

## **A Concise Conservation Policy for Migratory Salmonids and Resident Brown Trout in the South Devon Avon.**

For seventeen years (1986 until 2003) the writer held fishing rights on the Eastern bank of the River Avon 200 yards below Silveridge Weir upstream to the badger pass below upper Silveridge Bridge. Varying in nature throughout its short length, a total of 263 sea trout and 36 salmon were caught by the writer's sole angling effort over that period. Each fish was documented with the date, number of fish taken per session (if any), their weight, condition, fly or (in respect of salmon), the lure taken. Weather conditions and exact time of capture were additionally logged. From that total, sixty one sea trout and eleven salmon were retained for culinary/research purposes (in the latter instance in connection with my own work). All other fish were returned with minimum handling and stress. To any angler, this total would indicate a reasonably healthy population. However, there were annual fluctuations with a noticeable decline in sea trout numbers from 1999 until the termination of the lease on the water in 2003\*.

*\*I have received no further authenticated records for the entire river since that date beyond reports from individual anglers.*

Additional to the foregoing records I endeavoured to familiarise myself with the Avon Valley walking extensively from its source below the North Western escarpment of Ryder's Hill, Dartmoor to the estuary at Bantham. Throughout 23 years of observation a great deal has been noted/documentated regarding the status and behaviour of salmon, sea and brown trout and the overall ecology of the river.

When I acquired fishing rights on the aforementioned stretch in the summer of 1986, nocturnal fly fishing was an art new to me. I'd only ever taken three sea trout prior to that time and never a salmon. The role for which I qualified on the committee of my previous angling association was advisor on bank management for three sections of trout fishery on the headwaters of both Medway and Sussex Ouse catchments, a post I held for nine years until I moved to South Devon. What became immediately apparent was that a successful management and conservation principle applied to one river might not be appropriate for another. Similarly, fishing techniques employed successfully on one stretch of a specific river might achieve an adverse effect on another stretch of the same river given similar conditions. Over the years my diaries never followed any pattern or repetition. Never predictable, as a species, sea trout seemed to break all the rules.

That summer of 1986 was a particularly wet one, I had much to learn and obsessively read all I could concerning fly fishing, river management and the species. Notable reading included "The Trout," W.E. Frost & M.E. Brown. "The Salmon," Dr J.W. Jones (both published by Collins New Naturalist, reprints 1972). "The Trout & the Fly," Clarke & Goddard, pub: Ernest Benn and Hugh Falkus's comprehensive and unsurpassable work, "Sea Trout Fishing" Pub: Witherby.

At times of summer drought when water levels are low some pools may become land locked. Given such conditions ph levels can decrease to alarmingly low levels.

Immature salmon and trout are far more susceptible to disease than adult fish. However, each of those consecutive drought years in the latter 1980's confounded me in giving by far the greater number of catches and the largest sea trout specimens caught throughout the seventeen-year lease (Fish in excess of 6lbs).

Additional to personal research and experience I endeavoured to gain as much knowledge of the River Avon as possible through association with the ACA and attending meetings held by The Westcountry Rivers Trust. Over the years the latter have invited specialist speakers, experts in their field who have provided some insight into sound river management and conservation schemes beneficial to the welfare of a specific river and its ecosystem. Such initiatives have worked successfully on rivers elsewhere in the UK.

With recent reports of sea trout numbers within the Avon being alarmingly depleted and to a lesser degree those of non-migratory brown trout, research and review is urgently needed and long overdue. Those who remember the river of the eighties and nineties can no longer expect the same levels of success enjoyed throughout earlier years.

Initial problems appeared to encompass agricultural run off and the leaching into the river system of phosphates/pollutants. Both contribute to siltation and eutrophication (although the latter, given the rapid run-off peculiar to spate rivers would appear not to have shown significant problems on the Avon at the time of writing). Bank erosion by human activity and livestock also exacerbate the siltation process.

The application for a fish-rearing farm below Loddiswell will doubtless have serious detrimental effects on the river particularly downstream of the proposed location. Such a venture will require abstraction and chemical usage and, as history has decreed with inevitable bad effects. Indiscriminate felling of waterside trees, so important in stabilising riverbank, will ensure the resultant deterioration of rootstocks adding to both bank erosion and siltation. Water quality should be checked on a regular basis to locate any problems that can be dealt with immediately at source. All timbers that have fallen into the river or travelled down on spates should, where possible, be removed and carried to ground beyond the high spate line. Such activity requires regular working parties. The results not only make for a tidier and more visually attractive river but should go some way towards keeping spawning gravels from becoming clogged by detritus.

### **Predation.**

Predators are always the first to receive blame. However, as Dr J.W. Jones suggests in his excellent book, "The Salmon." (Pub. Collins New Naturalist, Special Volume, fourth impression, 1972).

"The indiscriminate slaughter of alleged predators has too often, in the past, resulted from ignorance and prejudice, or been a cover for inefficient management. It is certainly not justified in this country on any evidence yet available."

Whilst this statement might now be considered dated, with the exception of American mink, *Mustela vison* and the cormorant, *Phalacrocorax carbo*, my belief is that it still holds substance.

Together with some inevitable (to my mind acceptable at the time of writing) seal activity in tidal waters, near the top of my predator list during 1986-2003 was the mink population. To what extent their activities were reducing fish numbers seemed impossible to establish but it was rare not to see at least one mink on any visit to the river. Several times I watched females dragging substantial sea trout (up to 2lbs) to feed their kittens. One assumed that throughout the period of rearing young, such fish were taken on a daily basis. At that time, on the grand scale of things the level of fishkill was probably fairly insignificant and one assumed sustainable. However, their population growth then seemed alarming and it is known that mink will kill indiscriminately. Otters are present on the Avon yet their low incidence at the time of writing should denote no cause for concern.

Another predator on the unwanted list is the cormorant. These birds assemble (together with herons) on the Cockleridge bank at Bantham during May each year seemingly with the knowledge that both salmon and sea trout smolts will be making their annual migration to the sea. The majority of these fish will be between six and eight inches in length, cormorants will eat in excess of their own body weight in a day. Predation along the entire Avon Valley as far upstream as the Avon Dam must therefore be assumed to have some significance. During the peak of the autumn salmon run it was not unusual to share the water with up to four cormorants between Silveridge Weir and the bridge immediately upstream. The level of predation could not be accurately assessed although throughout 17 years I was never witness to a cormorant taking either adult salmon or sea trout larger than peal size.

Goosanders are present on the Avon although, to the best of my knowledge only one authenticated breeding site has been located at the time of writing. Goosanders do shoal up salmon parr, smolts and small brown trout but from personal observation I would doubt if their level of fishkill poses a serious threat to Avon fish stocks.

Lesser predators are numerous and include herons, gulls and parasitic lampreys in the tidal river, eels and bullheads (both of which predate not only on the eyed ova but maturing parr too). Their overall effect on fish stocks appears to be relatively inconsequential.

It should be emphasised that salmon, migratory and brown trout have highly developed olfactory senses. It is well documented that these senses are an active deterrent in locating odour and whereabouts of predators both at sea and in freshwater enabling rapid escape.

The growth and spread of invasive weeds such as Himalayan Balsam *Impatiens glandulifera* require checking before resultant problems become effective. Balsam is rapid in colonising areas of silt on river margins and elsewhere. Its seed pods, which carry a pleasant aroma, are capable of unfurling, rather like the snap of a finger broadcasting its shot-like seeds a remarkable distance, hence its rapid spread. The tall, watery stems die off during winter creating further build up of silt and detritus.

Salmon disease UDN (ulcerated dermal necrosis) fluctuated during the years of fishing Silveridge. It was pitiful watching fish wasting away during the autumn months. Whether victims throughout phases of infection are capable of spawning is

debatable however, the incidence of inflicted fish appeared to be less prevalent from 1995 until the termination of my fishings at Silveridge, Nov 2003.

Being realistic sometimes jars but in truth the greatest pressure on the South Devon Avon fish stocks comes from angling. Significant numbers of parr and smolt are caught each season and this is where extremely careful handling needs to be exercised (as it should throughout any phase of a fishes life). All anglers know that a good many vulnerable minors die as a result of bad handling and unhooking.

A small river such as the Avon cannot possibly sustain a significant annual fishkill to rod and line. A suggestion that a bag limit should be imposed with immediate effect of no more than one sea trout per angler per week and two salmon per month with all gravid hen fish carefully returned would outline a responsible and positive move in an effort to conserve. Effectively, if one works on a basis of 2/3 years parr life in freshwater followed by one year at sea, stocks should begin to make some noticeable recovery after a period of five years.

Returning to the stretch I used to fish at the end of the last fishing season (2009), I was deeply saddened by what I saw. Silveridge weir has partially collapsed into the current and is now bypassed at its upstream end causing a significant drop in water level and flow above the remaining structure. It was, in the 80's and 90's, a resting place for running fish over golden, water-polished gravels that now only see release from algae and detritus following a heavy spate. Elsewhere along the river large, unsightly polythene sacks flapped within the debris left by spates. Sections of riverbank were falling into the river through human erosion and in some cases riparian neglect and a disgraceful number of irresponsible anglers' lures dangled from overhanging trees. Is this a vision of the future? One can only hope not.

This paper represents a concise, personal ideal and only begins to touch the surface of the Avon's welfare. I make no claims to scientific knowledge beyond what I have learned from specialists within that field. Whilst I no longer have opportunities to fish the Avon, as an onlooker I am extremely concerned for its future and the successful continuation of both resident Brown Trout and migratory fishes. It should be the responsibility of all anglers to leave the same heritage that we have enjoyed for future generations.

**Mick Loates. Revised, July 2010**

