

Week Twenty Two

The week started in the office preparing some of the scales that we had collected from the hatchery brood stock last week. I then met with Martin from the board to head down to Montrose to get a tutorial from Bryce White in scale reading. Upon arriving Bryce welcomed us into his office where we discussed the process of sampling scales and the methodology involved. Bryce showed us how to prepare the scales for reading and the equipment that he uses. Marine Scotland has been collecting scales from salmon, sea & brown trout for over 40 years. This information has been invaluable in understanding the changes in stock components and river and sea life stages of salmonids over this period and has led to some interesting findings. The equipment that Bryce uses is a mixture of old and new, he prefers a mixture of the both in his typical analysis. He has the technology to read and save a digitised image of the scales, then use a computer programme to back calculate fish lengths and weights from the scale circulli measurements. The equipment that the Trust has is simple but effective which mirrors the Trusts need for the information from the scales. The information that we will be analysing for the requirements of the Trust and Board is collected and interpreted with relative ease. The procedure for collecting, imprinting and reading the scales leaves plenty of information which could be analysed in future if required.



An example of a scale imprinted and viewed on a microfiche, the fish age would be 2.1.1 this means that the fish is a grilse with 2 years in the river before it smelted then one winter at sea with some summer growth before it was returned and the scale was read. If you notice that the edges are rough this is as a result of the erosion from the re-absorption of nutrients by the fish during its period in the river.

So how is it done, well a firstly several scales are required in order to obtain some which are suitable for imprinting. The scales once dry can be removed from the packet and shaken onto a microscope

plate. Then it is a case of looking at the scales under a small magnification to identify scales with clear river and sea growth rings present on each. Once 3-4 suitable scales are identified they are then laid on a slip of acetate with another laid on top. The acetate is then passed through a jewellers press to imprint the scales circuli (or rings) onto the plastic acetate. This imprint can then be stored indefinitely and also allows for info to be added to the plastic in order to identify the slide. Once imprinted the slide can then be placed under a microfiche reader in order to read the scales. It is then a case of reading the scales and identifying the various information held within the scales. We will have further reports on this section in future and will also have more images available soon.

On Tuesday I met with the board team again up at the hatchery. On this occasion we prepared the hatchery for the arrival of one of the Trustees Dr Sam Martin and his group of MSc students from the University of Aberdeen. The group consisted of about twenty students studying various aspects of ecology at the university. The response from the students was great, many questions were asked and some photographs taken it was a useful opportunity for me to speak to those more interested in this aspect of ecology to ascertain if there were any suitably interested students which may be able to work with the trust as a summer student. Overall the day went very well and Dr Sam Martin thanked both the Board and Trust staff for the day.

On Wednesday I was joined by Iain one of the trustees as we were to attend an event held by RAFTs in Perth on the funding procedure to date. In the interest of saving fuel and the environment we contacted the neighbouring Trusts to ascertain if they would be in attendance at the event. Dr Mark Bilsby from the River Dee Trust replied to let us know that he would be attending and that we would be most welcome to join him. The event was held in the Dewars Rink Centre in Perth, it was attended by all the RAFT members and also by the funding body Marine Scotland. The theme of the event was to ascertain the effectiveness of the current Funding programme and to get some feedback from the members on the process so far. It was also an opportunity for the genetic study group from Marine Scotland to present their current findings and how they anticipate their forthcoming results to illustrate the different genetic outcomes we could expect from our genetic analysis. A summary of this report will be posted shortly.

Thursday was spent in the office whilst Friday was occupied with two school visits to the hatchery. The two schools on Friday were the first of this year's visitors to the hatchery in the Salmon in the Classroom programme. These schools were Lumsden and Monymusk Primary schools. On arrival at the hatchery the school groups would be split in two and one half would join Jim and Martin or Stephen and the other half would join me. Jim's group would be visiting the impoundment first and witnessing the selection and stripping of the brood stock fish. My group would be taken up to the nursery hall to see the eggs being laid into the troughs and examine the other eggs already present. The children were delighted seeing all stages of the hatchery work especially seeing some of the bigger brood stock fish, some of which were as big as them.



Jim Kerr with one of the cock fish (20lb+) used for brood stock this year.

On Sunday I was again up at the hatchery but this time I was joined by some bigger kids, namely some of the ADAA members. The event was well attended with over 25 people present, some of whom had seen the process already and for others it was a totally new experience. The weather held out and the day was started with a safety briefing followed by a trip to the Newe weir to catch up some fish. After catching a few fish we returned to the hatchery to repeat the process as for the schools earlier in the week. There was ample time after to have a cup of tea and have a chat with some of the club members. It was great being able to discuss and chat with those whom I did, many questions were asked and hopefully my answers were adequate. As I have said to those at the event please feel free to get in touch with me if there are any questions or even if you are passing and would like to stop into the office.

Next week I'll be at the Hatchery with some of the schools I'll also be meeting with Caro Middlemass of FRS Marine Scotland at Pitlochry regarding her work on one of the tributaries of the Don.

Cheers Jamie