fish stocks than those where most or all of the dead wood cover has been cleared away. To create improved cover, logs or half logs can readily be pinned close to the bank, leaving a gap underneath them for sheltering brown trout.

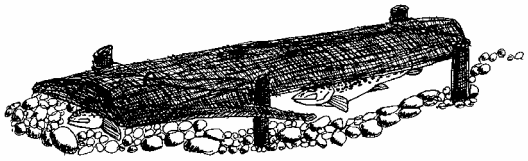
Trout using dead wood cover feature - staked close to well vegetated bank.



Log provides physical cover and shelter from current

Most of this fishery lacks fish cover in the form of deadwood and there is great scope to add cover along many suitable stretches, using timber boards or small logs.

Half log cover board staked to river bed



safe cover is provided for two adult trout

The boards / logs will not rot as long as they remain submerged year-round.

Upstream-V current deflector