UPPER RIVER CLYDE

LAMINGTON & DISTRICT ANGLING ASSOCIATION

ADVISORY VISIT REPORT

Undertaken by Ron Holloway MIFM (R H Associates) on behalf of the Wild Trout Trust (WTT)
On Friday 15th August 2003

The Upper River Clyde (pic1)

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THE UPPER RIVER CLYDE REPORT.

This Advisory Visit was undertaken by Ron Holloway (R H Associates) in the company of George Clark (Committee Member of Lamington & District AC)., Brian Dexter (Secretary of Lamington & District AC)., John Middlemas (Club Bailiff) and Charlie Davidson (Club Member).

Objectives:

To look at the 12 miles of the Upper River Clyde that make up the Lamington & District A C Water and to pinpoint and identify any problems in and around the water which may be limiting the natural production of wild brown trout. To advise on any such work that may need to be done to maintain, enhance or restore habitat for wild brown trout. To advise on future management policy changes which would be required to address the perceived problems and concerns voiced by the Club Committee during the advisory visit.

Background:

The twelve miles of river runs from above Abington down to Thankerton Bridge, south and west of the town of Biggar in South Lanarkshire. The fishery is mainly double bank with twenty landowners involved in the various leases. 75% of the river banks are fenced which affords good buffer zones and excellent healthy bankside

vegetation. The incidence of any major bank erosion is minimal, however, the unfenced banks are completely bare of vegetation. The substrate is typical for a Southern Upland river with very mobile well sorted smooth gravel, cobble and small rocks. Water quality appears to be excellent and despite low flows and extreme high temperatures, weed growth is minimal as is the incidence of diatamous algae with the river bed being (surprisingly!) exceptionally clean. Maybe too clean? Some blanket weed is apparent in some of the quiet backwaters but is not a problem. On the day of the visit, insect activity was reasonable with many small trout and grayling observed surface feeding in the larger pools.

The Club stocks annually with two thousand one pound to pound and a half brown trout which are purchased from a fish farm in Yorkshire. The Club membership is relatively small in number and the main source of revenue is derived from visiting anglers who pay for day, weekly or season tickets. Catch and release is voluntary, but there is a four fish a day limit, for fish of 10" or more in length. The Club employs a full time bailiff who polices the whole twelve miles of river.

The main concerns of the Club Committee are:-

1. There is a general concensus throughout the club that the volume of fly life is decreasing with a much reduced surface feeding activity by the trout.
2. Despite stocking there is an apparent shortage of trout in the ten to sixteen inch range.

Discussion:

The concerns voiced concerning the greatly reduced fly life throughout the river reflects the general national trend being reported from many rivers throughout UK. This is, therefore, not a problem specific to the Clyde system. However, local anecdotal evidence suggests, for example, Iron Blue *(Baetis Niger*) has been completely lost and the Grannom (*Brachycentrus sub),* which was once very prolific is now almost extinct.

Further information received indicates that Stoneflies (*plecoptera*) have increased in volume with the Medium Olive (*B.vernus &tenax*) and Sedge flies of various shapes and sizes, now make up the "bread and butter" species of the artificials in a anglers fly box. Further anecdotal evidence suggests that the "expert" dry fly anglers of the Upper Clyde are still managing to pick up some good quality trout, but mainly only in the 20" plus range. (Two days after the visit an angler took on a fly a four pound trout

followed by a five pounder followed again by a seven pounder in one evening on one pool!) The average Upper Clyde angler, however, is finding very few rising trout of the 10" to 16" class, despite the water being fairly heavily stocked. "The trout are not as free rising as they used to be" is a common complaint. Before any recommendations can be made regarding the improvement of fly life, apart from fencing the last 25% of the unfenced river banks, it is essential to find out from SEPA (Scottish Environmental Protection Agency) what invertebrate studies have been, or are being, undertaken on the Upper River Clyde. Until sufficient data is available from regular sampling, it will not be possible to establish if, in fact, there has been any reduction in the invertebrate densities or whether any species have been lost. SEPA will have sample site records and it is advised that you ask them to forward a copy of these records and, at the same time, request their qualified views on any trends or changes recorded over recent years. There are several possible reasons why anglers are finding fewer trout actually feeding from the surface, possibly for the following reasons:-

1. There is, in fact, a lack of fly life
2. Stocking with stock fish that have been inbred for many generations and are fed on sinking food which trains them to feed only off the bottom.
3. The impacts of increased avian predation by cormorants and sawbill ducks.

The large flocks of inland living cormorants that are now resident throughout the Clyde system could well be keeping stock trout and the surviving wild trout down in the water so that for self preservation reasons they become reluctant to feed from the surface of the water. Furthermore the stocking of ten to sixteen inch trout are of a size where it has been shown through various studies, that cormorants prefer! To overcome this problem, it has been found at Grafham Reservoir in England that the stocking of two pound plus fish greatly reduced cormorant predation. However, it must be remembered that in the normal course of events, even on a first class trout river, the intake of insect food by trout from the surface, rarely exceeds 15% of their total food intake. Apart from the genetic integrity of the stocked fish and the feeding regimes on which they were brought up, little concern should be given to the way artificial trout are produced. It will be found that wherever the stew bred trout originate, they all have a natural capacity to adapt to any new environment into which they are released. It is important to understand however, that all stock trout will have

a negative impact on the resident stocks of wild trout. This negative impact has been shown to manifest itself in many ways from competition for food, for cover and feeding lies, to name just a few.

It would be useful to pinpoint and identify the limiting factors that are controlling the survival of the wild, native stocks of trout in the Upper Clyde. Once the bottlenecks in the life cycle have been identified, then some positive action can be taken. It is suggested that the Club could start this process by first looking at all the potential spawning burns which flow into the Club water to ascertain whether there is adequate access from the main river into the burns for adult trout to utilise at spawning time, and also to ensure that there is sufficient good quality spawning gravel available and good natural cover for swim up fry.

Due to time constraints, only the Coulter Burn was inspected during the advisory visit. This particular burn was found to be in excellent condition with quality water and good potential spawning facilities. A robust, healthy population of YOTY (Young of the Year) and one plus trout, were observed along with large shoals of minnow. This burn must contribute a good supply of young trout each year to the main river and it is advised that the other spawning burns be checked to see if the same applies.

It was discussed whether the construction of a Club Hatchery to rear trout would be a viable option to the Club and for the fishing. It is suggested that operating a hatchery on the Upper Clyde system does, on the face of it, appear to be a good idea. However, there are many factors to take into consideration before a final decision is made. Serious consideration has to be given to the selection of a safe and secure site which has a year round supply of quality water that is safe from **all** flood events. A constant source of spring water is essential to incubate trout eggs as direct water taken from the river would, at times, be of an unsuitable quality. Earth ponds for rearing can be a problem if not correctly sited and constructed. It is vital to have a constant good head of water to gravity feed and supply each pond which saves the cost and susceptibility of using mechanical pumps. Rearing ponds have to be drainable at any time for health safety reasons. A trout hatchery/rearing unit requires 24hr a day and 365 days a year attention by an experienced person who can readily identify any problems of disease, oxygen levels, water temperature, feed requirements etc., and have a good experience of maintaining year round stock densities in rearing ponds.

To gain all the benefits of rearing ones own trout, it is essential to start with the right broodstock. Ideally the initial stock founders should come from the River Clyde itself, and once the whole cycle from egg to adult is complete, then brood stock should be selected each year for conformation, fecundity and, above all, should be kept isolated. Once the process is up and running, no cock fish will be required to be kept and only hen fish should be kept as brood stock. To fertilise the eggs each year it will be necessary to catch up some genuine wild cock fish from the spawning burns to use on the captive brood hen fish, which will help maintain the healthy genetic integrity of Clyde brown trout and reduce the incidence of inbreeding. To maintain and improve the quality of the stock, a complete life cycle has to be reared in the unit. A less effective, but cheaper option would be to buy in month fed fry in late spring and rear these to the required size, in rearing ponds. This would be cheaper to operate but the quality and integrity of the stock would not be improved, which defeats the objective of trying to establish and maintain a free rising Clyde strain of trout.

Further consideration could also be given to changing the present stocking regime from just stocking one pound to pound and a half trout, which are cormorant fodder, to stocking fewer, but bigger trout of two pounds plus, which would reduce cormorant predation. This stocking then to be underseeded with several thousand six inch trout to aid the natural survival rate of this year class into the next year class – i.e. pound to pound and a half.

To aid the improvement of the quality of fishing in the long term on the Upper Clyde waters, the Club could consider the following:-

1. It is important to gather the facts which will help measure progress in the changes of management regimes.
2. As no catch records have ever been kept by the Club it is difficult to ascertain how many trout are, in fact, caught and taken each season. To rectify this it is suggested that, initially, a voluntary catch form is attached to the annual club membership card and to all day and season tickets. Unfortunately, obligatory catch returns are an anathema to all fishing clubs and when tried to be enforced can create antagonism with members. By initially using a voluntary process which records all fish taken and fish caught and released and also include nil returns, would start to give a picture of what is being removed from the water. As catch and release is now operated by many anglers on the

water, purely voluntarily, it will be found that with encouragement catch recording would very soon be accepted by all.

3. Following on similar lines, to help monitor the insect life, volunteers could be enlisted to keep records of the various natural insects the angler observes when fishing club waters.

Conclusions:

To improve the management strategies of the Club in order to enhance fishing for trout on the Upper Clyde, consideration could be given to implementing the following suggestions:

1. Flylife: Approach the local SEPA Office to obtain records of invertebrate studies which have been carried out over the past five to ten years. Have the records looked at by a qualified biologist who would be able to interpret the records to illustrate the trends, volume and densities of the invertebrate life in the Upper Clyde system.
2. Ask SEPA about monitoring the predation levels on trout by cormorants and sawbills, with a view to finding out whether these birds are predating heavily on trout in the ten to sixteen inch size range.
3. Consider a change in stocking regime by stocking with fish of two pounds plus (2lb to2lb 4oz max) each year, underseeded by six inch fish. Although there may be fewer catchable size trout for the angler, those that are stocked at this larger size will be less susceptable to cormorant predation so will give a more certain promise of sport throughout the season.
4. If the construction and operation of a Club Hatchery is agreed in principle, it is essential that an experienced fish farmer, regarded as an expert in the siting and construction of a small trout rearing unit, is engaged to advise on the entire operation. It is also important that a full time hatchery operator is employed for the running of the unit year round. If this is the case and a good efficient site is found then consideration could be given to producing more Clyde trout each year that could then be sold on to other fisheries within the Clyde system. Besides accruing substantial extra revenue for the club this will also help maintain and improve the integrity of the over all trout population of the Clyde.
5. On the river, consider fencing off the remaining 25% of the unfenced river banks.
6. Introduce a voluntary catch recording system which will eventually give a clearer picture of the success of the changes to the management system.

7. Encourage a voluntary system which records fly life activity throughout the year.
8. It is suggested that all stock trout are spot marked for easy identification, using a different colour dye each year. This would help monitor survival and over wintering capabilities of the stock trout as well as differentiating between wild and stock trout.
9. This is a shot in the dark, but what may be worth investigating, is the deep excavated area where gravel has been extracted from the bed of the river which has left a long deep (20ft) weeded area where pike have recently been taken to twenty pounds or more. As the river flows through this area and if there has been a proliferation within the pike population they may have now spread out up and down the river and may now also be predating on the resident trout particularly the more naive stock trout. An electro fishing sweep above and below this excavated area will prove this one way or another.
10. It is suggested that an electro fishing survey be conducted that would give a more accurate picture of the make up of the fish biomass within the entire fishery.
11. Finally it would be useful to obtain from SEPA a set of water quality records for the Upper Clyde. It would require some qualified interpretation of these records to identify any subtle changes that may have taken place over the years that may be contributing to the perceived problems of today. Discuss with the Clyde Foundation.

Unfenced river banks (pic 2)

General Comment:

The Committee and Members perceived problems regarding fly life density and diversity and the apparent lack of trout in the ten to sixteen inch class cannot, at this stage, be attributed to any one specific cause. It is more than likely to be a multitude of contributory factors which together are impacting on the whole catchment. However, by adopting a systematic process of elimination to find out and identify the various causes will be the first step towards improvement. It is essential, in the first place, to find out what is there and then identify the limiting factors which may be controlling the natural insect volume and diversity, and the trout survival at each life stage. The Clyde Foundation will be able to guide the club along this path,

It is strongly recommended that the club invite Willie Yeomans (Biologist for the Clyde River Foundation) to visit the water to discuss with the committee the matters arising in this report.

I wish the club all success in its objectives in improving the quality of the angling experience for wild trout on the clubs waters and I thank the club for its hospitality on the day.

Ron Holloway MIFM

Distribution:
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The River Clyde Foundation