

15 August 2018

The Buckland Foundation supported a colloquium entitled “The evolution of science and management of wild Atlantic salmon: past, present and future” held at the National Marine Aquarium in Plymouth, Devon.

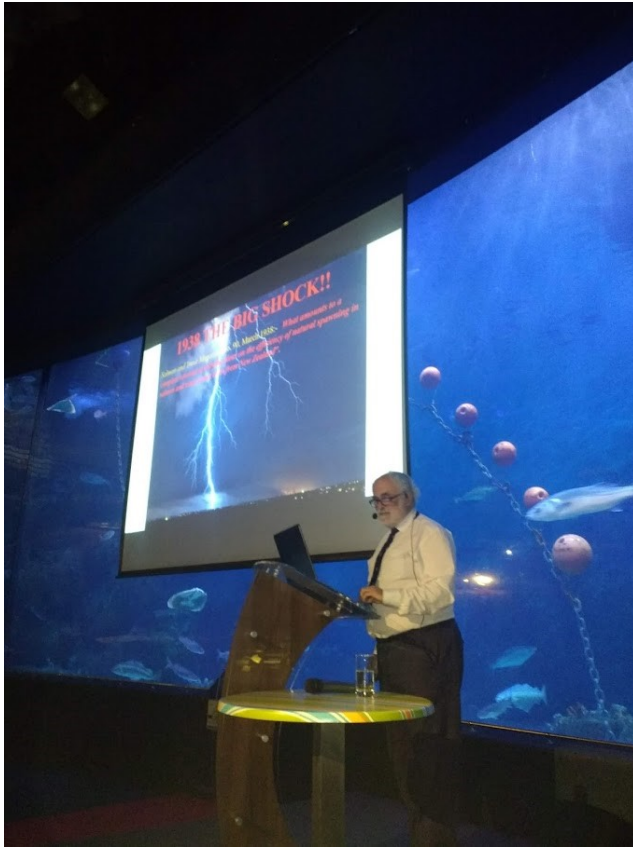


*Dr Ronald Campbell about to demolish a John Dory in advance of his lecture.*

The first presentation (45 mins) was offered by the Buckland Fellow for 2018, Dr Ronald Campbell, on the topic of the history of salmon management. Ronald traced the development of scientific understanding and its applications to management from the first legislation in the middle ages. It has taken centuries for the life cycle of the fish to be fully established. Ronald focussed his considerations of the 19<sup>th</sup> and 20<sup>th</sup> Centuries on two topics. First, the challenges of correctly identifying the young parr stages as a part of the salmon life cycle and worthy of protection. Second, the appreciation that hatchery rearing is rarely useful for enhancing wild stocks of salmon. This, he explained, is both because of a “fake fact” that spawning by wild salmon is inefficient, and a failure to understand that freshwater habitats impose a carrying capacity that limits the salmon biomass.

The second presentation (20 mins) offered by Dr John Armstrong, a Trustee of the Foundation, explained the recent declines in wild salmon stock strength and summarised the range of modern techniques being used to study the fish. These methods included the well-established electrofishing and fish counting systems, electronic tagging of various kinds, advanced computer modelling, geographic information systems and genetics. Perhaps most impressive is the technique of drilling out tiny samples along the length of a salmon otolith to use oxygen isotope analysis for estimating a historic record of sea temperature. From this series it is possible to generate a history of the approximate position of the fish at sea through the marine phase of the life cycle. The talk was concluded by musing as to what

Frank Buckland would have imagined might be possible now, and indeed what advances in science may be yet to come.



*Dr Ronald Campbell presenting his lecture against the backdrop of the large fish tank in the National Marine Aquarium in Plymouth.*

The total attendance was 49 comprising a diverse audience including scientists, fisheries practitioners, students and those with a general interest and curiosity in the subject matter. Some had undertaken journeys of three hours duration each way to attend. After a break for refreshments following the talks, there was a lively discussion session over 30 mins, with many individuals in the audience offering questions and opinions. There was particular interest in options for conserving salmon and the question of how we can apply historical knowledge in that context.

Special attendees John Buckland, a relative of Frank, and his wife Lavender, were very pleased to have reconnected with the Foundation. John and Lavender had just returned from a fish catching and consuming expedition in the Amazon, very much in the Buckland spirit.