

The Ghillies Seminar

Friday 28th April 2017

Sarah Bayley Slater (Atlantic Salmon Trust) – The Atlantic Salmon Trust - Marine Research, Preview of Atlantic Salmon Lost at Sea

The Atlantic Salmon Trust is 50 years old this year and will continue to focus on the marine environment. Why is this important? In the last 25 years marine survival has dropped from 15% to <5%.

SALSEA ran from 2006 to 2011 and worked to open up this area of understanding. Comprising 20 partners, it was a £20.6million project, with the last ship running in 2010. Over this time they determined migration routes, taking it to broad stock level using genetics. Can you then use this information to set up 'safe corridors' and reduce predation.

SALSEA also gave information on changes in the climate. It was determined that the distribution is linked to ocean currents, with surface winds also a factor.

AST are involved in tracking projects, with a dedicated staff member to assist with a broad overview of the data. A tracking project in the Cromarty showed that the fish headed out of the river and did not move directly to sea, but rather headed across the Firth to the Moray coast before heading out to sea. While this is possibly in order to pick up currents, it is counter-intuitive and will have an effect on the siting of wind farms, for example.

The new AST Board was put in place last year. They now have 4 priorities:

- Acoustic tracking – what is happening to smolts? This links to MS and NASCO research in oceans.
- An eDNA project to determine salmon in pelagic trawls as a by-catch. The probe was developed in 2016 and will give presence - absence at the present moment, although work is continuing to develop a way of determining quantities.
- Aquaculture. While AST has not been involved for several years, they are looking to create dialogue to improve management using ASC standards. ASC is an International standard, which includes wild fish interactions.
- Developing a salmon and sea trout archive. This will aim to digitise old records and 'grey' material, making them available on the internet.

A joint Conference was held on the Tweed, looking at smolt migration. This was recorded and is available on the AST YouTube channel.

As part of this talk we watched an uncut version of 'Lost at Sea', a film about the SALSEA project being produced by Gabriel Byrne, RTE.

Ronald Campbell (Tweed Foundation) Changes in run timing

Detailing changes in the rod catches on the Tweed over the past few decades, it was noted that the 2010 catch was an all-time record of 23000 fish, compared to 8000 in 2016 and 7500 in 2015. However, in general, the trend since the mid 1990's is of declining numbers overall with an increased catch in July compared to a declining catch in November. This signifies a change from a predominantly grilse catch to one of salmon. The size of fish is also declining, with grilse weight declining by about 1 lb every 5 years.

The Tweed has records from the estuary nets, going back to 1740. It is therefore possible to look at the long term changes in the proportion of grilse in the catches compared to salmon, as well as the total number of fish caught.

This showed that there was a cyclical change between large numbers of grilse and smaller numbers of spring salmon, operating on approximately a 60 year cycle. It is likely that the smaller numbers of salmon returning reflect their greater length of time at sea and therefore poorer survival. This is also reflected in the timing of the catch (February – June compared to July – September), with a dominant grilse population returning mainly in August and September. A similar pattern is observed in the other large east coast rivers – the Spey, Don and Dee.

These changes can be rapid, both in terms of size and numbers, with massive changes seen in 5 years. As numbers improve, weights also increase. The 1920's to 1960's were a salmon period therefore the starting run data used by MS should not start in 1952 as this was an unusual period.

Why does this happen? It seems that differences in ocean temperature are involved, relating to the North Atlantic Oscillation. When the NAO is positive, we get westerly weather and warmer water, with grilse doing poorly. A negative NAO of easterly weather and cooler water seems to favour the grilse.

Thus, what is the connection between grilse and salmon? Are they the same fish adapting to different conditions?

When looking at the situation we need to look at the history of the subject. While we need day to day management we need to be able to determine when changes are happening natural or anthropogenic. We can't do anything against long term changes so shouldn't waste time on these issues.

Discussion

Are there any identified genetic differences between spring salmon and grilse? Genetic changes have been noted in run timing but there is no detail as yet. That doesn't necessarily follow these patterns.

Tony George has looked at the differences between the east and west coast. RC will send details to SM.

Spring salmon have a higher exploitation rate than grilse, possibly because they have fed more recently. Stomach content analysis from the Berwick net catches showed that 10% of the fish had stomach contents before June, but none were found with contents after June.

Rod fishing is becoming much more intensive, and this will impact on rod catches. Previously people only went out if the water was good, now they will fish hard for the period of their let. The nets give a more consistent effort.

Shona Marshall (WSFT) – Wild Fisheries Reform, an update

This gave an update of the latest viewpoint of the Wild Fisheries Review, detailing what has been removed and what left in.

Out:

- The all species remit has been removed, so mandatory management will remain as salmon and sea trout only.
- The rod licence and all species levy have been removed. This is partly as a result of the difficulty in knowing who owns what.
- The plan to make it a criminal offence to fish for others species has been abandoned. It is still against the law to fish for any species without right or permission, but in the absence of a protection order this remains a civil offence. Much of this area is covered by a PO, should we be looking at extending this to all areas?
- The proposal for statutory Fisheries Management Organisations have been dropped. Government would still like to see Boards and Trusts merging but will not enforce it. FMO's would have larger areas than current Boards, which may reduce the ability to undertake local management decisions.

In:

- New legislation is still proposed. This will replace the 2003 Act, but timing is uncertain.
- Wild Fisheries Strategy/Fisheries Management Plans will continue to be developed. The Plans will follow a national template and will address national issues but must be delivered. The ability to address local concerns is perhaps questionable.
- There will be a reassessment of the powers of bailiffs and offences to make sure that they are fit for purpose.
- Training and CPD will be rolled out across the sector.
- Promotion and development will continue to be a part of the programme.

Other points of note:

- There will be a ban on the use of gillnets within coastal waters, thus closing a loophole in the current legislation.
- Conservation measures have been introduced for pike, but not for brown trout. It is up to the local area to introduce measures.
- There will be an opportunity to introduce local flexibility into the fishing season. This may result in Sunday fishing, if desired.

- Sea trout conservation has not been moved forward but can be included in local plans. It is up to the local management to look after the sea trout.

Discussion

Sea trout management is difficult – what is a sea trout? – and this is why there is not a national plan for their conservation. They can however be included in a local plan. Would be good, however, if the ban on taking of salmon had been extended to sea trout instead of deliberately excluding them.

The presence of predator damage on fish should be reported to the DSFB. Without evidence of a problem there cannot be applications for licences.

In the absence of FMO's, it is possible for the Trusts to retain flexibility in work that may not be open to the statutory Boards. This should be viewed as good as long as the Board and Trust continue to work together.