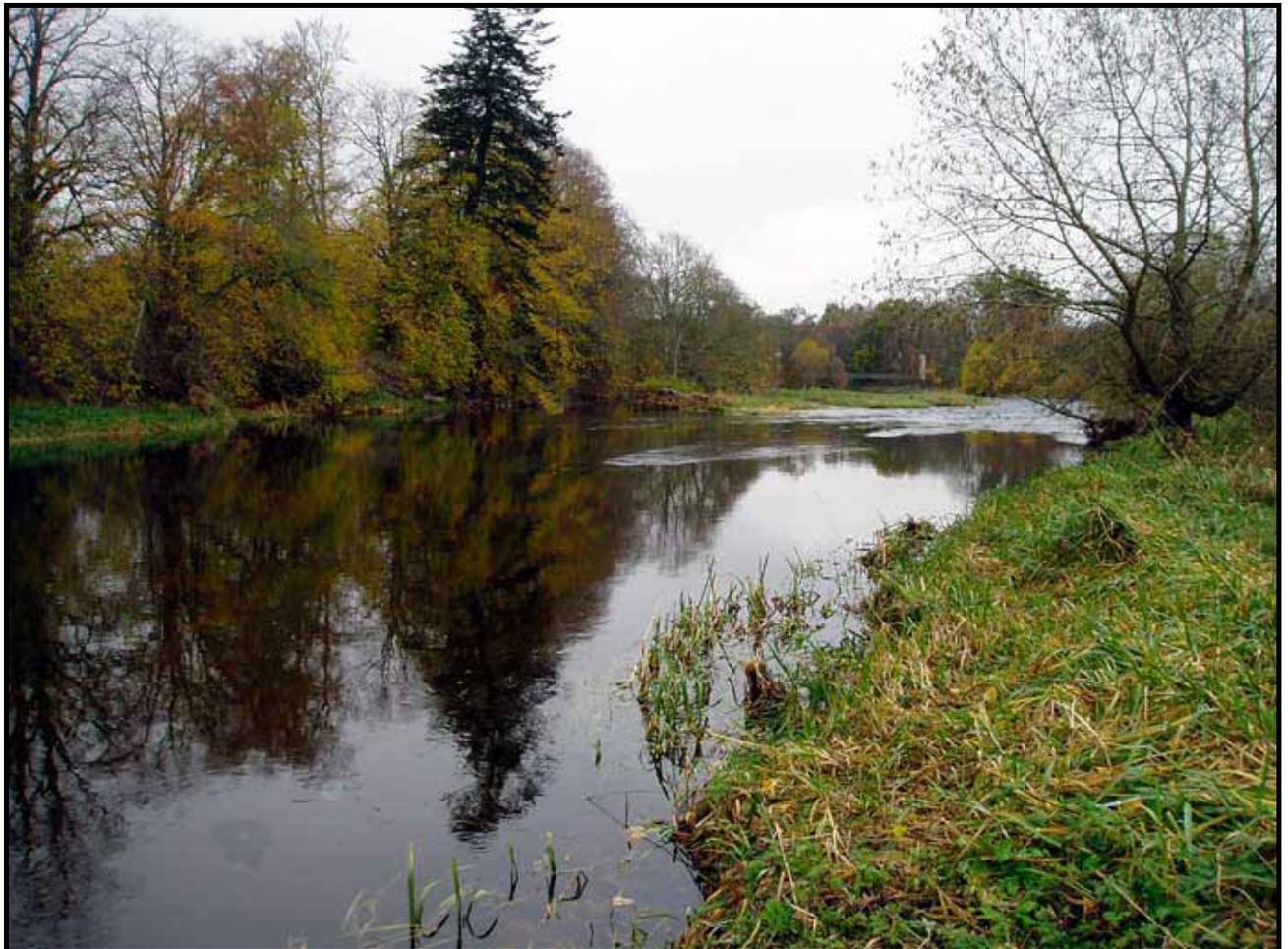


**ADVISORY VISIT TO KEMNAY BEAT 3, RIVER DON,
ABERDEENSHIRE ON 6 NOVEMBER, 2004**

**Undertaken on Behalf of the Wild Trout Trust
and sponsored by Orvis**



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1.0 OBJECTIVES

Simon Hicks, the proprietor of Kemnay Beat 3 on the River Don, in Aberdeenshire requested from the Wild Trout Trust an advisory visit to examine the potential for improving brown trout habitat and stocks within the Beat to supplement an angling fishery targeted mainly at salmon, believing that the health of the resident (as opposed to the migratory) fish population provides an indication of the general health of the local river habitat.

2.0 BACKGROUND

2.1 Description of the river

The River Don is the sixth largest river system in Scotland. It rises at an altitude of 680 metres in the Eastern Cairngorm Mountains in North East Scotland and flows in a generally easterly direction for 120 kilometres, entering the North Sea at Aberdeen. Most of the catchment of the Don is rural, set in rolling, productive, Aberdeenshire farmland. The area has become very popular as a dormitory for commuters to the city of Aberdeen, so there has been a progressive expansion of many of its small communities, placing greater stress on the river catchment, in various ways. Throughout most of the 20th Century, the Don was regarded as possibly the best brown trout river in Scotland, particularly for dry fly fishing. With the easing of a pollution barrier in the lower reaches from about 1980, it has also become a noted salmon river, with an improved run of sea trout. Kemnay Beat 3 lies in the lower/middle reaches, a few kilometres above the town of Inverurie and a short distance below the village of Kemnay.

2.2 Management of Don brown trout

The Don District Salmon Fishery Board is the statutory authority controlling the local salmon and sea trout fishing, but it has no such remit for the brown trout. [*There is new fisheries legislation on the horizon that may address this problem of lack of overall management of trout in Scotland*]. The main stem of the River Don and its main tributary, the Urie, is covered by a Protection Order, making it illegal for anglers to fish for brown trout and other freshwater fish without written permission. Prior to the granting of the Order, riparian and salmon fishery owners had little incentive to improve their trout fishings, having little legal recourse against visiting parties of anglers who removed large numbers of trout, fishing without a permit and by any methods. Uncontrolled fishing pressure gradually worsened as anglers from more populated areas of the country where there was less fishing available to them began to travel further afield. The granting of Protection Orders, although controversial, helped to regulate the itinerant anglers. Arguably, an even greater influence on the extent of angling pressure on increasingly fragile stocks of wild trout in Scottish rivers in general has accompanied the rapid spread and now easy accessibility of put-and-take fisheries for rainbow trout. In many rural areas, fishing for brown trout in rivers appears to be less intensive than it used to be. However, catch records are often inadequate to examine trends in levels of fishing effort and exploitation. There remains no statutory requirement to report brown trout catches in Scotland. Trout and salmon fishing are widely available on the River Don from private estates and angling clubs/associations, although some is controlled for members of angling syndicates.

2.0 ADVISORY VISIT

Kemnay Beat was inspected and discussed with Simon Hicks on 6 November, 2004, when the river level was moderately high, but not in spate. Several photographs that were taken to illustrate the main points noted are shown in this report. The fishery comprises about two kilometres of the right bank of the river, from the derelict weir at Mill Farm to the bottom of the long pool below Burnhervie Burn, a tributary entering from the left bank. Beat Three includes a number of named holding pools. The Mill Stream, Gilbert's, Garples (including The Shark's Fin and Nether Garples, Black Pot, The Bridge (Shakin' Briggie) and Burnhurvie Pools. (The Frontispiece shows a downstream view of the Black Pot Pool and Stream above a bridge (Shakin' Briggie). The fishery is primarily for salmon and some sea trout, but there are also brown trout. Local knowledge suggests that either the brown trout population has declined over recent years or they have turned to bottom feeding. Fishing is let on an annual basis to a syndicate comprising 21 rods, mostly professionals, including several doctors, and the fishing pressure tends to be light and seasonal. Salmon are available from February to September, but the best fishing is in autumn.

Kemnay Beat 3 lies in a slightly steeper section of the lower/middle Don, before the river reaches a plain below Inverurie. The river falls over bedrock, overlain with cobbles, with more gravel and fines deposited in slower sections. Much of the beat supports perennial patches of *Ranunculus*. There is a definite channel (c. 25 - 30 metres wide) between well-consolidated banks, with no problems of overgrazing. A substantial riparian strip is fenced off from neighbouring fields. The right bank is largely open and thickly-vegetated with coarse grasses or rushes, some bushes and small deciduous trees. The left bank, which is under separate fishery ownership, has more trees (Plate 2).



Plate 2. Upper Kemnay Beat 3 – downstream view of Garples

2.1 Minor bank problems

Minor bank damage was noted at the bank at the tail of Garples near the Shark's Fin rock. There, about two metres of bank edge had subsided and was eroding away, apparently due to trampling (Plate 3). This short section could be reconsolidated with stone, to prevent it getting any worse, but it would be easier to introduce some woven willow shoots, easily obtained from nearby trees, which should quickly root and give more natural bank protection. Alternatively, the rough path could be diverted back from the bank and the collapsed area may heal itself, especially if the anglers are discouraged from walking or standing there. As this is the most productive salmon pool on the Beat, any loss of access would be unpopular with Syndicate members. It may therefore be necessary to shore up the bank.



Plate 3. Bank collapse on Garples at the Shark's Fin

Walking further down, we passed an area on the inside of a bend on Black Pot where a small section of riparian trees might benefit from coppicing to thicken bankside protection and increase leaf cover. Then, after an extended riffle, the river passed under a bridge (The Shakin Briggie), reaching the slow running Burnhervie Pool at the bottom of The Beat. Simon Hicks suggested the possibility of opening up trout fishing in this bottom area, since it is scarcely used by the salmon anglers due to the distance from the fishing hut and more difficulty of parking and walking access. Trout may be more common in the bottom stretch due to the proximity of the Burnhervie Burn.

2.2 Trout stocks

Information on catches of brown trout made on the beat are scanty and therefore comments about the status of the stock in the beat were largely anecdotal, although the Syndicate has responded positively during 2003/4 to a request to record trout catches. Most of the trout seem to be taken as a by-catch with salmon tackle and few of the anglers target them specifically. The size and quality is believed to be good and specimens weighing several pounds have been caught. However, rising fish are seen only sporadically, often in spite of good hatches of flies. This may be because the trout are scarce and the benthic production is sufficient to keep them feeding at the river bed. Of course, a perceived lack of rising trout is a common complaint of river anglers. It is not always clear whether this is a genuine change in surface feeding behaviour, or that many modern anglers lack knowledge of the natural variation in the diet and seasonal feeding behaviour of wild trout. Unfortunately, it is very difficult to evaluate the quantity and trends in abundance of adult brown trout in large rivers like the Don. Brian Shields carried out a PhD study of the Don brown trout for the University of Aberdeen (Shields, 1996). He found from an analysis of available catch records that catches varied in quality and quantity depending on where the fishing took place in the river. Larger/ older trout were more frequent in catches from upper parts, where fishing pressure was relatively low, whereas catches from the lower river, where fishing effort was greater, consisted of mostly small, young trout (age 3+). This is still believed to be the case. Kemnay may lie somewhere between the two areas.

2.3 Recruitment

The trout population at Kemnay is likely to be largely if not entirely self-sustaining, although there is some stocking carried out in other parts of the river. However, the biological status of the trout is likely to be more complex than is commonly realised. Young brown trout enter the River Don from numerous tributaries and disperse to an unknown extent. Some will migrate from the river and become sea trout and the others will remain in fresh water as brown trout. The recent increase in sea trout stocks in the River Don may be due mainly to water quality improvements in the formerly heavily polluted lower reaches, but the general decline in commercial netting for salmon and sea trout in Scotland is an additional factor. The extra migratory fish entering the river will undoubtedly have benefited angling catches, but the overall effect of their increased abundance on the resident brown trout population is unknown. Shields (1996) believed that some degree of negative impact would be expected, as a result of juvenile competition for food and living space, although the two species have differing habitat and flow preferences. Also, it is possible that the increasing numbers of sea trout spawners may be having a genetic influence on the numbers of young trout that migrate subsequently to sea, reducing the overall tendency of the trout stock to remain as brown trout.

Kemnay Beat 3 will receive trout recruits from the Burnhervie Burn which flows into the river near its lower end, although it is uncertain how far these may penetrate upstream. The nearest tributary entering the river above the beat is the Ton Burn, much of which has been drained and straightened as it passes through farmland above the small town of Kemnay. Some trout may spawn on gravel in the mill lades from

the broken-down weirs. However, the lade on the right bank at the top of the Kemnay beat (Plate 4), which flows by Mill Farm, may become dry when river levels are low. Although the weir is broken, it might still be possible to cut a deeper channel from the river into the entrance of the lade, and install a simple sluice gate for water control.



Plate 4. Top of old lade leading to Mill Farm

There is also a very small stream, possibly spring-fed, that flows into the river via a large garden, immediately below Mill Farm (Plate 5). It is very unlikely that mature trout find their way into it because the access is steep and overgrown and the channel in any case is very shallow and lacking in cover. However, the stream could support trout fry, stocked directly, or hatched from egg boxes buried under the gravel. In time, some of these fish would make their way to the river. If the owner could be interested in such a project, the little stream could even be reconstructed with deeper, undercut banks and small removeable weirs to allow periodic flushing of accumulated sediment and given overhead netting for protection against herons. The eggs or fry should be obtained from brown trout of local genetic origin, perhaps supplied by the District Salmon Fishery Board.



Plate 5. This garden stream may be suitable for egg planting

A substantial amount of grass cuttings (Plate 6) has been deposited at the foot of the Mill stream and near the stables (Gilberts Pool). Liquor from the rotting piles is likely to find its way into the river and will have a high biological oxygen requirement (BOD), perhaps not as strong as silage, but potentially damaging to the immediate river habitat under the banks. Fortunately, the river flow is quite fast in the area and the deoxygenating effect should be quickly dispersed. However, it would be sensible to negotiate that the dumping of grass cuttings on the bankside be discontinued and some of the rotting material be removed.



Plate 6. Grass cuttings may result in seepage problem

2.4 Fishery Board stockings

The Don District Salmon Fishery Board distributes trout fry into the headwaters from ova obtained by Board staff when they are collecting salmon brood stock at Newe Mill Weir in Strathdon. The hatchery currently holds 133,000 brown trout and 100,000 sea trout ova (pers com. J. Kerr). Funding assistance to the Board for the stripping and stocking of brown trout fry comes from the River Don Brown Trout Improvement Association (pers.com. H. Wignall). No stocking of trout is carried out on the Kemnay beat, or its neighbours. Although the practice is disapproved of by the Fishery Board, largely on grounds of concern over smolt predation, brown trout of farmed origin are stocked at a takeable size for angling in the lower reaches of the Don by the substantial Aberdeen Angling Association (pers.com. J. Kerr). Some of these large fish (c.1.5 lb) may disperse upstream and survive to spawn.

The Fishery Board has also embarked on a three-year habitat survey of the Don catchment that will assist in targeting obstructions to fish movements, sources of pollution etc (pers.com. J. Kerr).

3.0 CONCLUSIONS and RECOMMENDATIONS

- Brown trout are lightly-exploited on Kemnay Beat 3 and the existing population may be able to sustain more fishing pressure without significant habitat engineering or stocking. There may be potential to open-up the Burnhervie Pool to day-tickets. It is not possible to advise one way or the other.-
- It may be possible to stabilised flows through the old lade streams that ran from the now defunct mill weirs, in order to encourage local natural recruitment of trout. It might also be possible to create a small nursery system in the garden stream, below Mill Farm.
- However, there is inadequate information to assess whether there is a need to increase the numbers of trout in the beat. The syndicate anglers may simply need to be encouraged to fish more for the brown trout and keep catch records.
- Catch records would provide a basis for assessing fishery limits. A good working basis would be to try to ensure that most of the trout survive long enough to spawn at least once before they may be retained. That is likely to mean a minimum size limit of at least 300mm forked length.
- The Don District Fishery Board should be encouraged in their programme of habitat inventoring of all tributaries, leading to well-targeted programmes of improvement. This should help to maximise the natural recruitment of salmon, sea trout **and** brown trout.
- Although it is hard to make a judgement without seeing the river at a lower level, there seems to be plenty of riparian and instream cover suitable for resident trout. A minor amount of coppicing of one thin group of bankside trees on the Black Pot Pool would thicken the stand, increasing bank protection and increasing the amount of deciduous leaf cover.

- At present, there is very little evidence of a need for bank protection. Most of the banks are consolidated and well-vegetated. A short section at the bottom of one pool should be protected from trampling by anglers in order to allow substrate accretion and renewal. Alternatively, it could be infilled with rock, or sown with willow shoots to try to establish rooted armouring.
- In the longer-term, the aim should be to preserve as much bankside cover as possible. This can be unpopular with salmon anglers who are inclined to clear the banks to assist casting. However, the retention of cover will also be beneficial to salmon and sea trout angling through better fish dispersal.

4.0 CITED REFERENCES

Shields, B.A. (1996). Aspects of the ecology of the brown trout (*Salmo trutta* L.) in relation to management of the fishery on the River Don, Aberdeenshire. PhD thesis, University of Aberdeen, 266 pp.

Simon Hicks was given a copy of “A Wild Trout Trust Guide to Improving Trout Streams” (Anon, 2002).