

## **THE ANGLING COMMUNITY'S CONTRIBUTION TO SALMON CONSERVATION**

There has been a fundamental shift in emphasis in salmon exploitation in the last 50 years. This has coincided with the general acceptance that we must manage our stock with care, in view of the reduction in returns from the sea. Whilst, historically, fisheries management in rivers was concerned primarily with ensuring access for anglers and commercial netsmen, some legislation provided limited conservation measures by declaring closed times and seasons for salmon fishing. Although it was illegal to kill stale fish on the point of spawning, there was no culture of catch and release and the vast majority of fish caught by both rods and nets were killed. Similarly, there was little regard given to the need to protect fishery habitats or the freshwater ecosystem, and the impact of land management practices on water quality was not fully appreciated.

Anglers have been in the forefront of this realism, through acceptance and promotion of catch and release, through funding of management, habitat and environmental improvements, exploitation reduction, and scientific research. Indeed, it is fair to say that without the existence of recreational angling, there would be little income stream to fund proprietors' actions, Fishery Board's policing and Fishery Trusts' investigative work and guidance on conservation measures.

### **Catch & Release**

When compulsory catch and release for early running fish was introduced in England in 1998, there was opposition from anglers. The fact that, a decade later, the review of the byelaw in 2008 to retain compulsory catch and release for spring fish was supported by the great majority of anglers, shows just how quickly attitudes to salmon conservation have changed within the angling community.

While catch and release has not been made mandatory in Scotland, most rivers have some form of regulation for rod caught fish. This ranges from total catch and release on rivers such as the Dee, to quotas of so many fish per day/week/season on others, to Tweed's highly successful ruling whereby the first fish caught is returned, and only the second, fourth etc may be retained by rods. In 2007 in Scotland, over 60% of salmon and 50% of seatrout were returned to the water; two figures which increase each year.

The past decade has also seen an extraordinary rise in voluntary catch and release by rods. The culture has changed dramatically to the present situation whereby, although the odd fish killed for the pot is still acceptable, there is peer pressure for restraint to be shown, even on rivers with relatively healthy runs of salmon. Anglers are now generally experienced in the art of returning fish to the water unharmed, and evidence shows that the survival rate of released fish is high.

There is no question that this change in practice by Fishery Boards, proprietors and anglers has led to a significant increase in the number of fish spawning in rivers. Catch and release has been, and continues to be, a genuine conservation measure widely adopted within rod fisheries.

### **Catchment Conservation**

Once again, Tweed led the way with catchment scale management and conservation by establishing the Tweed Foundation more than twenty five years ago. The idea is that scientific research underpins a management and conservation programme aimed at providing pristine spawning and juvenile habitats for salmon and sea trout, and sufficient adult spawners to reach that habitat and thereby maximise production of smolts. This work is funded by levies on proprietors per rod caught fish, financed through angling receipts, and some income from commercial netmen. Significant funding has also been raised from external sources, particularly through European Union initiatives, Stewardship schemes etc.

The rationale behind catchment management is that the freshwater environment must be as healthy as possible for returning salmon and sea trout to exploit, so maximum production of individual river systems is achieved. Local science provides the evidence on which to base conservation programmes, and management ensures that returning adult fish are not over-exploited by rods and in-river nets, and that their natural migration routes are not impaired by man-made barriers. Liaison with land managers, industry, local authorities etc helps to limit the impact of human activities on water quality and habitat condition.

Whilst the Tweed Foundation was the forerunner of the present situation, most of the Scottish rivers are now covered by Trusts, the purpose of which is to conserve and enhance native freshwater fish and their environments. These trusts are substantially funded by Boards (98% funded by angling), and by private donations.

### **Scottish Angling Associations**

Angling clubs and Associations make a significant contribution to communities and salmon conservation in Scotland. They act as fisheries managers in many instances, and they have a history of ensuring that there are inclusive opportunities for salmon angling for people with modest means. This has had the important effect of extending the franchise for salmon conservation to the interest of a wider community than would otherwise have been the case. It should also be noted that greater access to angling opportunities 'ticks boxes' within the Scottish Government's general strategy to make Scotland Wealthier and Fairer, Smarter, Healthier, Safer and Stronger, and Greener.

### **Scientific Research**

Fishery Boards, proprietors and anglers donate significant funds towards scientific research aimed at supporting salmon and sea trout management and conservation programmes. As well as the excellent work undertaken by Rivers' and Fisheries' Trusts, the Atlantic Salmon Trust (AST) is presently closely involved in NASCO's international, multi million Euro Salmon at Sea (SALSEA) Project, determining what happens to post smolts and adults in the marine environment. Meanwhile, the Salmon & Trout Association (S&TA) is a partner in projects to establish measures to counter excessive fine sediments in salmon spawning gravels, and the impact of endocrine disrupting chemicals on juvenile salmonids, especially in their ability to withstand increased water temperatures expected with global warming.

As well as committing resources themselves, the involvement of NGOs such as AST and S&TA is vital to unlocking larger external funds. For example, the SALSEA project has attracted TOTAL Oil as a major sponsor, while S&TA's partners include Defra, ADAS and Southampton and Exeter Universities.

### **Anglers as Environmental Watchdogs**

The angling community has a close interest in water quality and the wider interactions between all water dependent wildlife – flora, invertebrates, fish, birds and mammals. Anglers have been called the 'eyes and ears' of the riverbank and in many instances their observation, along with that of fishery managers, forms the bedrock of practical conservation and environmental management.

An example of this is the Riverfly Partnership, which is now active throughout the UK. Anglers are taught in workshops to monitor invertebrates and identify key family groups likely to be found in local rivers. Teams are then formed to regularly monitor their waters, allowing long term trends to be established and, more importantly, pollution incidents to be identified through sudden collapses in invertebrate numbers and/or species.

The Riverfly Partnership is run through S&TA but the Scottish operation is overseen by Buglife, so showing the close cooperation between fishery organisations and environmental groups.

### **Buy-out of Netting Stations**

The angling community has contributed significantly to the buy-out of netting stations, both at sea and in-river. Netting effort has reduced by an estimated 90% in the last 50 years, and this is in part due to anglers and proprietors being prepared to back financially the reduction in stock exploitation. For example, Scottish fishery interests contributed in excess of £500,000 towards the buy-out of licenses in the NE English Drift Net Fishery in 2003/4, principally because of evidence that up to 70% of the fish caught in that fishery were of Scottish origin, and were of mixed stock status.

The purchase of in-river netting stations has been as the result of local management policies and negotiations between Board/proprietors and netting interests. In many cases, these management decisions were taken in conjunction with local catch and release regulation of rod fisheries, ensuring that fish saved from netting were not all caught and killed by rods, but that a significant proportion survived to spawn and so contribute towards the conservation programmes within individual catchments.

### **Summary**

There has been a significant change in attitude by Fishery Boards, fishery proprietors and anglers towards salmon and sea trout conservation over the past three decades, and the last ten years in particular. Both compulsory and voluntary catch and release are now widespread management and conservation tools, and a high proportion of fees paid by anglers to fish in Scotland are re-invested into rivers by proprietors, Boards and Fisheries Trusts. Angling Associations and individuals are involved in fisheries management, and have an evidence based record of being competent observers of water and environmental quality. Netting stations have been purchased on a willing buyer, willing seller basis, with fair compensation paid to netsmen, so enabling as large a proportion as possible of returning adult salmon and sea trout to enter their natal rivers and exploit spawning habitat. Fishery Boards, fishery proprietors and anglers donate generously to research projects at both the national and international scale.

It can be estimated that anglers and fishery interests inject more than £6m per annum directly into stock management, habitat improvements and scientific research. The benefit of this management and conservation work reaches beyond purely the interests of fishery proprietors and anglers, supporting widespread communities, many in remote areas, in terms of jobs and local economies.

And finally, there is an often overlooked aesthetic public benefit from all this conservation work, in terms of the quality of life derived from the enjoyment of healthy aquatic environments by everyone who comes into contact with them.