

Charles Rangeley-Wilson

January 2018



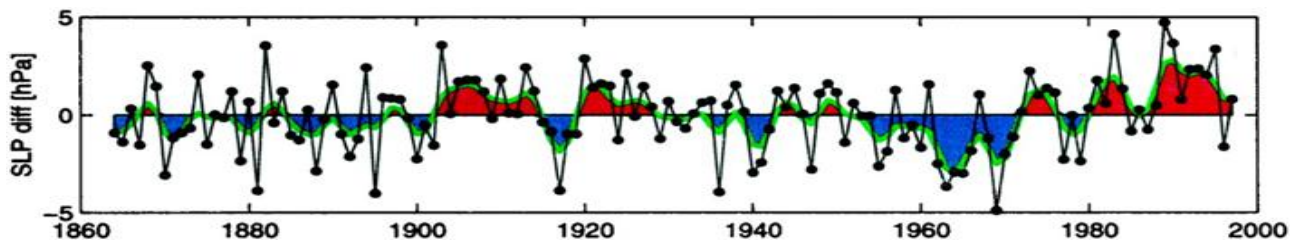
CR-W was introduced as an angler, conservationist, a TV producer, author and founder of the Wild Trout Trust. His first TV series led to 4 episodes of “The Accidental Angler” back in 2006, which visited London, Brazil, Bhutan and India. Like me you may well have missed these highly acclaimed programmes but the London episode, seeking brown trout in and around the Capital, is available on YouTube. A subsequent visit to Japan led to an awareness of how fish were still tied into their culture (think Koi carp) whereas in the UK it is almost non-existent. His TV film “Fish!- a Japanese obsession” does not appear to be available in English on YouTube unless someone knows better! The difference in philosophy inspired him to wonder how this came about. He identified 5 significant

fish in UK history – the eel, carp, herring, cod and salmon – all of which are discussed in his latest book “Silver Shoals – 5 fish which made Britain”. Rather than condense the 350 pages into an evening talk he thought it wise to select the salmon which was more relevant to our personal interests.

CR-W grew up in London in the 1970’s, when the Thames flowing through the Capital was in a dire state. By good fortune, his Godmother lived in County Kerry and it was on a holiday visit when he first saw a salmon jumping a waterfall. A bit of research led to “Collins Encyclopaedia of Fishing” where a chapter on Game Fishing by Reg Righyni on the life cycle and accompanying change in the “uniform” of the salmon further inflamed his passion. University Art School loomed and it was not until he landed a job at Canford School (Dorset) on the banks of the Stour that he was able to pursue his interests further. There was a marked difference between the rivers of mountainous County Kerry and those in rural Dorset. Despite the relatively sluggish nature of the Stour, the occasional salmon ran up from Christchurch Harbour (which it shares with the Hampshire Avon so how come more of the Avon salmon do not stray into the Stour?) in the late 80’s. A bit of river restoration led to the appearance of a spawned-out salmon the following spring with an estimated weight of 45lbs. CR-W did not see another salmon up to the time he left the area in 1997 although he did catch a parr last year.

It was time for a bit of natural history of the Atlantic salmon which were described as anadromous. In my ignorance I thought that might be a technical term for “hard to catch” but no, it means they are born in fresh water, live in the sea and return to fresh water to spawn. It is a characteristic they share with the lamprey and little else. Young salmon, parr, are imprinted with the scent of the exact area of the river where they were born. They can recognise their relatives and migrate in family groups. There is evidence that they have magnetite in their skins which assists precise navigation using the Earth’s magnetic field. The roots of the salmon family go back 100 million years. They have double the number of chromosomes of normal fish which means that they are very adaptable and grow very quickly. Monster Atlantic salmon are not necessarily old fish. The salmon species probably resulted through the procreation of 2 species of hybrid smelt. All Atlantic salmon are located in the northern hemisphere. 2 million years ago, salmon and brown trout inter-bred leading to sea trout. I refer the reader to “Silver Shoals” for a concise explanation of this process. The size attained depends on a number of factors including the time the fish spends in the sea which is usually 4 - 7 years. Perhaps 5% manage the spawning

trip twice. The UK rod caught record is 64lbs but there are reports of a netted fish weighing just in excess of 100 lbs. An analysis of the weight of salmon, captured by any method (“The Domesday Book of Giant Salmon - a Record of The Largest Atlantic Salmon Ever Caught” by Fred Buller), showed that the number of Atlantic salmon captured over 50 lbs was greatest



between 1900-1925. This was related to the North Atlantic Multidecadal Oscillation which is a climate cycle that affects the sea surface temperature of the North Atlantic Ocean. (see “Atlantic Salmon: An Illustrated Natural History” by Rod Sutterby, Malcolm Greenhalgh). A cyclic fall in sea temperature over the period 1960-1995 has had a similar but less obvious effect on the salmon population. Our resident expert Allan Sefton quipped that in order to enjoy the best salmon fishing you have to be born in the right era! The role of the NAMO is a working hypothesis supported by the observation that during a warm period the survival of cod larvae in the North Sea plummeted.

Over the aeons, the salmon has survived many traumas. The last ice age (max. at 17000 years ago) resulted in glacier cover over the UK extending to a line between the Severn and the Wash and salmon to the north were exterminated. A residual population survived on the south coast but those in the north awaited restocking by stray fish. There is also an apparent correlation between the Jurassic band of geological deposits which run from Devon to Yorkshire. That may well be a falsehood as the Jurassic period ended 150 million years ago, before the precursors of salmon existed. Nevertheless, this boundary also coincided with the distribution of salmon today which seemingly show a preference for living in the waters scouring the older upland rocks to the north. A more plausible explanation for the distribution of salmon is that it is man-made. Obstructions in the form of water mills (for grinding corn) started to appear on the rivers around 700AD. According to the Domesday Book there were around 5200 in use in 1100 AD and this increased to 25-30,000 by 1850. Even more interesting was the observation that the mills in the northern regions were of the vertical Norse type wheel which incorporated a mill race, whereas those in the south were of the original Roman design with a horizontal wheel which had to be much larger in order to generate enough power from the sluggish lowland waters. These Roman mills frequently filled the width of the waterway and obstructed the passage of salmon.

Pollution was on the rise thanks to population growth and urbanisation. Tanning of leather (Eastern Counties Leather works ~1976, anyone?) used an alkali-rich process of immersion in warm dog dung or bird droppings which were subsequently dumped in the local river. The butcher’s yard was also a major source of obnoxious debris. By 1850, the Mersey was biologically dead thanks to an estimated annual dumping of 750,000 tons of ash, colliery waste and untreated sewage.

Salmon were extinct in the Thames, the finest Salmon River in Europe, by 1815. An attempt to reintroduce salmon in 1985 was doomed by the fact that nobody seemed to appreciate that the salmon returned to the river where they were born. The few fish that were caught (we had a successful angler at one of our evening meetings – see the archives) were almost certainly strays from the Itchen and Test! All is not lost – it is just that the time scale is not in our favour! Apparently, a salmon was caught in the Stour in 2014 and another from the Trent in 2015. It is a matter of improving the water quality, removing obstructions to migrating fish, and creating a river bed suitable for redds. Steve Marsh Smith, the founder of the Wye and Usk Foundation,

adopted an aggressive approach on the Wye where the salmon catch had dropped from 5000 fish a year down to 300 in 2004. Their efforts have improved the catch rate to 900 whilst other rivers, including the adjacent Severn, have flat-lined or declined. The global population of Atlantic salmon has fallen from 9 million in 1975 down to 3 million today.

His mission is to restore the lowland rivers to a state that they can hold salmon once again, notwithstanding the lack of native fish. CR-W has had some success with sea trout on his own local stretch of the Nar which had previously been “improved” by indiscriminate dredging.

After the break it was question time. *What are the chances of reviving the salmon rivers in Scotland?* It is a complex problem replied CR-W because of the general decline on which is super-imposed a cyclic variation between seasons. The poor survival chances at sea are a major factor. At one time 5% survival rate of the original stock of parr was adequate to maintain the indigenous salmon population: this figure is now nearer 15%. There is also the NAMO which is entering a cooling phase and maybe causing the decline in the run of grilse. Fish farms are a problem especially when escapees destroy the gene pool. Did I hear the word *corruption*? There are experiments with alternative systems other than nets hung in lochs. One such installation in the Hebrides, according to CR-W, utilises native fish and is located where the tidal flow is such that lice cannot survive. Allan Sefton agreed with the comments of CR-W but, overall, was more optimistic. He said that the Scottish rivers, specifically the Tweed, had never been in better shape and it was stuffed full of parr. Further stocking was futile as the survival rate of this high density of parr prior to migration was estimated at only 40%. We returned to the ice-age problem which drove salmon down south as far as North Africa: the receding glacier cover may now mean that southern England is now the edge of the range of the Atlantic salmon. At the northern limit, salmon are appearing in some of the rivers in Greenland. However, Allan came prepared and quoted figures from the Tyne where the actual numbers of salmon were counted through fish passes. The maximum was 44,000 in 1996 dropping to 22,000 in 2009 but have averaged 33,000 over the past 5 years which suggests a level of stabilisation: of course, the catch rate was significantly less.

What is generally accepted, following observations by Hutton, the renowned Wye angler back in 1939, is that there are two genetically different salmon groups in the British Isles, following the retreat of the glaciers. Those from southern England, Wales and Ireland were re-stocked from North Africa whereas those in the NE of England and Scotland came from stock which survived in a glacial lake in the Baltic. Allan used this happening to explain why there were very few grilse in the west coast of the British Isles but I did not understand it other than fish on the west coast were more exposed to more hazardous conditions at sea and the population could not be sustained.

Peter Hartley, salmon angler and award-winning salmon fly tyer, wanted to know *if all salmon only made one spawning cycle*. The answer appears to be that it depends on the inherent fertility of the river. Kelts which die in barren rivers decay and make a significant contribution to the food available for parr. Kelts appear to survive more readily in fertile rivers and may make several journeys to the sea.

Peter also asked if the *catch and release mantra was nonsense (sic)* especially as it is mandatory on rivers such as the Dee? CR-W tactfully responded that in Scotland it was mainly a political move to placate the drift net fisherman but was probably justified where the run of fish was precarious. Peter said that there was a massive change in culture in Scotland over the past 30-40 years where at one time ghillies would never contemplate returning a fish.

How many times can a salmon return to the sea? Maybe a few times? How many cycles did the Ballentine record of 64 pounds manage? Maybe 6 winters, confirmed by scale readings.

However, when the Greenland fishery was in full swing in the nineties it was estimated that netting removed a third of the salmon biomass. It was irritating that Greenland was administered by Denmark who had systematically destroyed their own salmon fishery. In 2000 Greenland agreed to limit the catch to 20 tonnes per year which represented the level of internal consumption. Recently this has been increased, against scientific advice, to 30 tonnes. Thus, with the current voluntary control of the Greenland fishery, the chances of more big salmon surviving may be improved.

Can you tell us more about the restoration project on your (CR-W) trout stream on the Nar? The Nar is one of a dozen chalk streams in Norfolk. It is about 30km in length but the bottom half is essentially man-made running through a salt marsh up to Narborough with the aid of raised banks. The fishable sections of the river are in the vicinity of Castle Acre. CR-W's interest stirred when the WWF won an action on the back of the British Government's failure to deliver on the EU Water Framework Directive, and he was asked to draw up a catch and restoration plan. This was based on the Nar but instead of throwing money around, focussed on identifying where the cash could be spent most effectively. An example of a simple reconstruction involved felling trees into the water way and by reducing the width, increased the flow. Another advantage was that the trees provided a refuge for the fish and they were less easily spooked by man or beast. It proved to be very effective. The next project involved a section where the original meandering profile had been retained but the bed had been destroyed by dredging. Gravel from the plain alongside the river was dumped into the river. Initial concerns that using ungraded material would be disastrous proved unfounded as the flow of the river performed a self-grading operation. In areas where the river was straightened it proved more cost effective to dig out a fresh meandering channel thus exposing the natural underground gravel layers and avoiding the need to seek fresh material.

Is this money still available? You need to be aware of the possibility of grants in the pipeline which tend to be intermittent. Bids based on demonstratable success are likely to win. Don't (exclusively) mention the fishing! Concentrate on benefits such as crayfish, water voles, invertebrates and even public access.

Can you give us five minutes on eels? (Much mirth as it was getting late and the chances of delivering an oration on eels were a bit restricted). CR-W focussed on the collapse in the eel population; again, a complex situation. Elvers cannot swim and drift back to Europe from the Sargasso Sea with the prevailing ocean currents and can easily end up at the wrong destination. Elvers are regarded as a delicacy in the Far East where they are said to be worth \$1 each. Wooden (leaky) sluices have been replaced by steel and concrete structures which are difficult to traverse. (a previous speaker said there was an eel ladder at Jesus Green lock). He thought that because the dearth of eels was a world-wide problem, the cause must be on a similar scale. Pollutants such as PCB's were high on his list. Eels are scavengers and living in the bed of lakes mop up any undesirable substances. The high fat content of eels retains organic pollutants and in turn these are claimed to prevent the eel reaching sexual maturity en route back to the Sargasso Sea. Partly because the eel breeds 4000 miles away at a depth of 1500-7000 metres, less is known about the eel than particle physics.

The meeting had to draw to a close and CR-W was warmly applauded by a full house.

General points

“Accidental Angler” Charles Rangeley-Wilson ISBN 978-0224080125

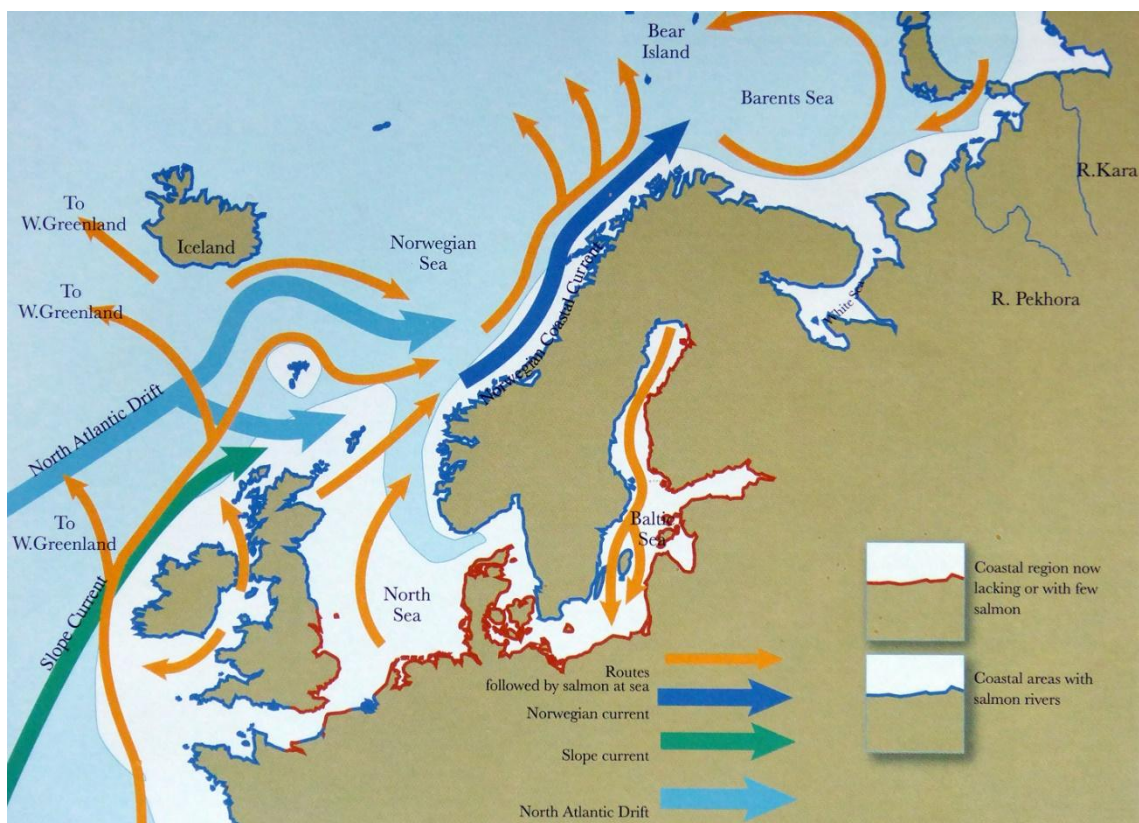
The book which preceded the film. I can find the episode on searching the London area for brown trout on YouTube but not the remaining chapters. Does anyone know better?

“Silver Shoals – Five fish that made Britain” Charles Rangeley-Wilson ISBN9781784740863. *The fish are carp, herring, cod, eels and salmon. The book is very readable and informative but the 350 pages lacks illustrations or photographs which is a pity. For the guy who wanted “5minutes on eels” he can read almost 60 pages on the subject in here!*

“Fly Fishing for Salmon” Allan Sefton ISBN 9781472135629 *I have to plug this book but not just because it was written by one of our club members. The first three chapters provide a concise description of the history, species and behaviour of the salmon. Even if you have no intention of going salmon fishing, the remainder of the book is a good read especially the summaries at the end of each chapter (and don't forget his book on trout fishing). I defy you to find another authority on salmon with both hands-on fishing experience and an up-to-date knowledge of the state of play regarding the latest research, rivers and the statistics relating to the fish catches.*

“Atlantic Salmon – an illustrated natural history” by Roderick Sutterby and Dr Malcolm Greenhaigh, ISBN9780811701457 *This is a compact history of the salmon endorsed by Orri Vigfusson (RIP), Chairman of the North Atlantic Salmon Fund. Parts of this book can be found on the www. The picture below showing the migration route of salmon, was downloaded from the site and hopefully does not infringe copyright.*

Dave Jones. January 2019



Migration routes for Atlantic Salmon around Europe