Atlantic Salmon Trust
WORKING FOR THE FUTURE OF WILD SALMON AND SEA TROUT

Report from the 2nd International Sea Trout Symposium

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The symposium, which met in Dundalk, Ireland, provided a fascinating insight into recent research into all aspects of sea trout biology and behaviour.

In 2004 the 1st International Sea Trout Symposium was held in Cardiff. Sea trout have long been treated as the poor relations of salmon, and this was the first major conference on this complex, and fascinating fish. It produced a series of recommendations for further research, and the 2nd symposium, which took place over three days in Dundalk, Ireland, provided an opportunity to review the progress that has been made in the intervening 11 years. The event lived up to its name, with papers on sea trout from the Baltic to the foothills of the Pyrenees as well as Britain and Ireland.

The overwhelming impression left by the symposium was the sheer diversity of trout behaviour. Sea trout in the river Teno in the North of Finland return to the river in late summer and overwinter there, with immature fish then migrating back to the sea and mature ones moving further up the system to spawn the following year. In parts of Britain and Ireland, on the other hand, finnock may return to the river after only a few months at sea, with some maturing and spawning the same year. Moreover, migrating to sea (anadromy) is only one of a range of life strategies that trout adopt. A study from Switzerland showed that trout there migrate to and from large lakes in much the same way that trout elsewhere migrate to sea, with the crucial difference that such freshwater to freshwater migrants do not need to become smolts to deal with the transition to freshwater.

The symposium showed how much research there has been into all aspects of trout biology and behaviour since the 1st symposium. The programme addressed a series of important questions: what causes trout to go to sea, and why do apparently similar populations behave very differently? What is the genetic structure of sea trout populations and what does this tell us about their origins? Where do sea trout go at sea and what do they feed on? What can we do to improve the monitoring of sea trout stocks? What is the impact of the various threats to sea trout? To try to answer these questions an important series of papers on the results of the EU-funded Celtic Sea Trout Project were presented, as well as a large number of other studies. . Inevitably, in some areas new research is undermining received ideas and showing that we know less than we thought we did. But in others there have been real advances in knowledge, particularly in the field of genetics and behaviour at sea.

Fascinating though the latest scientific research was, the symposium had a practical purpose: its title was From Science to Management, and the aim was to draw practical conclusions from the research that will help managers improve the management of their sea trout stocks.

One of these is that sea trout are great vagrants. While the evidence shows that the vast majority return to breed in their natal stream, sea trout frequently visit other estuaries and rivers. It should never be assumed that a sea trout found in the lower reaches of a river is a native of that river, and sea trout in estuaries may well come from a wide range of stocks. This has obvious implications for management. Despite the many problems, there have been significant advances in modelling sea trout populations. This will eventually help managers assess better the state of their stocks. However, a number of issues still need to be resolved, such as the role of resident trout and of finnock. There is a clear need for more sea trout index rivers,

so that all aspects of actual sea trout populations can be studied in depth. Work in Norther Ireland on the Shimna River showed what could be done.

An important finding from the Shimna was that some 85% of eggs in the system were contributed by larger sea trout that have spent at least one winter at sea. This is likely to be true of many other systems, and has obvious implications for management. If managers want to safeguard the main part of their spawning stock, they need to focus on conserving these fish; slot limits, requiring anglers to return fish with a defined size range, is one option.

Although we know much more than we did about sea trout at sea, there is still a lot more we need know- which is not surprising given how little we knew to start with. Areas for new work include tracking studies to give us more understanding of sea trout movements and behaviour in estuaries and around coasts, studies on diet and the role of coastal streams in contributing to sea trout numbers at sea.
One important topic that the symposium did not address was the importance of sea trout and sea trout fisheries to the economies and cultures of so many parts of Europe. An event concentrating on advances in science was probably not the place for this, but it is something that needs to be done.

Details of the symposium programme can be found on the symposium website - http://seatroutsymposium.org/ - and it is hoped to upload the presentations on to this, together with the poster papers displayed in the conference hall. In the longer term a full Proceedings, with peer-reviewed papers, will be published, and copies of this can be ordered on the website.

The symposium was very well organised by the principal sponsors, Inland Fisheries Ireland and the Department of Culture, Arts and Leisure in Northern Ireland, and the AST played a prominent role in the preparations as one of the other sponsors and as one of the convenors. In all over 160 people from over 12 countries attended, and there was general agreement that we must not let another 11 years elapse until the 3rd symposium.