Wild Trout Trust Advisory Visit

AJ's Fly-fishers'
River Nidd
North Yorkshire

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Executive Summary

- Catchment issues cannot be solved within the beat but representation should be made to the appropriate statutory bodies to ensure that the club is recognised as a stakeholder.
- The riparian owner is the Woodland Trust which provides a great opportunity for partnership concerning habitat improvements and demonstration of best practice in land and river management.
- The Nidd has recently suffered water quality problems relating to changing land use, in particular upland drainage, and overstretched sewage treatment works. Odour of treated sewage water was apparent on day of visit but the beat is within reasonable statutory water quality limits.
- The gorge like nature of the river is a unique characteristic of the beat and should be preserved whilst improving the quality of habitat where possible.
- The upstream section is formed by natural bedrock substrate with very little potential for improvement to in-stream habitats.
- The downstream section demonstrates more typical pool-riffle characteristics of a spate river and provides more opportunity for habitat improvements.
- Habitat improvements should initially concentrate on maintenance of riparian trees, preventing Himalayan Balsam, and managing large woody debris.
- The club should aim to improve the quality of catch return data in order to facilitate management decisions such as the level of stocking required.
- If stocking is to continue, it should continue by the current methods. However, the club should investigate marking of stocked fish to improve catch-return data and catch and release policy.
- There is little potential for improving production of wild trout within the beat due to a lack of suitable spawning habitat. This is a natural feature of the beat.

Introduction

AJ's Flyfishers' lease and maintain angling rights on the River Nidd through the attractive but challenging Nidd Gorge. The gorge itself is owned and managed by the Woodland Trust. Recent improvement activities by the Trust to the gorge have included thinning of the conifer plantation and improvements to pedestrian and vehicular access. The gorge is open to the public via permissive footpaths and is extensively used by dog-walkers. Conflict does exist on occasion but it is not excessive and is manageable. The membership are primarily interested in wild brown trout fishing, however, the Grayling fishing is of increasing interest. The club does carry out maintenance on the beat with the assistance of members and are prepared to carry out habitat improvements where they can.

Stocking

The beat has been historically stocked with 300 retainable trout a year split into stockings at the beginning of the season through to the middle of the trout season. The angling club up-stream also stocks with a considerable number of trout early in the season. A lack of accurate catch return records prevents analysis of whether the stocking is worthwhile.
Anglers feel that they catch wild fish in addition to the stocked fish, but how individuals differentiate between the two is unclear. Downstream migration of stocked trout is accepted to be high if habitat is unfavourable or carrying capacity has been reached. With current levels of stocking upstream at an apparent high level, optimum adult trout populations may be achieved without supplemental stocking in the beat. The club should attempt to determine the efficiency of their stocking by investigating the cost of "pan-jet" marking of stocked fish and recording the numbers of fish caught by anglers. Marking of fish in this manner results in a small blue mark on the belly of the fish, it will normally add a few pence to the purchase cost of each fish, but allows anglers to accurately determine the nature of the fish and make appropriate decisions as to whether to catch and release or not. It is generally accepted that winter survival of stocked fish at this life-stage is low, especially within the beat, and there is nothing to be lost by anglers retaining them.
Natural production of grayling appears to be high in the Nidd and improving, as is the case in most northern rivers. The reason for this is most likely improving water quality conditions and their preference for spawning in the main stem of the river. There is little potential to increase natural trout production within this beat, due to the lack of suitable spawning habitat. Trout have a preference for spawning in smaller tributaries rather than in the main stem of the river, although substrate size on riffles in part of the beat are of a suitable size for trout spawning. If upstream production of wild trout is too low for adult fish to be moving downstream into all available habitat, artificial spawning can be replicated using in-stream incubators of various designs. Care should be taken that assisted production of wild fish does not lead to the carrying capacity being exceeded. If this type of activity is pursued, further and more detailed advice should be sought from

the WTT and statutory authorities. Considerable commitment from the club would be required to achieve long-term success.

Habitat

The upstream section of the river is limited in trout carrying capacity by bedrock and the dark gorge-like nature of the river. There is little potential for the creation of additional in-stream or bankside habitat to increase this carrying capacity. Artificial structures cannot be easily attached to the in-stream bedrock which also extends above the normal flow zone and prevents creation of new bankside habitat. The only features in this part of the river that supplement adult trout habitat are the occasional accumulations of large woody debris and any large submerged boulders. The large woody debris will provide new areas of cover, and will also assist in production of invertebrates. These accumulations are of extreme importance and should not be removed unless they are causing access problems or are a potential flood risk. As previously mentioned, stocking in this stretch may result in exceeding of the natural carrying capacity and there will be no long-term gain for anglers. Stocking should be reduced or stopped in these areas and catch returns monitored to determine the importance of current stocking protocols. It is likely that a reduced number of stocked fish will result in the same number of fish caught by anglers. The banks beyond the bedrock are dominated by alder, many of which are multi-stem and have previously been managed by coppicing. There is no immediate need to undertake drastic tree management through this section as the trees do not appear to influence the in-stream habitats. The shaded nature of the gorge is a characteristic feature that will be attractive to most users, but does not provide many opportunities for habitat improvements.

The character of the beat begins to change downstream. Bedrock features do still remain in parts, however, the gorge opens significantly and river habitat is no longer limited by it. Riffles start to be more dominated by gravel substrate. The bank is still dominated by multi-stem alder and this becomes an increasing problem to the fishery. The trees have not been managed for approximately 50 years. The shading nature of this section is not necessarily natural and overshading has resulted in a loss of vegetation below the tree canopy. In a river this results in gradual erosion between the areas where tree roots protect the soil. This leads to eventual loss of the trees into the river, constant erosion of sediment into the river, lack of bankside cover for fish between tree roots, and over-widening (and consequently shallowing). The shading throughout this section is so dense that there is little potential for in-stream vegetation, which is even more important to adult (and juvenile) trout populations and essential for some invertebrates.
The erosion is of particular concern throughout this section because of the extremely sandy nature of the soil. Once vegetation is lost, the soil is particularly mobile. The eroded sandy soil is depositing in very high quantities in the pools. This will undoubtedly result in a loss of invertebrate habitat in the pools. The coarse nature of this sediment means it will not have an impact on potential spawning areas unlike finer sediments.

There is a real need to instigate cyclic coppicing throughout this section of the river. Coppicing will not result in long-term loss of the trees, or more importantly the roots that provide bankside habitat for trout. Following coppicing, the risk of collapse of the tree is immediately removed, vegetation begins to recover between the trees and provides increased levels of habitat between the remaining root structures. There is also more chance of in-stream vegetation beginning to recover and the process of the river over-widening is stopped and can be reversed. This work could increase adult and juvenile fish habitat considerably. The age of the trees means that this will be a considerable task for club volunteers and the club should investigate carrying this work out in partnership with the Woodland Trust. There may be options for including the work in existing conservation schemes operated by the Trust. The Trust should be made aware that erosion to the bank caused by the overshading is beginning to threaten the footpath and attempts to reduce this erosion will not be successful without changes to the shading regime. It is unlikely that the shaded nature in this section is a natural characteristic but due to unsympathetic management. Once a better shading regime is achieved, further habitat improvements may be possible.

Multi-stem trees characteristic of historic coppice and displaying high erosion of the sandy soil typical of overshaded river banks.

There are a number of fallen trees throughout the bottom section of the beat and these are providing excellent habitat, food production and in some places protection from erosion of the bare banks. Any management works involving large woody debris should consider the fisheries value of the debris

before considering removal. If removal is necessary, the club should consider moving the debris to a location where it will be beneficial before complete removal from the river is considered.

Large woody debris are the only bankside features providing habitat and erosion protection in the absence of adequate sunlight.

A common problem for many UK rivers, is the invasion of an exotic plant, Himalayan Balsam. This attractive plant, first imported as an ornamental, competes for bankside habitat and colonises in large stands. The plant dies back in winter leaving a bare exposed bank which is prone to erosion and provides little habitat. The Nidd has extensive colonies, however, it is apparent that someone has been keeping a check on the plant throughout the gorge by pulling it. The plant is an annual and can be eradicated by removal starting at the top of the river catchment. As the plant has not established in large colonies yet on the beat, it would be prudent to advise anglers to assist in the manual removal of the plant as they come across it until such a time as there is a catchment-wide eradication programme. No other exotic invasive plants were seen on the visit, but an eye should be kept open for Japanese Knotweed which can cause considerable problems. If it does occur, specialist advice should be sought on removal techniques in order to prevent the spread of the plant.

Himalayan Balsam does occur within the beat but has been controlled up to now.

Recommendations

1. Before undertaking any tree management or operating chainsaw equipment, take advice from the riparian owner and professionally trained individuals for obvious legal and safety reasons.
2. Meet with the Woodland Trust representative to bring the river corridor into the conservation or management plan for the gorge and offer assistance from the club where possible.
3. Produce a coppicing plan for the beat to increase light levels in some of the heavily eroding sections (particularly where multi-stem alder dominates).
4. Investigate the cost of marking stocked fish and run accurate catch return project, even if only for a couple of seasons, to try out various new stocking regimes.
5. Recommend to fishermen that they assist in the removal of Himalayan Balsam in order to prevent large stands developing.

This work is likely to result in a significant improvement to the river, and any future possible habitat improvements will depend on them.