## Written submission from Andrew Douglas-Home

## SYNOPSIS OF ATTACHED COMMENTARY PAPER ON PROPOSALS TO LICENCE AND TAG ALL KILLED ROD CAUGHT SALMON (prepared by Andrew Douglas-Home)

1. Implicit in the proposals is that licensing/tagging of rod killed salmon is required to protect and conserve salmon stocks from unsustainable practices by rods in killing too many; there is no evidence of this, on the contrary, the evidence from rivers like the Tweed and Dee is that over $95 \%$ of salmon survive to spawn. As almost all other rivers have equivalent catch and release characteristics, it is reasonable to assume that they too have similar survival rates of salmon entering their rivers to spawn.
2. Over the past 35 years, river proprietors and managers have spent very large sums in reducing netting (by voluntary buy-outs) and therefore increasing the numbers of salmon which escape into the rivers; for example, the Tweed has spent well over £2 million to achieve this, all from private funds, so that now there are virtually no active nets on the Tweed.
3. At the same time, the rods have restricted their own fishing to exclude the more effective methods (prawn, shrimp, worms etc), and adopted catch and release as standard practice. Almost all rivers now have $100 \%$ catch and release, from this year by law until 31st March but voluntarily much longer than that, often until 1st July; even after 1st July almost all rivers release at least two thirds of rod caught salmon.
4. Licensing and tagging for rod killed fish will be very expensive to implement to no obvious purpose. It will be almost impossible to operate when you consider the number of Scottish rivers, the numerous beats on those rivers and the multiplicity of fishermen who fish on those beats. It also risks the charge of alienating, because it will achieve nothing, the very people who put so much time (and money) into these rivers.
5. It has been illegal to sell rod caught salmon in Scotland for over 12 years now, with no evidence of abuse, and there have been no calls since then of any need to tag killed rod caught salmon. The advantage of not tagging rod caught salmon is that it is only tagged commercially netted salmon which will be able to be sold legally. Any untagged salmon offered for sale will either be illegally caught by poachers or illegally offered for sale by a rod fisherman.

## NOTE

The attached more detailed COMMENTARY should be read with the above synopsis. Both have been prepared by Andrew Douglas-Home, who has lived on the banks of the Tweed for most of his life, has been a Tweed Commissioner for nearly all the past 35 years, was a founding trustee of the Tweed Foundation in 1983, and was Chairman of the River Tweed Commission and Tweed Foundation for 8 years between 2004 and 2012.

The views expressed are his own, although the data given and assumptions made, on which many of the conclusions are based, are all believed to be, respectively, true and reasonable.

## DETAILED COMMENTARY on the Wild Fisheries Review Proposals on (a) Rod Caught Salmon licences (quotas) to kill salmon, and (b) tagging of killed salmon.

## 1. BACKGROUND

Implicit in the WFR proposals to issue licences/quotas for rod fishermen to kill salmon, and then tag them, is that what has been happening up to now with respect to rods killing salmon has not worked, is not working, or will not work in the future, in order to achieve what we all want, sustainable salmon fisheries.

In other words, so the argument goes, sustainable salmon fisheries can only be achieved by changing things, and specifically putting controls from above (a "suitable public authority" per the WFR) to ensure that rods do not kill too many salmon.

Has the system not worked up to now and is there any evidence it will not in future?
For this we need to look at what river boards (specifically in this case the River Tweed Commission, but other boards have performed very similarly) have done to conserve their salmon over the last 35 years.

## 2. SALMON CONSERVATION 1980 to 2015

The 1980s saw the start of (a) the bespoke Rivers Trusts movement, (b) the river boards, wholly financed by the rod fisheries, realising that the predations of the net fisheries were seriously damaging (whose 40 nets on the Tweed alone sometimes caught and killed over 100,000 salmon in a year) to salmon stocks, and (c) instituting restrictions both on rod fishing methods and on killing the most vulnerable components of Tweed salmon stocks

## (a) The Tweed Foundation

The Tweed research arm, the Tweed Foundation, was founded in 1983 and still to this day is in the forefront of salmon river research and employs 3 full time biologists, headed by Dr Ronald Campbell. The Tweed Foundation is effectively wholly financed by the rod fishing proprietors and provides scientific advice on fish stocks to the river board.
(b) The nets

Shortly after that in 1987, a consortium of rod fishing proprietors bought out 25 of the 40 operating Tweed nets for $£ 750,000$. There were further net purchases by proprietors, the River Tweed Commission (RTC) and the Tweed Foundation (TF) between 1987 and 2003 costing over $£ 150,000$ and reducing operating nets to less than 10. In 2003 the RTC paid over $£ 500,000$ to the major reduction in the North East Drift Net Fishery, and in $2015 £ 650,000$ will be paid to remove the last of the effective river nets.

In summary, the river board and the proprietors have paid well over £2 million over the last 35 years to reduce salmon predation by nets on the Tweed to all but nil.

Cynics will say they did this so that the rods would catch more fish. Whereas the effect, of course, of nets not catching and killing up to 100,000 salmon is that the rods will catch more, the lie is given to that as the main motive because Tweed has, for the last 40 years, caught a heavy preponderance of its salmon after 15th September. There has never been any netting on Tweed after 15th September by law.

The current purchases totalling $£ 650,000$ are on nets on the coast which predate most particularly on the most fragile stock, the spring and early summer salmon.
(c) The rods

Having dealt with netting, how has the river board, the RTC, dealt with controlling how rods behave, how they fish and what they kill?

Tweed rods, unlike any other river, can, by law, only fish with a fly in the 2 weeks before 15th February, and in the 11 weeks after 15th September. In the 1980s the RTC banned the use of prawns, shrimps, worms and multiple hooked lures, both because they were too effective and because of their tendency to deep hook, making it difficult to release fish unharmed.

In the 1990s the RTC restricted the rods to only killing every other spring salmon (and not the first), this was extended in 2010 to $100 \%$ catch and release for all salmon caught by the rods before 1st July, and at the same time the RTC, financed by the rod proprietors, paid the then few remaining nets compensation for not netting and not killing any salmon before 15th June.

Although the RTC, as advised by the TF, has not found any scientific evidence in relation to later running salmon stocks, which necessitates advice to rod fishermen to release rod caught salmon caught after 1st July, in practice the RTC is aware that both gillies and fishermen have an increased tendency to do so, especially the larger female salmon, carrying several 1,000 eggs each, so that somewhere around $55 \%$ to $60 \%$ of later running salmon are released.

The figures for rod catches of salmon on the Tweed over the last 4 years (2014 figures not yet available, but estimated below), and the numbers released are as follows:

Rod catch
Released
\%

It is likely that the 2014 rod catch figure will be some 7,500 with somewhere around $70 \%$ released.

Although in terms of recent catches 2014 was poor, in line with all other salmon rivers in the North Atlantic, in terms of historical perspective and spawning escapement, there were only 4 years between 1950 and 1987 when the rod catch exceeded 7,500.

## 3. IS THERE ANY JUSTIFICATION FOR LICENSING and QUOTAS FOR KILLING ROD CAUGHT SALMON?

Rod fishing is a very ineffective method of catching salmon, especially with the various restrictions as to method applied by river boards. Most have banned prawns, shrimps, worms etc long ago and the vast majority of salmon are caught by fly.
(a) Rod catch rates

What percentage of salmon coming into the river does rod fishing typically catch?
Once we can estimate that, then and only then can you begin to assess the need, if any, to control what rods kill, by licence, quota or whatever else.

It will vary river to river, and because rivers have not found a foolproof way of accurately counting populations, all we have is a mixture of general indications from experience, a few derivations from counters on tributaries (counters do not work on the main stem for reasons of sheer size, magnitude of flooding, cost etc) coupled with research from catching up salmon by net as they come into the river, tagging them with a highly visible tag, and then finding out how many tagged salmon are subsequently caught by the rods.

On the Tweed, such estimations can be done in two parts.
First, on the early running spring salmon which enter the river before 30th June and which mainly head for one tributary, the Ettrick, to spawn. For some years, with interruptions for breakdowns and repairs, the Tweed Foundation has monitored spring salmon runs up the Ettrick by having a counter from which accurate numbers of salmon passing through the counter can be obtained.

We also know that, on average, the rods catch around 2,000 salmon before 30th June, and that the rod catch rate on spring fish is very much higher than for later running fish, not just because spring fish can be very good "takers", but they are also in the river longer and therefore more available for the rods to catch. Anecdotally the catch rate can be as high as $40 \%$, although allowance must be made, with $100 \%$ catch and release in the spring, for a small percentage being caught twice.

There is no certainty in this, but TF scientists if pushed, from rod catches, from estimated rod catch rates and with information on spring salmon passing through the Ettrick (the main, but far from the only, tributary for spring salmon) might consider a reasonable assessment of Tweed's total spring salmon population to be around 6,000 on average.

There are more complicated scientific calculations which go into assessing how adequate this number is, involving available spawning space, egg deposition etc....but the current assessment is that this is a fairly stable and adequate population, but the precautionary approach indicates that killing any spring salmon until the numbers increase well above 6,000 would be wrong.

It is for that reason that, for many years, restrictions have been placed by RTC on killing spring fish, and for the last 5 years none have been killed at all by rods (other than the very few which die in the process of being caught), the nets have been paid by RTC not to fish until 15th June, and now all the nets have been bought out.

Secondly, on the summer and autumn fish, those coming in from late July with the main run gathering momentum through August and peaking from mid September to mid November.

This is a very large run, heading for almost all tributaries and therefore impossible to count, because there are not counters on all Tweed's numerous tributaries.

The Tweed Foundation under Dr Ronald Campbell has for many years operated a research netting station close to Berwick harbour in the later months of the season. This net catches salmon as they first come into the river from the sea, they are tagged and released, and then the rods are advised to look out for and report any salmon they catch with a tag attached.

The results over many years have been remarkably consistent. In only 1 year was the catch rate over $5 \%$, in all the other years under, sometimes well under, $5 \%$. In other words, for the Tweed's late running fish the rod catch rate is, on this basis, at most 1 in 20.

The difference between $5 \%$ for late running salmon and (maybe) $40 \%$ for spring fish may seem large, but perhaps not when you consider the huge numbers that can come into the river from July onwards, thereby reducing the likelihood of each salmon being caught, and that a salmon coming into the river (say) at the end of October is only available to be caught by the rods for 4 weeks, compared to many months for a spring salmon coming in in March.
(b) Estimated average annual population of Tweed salmon

From all this, based on the past 5 years annual average rod catch (in round figures) of 15,000 salmon, with 2,000 being caught in the spring and 13,000 in the summer and autumn, we can estimate Tweed's annual average population as follows:

Summer and autumn 260,000 (13,000 x 20)
The rods have been killing, on average over the past 5 years, 4,800 salmon annually, very few of which come from the spring population.
(c) Rods kill rate in relation to Tweed's salmon populations

Spring salmon: If we assume $5 \%$ of spring fish die as a result of being mortally hooked, then 100 spring salmon ( $5 \%$ of 2,000 ) will die every year, which in relation to the estimated average population of spring salmon of 6,000 , is less than $2 \%$ with over $98 \%$ surviving to spawn.

Summer and autumn salmon: We know that the average number of summer and autumn salmon killed is 4,800 with the estimated population, based on consistent research, being $260,000.4,800$ is therefore less than $2 \%$, with an average of 255,200 surviving to spawn.

Even of you halve this estimated population above, reducing the summer and autumn total to 130,000 , the kill rate is still well under $5 \%$, with 125,200 salmon surviving to spawn.

With similar rod catch rate profiles, and in many cases much more stringent catch and release rules than the Tweed, it is likely that other rivers and their boards (the Dee being the most obvious one, but it is far from alone in its application of tough catch and release rules for rods going back several years) will be able to estimate rod kill rates, in relation to their total populations of salmon, even lower than those for the Tweed.

## 4. IS TAGGING SALMON KILLED BY RODS EITHER DESIRABLE OR NECESSARY?

Until the WFR was published in October 2014, there had been no discussion of tagging rod caught salmon. Since 1st October 2002, over 12 years ago, it has been illegal to sell rod caught salmon and there is no evidence of that law being broken to any extent since then.

At the same time, the commercial nets, for obvious reasons, have had no such restrictions; they kill $100 \%$ of their catch and sell them all, in contrast to the rods who, broadly kill no more than a third of what they catch, and sell nothing.

When the current tagging scheme of net caught fish was proposed, before the WFR was published, it was specifically stated that it excluded rod caught fish, the purposes of that scheme being (a) to stop the sale of illegally caught salmon, while at the same time, by the issuing of pre-numbered tags, (b) acting as a check on the number of salmon actually caught and killed by the nets.

There is no reason for tagging to be extended to salmon killed by rods, indeed the very fact of not being tagged differentiates them in a very obvious way from net caught salmon for sale which will be tagged. Any untagged fish being sold will, by
definition, be illegal, either because it has been caught by a poacher or by a rod fisherman.

Tagging for rods will also be very expensive, administratively cumbersome and difficult because of the sheer numbers of Scottish salmon rivers, the variety and numbers of different beats on those rivers, and the multiplicity of individual fishermen on each of those beats.

As has already been shown above, there is no evidence of rod killed salmon having any damaging effect on the sustainability of rivers and their salmon stocks.

## 5. CONCLUSIONS

The history of river boards in Scotland, such as the RTC, over the last 35 years has been one of constant vigilance, increased expertise in their research trusts, and ABOVE ALL, control of the killing of salmon in their rivers, both by paying out vast sums, without any assistance whatever in Scotland from the public purse, to reduce their netting activities AND by controlling rod fishing, not just by banning completely especially damaging and effective techniques, but also by the voluntary imposition, not supported by law, of extraordinarily high levels of catch and release. Indeed, such is the buy-in by fishermen, without the imposition of law, that at least two thirds of rod caught salmon, often very much more, are routinely released by fishermen and gillies, even where the board has not recommended catch and release at all because the level of stocks eg on the Tweed in the autumn, does not demand it on purely scientific grounds.

River boards have been exemplary guardians of their salmon, and those who point at 2014's poor runs as evidence of something different are guilty of opportunistic short-termism. The Atlantic salmon is a wild resource, subject to all the vagaries of nature, climate, ocean currents, prey fish on which salmon survive and prosper at sea, and innumerable other things, most outwith man's control.

Many criticised the RTC and other boards after the very poor runs of 2009, only to fall very silent and eat many of their words after the record runs of 2010.

There is no room for complacency, and everyone is concerned after what happened in 2014.

But imposing licences/quotas and tagging on rods to kill salmon is without any justification and will do precisely nothing to advance the cause of salmon sustainability.

Indeed, by the imposition of cost and regulation on those who have spent a lifetime and, by any standards, really very large amounts of money in the cause of saving their salmon....the risk is one of local volunteer disengagement, and antagonising the very people who should be encouraged to continue their good work on Scottish rivers such as the Tweed.

There is emphatically no need for it.

If Government wants to CONTROL rivers, then at least come out and say so, rather than invent spurious reasons for doing so such as licensing and tagging for those rods who, eminently sustainably as part of a harvesting surplus, kill salmon.

ADH 22/2/2015

