

**ADVISORY VISIT TO THE RIVER UGIE,
ABERDEENSHIRE, ON 28 MAY, 2006**

Undertaken on behalf of the Wild Trout Trust



Frontispiece: River Ugie at Inverugie

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1.0 BACKGROUND

The River Ugie Angling Association, near Peterhead in Aberdeenshire, requested from the Wild Trout Trust an advisory visit to the river with primary regard to conservation and enhancement of sea trout and brown trout stocks through habitat improvement. The visit provided a brief overview of the river and an opportunity for practical advice “on the river bank.” The visit plus this follow-up report may be helpful in formulating new and maintaining existing fishery management policies. The Wild Trout Trust was established in 1997 by a small group of people dedicated to the idea that ailing populations of wild trout can be given a helping hand. It provides practical guidelines and encourages riparian owners, angling clubs and community volunteer groups to instigate their own habitat restoration projects, not only to protect and improve stocks of wild trout, but to deliver many gains to local bio-diversity. The Trust continues to grow in strength and now operates throughout the United Kingdom and Ireland. The consultant fee for the advisory visits is often paid for through sponsorship, with only travel expenses falling to the recipient. For more information contact the Trust’s Projects Co-ordinator at projects@wildtrout.org, or in writing to: The Wild Trout Trust, PO Box 120, Waterlooville PO8 0WZ (tel: 023 9257 0985).

2.0 GENERAL DESCRIPTION

The River Ugie comprises a surface water catchment lying in the north-eastern corner of Grampian, covering an area of approx. 155km². There are two main tributaries, the North and South Ugie, flowing through largely lowland, mixed farmland, with some 270 farms. The southern part of the catchment consists of moderately intensive agriculture while the northern portion is much less heavily cultivated and includes an area of commercial peat moor. Water is abstracted from the river close to the coast at Balmoor and taken to a nearby reservoir supplying drinking water to Peterhead and area (Scottish Executive website). According to SEPA, the Ugie catchment also lies within a designated Groundwater Nitrate Vulnerable Zone. Also, there have been concerns about detected levels of pesticides, with agriculture being the most likely source. To meet stringent water quality standards, expensive treatment has been required to remove the peaks of these herbicides from the drinking water, but the only sustainable long-term solution to this problem is its elimination at source (see Appendix – advice to farmers about useage and application timing of pesticides from The Voluntary Initiative, the Crop Protection Association). In the past, SEPA has had little regulatory control over diffuse pollution, but has led, or collaborated within, a number of initiatives to help further best agricultural practices. Under the EU Water Framework Directive and its accompanying UK legislation (eg. The Controlled Activities Regulations), the main pressures on watercourses must be identified and measures to effect further improvements in water and environmental quality should follow.

The River Ugie supports a locally important angling fishery for salmon and sea trout and brown trout and it has a Salmon Fishery Board. The River Ugie Angling Association manages the River Ugie Fishings, nearly all of which are leased, unusually, from a single owner. Normally in Scotland, salmon (and sea trout) fishing is in multiple private ownership. The Board/Angling Association runs a small

hatchery, stripping brood stock salmon and sea trout captured in the river and its tributaries and planting early-fed fry into several areas where spawning is believed to be deficient. In a report on a juvenile electro-fishing survey of the River Ugie carried out in Sept 2001, following up work carried out in earlier years back to 1991, Dr David Summers concluded that juvenile sea trout and salmon stocks remained healthy.

3.0 ADVISORY VISIT



Plate 1: River Ugie below Inverugie

The advisory visit took place on Sunday 28 May, 2006, in the company of the River Ugie AA Chairman James Duthie and Bailiff Bob Davidson. We met at the bridge at Inverugie (Frontispiece) and had a brief look at the hatchery near Crimond and a tour of the river, concentrating on the tributary burns, particularly in the southern section. Water flows were moderate and the water was clear.

The lower main stem by Inverugie was very attractive, with a cobbled and gravel bed of varied depth, and patches of attached water plants and with stable, well-vegetated banks clad by mixed light woodland and grasses (**Plate I**). There were no obvious features requiring action. Much the same could be said of viewed parts of the lower parts of the South Ugie (**Plates 2&3**), although the second of the two images shows some steeply cut earth banks which may lead to some shearing of sections during

spates. There may be parts where widening and shallowing has occurred due to bank collapse, but no examples were seen.



Plates 2&3: Views of the South Ugie

The hatchery (**Plates 4&5**) was based at the site of a former small fish farm which was based on earth ponds. The hatchery unit now comprises a lorry container, improvised as a hatchery shed, containing egg/fry troughs, and two or three small fibre-glass tanks for early feeding. There were no fish present at the time of the visit. Ample water is supplied by gravity feed from a nearby burn. This results in some sedimentation over the incubating eggs. Clearly, there is potential to upgrade filtration of the water supply and the hatchery in general needs improvement,

although it may have served its purpose well for several years. The Wild Trout Trust may help to pump-prime with financial contributions selected habitat schemes, but favours environmental practices designed to promote sustainable natural spawning. It is not against stocking practices where these are necessary to maintain trout populations. In this context, it was necessary to see some of the spawning/nursery burns before commenting further on the use of the hatchery.



Plates 4&5: River Ugie Angling Association Hatchery

Several burns varying from less than one metre to several metres wide were viewed from bridges. These included the Adzeil, Bruxie, Quhomery, Cairngall and Monyruy Burns and some unnamed ones. The North and South Ugie were viewed from bridges at Strichen and Gaval and the South Ugie at Atherb, Maud and Abbey Bridges. Some of the burns were utilised for stocking fry from the hatchery. All of those seen had been straightened as part of agricultural drainage operations. Generally, such heavily-modified streams are shallow and lacking in in-stream and bankside cover for larger fish. The natural physical processes of stream flow and erosion/deposition tend to restore channel undulations, depth variation and overhanging vegetation and fish populations may recover, given enough time. Recovery is more likely to occur where

burns flow through ground that is not subject to heavy grazing pressure and open to wading and trampling by farmed stock. In this respect, the burns that were seen were fenced back a few metres on each side and were therefore protected from cows or sheep. Sections adjoining grazed pastures often had fenced areas designed to allow stock necessary access to drink without general trampling. The buffer zones along the stream margins were heavily grassed and bushed and there was evidence of a gradual natural restoration of stream contouring. However, presumably further drainage and straightening may occur at any stage that the farmers consider desirable, unless action can be taken to prevent this happening.



Plates 6&7: Typical fenced but canalised tributaries of the South Ugie, one with a watergate to allow stock access to drink without trampling. Both images show gradual recovery of some channel sinuosity, overhanging and in-stream vegetation and a stable substrate

Based on their general appearance and the common occurrence of mixed gravel, patches of water plants etc, most of these straightened burns are healthy and should support good spawning populations of trout and perhaps occasional salmon. Fish were often apparent from bridges. The burns would be expected to contain relatively dense populations of fry (0+ years), but fewer than normal older parr or adult fish. The Ugie salmon are likely to spawn with greatest success in the main stems and larger burns. In the smaller burns, where trout are likely to predominate, once the fry begin to require more depth and general cover from predators they will find the straightened channels rather bare of shelter and have to migrate downstream early, or die *in situ*. In the past, before intensive agriculture, these burns probably offered better habitat conditions for larger parr and older brown trout. Spawning and fry nursery conditions may remain good overall throughout the Ugie catchment, but parr and smolt production and adult trout numbers may be lower than expected, although the fencing of burns carried out during the last decade should have resulted in some improvement.

In time, the dense marginal vegetation inside the fences along some of the smaller and narrower burns will need to be cut back to prevent dense overgrowth and channel blockage by excessive woody debris (a modest amount is okay).



Plate 8: Gradual overgrowth will require pruning to maintain light levels

One of the burns visited appeared to be grossly polluted and there was no sign of fish. The water carried a strong smell and the margins were discoloured (**Plate 9**). There are also believed to be some silage problems remaining here and there in the Ugie catchment (pers. comm. Bob Davidson). Clearly, while the water quality in general appears to have shown significant improvement over recent years owing to changed agricultural practises, there are some localised problems that remain to be dealt with. The Angling Association can do its part to maintain the improvements to the river by immediately reporting incidents of pollution and maintaining positive contacts with SEPA and the farmers.



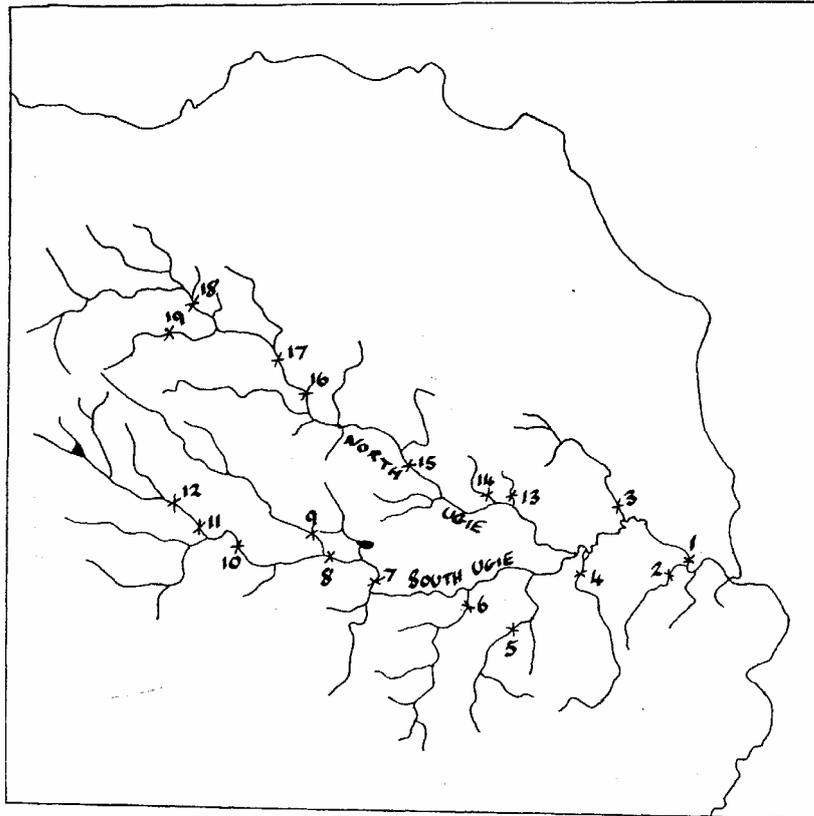
Plate 9: Evidence of poorer water quality – tributary of the South Ugie

4.0 ELECTRO-FISHING SURVEYS OF THE UGIE

As noted earlier, Dr David Summers has carried out electro-fishing surveys of the River Ugie for juvenile densities in four surveys carried out at various sites during 1991 and 1992, 2001 and 2002 (see the following scanned map of sites). His reports were kindly made available for examination by Bob Davidson. The data were obtained from generally small and upstream sites more typical of trout than salmon by a single-pass of measured areas, repeated each year, and therefore can be considered reasonably quantitative, although it is normal to carry out more than one pass at each site. In practice, most of the fish are caught in the first pass, but the estimated densities will be slightly under-represented, although reasonably comparable. The data also are subject to the usual complications of varying water levels at the time of the surveys and some differences in timing between years. The results indicate no appreciable change in the health of the stock over the ten year period. In spite of concerns about adequacy of habitat for older fish, the densities of 1+ and older trout parr were reasonably high at most sites. However, no fish were found in the Hythie Burn (North Ugie) which was polluted by leachate from a tip. Densities also were low in the Greenspeck Burn (North Ugie). These are matters requiring ongoing attention by SEPA.

Any future **stocking programme** should depend on juvenile survey data so that the fry plantings can be targeted to best advantage. Juvenile densities should be compared at similar stocked and unstocked sites to show whether stocking is producing the desired results. The hatchery provides the capability to spread fry more widely in areas where spawning is deficient, perhaps because of poor gravel availability, or excessive siltation, or simply low adults numbers. On the other hand, there is no point in simply pouring more fry into areas which are already well-supplied by natural spawning. Where the cause of low stock levels can be identified as point sources of pollution, stocking may be used as a stopgap until the problem is removed, but may become unnecessary once water quality recovers. As is often the case in salmonid fishery management, the case for continued stocking will need to be closely argued and targeted to be considered worthy of outside funding support for any upgrading of the hatchery facilities.

Figure 1. Sites fished within the Ugie catchment



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|--|--------------------------------------|
| 1 River Ugie (Inverugie) | 2 East Burn (Inverugie) |
| 3 Crooko Burn (Artlaw) | 4 Faichfield Burn (Monyruiy) |
| 5 Cairngall Burn (Ludquharn) | 6 Quhomery Burn (Inverquhomery) |
| 7 South Ugie (Deer Cemetery) | 8 South Ugie (Abbey Bridge) |
| 9 Bruxie Mill Burn (Bruxie Mill) | 10 South Ugie (Maud) |
| 11 Water of Fedderate (Atherb) | 12 Water of Fedderate (Weetingshill) |
| 13 Bigginsteps Burn (Little Fortrie) | 14 Hythie Burn (Lintmill) |
| 15 North Ugie (Gaval) | 16 North Ugie (Howford) |
| 17 North Ugie (Strichen) | 18 North Ugie (Skelmanaie) |
| 19 Greenspeck Burn (Greenspeck Bridge) | |

(scanned from “**Report on a survey of juvenile salmonid stocks in the River Ugie, July 1992.**” David Summers)

5.0 CONCLUSIONS

- The Ugie is an attractive small river that continues to support a reasonable rod catch of salmon and sea trout despite intensive agriculture which has degraded most of its spawning tributaries. Many of the inflow burns are now fenced against bankside overgrazing and the picture is one of gradually improving riparian habitat and water quality. Much of the credit for this must go to SEERAD and to SEPA and the other organisations that co-operated with farmers in the Ugie Wetland Project (1997-1999). The project has been successful in its aims to improve and showcase wetland habitat and river quality and to help farmers care for the river banks and wetland areas and improve their nutrient budgeting in cost-effective ways. SEPA state that 20km

of buffer strips were established on stretches of the main stem and on over 50km of tributaries of the River Ugie. In addition, 132 ha of wetland were brought into positive management. One farmer commented “We have a comprehensive SEERAD Country Premium Scheme (CPS) plan with emphasis on management to benefit the river and protect it from agricultural inputs and activity.....The CPS payments enabled us to make the necessary management changes..... Wader birds, owls, ducks and otters are seen more often in and around the farm. Hedges are adding interest and amenity to our surroundings. The angling community (locals and visitors) now have the banks free of cattle....They have been able to improve their access to the river. The river bed is much less prone to siltation from raw trampled banks and....the water quality is better for it.”

(<http://www.scotland.gov.uk/library3/agri/fssa-05.asp>).

(From *A Forward Strategy for Scottish Agriculture*)

- Unfortunately, the Scottish Executive’s funding of agri-environmental schemes is now decreasing due to pressure upon public finances. On the other hand, SEPA will need to continue to deliver further improvements to water quality as a consequence of the Water Framework Directive.
- There will be a requirement for periodic pruning and coppicing to prevent overgrowth of some of the narrower burns which have benefited from fencing.
- A few areas of chronic pollution need to be addressed and the sources of the pollution removed. Members of the Angling Association should be prepared to take water samples immediately above and below polluted stretches when incidents come to light. The samples should be dated and labelled (ideally map-referenced or with GPS readings) and supported by digital photographs and provided urgently to SEPA for immediate action.
- The hatchery is in need of refurbishment or total upgrading, but applications for outside funding support will require a strong case to be made for stocking, backed up with continuing electro-fishing survey data on juvenile densities.
- Continued surveys of juvenile densities, in any case, should be encouraged as a means of monitoring the health of the stocks.
- The Wild Trout Trust would be happy to look further at any specific examples of habitat improvement schemes where these come to light. We can advise on ways to help raise funds for these purposes (e.g. some kick-start funding and/or rods to raffle).
- In general, the River Ugie Angling Association seems to be performing well in its share of the stewardship of the river environment.
- In the longer-term, consideration should be given to linking in the River Ugie with the network of fishery trusts which has developed to cover most of Scotland.

[A copy of The Wild Trout Survival Guide – Habitat and fishery management guidelines, produced by the Wild Trout Trust, 2006, was provided to the Association.]