



2019

ANNUAL REVIEW

Fisheries Management Scotland was formed in 2016 as the single representative organisation for the District Salmon Fishery Boards, River Tweed Commission and Fisheries Trusts and Foundations in Scotland.

We aim to:

- Promote and ensure the best fisheries management for the protection, preservation and development of Scotland's wild salmon and freshwater fish, along with their fisheries and environment.
- Represent the interests of our member organisations

FMS employs 3 staff – Dr Alan Wells (Chief Executive), Brian Davidson (Director of Communications & Administration) and Sean Dugan (Manager of the Scottish Fisheries Co-ordination Centre). We are grateful to Marine Scotland for facilitating the secondment of Aleksander Jasinski to Fisheries Management Scotland on a part-time basis.



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Fisheries Management Scotland are grateful for the support received from Marine Scotland, Crown Estate Scotland and The Fishmoners' Company for project work undertaken by our members

Editor: Rob Fletcher / Design: bremnerdesign.co.uk



Chairman's introduction

Richard Sankey

Chairman, Fisheries Management Scotland

I am delighted to have been appointed as the Chairman of Fisheries Management Scotland. I would like to thank my predecessor, Alister Jack, who has helped to establish the organisation as a key influencer in the fisheries and freshwater sector.

In December, our community was rocked at the sudden death of Simon McKelvey. Simon made a massive contribution to fisheries management in Scotland and was a real champion of evidence-based management. Lord Nickson, who gave the eulogy at Simon's funeral, has kindly agreed to share those words on pages 2-3 of this review. Our thoughts are with Lynn and the rest of Simon's family.

I took on the chairmanship at the AGM in November 2018. That meeting highlighted the breadth of activities that Fisheries Management Scotland and the Scottish Fisheries Coordination Centre are involved in. Alan Wells, Brian Davidson and Sean Dugan work extremely hard on behalf of our members, and for the conservation and protection of fish, fisheries and the wider environment.

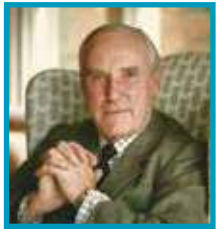
We have developed an excellent working relationship with the Scottish Government and its agencies, which is crucial to delivering the long-term changes that are required to protect and enhance the environments on which our fish depend.

We are clearly experiencing challenging times, with marine survival at an all-time low. 2018 was a difficult season, with a combination of poor returns and poor fishing conditions hitting many rivers hard. The current circumstances mean that now, more than ever, we need a well-resourced and skilled fisheries management infrastructure in Scotland. There is now a recognition within Scottish Government that more needs to be done to address the range of pressures that our fish and fisheries face. It is also important to emphasise that, despite the current low marine survival of salmon and sea trout, Scotland continues to offer a world-class angling experience for a range of fish species, which compares favourably to anywhere else in the world.

I look forward to working with my fellow Board members and staff to continue to offer high quality representation for our fisheries management community for the benefit of our fish, fisheries and the environment on which they depend.

Finally, I would like to thank Gillespie MacAndrew for sponsoring our annual review and I wish everyone well for the new season.

"It is important to emphasise that, despite the current low marine survival of salmon and sea trout, Scotland continues to offer a world-class angling experience for a range of fish species, which compares favourably to anywhere else in the world."



A tribute to Simon McKelvey

Lord Nickson

Former Chairman of the Cromarty Firth Fishery Board and Trust
and former President of the Association of Salmon Fishery Boards

Many within the salmon world will have been shocked by the untimely death of Simon McKelvey – he was a uniquely special man. His qualifications, his achievements and his contribution to the Scottish salmon world were formidable – fuelled by an abiding passion to conserve and enhance the species to which he dedicated his life: the magical, mysterious *Salmo salar*.

He had a fine intellect and a keen mind but was also an innately modest man. He was a brilliant communicator at all levels, both in discussion with his peers and in educating the young. Despite his gentle approach, he was as brave as a lion and sometimes needed to tackle some very daunting situations on the Conon.

Simon was brought up in Northumberland. His early fishing was on the Tyne. He read zoology at Newcastle and was soon employed as ranger/manager by Gateshead Council in Derwent Country Park.

In the late 1980s and early 1990s the Conon Board had a really difficult time. Grilse were in an abundance of which we can only dream today, but this attracted poaching on a criminal scale by violent men. I first met Simon when recruiting a new Director of the Board. He was not the obvious candidate – others presented themselves rather more glibly – but there was something about him that appealed to us. The deciding moment came when we asked him if he was tough enough to deal with some of the less desirable characters with whom he would have to cope. Simon simply reminded us that he was, after all, a Geordie. He got the job.

That was 25 years ago and in the intervening period Simon compiled an impressive CV. He was Chairman of the Institute of Fisheries Management Scottish Branch for the last nine years and a member of the Fisheries Management Scotland Board. During this time a training course and qualification certificate was developed for bailiffs, an important step in ensuring that bailiffs are regarded as highly professional enforcement officers.

Since 1997 he was involved with the Scottish Fisheries Co-ordination Centre, which was set up to collect fisheries information in a scientific and co-ordinated way. He was a key player in the panel tasked with reviewing freshwater fisheries management in Scotland, a role that involved hundreds of hours of meetings and endless journeys up and down the country, usually in his own time.

He was instrumental in achieving the amalgamation of the old Conon and Alness Boards into the combined Cromarty Firth Board. He was fully involved and supportive in the creation of the Cromarty Firth Fisheries Trust in 1999. He became director of both organisations. He pioneered the first comprehensive long-term fishery management plan for the 500 square miles of the Cromarty Firth catchment, now a model for many other Boards. He always drove himself beyond the call of duty and was an inspirational leader, never expecting his colleagues to do anything he himself was not prepared to do.

His initiatives included establishing a “smolt shuttle” from above Loch Luichart to Tor Achilty, to ensure the



Habitat restoration on the River Peffery © Moray Firth Sea Trout Project



free passage of these fish; electro-fishing throughout the catchment; the introduction of phosphate into burns to enhance their productivity; the removal of alien species such as *Rhododendron ponticum* which clogged the Orrin watercourse; riparian planting along the burns; the construction of the salmon pass at Corrie Feol; the creation of the spawning channel at Dunglass; the operation of the heck at Loch na Croic and the Contin Hatchery. These will shortly be followed, I hope, by a new acoustic barrier on the Meig to direct smolts into a new trap, which if successful could lead to a similar construction on the Orrin.

Many people have been in touch with me since Simon died. Andrew Wallace, formerly director of the ASFB and chairman of RAFTS, who is now head of fisheries for the Fishmongers Company in London, said: "No one is irreplaceable, but when you look at the unique combination of Simon's tact, knowledge, vision and determination, and add up all the years of accumulated experience, it is hard to see how anybody could replace his contribution, either on the Conon or nationally".

The second comes from Alastair Stephen, long-time friend and colleague, and senior environmental advisor to SSE: "Outside his day job Simon was a true

inspiration. He was regarded by his peers as someone who was always fair and provided wise advice and judgement in all matters relating to fish and fisheries management. All of us who have been involved with Simon's work are determined to make sure that it continues and evolves."

Alastair's suggestion that his work and all he aspired to should be continued by his successors is the most appropriate memorial we could possibly seek to give him.





Fisheries Management Scotland in 2018

Alan Wells, Brian Davidson & Sean Dugan

2018 was another busy year for Fisheries Management Scotland. Through this article and the review, we revisit the activities undertaken on behalf of our members. It is impossible to cover everything here, so we would urge you to visit www.fms.scot, where you can find detailed information on our priorities and our members' activities.

We are a small organisation and we rely heavily on the extensive knowledge and expertise of our members to inform the policy positions that we develop. Marine survival of Atlantic salmon is at a historic low and a number of Scottish rivers now have fewer adult fish returning than are required to fully populate them. Our main focus is on protecting our migratory fish and fisheries from impacts, pressures and people and to ensure that their environment – aquatic and riparian – is optimal. We continue to work with Marine Scotland to refine and improve the system for assessing the conservation status of salmon, but it's clear that angling exploitation within Scottish fisheries is sustainable. The onus is now on the Scottish Government and agencies to ensure that efforts to address man-made and other pressures are tackled with renewed vigour. We welcome the announcement of a workstream to examine, prioritise and take action on the high-level pressures facing Scotland's wild salmon.

In addition to fish farming and predation, which are covered in more detail on pages 16-17 and 18-19 respectively, our main focus has been on the following policy areas:



Scottish Angling National Development Structure
© Countryside Learning Scotland

River basin management planning

We have placed a greater emphasis on improving communication and partnership working between fisheries managers and SEPA, and to that end we are jointly developing a specific 'sector approach' for the fisheries management community. As a regulator, SEPA is responsible for a number of pressures faced by our fish – including hydro-electricity generation (water abstraction and fish passage), diffuse pollution, finfish aquaculture and barriers to fish migration. These policy areas form the basis for our ongoing dialogue with SEPA.

Marine renewables

We are working closely with colleagues across Marine Scotland to ensure that the development of offshore wind, wave and tidal energy does not negatively impact salmon or sea trout populations. Fisheries Management Scotland is a member of the regional advisory groups established to inform monitoring requirements on offshore developments in the Moray Firth, Forth and Tay. As part of this process we are working closely with the Atlantic Salmon Trust and the DSFBs around the Moray Firth on a major tracking study to understand how fish use the coastal and marine environment.

Support for fisheries management

We continue to make the case for stable and ongoing funding for local fisheries management in Scotland. Our positive relationship with Marine Scotland has seen significant funding for meaningful projects being delivered across the country and we hope this will continue. The declines in catches in recent years have made selling fishing more challenging, with potential knock-on effects on angling tourism and Scotland's rural economy. We are delighted that Scottish Enterprise is now working with the sector to investigate the impact of decline in salmon numbers on rural businesses and investigate opportunities for Scotland's rivers.

Scottish Angling National Development Structure

We are working with Countryside Learning Scotland to develop a Scottish Angling National Development Structure, and we are grateful to Marine Scotland for supporting this project. It will build on the excellent local work already taking place to increase participation in angling and to ensure it has a sustainable future. As well as the economic importance of angling to Scotland, the wider benefits of angling cannot be

"Our main focus is on protecting our migratory fish and fisheries from impacts, pressures and people and to ensure that their environment – aquatic and riparian – is optimal."

overstated, including its broad appeal and inclusivity, social and community value and its wider positive impact on mental and physical wellbeing.

Enforcement

We have developed a series of priorities for legislative change to improve and modernise enforcement actions for fish and fisheries. Some of the current legislative provisions are complex, archaic and have not kept pace with 21st century developments. We will be discussing these priorities with our members and the Scottish Government with a view to ensuring they are brought into a bill at the next available opportunity.

Training continues to be a key focus for fisheries enforcement personnel, and we have published a resource to highlight training opportunities for all staff within our network. The annual bailiffs' seminar provides a central focus for training, and we delivered a training workshop on surveillance techniques at the 2018 event, as well as demonstrations on drone technology. For the 2019 event, there will be a strong

focus on training and professional development. We continue to liaise closely with Police Scotland and the Crown Office Procurator Fiscal Service to highlight fish poaching as a serious wildlife crime. A training day with both organisations was delivered by Fisheries Management Scotland in March to ensure both understand the nature of fish poaching and to improve national and local coordination.

Scottish Fisheries Co-ordination Centre (SFCC)

In February 2018, a record number of attendees met for the 20th annual SFCC biologists' meeting. Fisheries Trusts, DSFBs, government agencies and academic staff listened to 27 presentations, over two days, on conservation regulations, juvenile salmon sampling, new sonar fish counting technologies and the Norwegian approach to monitoring fish populations, using snorkelling and underwater video systems. Fisheries managers were also provided with tools to inform the location of riparian tree planting schemes, derived using data from the river temperature monitoring network.

Marine Scotland developed the national electro-fishing programme for Scotland, a strategically designed approach aimed at collecting data to inform the assessment of salmon conservation status. Over 900 surveys were delivered under tight timescales by our members across Scotland. SFCC played a key role in this project through provision of an online database allowing 29 DSFBs and Trusts to upload data.

During 2018 SFCC also delivered training courses and support in mapping, scale reading and electro-fishing.



Electro-fishing training © FSCC



The International Year of the Salmon

Sarah Robinson

Assistant Secretary, NASCO



Environmental change and human impacts across the Northern Hemisphere are placing salmon at risk. The International Year of the Salmon (IYS) aims to bring people together to share and develop knowledge, raise awareness and take action on behalf of these fish.

The North Atlantic Salmon Conservation Organization (NASCO) is a key partner in IYS, taking part in a bold multi-year initiative in co-operation with the North Pacific Anadromous Fish Commission. Across the Northern Hemisphere an intense burst of outreach and research is underway. This aims to fill knowledge gaps and catalyse new ways to generate and share knowledge necessary for the resilience of salmon and people in a changing world.

NASCO is an intergovernmental organisation, formed by a treaty in 1984, and is based in Edinburgh. Its objectives are the conservation, restoration and rational management of wild Atlantic salmon stocks, which do not recognise national boundaries. It is the only inter-governmental organisation with this mandate, which it implements through international consultation, negotiation and co-operation. Despite the enormous efforts being made to conserve and restore wild Atlantic salmon, the International Council for the Exploration of the Sea (ICES) clearly indicates that abundance

remains low – indeed, in some areas it is critically so. IYS is an opportunity to catalyse the efforts being made to manage the species by raising awareness of what people can do to ensure salmon and their habitats are conserved and restored. The extraordinary lifecycle of salmon exposes them to many environmental and human-caused risks in the North Atlantic, influencing their health and abundance. Anyone is welcome to get involved in IYS and we encourage members of Fisheries Management Scotland to use the occasion as an opportunity to highlight the work they are undertaking for the benefit of salmon.

There are a number of resources available on the IYS website (www.yearofthesalmon.org) that can be downloaded and used for events and activities. Projects and events can also be uploaded onto the website, enabling you to promote your efforts and see what others are undertaking around the Northern Hemisphere.

We encourage everyone to engage with IYS and consider how you can contribute to this important initiative, which will hopefully lead to greater support for programmes to conserve and restore wild Atlantic salmon throughout their range.



Big Brevenniy Rapid © Sergey Prusov



Purnach River © Sergey Prusov



© Sergey Prusov



Communicating fisheries management activities in the International Year of the Salmon

Brian Davidson

Director of Communications & Administration, Fisheries Management Scotland

Never has the Atlantic salmon needed a voice more than now. The International Year of the Salmon (IYS) is providing a world stage on which we can express our hopes and fears for this iconic species. More importantly, it is an opportunity to galvanise people into action across the communities whose lives rely on this fish.

Fisheries Management Scotland believes that this is an important initiative. However, it can only be effective if people engage and use the opportunity to deliver meaningful actions across key areas – including effective communication of key threats through advocacy and publicity; influencing evidence-based change at the highest level; and developing and delivering practical measures to protect these culturally significant fish. It will allow us to share and extend our knowledge and – by doing so – to better understand how we can make the salmon's environment less hostile in these challenging times.

Fisheries Management Scotland's network of DSFBs and Fisheries Trusts delivers an impressive array of conservation and management activity to make the salmon's world a better place. However, we need to be more vocal in delivering this story to those that matter, including the wider public. IYS provides a perfect global platform.

Our plans for IYS include our conference on 29 March and a number of specific projects throughout the year – using video, prose and photography. This year's conference will be framed differently, incorporating workshops examining a range of pressures facing salmon and considering how we can share knowledge and international best practice to address and halt these pressures where possible.

A compilation of underwater footage of wild salmon on the Ness, undertaken by the Ness DSFB, has shown how videography can help to draw attention to the salmon's mysterious underwater interactions and has been a superb example of how this wonderful species can capture the public's imagination. As a community we need to adapt and rise to the challenge of using new technology and contemporary media to tell our story.

We have also commissioned a series of personal stories to illustrate what wild salmon mean to different people. These will be displayed at our conference and will be promoted throughout 2019. Salmon mean different things to different people and, by articulating these stories, we hope to create a lasting resonance with the wider public and to generate empathy for the salmon's cause.



© Sean Dugan



Saving the sparling

Courtney Rowland

Sparling Project Officer, Galloway Fisheries Trust

The Galloway Fisheries Trust's 'Saving the Sparling' project aims to understand, protect and increase awareness of an amazing species, the sparling, which is found in southwest Scotland.

Also known as smelt or spurlin', *Osmerus eperlanus* is a rare fish which has suffered drastic declines over the last few centuries – mainly due to overexploitation, the construction of impassable barriers and deteriorating water quality in rivers. The Cree is home to only one of three Scottish populations, which is in good condition, but is still considered fragile and in need of protection.

Sparling are anadromous, meaning they spend most of their life at sea but migrate upstream to freshwater to spawn in the spring. Large shoals form in the Cree estuary in the autumn and the upstream migration is initiated in the spring when temperatures rise above 6°C. Being relatively weak swimmers, Cree sparling utilise incoming spring tides to migrate upstream to the upper tidal limit, just below Newton Stewart. They aim to reach suitable spawning habitat, which includes riffles and tails of pools.

Sparling – which smell strongly of cucumber – move into these fast-flowing riffles to release their reproductive material, maximising egg dispersal and survival. The sticky eggs, in their millions, attach to waterweed and stones, where they develop over the forthcoming weeks. Once spawning has occurred, there can be widespread mortalities from predation and physical exhaustion, while those adults that do recover migrate back to the sea.

This project has been funded by European Maritime and Fisheries Fund, The Scottish Government and The Holyrood Trust. Alongside practical elements, my work has revolved around community engagement. Too many locals have forgotten about this amazing species. I have been working to increase awareness in the local community through open events, presentation evenings and interactive sessions with local schools. We really do hope to save the sparling.



Sparling *Osmerus eperlanus* © GFT



Sparling eggs © GFT



Habitat restoration on the upper Dee

Edwin Third

Operations Manager, Dee DSFB

In recent years the reintroduction of large woody structures to rivers has captured the attention of fishery managers, anglers, engineers, flood risk managers and conservationists around the world.

Practically all of Scotland's upland rivers would have once flowed through extensive areas of woodland, which helped to create ideal habitat for salmon, by regulating temperature and flows and by providing shade and nutrients. Trees falling into the river created pools, spawning gravels, cover and a range of flow conditions which suited the complex habitat requirements of all life stages of salmon. They also supported higher numbers of invertebrates by trapping nutrients for key species groups, such as mayflies, stoneflies and caddisflies.

However, deforestation of our upland streams has resulted in the rivers becoming around 30 percent wider and shallower. Rivers like the Gairn often now reach peak summer water temperatures of over 20°C and this summer water temperature in the upper Gairn reached 27.5°C (81.5°F), very close to the lethal limit for juvenile salmon. In order to offset these temperatures the Dee DSFB and the River Dee Trust have, with the help of various funding schemes, planted over 140,000 native riparian trees in the upper catchment. This is just the start of an ongoing project and much more needs to be done in the future.

These newly planted trees will take decades before they grow large enough to fall into the river and create the habitat improvements that salmon require. In order to kick-start the process the Board created 24 large woody structures on the Gairn this autumn. Over 70 large wind-blown Scots pine trees were transported to the upper Gairn from the nearest woodland, around eight miles away. These were then securely dug into the bank or bed of the river to mimic natural woody structures. Each was located to lead to narrowing and speeding up of the stream.

Establishing riparian woodland and restoring the in-stream habitat of our spring fish-producing catchments is key, not only to protect our salmon but also to increase the numbers of fit healthy smolts these streams produce each year. Recent studies have shown that fitter smolts have a much higher chance of surviving at sea and returning as adults.





Pearls in Peril and beyond – restoring freshwater pearl mussels in the River Moriston

Chris Daphne

Biologist, Ness and Beaulay Fisheries Trust (NBFT)

The NBFT has been heavily involved in the Pearls in Peril project since it began in 2012. A major part of the project was to restore a declining population of pearl mussels in the River Moriston. Stocks are healthy in the lower reaches, but in the upper reaches the population has declined dramatically.

Pearl mussels live up to 120 years and the larvae (glochidia) rely on a host fish – usually a juvenile salmonid – for their survival. Pearl mussels each release 2-3 million larvae, some of which are inhaled by juvenile salmonids and settle on the fish's gills. They remain there over the winter and drop off into gravel in the following spring. Only a tiny percentage will survive.

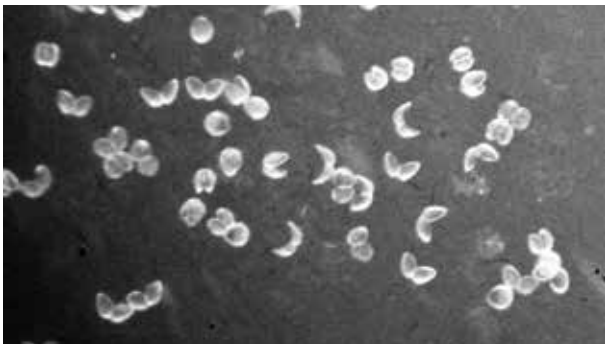
It is estimated that it takes approximately 30 days from fertilisation for the larvae to develop (spat). There are five stages of development, in the last of which they are free from their egg and actively 'snapping' – ready to attach to gill filaments.

On the day of release mussels are placed in water-filled containers where they are allowed to spat, before being returned unharmed to the river. The spat are then

taken to sites where pearl mussels are scarce. Here, juvenile salmonids are captured and placed in the spat container for a few seconds, so they inhale some of the glochidia before being released and distributing the spat.

Upon completion of the Pearls in Peril project in 2016, further funding was obtained from Scottish and Southern Energy (SSE), allowing the Trust to continue this vital work until 2018. Over 2,500 fish were exposed to glochidia between 2012 and 2018. Biologists monitor the sites in the year following encystment to ascertain whether this part of process has been successful. Fish are captured from the encystment sites using electro-fishing equipment, the gills are examined and the glochidia counted. As there are very few, if any, pearl mussels at these sites it can be assumed that any fish with glochidia present are the result of artificial encystment. Monitoring in 2017 showed that up to 25 percent of all the fish captured at these sites were carrying glochidia, with over 100 glochidia on each gill in some cases.

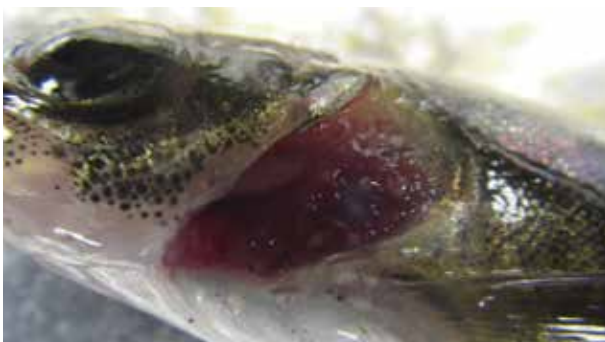
Funding has now ceased and the Trust is now seeking further funding to continue this vital work.



Glochidia stage 5 - as seen under a microscope



Glochidia sac on pearl mussel gills



Glochidia on fish gills



Glochidia sample



Managing the impacts of mining

Jim Henderson
Fishery Director, Nith DSFB

The upper catchment of the River Nith in southwest Scotland has rich reserves of coal in its underlying geology. These reserves have been exploited by generations of people for commercial purposes.

Fisheries managers in the Nith catchment have been involved with the coal mining industry from the initial planning stages through to monitoring and restoration measures. The role of fishery managers is essential in this type of development, which is often perceived as being environmentally detrimental.

Baseline

Prior to work commencing it is essential to establish accurate baseline fishery data. This will be used as a benchmark by which to judge the performance of the watercourses in the vicinity of the mining development.

Monitoring

Once the ground is cut and work is underway it is important to conduct regular electro-fishing surveys in order that fishery managers can assess if there are any impacts on the fish communities. This information is shared with the developers, statutory bodies, planners and the local community.

Fish rescues

The fishery managers in the Nith catchment are often called upon to conduct a fish rescue in advance of a mining procedure which is required in close proximity

to a known fish habitat. The requirement to perform a fish rescue is obtained using the baseline and annual monitoring results data.

Habitat creation

When a mine is in its restoration phase, opportunities are afforded to create fish habitats, both in-stream and in the riparian zone. Restored mine land is often managed with conservation, rather than agriculture, as its main objective. Fishery managers in the Nith catchment sit on the mine technical working groups and advise on sympathetic restorative measures likely to enhance fish populations.

Aftercare

Following completion of mining operations and restoration, there is still a role for fisheries managers. Monitoring continues to ensure that, when the localised original water table is restored, no long-term water quality issues occur to the detriment of fish populations.

All of the above involves work for the Board and Trust but the benefits are clearly visible. The mining companies can demonstrate that they have fulfilled their environmental obligations, the Board can demonstrate that it has fulfilled its statutory duty of care to migratory salmonids and the Trust can show it has carried out its objectives. This is all achieved by using the presence and welfare of fish including Atlantic salmon.



2005: new river channel



2018: restored river habitat



Ettrick counter proves productive

James Hunt

Biologist, Tweed Foundation

The installation of a new fish counter on the Ettrick was completed on 5 April 2018, with the first passing salmon registered five days later.

Situated at the Philiphaugh Hydro site, near Selkirk, it was a complex project – involving the repair of the existing cauld, installation of turbines with a new adjoining Larinier fish pass, and the design and installation of the counter itself. The challenge was to establish a counter suitable for the exit of the pass, which is 1.8m wide and 1m deep, while maintaining sufficient flows down the fish pass to meet SEPA's hydro licence conditions.

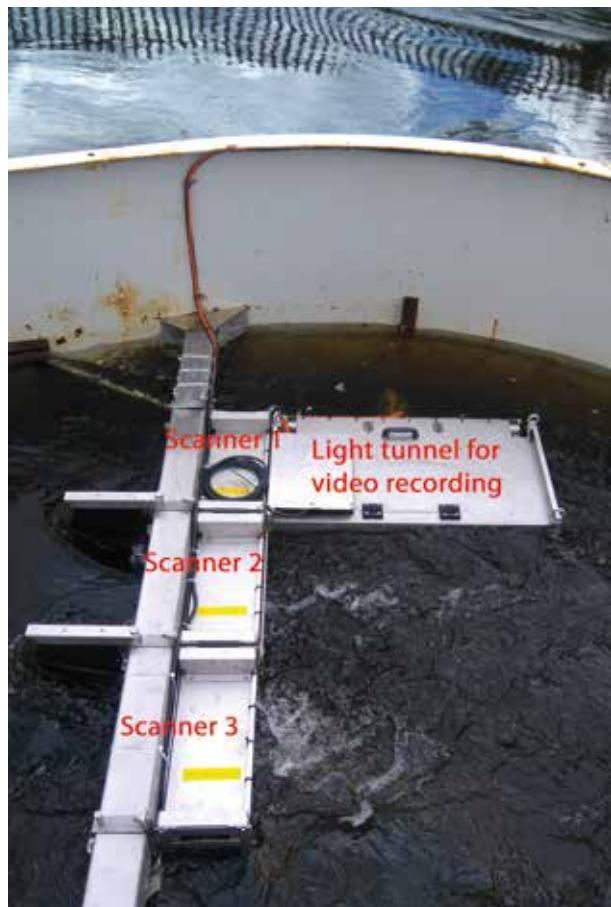
An array of three Vaki infrared Riverwatcher scanners was chosen, one of which has a camera attachment for species identification (see picture). The project was only possible thanks to significant grant funding from the Scottish Government, in recognition of the need for a fish counter network to provide accurate, reliable data.



Looking up the Larinier fish pass to where the fish counter is located



A 60 cm salmon passing through the counter



The three scanners and light tunnel which houses the video camera

The installation will allow the data series from a counter in the old fish pass between 1999 and 2009 to be revived. The location allows us to monitor the migration of adult salmon and trout in 10 percent of the Tweed catchment. And we know – through radio tracking studies – that a significant proportion of the catchment's spring salmon population originates from the Ettrick, so the data are vital for informing spring salmon conservation measures. This is particularly important given the continuing exploitation of spring salmon by an estuarial netting station at Berwick.

A total of 1,304 salmon were counted up the Ettrick in 2018. However, until a full validation check is carried out, this figure is provisional. If correct, it's a third below the average, which mirrors the poor spring catches on Tweed last season. Before drawing any strong conclusions, however, we need to carry out a full validation test of the scanners. Looking longer term, at least 12 years of data will be needed to construct a stock-recruitment graph, which will help produce a spawning target estimate for the Ettrick and assist with conservation assessment for Tweed spring stocks.

2018 in summary – our members' contribution to protecting and improving our fisheries and freshwater habitats



31

Barriers physically eased/
removed to which our members
have contributed time or money



562km

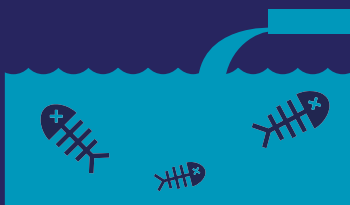
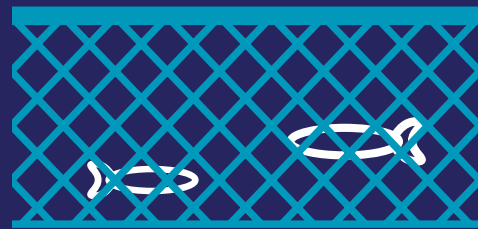
Of river managed
for invasive species

24

Offences formally reported
to Police Scotland or
Procurator Fiscal

56

Illegal instruments
retrieved/confiscated



61

Pollution incidents
reported to SEPA

21,905

Native
trees planted



224

Schools worked with

14,131

Pupils engaged

255km

Estimate of newly accessible river
following barrier easement



Sampling the West Greenland Atlantic salmon fishery

Sean Dugan

Manager, Scottish Fisheries Coordination Centre

In September 2018 I was fortunate to spend 17 days in West Greenland, sampling salmon. In this article I will touch on the history of the West Greenland fishery, my experience and the plight of salmon at sea more generally.

The likelihood of salmon surviving their marine migration has declined to an extent that now less than five out of every 100 smolts return as adult salmon. This decline has prompted international research efforts, including the West Greenland Salmon Sampling Programme. Data from Greenland reveal that, while during the 1970s up to one in every three salmon were taken by the fishery, the exploitation rate has now reduced to less than one in 100 fish of southern European origin (including those from Scotland).

History of sampling at West Greenland

In the 1960s and 1970s the West Greenland salmon fishery involved large vessels intercepting fish originating from North America, continental Europe, Iceland and Greenland. Through international agreements this exploitation has now been reduced to a Greenlandic internal-use only fishery. Early reports suggest that the catch for 2018 was down to less than 18 tonnes (c.5,270 fish).

For many years the Scottish Government has contributed to an international sampling programme. Several Fisheries Management Scotland members have had the opportunity to contribute to these efforts, including myself in 2018. Recovery of salmon first tagged in Scotland before being caught off Greenland revealed their oceanic migrations. The first recovery was from a salmon tagged on the River Conon in 1955 then

recaptured in Eqalug Fjord, West Greenland in 1956. 62 years later I was fortunate to visit the same fjord to continue the data collection effort.

My experience

Salmon are sampled opportunistically as they are brought to port from subsistence coastal netting operations. Basic characteristics are noted, as well as tissue and scale samples being collected, to help understand each salmon's region of origin.

After 17 days I finished up with data on 150 salmon. Fisherman and staff at the Maniitsoq market were incredibly helpful and were also deeply concerned about the recent decline in "Kapisillit" – as they call them – numbers.

Why sample?

Data are required by the International Council for the Exploration of the Seas (ICES) to provide catch advice to the North Atlantic Salmon Conservation Organisation (NASCO). Based on this advice management measures are negotiated with the Government of Greenland.

Status of stocks

The most recently available West Greenland fishery exploitation estimate (2016) for salmon from southern European rivers (including Scotland) was 0.8 percent. ICES also assess the health of seven different salmon populations across the North Atlantic. Out of these, five were assessed as being below good conservation status. For the grouping containing Scottish fish, the probability of meeting good conservation status is forecast at 0.377, 0.421 and 0.549 respectively for 2018-2020.



Marine Scotland demonstrating new digital scale photography technology to SFC members



West Sutherland Fisheries & Inverpollly Estate staff surveying a National Electrofishing Programme for Scotland site

**The big picture –
human impact on the marine environment**

Exploitation of salmon at sea (including those caught by the Greenlandic Inuit for subsistence) no longer appears to be a major driver of declines in marine survival for Scottish-origin salmon. Wider factors affecting marine survival now appear to be more important. Several theories are being debated as to why this is, with the answer likely to be a range of factors varying in space and time, as experienced by salmon during their coastal and ocean migrations.

The underlying factor in all of this is likely to be man's impact on the wider marine environment, predominantly via climate change and commercial activity. For example, a study in the journal *Nature*

mapped cumulative human impact on the global oceans by combining information on numerous different pressures¹. The study concluded that the majority of our oceans are currently experiencing a large and increasing cumulative impact. Notably, the North Sea (where our post-smolts migrate) is considered alongside the South and East China Seas as a global 'hotspot' of cumulative human impact, where the environment is experiencing a vast range of different pressures all acting at once.

Acknowledgements

The West Greenland Salmon Sampling Programme is delivered by ICES on behalf of NASCO. My trip was funded by Marine Scotland and SFCC.

¹ Halpern et al., (2015) Spatial and temporal changes in cumulative human impacts on the world's ocean. NATURE COMMUNICATIONS | 6:7615 | DOI: 10.1038/ncomms8615 | www.nature.com/naturecommunications



The waters off Greenland provide rich feeding grounds for salmon and up to 14 species of whales and dolphins



Approximately 80% of salmon caught off Greenland originate from Canada. Photo courtesy of Jason Henry (Marine Scotland)



The Greenlandic salmon netting industry has declined in recent decades



Fish farming – time to deliver

Dr Alan Wells

Chief Executive, Fisheries Management Scotland

As we have stressed throughout this review, wild salmon and sea trout are a vital part of Scotland's heritage and they are now under threat. We recognise that aquaculture is one of a number of potential impacts on wild fish. Wider impacts on the high seas (such as climate change-induced variations in food availability) are outwith our direct control. However, of those potential impacts within human control, the impact of fish farming on wild fish is the only example that does not have a regulatory system in place in Scotland. This is the fundamental issue that needs to be addressed.

We recognise that finfish aquaculture is vital to Scotland's economy, particularly on the west coast. However, the economic and cultural importance of our wild fish and fisheries should not be overshadowed by this, and we must ensure that the regulation of finfish farms is firmly grounded in the principles of sustainable development.

2018 provided an opportunity to make significant and meaningful progress towards a better situation for wild fish and fisheries, and we are engaged in a number of projects and processes with a view to turning this optimism into reality. That said, the shocking situation in Loch Roag, during the summer of 2018, emphasises the amount of work that remains to be done. Large numbers of heavily lice-infested wild adult fish, carrying significant skin damage and lesions, were observed in the tidal pools below the Blackwater River. Many of these fish were dead or dying and this avoidable situation will have had a substantial impact on the spawning run of Atlantic salmon bound for the Blackwater and the neighbouring Grimersta, part of the Langavat SAC for Atlantic salmon.

During 2018, the Environment, Climate Change and Land Reform Committee, and the Rural Economy and Connectivity (REC) Committee of the Scottish Parliament held inquiries into salmon farming in Scotland. Fisheries Management Scotland gave evidence to the REC Committee and submitted written evidence to both inquiries. We welcome the conclusions of both inquiries, which recognise the major challenges and long-standing concerns that we have been pressing for many years. Both committee reports highlight the failings of the current regulatory regime for finfish aquaculture in Scotland and conclude that the status quo is not an option. We consider that a reformed regulatory system which is robust, transparent, enforceable and enforced is required.

We are working, through the Interactions Working Group and the Farmed Fish Health Framework Working Group, to ensure that the necessary changes are put in place for the protection of wild fish from the impact of sea lice, escapes and disease transfer.

Our Fish Farming Committee, which informs our policy and advocacy work, is now well-established and provides an excellent forum for the fisheries management sector to take a more consistent and informed approach to local interactions. Despite the wide recognition that the current regulatory system is not fit for purpose, we are facing a large, and increasing, number of applications for increases in finfish farm production across the aquaculture zone. Many of these proposals are in direct conflict with the recommendations of the REC Committee (ie there should be an immediate and proactive shift towards siting new farms away from known migratory routes for wild salmon).

We are working with our members to develop a consistent approach to monitoring impacts on wild fish. Formal requirements for such monitoring are increasingly being included as a planning condition through an Environmental Management Plan (EMP) and Marine Scotland have stated that they will now expect an Environmental Monitoring Plan to be delivered as a condition of any consents for marine aquaculture planning applications. While local authorities accept that EMPs are an imperfect solution, it is important that they are as effective as they can be until the planning and regulatory system is reformed. Ultimately, such monitoring requirements need to be based on management areas, rather than individual farms, and should incorporate existing farms, rather than just new production. We are engaged in a very productive discussion with Mowi (formerly Marine Harvest) and the Argyll Fisheries Trust, with a view to developing an Environmental Management Plan which will meet the needs of fisheries managers.

Our members are engaged in a range of projects to monitor the impacts of fish farming on wild fish. It is easy to discuss interactions between farmed and wild fish in black-and-white terms, whereas the reality is that such interactions are highly complex and difficult to quantify. This complexity is poorly understood at all levels of the planning and regulatory system. It is our view that an adaptive management approach – where the results of robust monitoring of impacts on wild



A salmon farm on Loch Torridon © Sean Dugan



A bag net was used to measure sea lice loads on wild salmonids - Lochaber Fisheries Trust



Sweep netting - Argyll Fisheries Trust

fish (primarily sea lice and escapes, but we are also investigating sampling methods to develop a better understanding of disease transfer) feed back into farm management through the regulatory system – is the most appropriate route forward. Such adaptive management must be overseen by a regulator with appropriate powers, resources and sanctions available to properly discharge this function.

We are working with Crown Estate Scotland, Mowi, Marine Scotland and SNH to develop methods for monitoring impacts of sea lice on wild fish. We are grateful to Crown Estate Scotland for funding this project. In 2018, with extensive help and support from Mowi staff, the Lochaber Fisheries Trust successfully deployed a bag net, which allowed sea lice loads on

wild fish to be measured on a more representative sample of fish. This work was undertaken in parallel with the established programme of sweep netting undertaken by the Fisheries Trusts. We are grateful to Marine Scotland for their ongoing support of the programme of sweep netting.

In conclusion, Fisheries Management Scotland and our members continue to engage with the Scottish Government and the aquaculture industry with a view to making meaningful progress and delivering the recommendations of the Scottish Parliament. There is a real urgency to ensure proper regulation of this important industry – our wild salmon and sea trout deserve no less.



Predation of Atlantic salmon

Roger Knight

River Director, Spey Fishery Board

It is widely recognised that survival of our wild Scottish salmon and sea trout has reached historic lows and there is now an urgent need to protect these species. Fisheries Management Scotland is working on our behalf with Marine Scotland to agree a list of high-level pressures which are impacting on our salmon and sea trout populations. This article highlights some of the work that the fisheries management sector is involved in as we try to reduce predation pressure on our migratory fish.

Fish-eating birds

The salmon and sea trout smolt migration is a particularly sensitive time for these young fish because the population no longer has the ability to compensate for any losses – the number of smolts leaving the river is directly proportional to the number of returning adults. A key priority for fishery managers is therefore to maximise the number of healthy, wild smolts leaving our rivers.

Recent and ongoing studies on the Dee, Tweed and Deveron have suggested that, during the early part of the smolts' journey within the river, these young fish sustain high losses. It is known that some of these losses are down to predation from fish-eating birds – such as goosanders, mergansers and cormorants – and these can be moved off rivers by a variety of means, including shooting to scare. These birds are also protected, so shooting to scare activities take place under a licence issued by Scottish Natural Heritage (SNH), which authorises these activities to take place both prior to, and during, the downstream smolt migration.

In order to better understand the impact of fish-eating birds and to support applications to SNH, some DSFBs, including the Spey, undertake extensive bird counts throughout the year. These surveys require significant resource and investment, but they enable much of the main river to be surveyed from canoes. In due course, we hope to expand this to the tributaries as well. This work suggests that, at least on some rivers and notably the Spey, the counts of fish-eating birds are increasing significantly. It should also be recognised that many other DSFBs simply do not have the resources to undertake such work.

For several years, DSFBs around the Moray Firth have coordinated this work and submitted a combined application to SNH. More recently, this regional



Cormorant © Stuart Brabbs

approach has expanded to include a number of other Scottish rivers, as well as Fisheries Management Scotland, SNH, Marine Scotland (both Policy and Science), the Centre for Ecology and Hydrology (CEH) and Science and Advice for Scottish Agriculture (SASA). These organisations are working together to understand the impact of avian predation on migratory fish, review and streamline the licensing system, and look at means to use counts collected on one river as indices for management activities on other, neighbouring rivers.

Additionally, Fisheries Management Scotland is working with SEPA and other regulators to ensure that activities and structures licensed in or near our rivers do not expose migratory fish to greater predation risk. For example, dams and weirs can result in migration 'pinch points', where fish accumulate and are therefore easily targeted by fish-eating birds.

Seals

Like fish-eating birds, both common/harbour seals and grey seals are protected species. Scotland-wide, the population of common seals is declining, whereas the grey seal population is increasing. Work undertaken in the Moray Firth, in partnership with the Sea Mammal Research Unit, demonstrated that a small number of seals develop specialist behaviour, breaking away from the main seal colonies and penetrating well into rivers to feed on salmon and sea trout. While these may only form a small proportion of overall seal populations, they can have a significant and disproportionate impact on migrating and spawning fish.



The fisheries management sector is working with the Scottish Government to understand the impact of seal predation on migratory fish, particularly where returning salmon and sea trout need to pass through pinch points where seals accumulate. It is important to ensure that fishery managers have access to a range of affordable and effective tools to reduce predation pressure where necessary. Preventing or discouraging such seals from entering rivers is the preferred solution, but experience of using a range of acoustic deterrent devices has so far shown them to almost never be completely effective. There is an urgent need to develop improved, fully effective technological solutions to deter seals from entering rivers. In the meantime, it is also important that fisheries managers have the ability to remove problem seals from within rivers. We are exploring the feasibility of relocating such seals to less sensitive places, but in some limited circumstances, licensed removal of seals may be necessary. Again, many DSFBs simply do not have the resources to undertake such work.

We recognise that predation is a sensitive and controversial subject and that these birds and seals

are also protected species. There has to be a balance, though, and a recognition of the impact that these predators are having on other species such as Atlantic salmon, which are now under significant threat. As fisheries managers, we work within the existing legal framework to conserve and protect these native fish. We also need to raise awareness that the survival of wild Scottish salmon and sea trout has reached historic lows. This is undoubtedly due to a range of pressures, but there has never before been a more pressing need to protect these species.

"A key priority for fishery managers is therefore to maximise the number of healthy, wild smolts leaving our rivers."



The Likely Suspects Framework

Mark Bilsby
CEO, Atlantic Salmon Trust

Atlantic salmon are found in most of the clean and accessible rivers draining into the North Atlantic – from Spain in the south, to Norway in the north, across to Greenland and North America in the west. Atlantic salmon spend the first portion of their life in freshwater, before heading off on significant ocean migrations. As such they provide a good ecological indicator of the health of our rivers and oceans. Since 1985 the number of salmon in the Atlantic has dropped from 8-10 million to less than three million, and there are no signs of this decline abating.

The Missing Salmon Project is a research programme that aims to develop comprehensive action plans to halt and reverse this decline. The programme is based on an established process – a suspects framework – which was used to successfully halt and reverse the decline of stocks of cod in the Irish Sea. To take the project forward the Atlantic Salmon Trust (AST), along with Game Conservancy & Wildlife Trust, Salmon and Trout Conservation and The Angling Trust, have formed the Missing Salmon Alliance (MSA), to more effectively deliver management of the remaining salmon stocks.

The MSA and the inter-governmental bodies across the Atlantic and Pacific have developed a statistical framework for conceptualising all the impacts on salmon during their freshwater and marine migration phases. This suspects framework will be used to create

a prioritised list of the factors implicated in the decline of salmon stocks and form an evidence base to support management plans at a local level and also influence policy at national and international levels, in order to reverse the decline of Atlantic salmon stocks.

To populate the framework evidence needs to be gathered from different populations of salmon around the Atlantic. To create this framework a small team needs to be brought together to collate and model the information, highlight gaps in our understanding and work to fill the gaps.

One of the gaps that has been identified is the fate of smolts as they migrate downstream and out to sea. As a result, the AST has raised £1.3 million to track salmon from seven rivers into the Moray Firth, where 20 percent of the UK's salmon start their ocean journey. The aim of this year's work is to identify where the fish are dying – from the headwaters, up to the first 100 km of their ocean migration.

There will be conferences in London at Fishmongers Hall on 26 November and Edinburgh in early 2020 to discuss the framework and the preliminary results from the Moray Firth project.

To find out more visit www.atlanticsalmontrust.org or email info@atlanticsalmontrust.org





Will tighter regulation pave the way for closed containment salmon farming?

Robert Scott-Dempster

Partner and Head of Land & Rural Business at Gillespie Macandrew LLP
and Director the Atlantic Salmon Trust

The Rural Economy and Connectivity Committee's report on Salmon Farming, published last November, states that "maintaining the status quo in terms of the regulatory regime in Scotland is not an option" and recommends "a comprehensively updated package of regulation both to ensure the sector will be managed effectively and to provide a strong foundation on which it can grow in a sustainable manner".

How far will the Government go in implementing these recommendations? The pressure not to upset a burgeoning Scottish industry will be considerable. According to Government figures 162,817 tonnes of salmon were produced in Scotland in 2016. By 2020 the industry aims to sustainably produce 210,000 tonnes of marine finfish, increasing to 350,000 tonnes per year by 2030, an increase of 115 percent, which is anticipated to boost the value of Scottish aquaculture from £1.8bn in 2016 to £3.6bn by 2030.

The answer may depend on how soon we see meaningful advances in "closed containment" or recirculating aquaculture systems. This involves the rearing of salmon in tanks rather than in cages moored to the sea bed and recent publicity suggests a growing level of interest. The tanks are usually served by water taken from and discharged back into the sea. The fish mature in an artificial environment, or closed containment system, which mimics the conditions of coastal waters.

Its proponents argue it has a number of advantages:

- Producers have full control of environmental conditions which reduces problems relating to parasites, disease, escape and predation.
- Removing or reducing variable factors creates greater consistency in quality of production.

- Separating farmed fish from their wild cousins prevents transmission of diseases and interbreeding.
- Pumps, filters and treatments ensure the water used is always clean.
- Waste matter and medicine residue from the tanks are contained and recycled for other uses, such as fuel or fertiliser, rather than ending up on the sea or loch bed which can pose a risk to other marine life.

The main disadvantage is cost, illustrated by considering the volume of water required to fill and flush tanks during the rearing cycle. A traditional producer pays for the right to secure cages to the bed of a sea loch where the tides will ebb and flow each day. The onshore producer must obtain and maintain equipment to pump and clean the equivalent volume of water. To try and quantify this in litres would draw comparisons with Hercules cleaning the Augean stables.

Economic, political and environment considerations mean closed containment production will surely increase. Whether this includes Scotland, and whether it complements or replaces traditional production methods remains to be seen. We can say with certainty that we at Gillespie Macandrew will be keeping an eye on new regulations and helping to make sense of their implications.

GILLESPIE MACANDREW



2018: a year of extremes

Brian Davidson

Director of Communications & Administration, Fisheries Management Scotland

It will not be a surprise to readers that, for the majority of Scottish rivers, 2018 was a very challenging season. The winter was cold, while the early spring suffered from the 'Beast from the East'. The remainder of the year was defined by the long and very hot summer, creating not only problems for fisheries and angling, but also for fish survival in some systems. Many rivers reported catches below their five-year averages, with some reporting the lowest catches since the 1950s.

While there are obviously conservation concerns for Atlantic salmon populations as a whole, the extraordinarily dry and hot weather conditions clearly had a profound influence on angling effort and catches. During July, daytime river temperatures in some areas exceeded 19°C, with 27.5°C recorded in the upper Dee catchment, which is close to the lethal limit for salmonids. As a result, fishing effort was low, and even non-existent on some systems, with some proprietors closing fishing due to the extraordinary conditions.

A few rivers somehow managed to buck the trend, to a degree, with some reasonable catches of spring fish, for example, in the Kyle of Sutherland. Quite a few rivers

managed to regain some lost ground when the rains arrived in the autumn. The later part of season did prove relatively productive, with some rivers reporting the vast majority of their catch in the final two months of their seasons.

On another positive note, anecdotal reports suggest that there is no immediate cause for concern arising from the local juvenile surveys undertaken during the year, and a number of rivers reported good numbers of fish within the spawning tributaries and on the redds at the end of the year. The results of the National Electrofishing Programme, which will be published later in the spring, will provide further information on the strength of juvenile fish numbers.

In this section of last year's review we alluded to climate change-related issues facing salmon in the marine environment. 2018's extreme river conditions also appear to be related to climate change, which underlines the importance of ensuring that freshwater habitats are in optimal condition to help mitigate these effects in the years to come.





TWEED

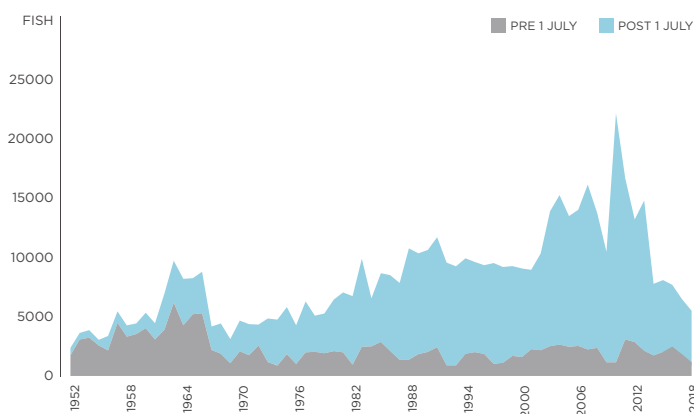
Fay Hieatt

Clerk, River Tweed Commission and Director,
The Tweed Foundation

Salmon catches dropped for a fourth consecutive year, with the spring catch half of 2017's. A cold start followed by a prolonged and hot late spring and summer resulted in months of low water conditions. The sea trout catch was the lowest for many years. Avian predation continued to be a major concern; monitoring and control continued, with the development of non-lethal techniques, and preparation for a dietary analysis study. Preliminary trialling of a smolt trapping facility was undertaken and will be expanded in 2019. Fisheries implemented the Tweed Salmon Conservation Measures, extending catch and release beyond the mandatory 1 April; discussions with the Scottish Government continued throughout 2018 to extend this further.

	2018 total	Pre July 1	Post July 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	5,644	1,083	4,561	485	11,406	98/84/87%*	30lb
Sea Trout	817	n/a	n/a	n/a	1,894	74%	n/a

Season: 1 Feb – 30 Nov. *Spring/rest of season/overall.



TWEED ROD CATCH STATISTICS 1952-2018

SOURCE – RIVER TWEED COMMISSION



FORTH

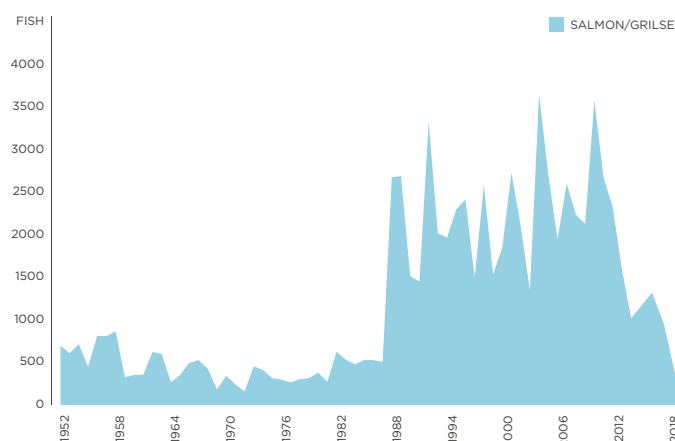
Alison Baker

Forth DSFB and Rivers Trust

The catches reported for 2018 are the lowest since the 1980s, but there are some positives – the Forth at Stirling and the mid-Teith beats reported the same number of fish caught as 2017, despite the dry summer, while the Teith produced the country's largest fly-caught salmon (winner of the Malloch Trophy), a 28-pounder caught and released at Lanrick in March. The Allan and Carron – smaller rivers – also suffered from low water, with neither producing fish until the end of the season. The Almond has had two poor years in terms of fish reported, due to operational issues of the main angling club and the extensive physical works being undertaken to the barriers, which have disrupted fishing but should improve salmon returns in years to come.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	464	n/a	863	n/a	1,825	90%	n/a
Sea Trout	135	n/a	n/a	n/a	706	98%	n/a

Season: 1 Feb – 31 Oct.



FORTH DISTRICT ROD CATCH STATISTICS 1952-2018

SOURCE – FORTH DSFB



TAY

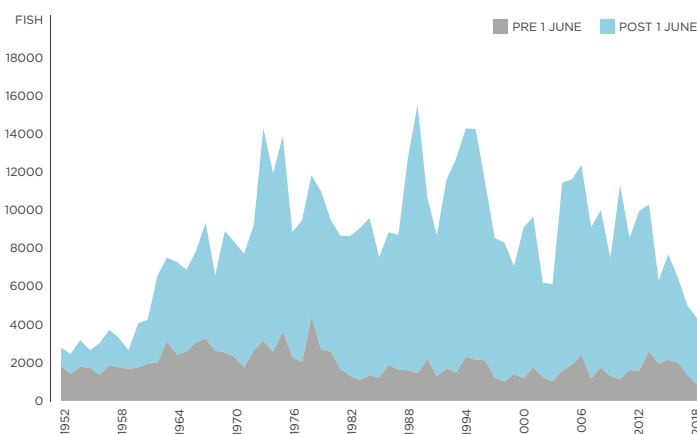
Dr David Summers

Director, Tay DSFB and Tay Foundation

The spring catch was a little down on recent improving springs. Warmer, drier conditions did not help. The earliest weeks were dominated by three sea winter salmon, which continue to increase. Unfortunately, the grilse run appeared weak, and fresh fish of any age were scarce after July. Autumn catches were substantially reduced, causing the lowest total reported rod catch in over 50 seasons. After years of anticipation, SSE restored flow to the formerly dry upper River Garry. Adult salmon, perhaps themselves originally stocked by the Board, spawned in the restored reach – the first to do so since the 1950s.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	4,483	949	3,543	n/a	7,930	95/93/93%*	35lb
Sea Trout	735	n/a	n/a	n/a	1,158	97%	n/a

Season: 15 Jan – 15 Oct. *Spring/rest of season/overall.



TAY ROD CATCH STATISTICS 1952-2018

SOURCE – TAY DSFB

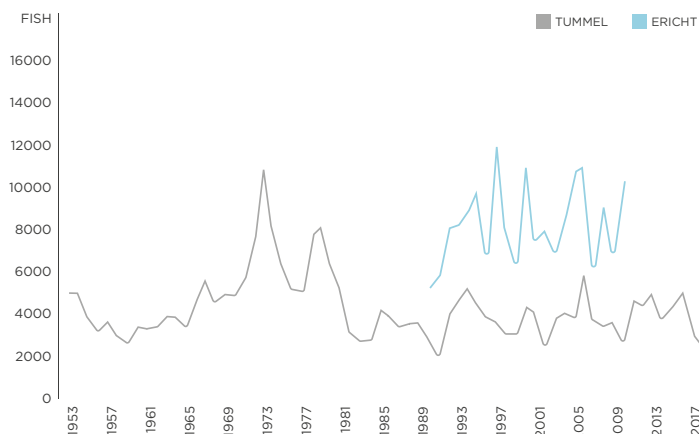


TAY COUNTER

Dr David Summers

Director, Tay DSFB and Tay Foundation

The counter on the Tummel at Pitlochry recorded 2,732 fish, well down on the 3,344 recorded in the previous year. Combined with the summer drought it helps to explain why the 2018 salmon catch was the lowest reported since the late 1950s. The summer drought affected fishing from June to September, but catches were also down in the spring months and the welcome eventual flurry in late September did not last, confirming the counter's suggestion that actual numbers of grilse and spring salmon were both a bit down.



RIVER TUMMEL (PITLOCHRY) UPSTREAM COUNT 1953-2018

SOURCE – SSE

RIVER ERICHT UPSTREAM COUNT 1990-2010

SOURCE – TAY DSFB



SOUTH ESK

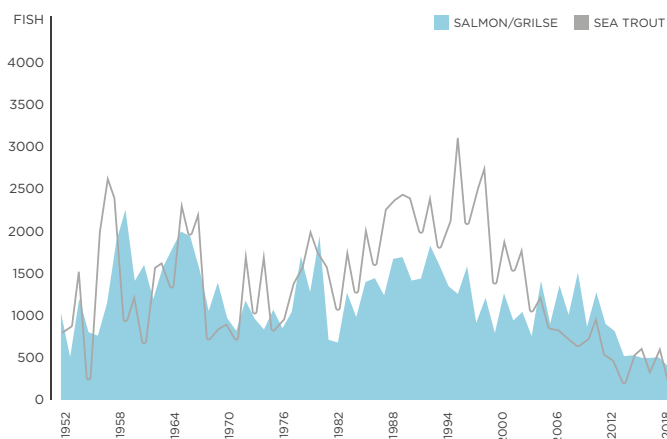
Craig MacIntyre

Esk Rivers Director

The 2018 season was poor, with river levels too low even for sea trout from May until October. Not many fish were seen for much of the season and hot, dry weather was not conducive to good fishing. However, many beats ended the season with good catches in October. Six hundred native broadleaf trees were planted on lower tributaries to protect the river banks and provide shade for salmonid species.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	404	41	363	n/a	865	100/86/87%*	25lb
Sea Trout	161	n/a	n/a	n/a	610	n/a	4lb

Season: 16 Feb – 31 Oct. *Spring/rest of season/overall.



SOUTH ESK ROD CATCH STATISTICS 1952-2018

SOURCE – ESK DSFB



NORTH ESK

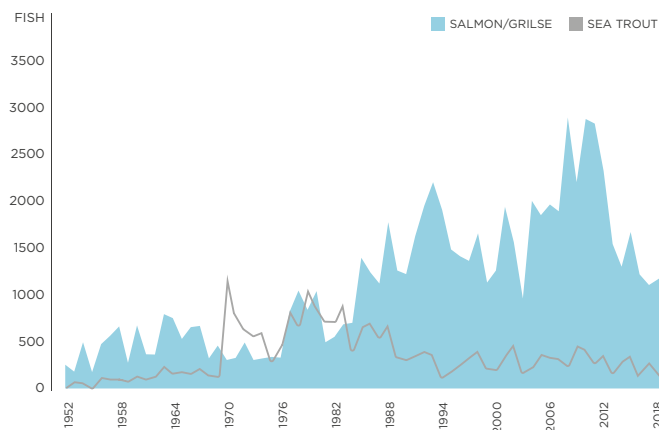
Craig MacIntyre

Esk Rivers Director

The run timings followed the same trend as recent years, with the main runs of fish appearing during June, July and August, with poor numbers of fresh-running autumn salmon. River levels were very low throughout the late spring and summer, meaning not many fish were seen during daylight hours and catches were poor. We finally had some good water in October, which accounted for a third of the total annual catch. Interestingly, the Logie fish counter recorded good numbers of fresh-run salmon entering the river in November. In 2018, the Board purchased the rights for the last remaining in-river salmon nets in the district. With no more netting taking place, we will be keeping a close eye on the fish counter in 2019.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	1,197	218	979	n/a	2,178	93/80/82%*	25lb
Sea Trout	140	n/a	n/a	n/a	481	n/a	6lb

Season: 16 Feb – 31 Oct. *Spring/rest of season/overall.



NORTH ESK CATCH STATISTICS 1952-2018

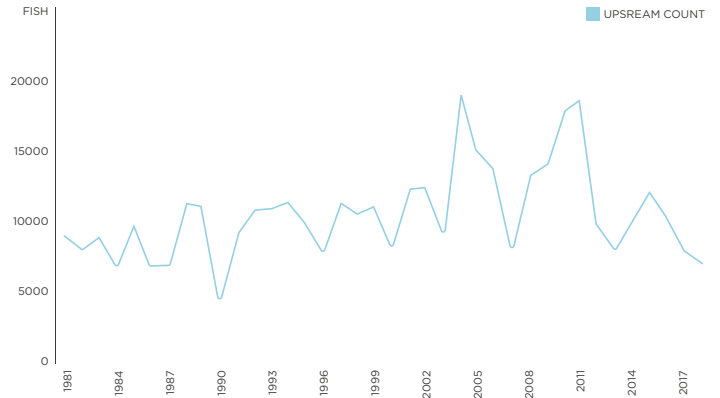
SOURCE – ESK DSFB



LOGIE COUNTER (NORTH ESK)

Craig MacIntyre
Esk's Rivers Director

The total upstream count over the Logie fish counter was 7,424 to the end of November, against a five-year average of 9,660. The main runs of salmon were in June and July, with relatively low numbers of fresh fish running in September and October, followed by a strong run in November.



NORTH ESK UPSTREAM COUNT 1981-2018

SOURCE – MARINE SCOTLAND SCIENCE



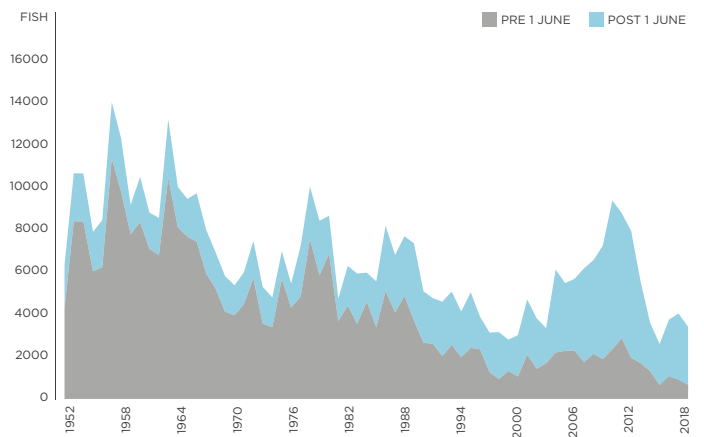
DEE

Lorraine Hawkins
River Dee Director

Rod catches were undoubtedly limited by the lack of water from the spring until September. Once rain came, half of the season's total was caught in September and October, and the number of coloured fish showed they had been lying low in the river all along. The redd counts were average but, on a positive note, electro-fishing surveys found the best fry and parr densities for four years. Habitat restoration work continued apace in the upper catchment, with riparian tree planting and the introduction of large woody structures to watercourses, while further riparian protection was carried out in agricultural areas. Acoustic tracking of migrating smolts highlighted substantial losses in both the river and harbour, showing there is much more still to be done to protect Dee stocks.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	3,320	661	2,659	n/a	5,546	100/99/99%*	28lb
Sea Trout	920	n/a	n/a	n/a	1,514	98%	n/a

Season: 11 Feb – 15 Oct. *Spring/rest of season/overall.



DEE ROD CATCH STATISTICS 1952-2018

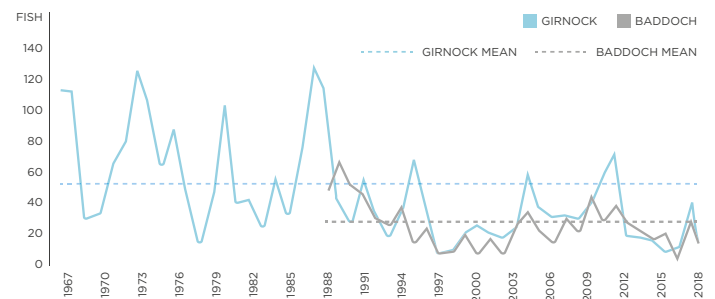
SOURCE – DEE DSFB



GIRNOCK AND BADDOCH (RIVER DEE)

Ross Glover
Freshwater Fisheries Laboratory,
Marine Scotland Science

Marine Scotland Science Freshwater Fisheries Laboratory operates two traps on upper tributaries of the Aberdeenshire Dee (Girnock and Baddoch burns). These tributaries are dominated by multi-sea winter spring salmon, the stock component that has been of most concern in recent decades. Although numbers of male and female salmon caught in the traps show similar temporal trends, only female numbers are plotted, as they are considered the fundamental spawning component. In 2018, 15 females were caught in each of the Girnock and Baddoch traps, representing 29 percent and 54 percent of the long-term means respectively. However, it should be noted that the mean count at the Baddoch is over a shorter time period and does not include the period of high adult returns observed in early years at the Girnock. For further information on the Girnock and Baddoch fish traps, see: <http://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Monitoring/Traps>



GIRNOCK & BADDOCH FEMALE UPSTREAM BURN TRAP COUNTS 1966-2018

SOURCE – MARINE SCOTLAND SCIENCE © Crown copyright

Number of adult females returning to the Girnock and Baddoch traps on Deeside. Long-term mean values are shown for each site.



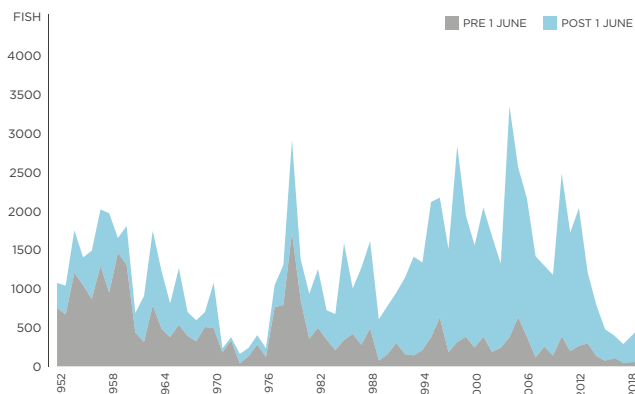
DON

Lorraine Hawkins
River Don Director

Exceptionally low flows throughout the season no doubt limited the potential for catches, with rains arriving too late in the last few days of the season. Unsurprisingly, fishing effort was much reduced too. The main stem weirs exacerbate the impacts of low flows, but progress has been made with at least one of these weirs in the upper catchment. A big effort from staff and volunteers has been put into controlling invasive giant hogweed on the banks, and positive impacts are now being seen. Green engineering, supported by SEPA, has been successfully trialled in a couple of places on the main stem. 2018 was the first year the Don was assessed as a Category 3 river and total catch and release was practiced.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	450	50	400	n/a	1,149	100%	25lb
Sea Trout	60	n/a	n/a	n/a	293	n/a	n/a

Season: 11 Feb – 31 Oct.



DON ROD CATCH STATISTICS 1952-2018

SOURCE – DON DSFB



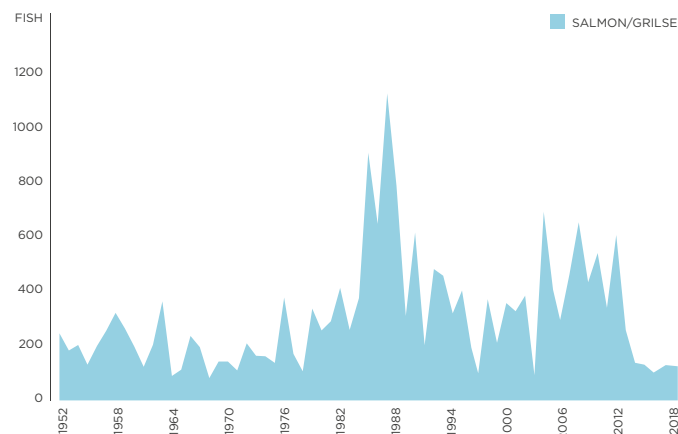
YTHAN

Mark Andrew
Ythan, DSFB

The Ythan was very high in the early part of the year but dropped to below average for the majority of the season, save the last three days. Few fish ventured upstream of Ellon and fishing below Ellon was excellent until the fish stopped taking any bait offered. A further 80km of bank has been sprayed to control invasive non-native giant hogweed and Japanese knotweed. SEPA will be inspecting all farms in the catchment for diffuse pollution – a huge problem, as the whole system falls within intensively farmed land. As a Category 3 river, all salmon are returned. The Ythan conservation code allows one sea trout per day and, overall, two sea trout per angler for the season to be kept.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	128	0	128	n/a	301	100%	n/a
Sea Trout	1,185	n/a	n/a	39	1,641	80%	n/a

Season: 11 Feb – 31 Oct.



YTHAN ROD CATCH STATISTICS 1952-2018

SOURCE – YTHAN DSFB



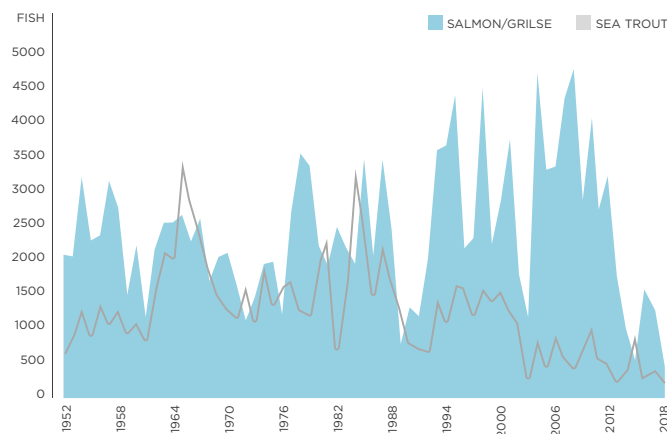
DEVIRON

Richard Miller
Director Deveron DSFB & Deveron,
Bogie & Isla Rivers Charitable Trust

A Marine Scotland study (2005) shows Deveron catches to be particularly influenced by river flow and this was certainly a major factor in the 2018 season, with the unprecedented low level of rainfall reducing the total salmon catch by 64 percent from the previous year – making it the lowest since records began. 15 beats recorded 737 brown trout. The fixed engine netting stations did not operate during 2018. The Deveron has been reclassified as a Category 1 for the 2019 season, suggesting current levels of salmon exploitation are thought to be sustainable. The Board aims to preserve this status and asks that the River Deveron Angling Code 2019 (found at www.deveron.org) be adhered to by all anglers.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	486	88	398	n/a	2,025	95/88/90%*	22lb
Sea Trout	207	n/a	n/a	n/a	570	99%	7lb

Season: 11 Feb – 31 Oct. *Spring/rest of season/overall.



DEVIRON ROD CATCH STATISTICS 1952-2018

SOURCE – DEVIRON DSFB



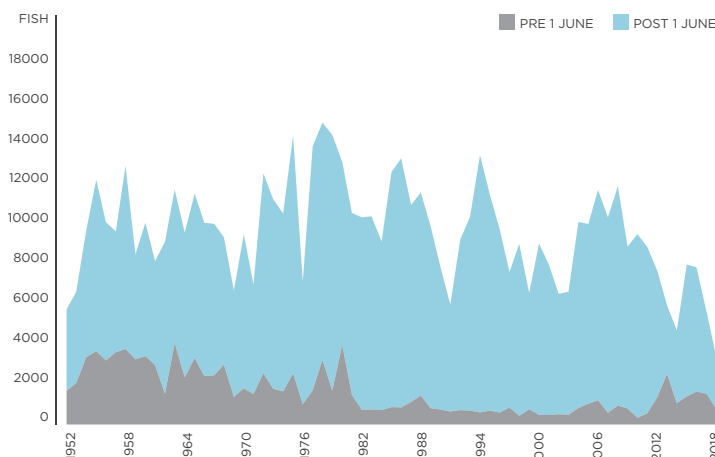
SPEY

Roger Knight
Director, Spey Board and Foundation

A prolonged, cold winter, followed by a rapid and sustained rise in temperatures and significant drop in water levels, made fishing conditions particularly challenging. The Spey dropped to levels last seen during the drought of 1976, but anglers continue to impress with their very responsible approach to conservation. The Board remains concerned by the significant levels of water abstraction, particularly in the upper catchment at Spey Dam, where substantial volumes are diverted to Fort William. This has a severe impact on the upper Spey salmon population. The SFB regularly meet with representatives of GFG (the new owners of Spey Dam) and SEPA, and a much more positive relationship has developed. We look forward to working with them to deliver improvements in the uppermost river.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	3,178	658	2,250	n/a	6,813	98%	38lb
Sea Trout	1,830	n/a	n/a	n/a	2,000	88%	13lb

Season: 11 Feb – 30 Sep.



SPEY ROD CATCH STATISTICS 1952-2018

SOURCE – SPEY DSFB



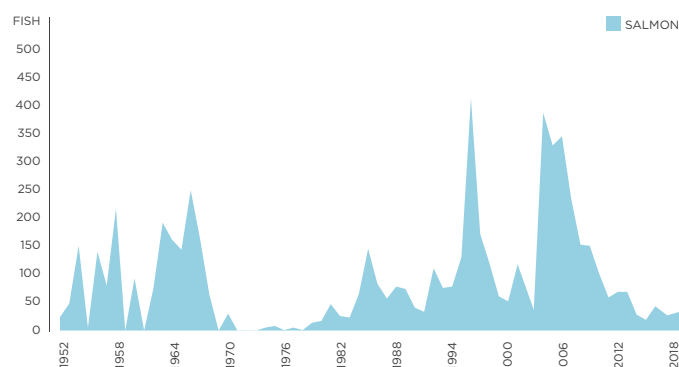
LOSSIE

Valerie Wardlaw
Administrator, Lossie DSFB

2018 was an exceptionally dry year, with lower than normal river flows from May onwards, exacerbated by a very dry summer. Fish were seen entering the river in July but they remained at the mouth and were trapped in pools in Elgin until water levels rose in September, when they moved rapidly upstream. Weirs on the Linkwood Burn, which act as barriers to fish passage, continue to be removed, with one fish pass installed and more in development, opening up good spawning grounds for the first time in 60 years. Invasive non-native plant control continued, while five mink were also caught. Major wind farm and road upgrade developments in the catchment are being monitored. The number of anglers fishing the river is much reduced, which is reflected in the catch returns.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	37	2	35	n/a	79	100%	9lb
Sea Trout	32	n/a	n/a	n/a	114	89%	4lb

Season: 25 Feb – 31 Oct.



LOSSIE ROD CATCH STATISTICS 1952-2018

SOURCE – FINDHORN, NAIRN AND LOSSIE FISHERIES TRUST



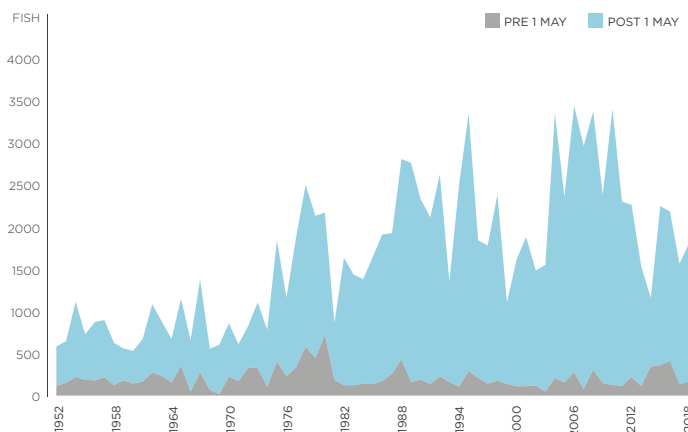
FINDHORN

Valerie Wardlaw
Administrator, Findhorn DSFB

The salmon catch was 75 percent of the 10-year average, which was better than expected considering the very dry weather and low water levels. The spring catch was slightly below last year, with fish remaining in the lower river due to low water temperatures. The sea trout catch was above the 10-year average. Good numbers of fish accumulated in the lower pools during the summer. In September rain enabled them to move swiftly up to their spawning grounds. The release rate for salmon was excellent throughout the season, averaging 91 percent. Control of invasive non-native plants continued, with intensive treatment by contractors, FNLF Trust and SISI staff above the A96. Two mink were also captured and monitoring rafts installed. Major wind farms and road upgrades planned in the catchment are currently being monitored.

	2018 total	Pre May 1	Post May 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	1,864	161	1,703	n/a	2,256	95/91/91%*	25lb
Sea Trout	155	n/a	n/a	n/a	130	70%	4.5lb

Season: 11 Feb – 30 Sep. *Spring/rest of season/overall.



FINDHORN ROD CATCH STATISTICS 1952-2018

SOURCE – FINDHORN DSFB



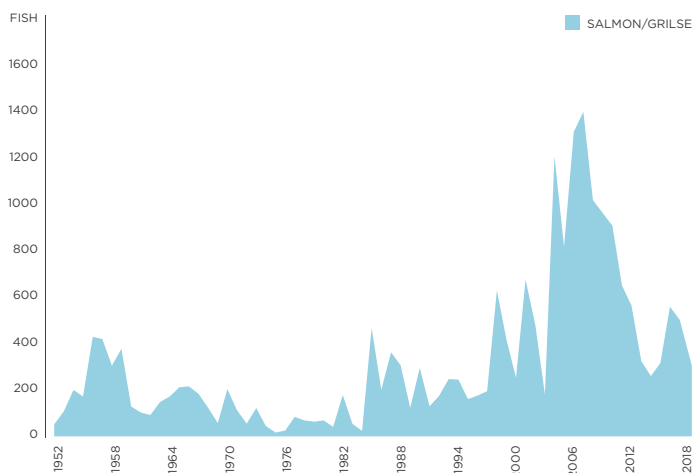
NAIRN

Alastair Skinner
Nairn River Bailiff

The season started with a poor run of spring fish, followed by low water levels in March, April and May. The river level continued to drop in June and July, while the lowest ever level was recorded in August. The Nairn Angling Association closed pools to all anglers due to the low river levels and the build-up of fish. Very little fishing effort was conducted during this period, which had a real impact on the catch returns. Only in September did we get a spate – most of the fish were caught during this month and most were returned. Control of invasive non-native plants continued, leading to a reduction in their densities. Mink were seen throughout the catchment but none were caught. American signal crayfish control was not undertaken in 2018, due to the lack of funding, but may start this year.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	314	13	301	n/a	640	80%	18lb
Sea Trout	30	n/a	n/a	n/a	65	85%	7lb

Season: 1 Mar – 7 Oct.



NAIRN ROD CATCH STATISTICS 1952-2018

SOURCE – NAIRN DSFB



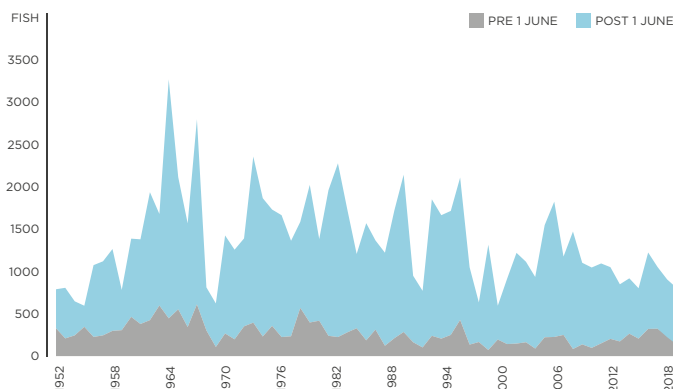
NESS

Chris Conroy
Director, Ness DSFB

This was a challenging year – a cold and dry spring period, compounded by a major hydro outage at Garry Dam, was followed by an exceptionally warm and dry summer. The provisional total of 866 salmon was below the five-year average, yet the district performed better than many others, in part due to relatively good grilse catches (432 fish) and a constant supply of cool water from Loch Ness. Multi-sea-winter salmon catches were a concern, with the 434 reported fish being the lowest on record. Electro-fishing survey results suggest that the Ness system is producing improving numbers of juvenile salmon and a Category 1 conservation status has been proposed for 2019. This suggests that there are currently enough spawners to maintain the basic sustainability of the stock.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	866	184	682	n/a	966	100/90/92%*	25lb
Sea Trout	21	n/a	n/a	n/a	71	95%	n/a

Season: 1 Feb – 15 Oct. Spring/rest of season/overall.



NESS ROD CATCH STATISTICS 1952-2018

SOURCE – NESS DSFB



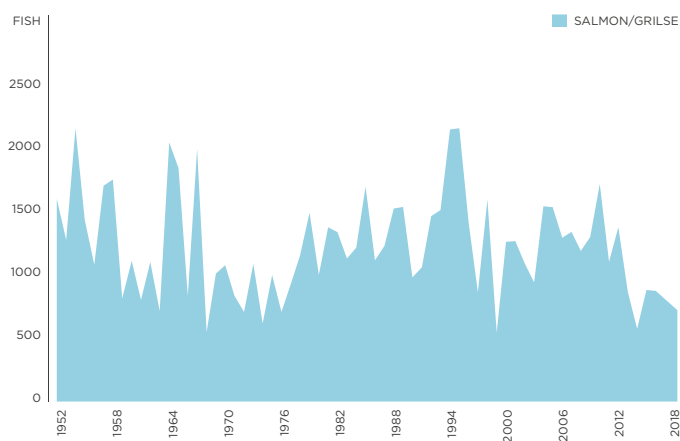
BEAULY

Alastair Campbell
Beauly DSFB

At the time of writing the total catch submitted for the system was 729 salmon and 478 sea trout, but this excludes the returns from a number of beats. Like most rivers, the season was slow due to the lower numbers of returning fish combined with high temperatures for much of the year. However, the Beauly probably held up better than many other rivers and was always potentially fishable due to the compensation flow from the dams at the top of the system. The counters at Kilmorack and Aigas had recorded 2,798 and 2,170 salmon respectively passing through them by the end of November.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	729	n/a	n/a	n/a	n/a	n/a	n/a
Sea Trout	478	n/a	n/a	n/a	n/a	n/a	n/a

Season: 11 Feb – 15 Oct.



BEAULY ROD CATCH STATISTICS 1952-2018

SOURCE – BEAULY DSFB



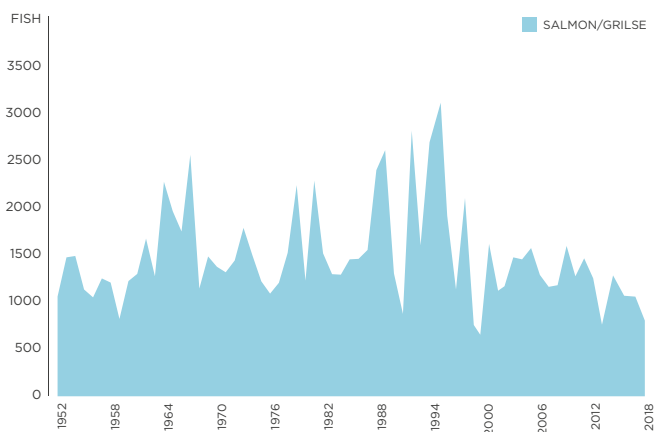
CONON

Neil Wright
Clerk, Cromarty DSFB

The 2018 season began with another reasonable spring run for parts of the catchment, but later-running grilse were very scarce, in part due to the very warm dry weather, and arrived much later than normal. On the Blackwater, which is dominated by a summer grilse stock linked to the SSE compensatory hatchery, the count was down to 592 fish, compared with a 10-year average of around 1,000, due to the absence of larger female grilse. Only 246 of the 592 fish were female, but the fish were heavier and longer than in 2017. Management priorities include maximising smolt escapement from predation at hydro impoundments with an experimental acoustic barrier, restoring the nutrient status of upper and middle catchments and the restoration of riparian habitats to safeguard juvenile fish.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	819	n/a	n/a	n/a	1,236	100/85%*	22lb
Sea Trout	n/a	n/a	n/a	n/a	596	96%	6lb

Season: 11 Feb – 30 Sep. *Spring/overall.



CONON ROD CATCH STATISTICS 1952-2018

SOURCE – CROMARTY DSFB



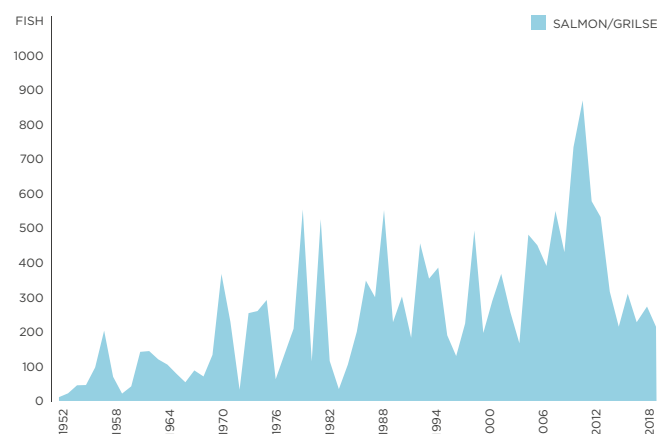
ALNESS

Roger Dowsett
Manager, Novar Fishings

It was another extremely difficult season, the sixth in succession. There was no significant rainfall for over 130 days – from early May until mid-September – the most extreme drought since the dam was built in 1979. Loch Morie reserves were already depleted by mid-July and by mid-August loch levels were the lowest on record. There was almost no fishing effort from May through July, and very little in August. A few grilse braved the trickle of water in August, but catches never really began until river levels improved from 13 September. Catches were steady but not prolific thereafter and it was impossible to assess total stocks. For the third consecutive year, the MSW salmon stock component was low – only 21 percent, based on catch returns. Marine Scotland Science had designated the Alness as a Category 3 river for the 2019 season.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	217	0	217	n/a	429	100%	16lb
Sea Trout	58	n/a	n/a	n/a	63	100%	3.5lb

Season: 11 Feb – 31 Oct.



ALNESS ROD CATCH STATISTICS 1952-2018

SOURCE – CROMARTY DSFB



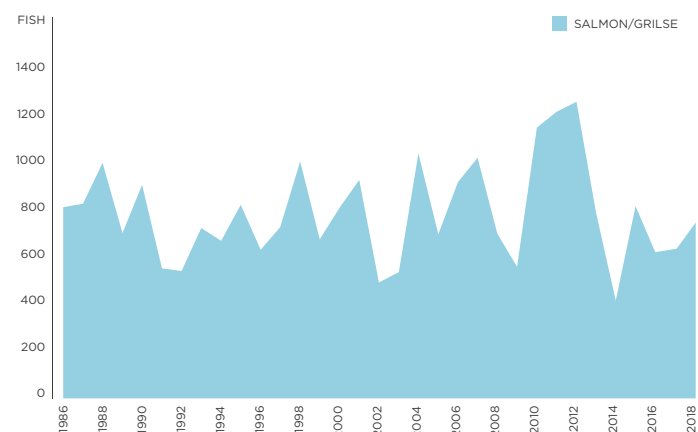
CARRON (EAST COAST)

Keith Williams
Director, Kyle DSFB

Spring salmon fishing was highly productive, with snowmelt providing ideal fishing levels for an extended period, particularly in April. Catches reflected this with a two-rod lower Carron beat, Gledfield, reporting a week of 23 and Braelangwell, further upstream, reporting its best April week since 1980. However, the river suffered an extended drought from May onwards and was at a virtual standstill until levels were finally replenished by autumn rains. Nonetheless, the low water in May did permit good numbers of fish to pass Glencalvie Falls and reach the upper catchment. September catches again reflected good water levels and the season finished strongly. Reports from ghillies suggest sufficient spawning activity and a number of large fish were sighted in the lower reaches of the river.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	745	274	471	n/a	n/a	98/99/99%*	n/a
Sea Trout	25	n/a	n/a	n/a	n/a	88%	n/a

Season: 11 Jan – 30 Sep. *Spring/rest of season/overall.



CARRON ROD CATCH STATISTICS 1986-2018

SOURCE – KYLE DSFB



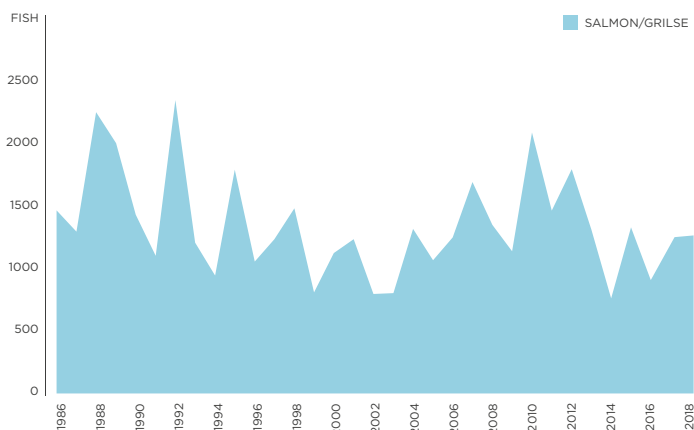
OYKEL

Keith Williams
Director, Kyle DSFB

The Oykel was the first of the Kyle rivers to get off the mark – with a fish in January. April was by far the best of the spring months, as by May the hot weather that was to dominate the season had set in. Unlike the neighbouring Carron, the Oykel benefited from several small rises in level during the summer. Although these did little to help catches they almost certainly prevented salmon mortalities, as river temperatures rose to dangerous levels. The Oykel is typically the most prolific of the Kyle rivers during the summer months and improved river levels from August onwards increased catches greatly. September was a particularly prolific month with the Upper Oykel fishing particularly well. Relatively large fish were a feature of the August and September catches, including several in excess of 20lb.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	1,280	116	1,164	n/a	n/a	100/97/97%*	n/a
Sea Trout	81	n/a	n/a	n/a	n/a	91%	n/a

Season: 11 Jan – 30 Sep. *Spring/rest of season/overall.



OYKEL ROD CATCH STATISTICS 1986-2018

SOURCE – KYLE DSFB



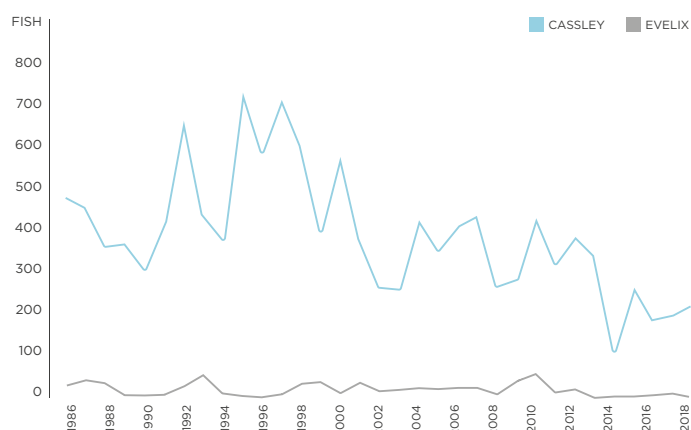
EVELIX & CASSLEY

Keith Williams
Director, Kyle DSFB

The Cassley was into double figures by the end of March, which represented an improvement on the start of 2017. The overall spring catch was slightly down on 2018, however, as by May drought conditions had begun to set in. For several months fishing was at a virtual standstill. In common with the other Kyle rivers the season was rescued by a relatively strong September on the upper beats. Overall season catches were up on the previous year, although it should be noted that the Glencassley beat was more extensively fished than in recent years. Conditions did not suit the Evelix and catches were modest as a result.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	213	56	157	n/a	n/a	100/99/99%*	n/a
Sea Trout	0	n/a	n/a	n/a	n/a	n/a	n/a

Season: 11 Jan – 30 Sep. *Spring/rest of season/overall.



EVELIX & CASSLEY ROD CATCH STATISTICS 1986-2018

SOURCE – KYLE DSFB



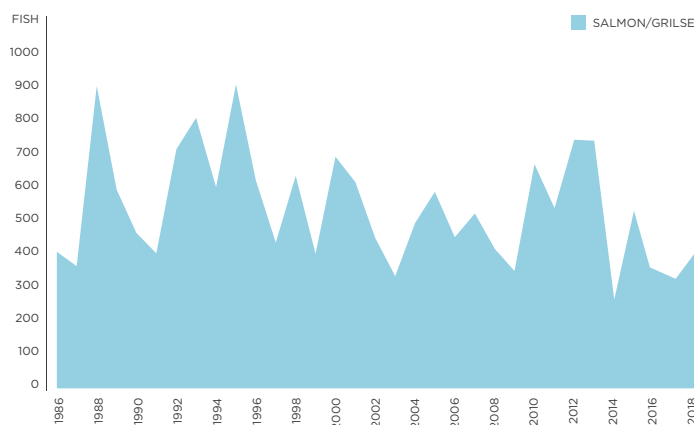
SHIN

Keith Williams
Director, Kyle DSFB

Summer rods often benefit from guaranteed compensation flow levels at Shin Diversion Dam during drought conditions, but high water temperatures during the 2018 heatwave appeared to make this less of a benefit than usual, at least until cooler temperatures and rainfall arrived in August and September. Catches then responded well and the final total for the season was around 50 fish higher than in 2017. The Shin has long been famed for its large fish and a number of fish well over 20lb were caught. Preliminary counter data suggests similar numbers of fish (just under 200) accessed the upper tributaries in 2018 and 2017. Around 6,000 smolts were transported and released downstream of the dams in the spring as part of ongoing mitigation efforts by SSE to reduce the impacts of hydro-electricity generation.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	406	43	363	n/a	n/a	100/99/99%*	n/a
Sea Trout	0	n/a	n/a	n/a	n/a	n/a	n/a

Season: 11 Jan – 30 Sep. *Spring/rest of season/overall.



SHIN ROD CATCH STATISTICS 1986-2018

SOURCE – KYLE DSFB



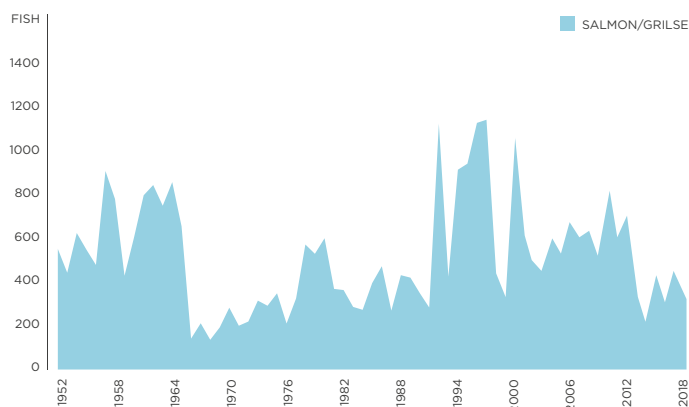
BRORA

Neil Wright
Clerk, Brora DSFB

The number of salmon caught was lower than normal due to the very warm, dry weather and during the drought the fishing ceased on certain pools to protect fish stocks. There was a steady – albeit low – number caught when water conditions allowed, but this picked up with the late arrival of the main run, which coincided with increased rain and cool weather. The Brora DSFB has commissioned a survey of the full catchment, which is now into its second year. From this a management plan with suggestions on conservation and management objectives will be produced. The river has been given Category 1 status for the 2019 season.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	346	n/a	n/a	n/a	575	100%*	20lb
Sea Trout	n/a	n/a	n/a	n/a	301	98%	7lb

Season: 1 Feb – 15 Oct.



BRORA ROD CATCH STATISTICS 1952-2018

SOURCE – BRORA DSFB. MARINE SCOTLAND SCIENCE © Crown copyright



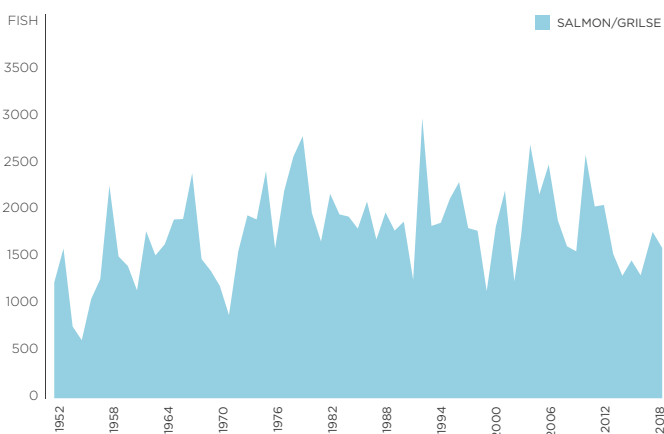
HELMSDALE

Michael Wigan
Manager, Helmsdale DSFB

A four-month drought, starting in May, lowered summer catches, but the overall total was sustained by releasing water through the summer from Badanloch Dam. Voluntary conservation measures consist principally of local angler assistance – with 20 nominated anglers taking part in rod and line capture of broodstock for a hatchery operation that produces 160,000 fry for reintroduction to the system each year.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	1,612	171	1,441	n/a	1,707	100/95/96%*	24lb
Sea Trout	152	n/a	n/a	n/a	n/a	48%	5lb

Season: 11 Jan – 30 Sep. *Spring/rest of season/overall.



HELMSDALE ROD CATCH STATISTICS 1952-2018

SOURCE – HELMSDALE DSFB



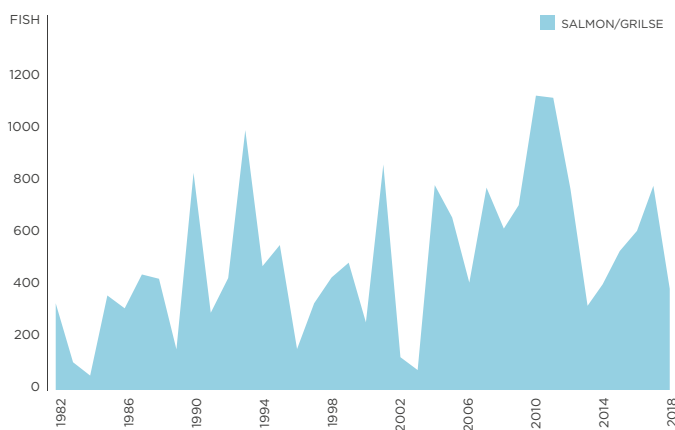
WICK

John Mackay
Secretary, Wick Angling Club

We suffered from the prolonged drought from April until September, with only 36 fish caught by the end of July. Considering the poor conditions, however, our total catch of 386 was respectable and at the spawning we assessed the stocks on the redds as adequate.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	386	8	378	n/a	673	50%	14lb
Sea Trout	3	n/a	n/a	n/a	4	n/a	2.5lb

Season: 11 Feb – 12 Oct.



WICK ROD CATCH STATISTICS 1982-2018

SOURCE – RIVER WICK



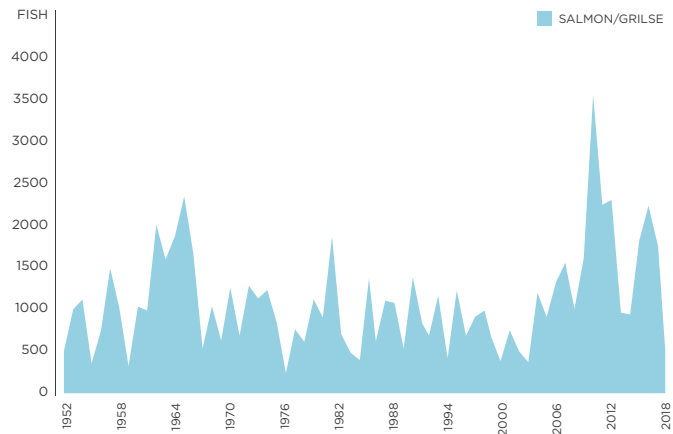
THURSO

Tim Hawes
Thurso River Manager

Because of the weather it was very difficult to assess numbers of fish and any trends. There was a slow start to the season with very cold conditions and the river frozen on many days. Early fish were in good condition and of good size. What was missing were fish in the 6lb to 7lb class. The drought started in the middle of April and we did not see any decent rain until the middle of September, 349 fish of the total were caught in September and the first five days of October. The river continues to operate a conservation strategy that allows no fish to be killed before the middle of June and only two grilse to be taken thereafter by any rod fishing a full week.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	505	93	412	n/a	1,720	99/96/98%*	22lb
Sea Trout	10	n/a	n/a	n/a	n/a	100%	4lb

Season: 11 Jan – 5 Oct. *Spring/rest of season/overall.



THURSO ROD CATCH STATISTICS 1952-2018

SOURCE – THURSO RIVER MANAGEMENT



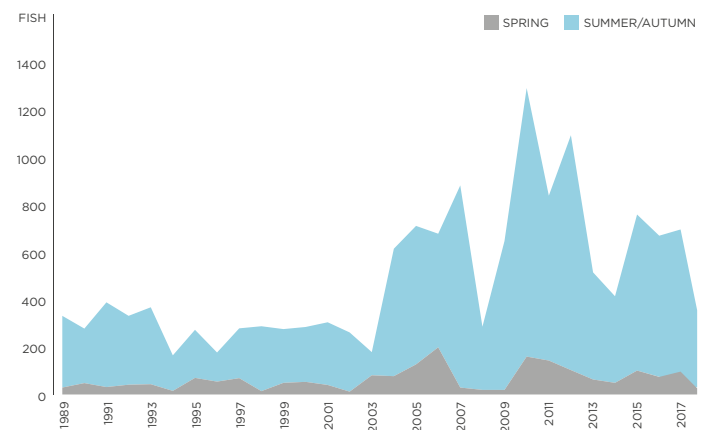
HALLADALE

John Salkeld
Halladale Partnership

The season was exceptionally dry and hot from May to August, during which period the daily river levels were 6" to 9" below the five-year averages. Unsurprisingly only 52 fish were caught in this period, well below the five-year average of 467. The weather broke in the second week of September and a further 252 salmon were caught, giving some reassurance that there were enough fish to achieve spawning targets. 2003 was a similarly dry season, with a poorer catch return than 2018, but this appeared to have no long-term detrimental effect on fish stocks. Electro-fishing showed disappointing results in some areas and year classes, especially near conifer felling, where water quality is being closely monitored.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	355	17	338	n/a	742	82/93/92%*	23lb
Sea Trout	4	n/a	n/a	n/a	5	n/a	2.5lb

Season: 12 Jan – 30 Sep. *Spring/rest of season/overall.



HALLADALE ROD CATCH STATISTICS 1989-2018

SOURCE – HALLADALE PARTNERSHIP



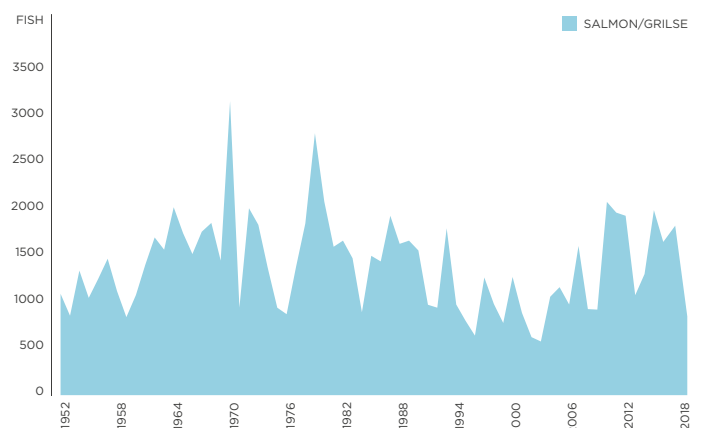
NAVER

Richard Wright
Baillif, River Naver

The season started well, although after the end of April things began to take a downturn, with no more significant rises in the river level until the second week in September and the marker gauge at Rhifail measuring -11 inches at our driest. High temperatures were our main concern this season, but we managed to escape without any major fish mortalities. On the six beats anglers refrained from fishing for the majority of July and August, with only four fish being landed in July and none in August, which must be a first for the Naver. Despite this 826 salmon were recorded for the catchment, yet this was still the lowest number since 2003. Good numbers of fish were seen creating redds, although spawning was very stop/start due to the lack of frosts to bring fish on to the redds.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	826	289	537	n/a	1,515	97/93/95%*	23lb
Sea Trout	134	n/a	n/a	n/a	295	80%	3lb

Season: 12 Jan – 30 Sep. *Spring/rest of season/overall.



NAVER ROD CATCH STATISTICS 1952-2018

SOURCE – NAVER MANAGEMENT



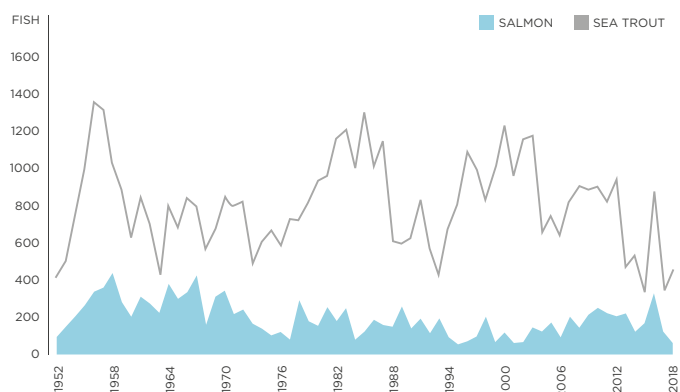
HOPE

Andrew Adamson
Wildland Ltd Estate Manager

Like most spate rivers in Sutherland, the Hope suffered from the lack of rain in 2018. We saw some spring salmon entering the river in April/May, followed by the grilse, but none of which managed to make it into the system until the back end. The sea trout fishing in the loch proved fruitful in the right conditions, and the estuary was very productive this year, with approximately 40 percent of the sea trout caught being finnock (in excess of 400), which showed that we still have very good spawning grounds. We still operate a 100 percent catch and release programme on all Wildland estates, which will hopefully help to improve stocks for the future. As of 2018 we have made the fishing on the loch more accessible, with a boat now available through the Tongue & District Angling Club.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	51	n/a	n/a	n/a	n/a	100%	12lb
Sea Trout	448	n/a	n/a	n/a	n/a	100%	n/a

Season: 11 Feb – 31 Oct.



HOPE ROD CATCH STATISTICS 1952-2018

SOURCE – WILDLAND LTD. MARINE SCOTLAND SCIENCE© Crown copyright



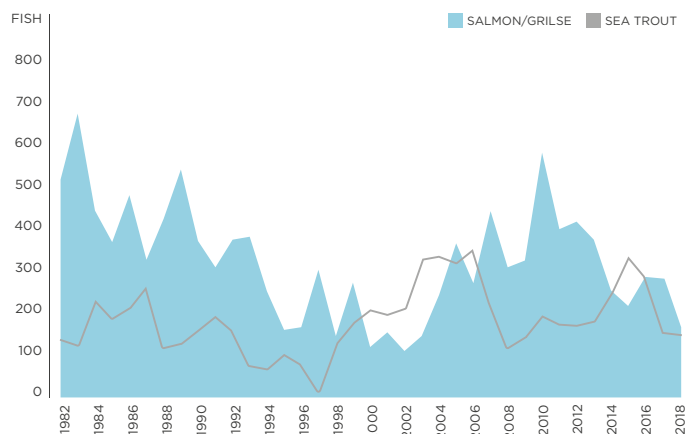
DIONARD

Jim Allingham
North and West DSFB

The 2018 season was poor and was dominated by heat and drought. When water did arrive there were very few fresh fish in evidence, though many that did arrive were thought to have become coloured through waiting in the Kyle. All salmon and sea trout caught were returned and by the end of October it was thought that there was a sufficient spawning stock in the river.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	167	0	167	n/a	332	100%	n/a
Sea Trout	149	n/a	n/a	n/a	202	100%	n/a

Season: 11 Feb – 31 Oct.



DIONARD ROD CATCH STATISTICS 1982-2018

SOURCE – NORTH AND WEST DSFB



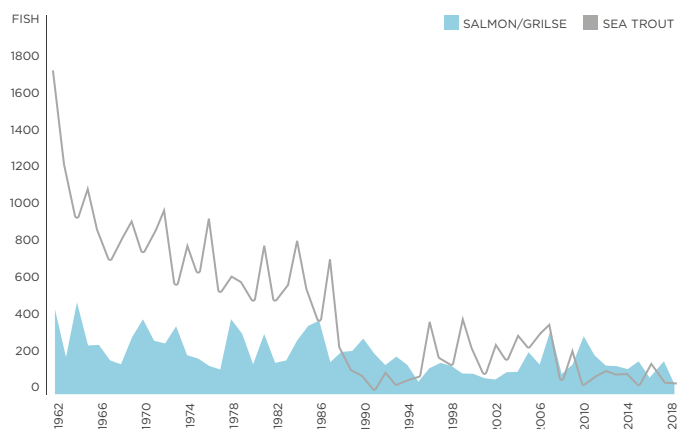
LAXFORD

Shona Marshall
Biologist, West Sutherland Fisheries Trust

2018 was an exceptionally dry season, which helps to explain why both salmon and sea trout catches were poor. Indeed, the salmon catch was the lowest on record, while the sea trout catch was the fifth lowest. The longest period without rain for decades, combined with high water temperatures, adversely affected opportunities for fishing and over half of the catch was taken in September, following heavy rainfall. In the long-term the ongoing restructuring and development of woodland close to riparian waters should result in improvements to riparian zones and water quality.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	52	1	51	n/a	163	100%	18lb
Sea Trout	67	n/a	n/a	n/a	117	100%	4lb

Season: 1 March – 30 Sep.



LAXFORD ROD CATCH STATISTICS 1962-2018

SOURCE – WEST SUTHERLAND FISHERIES TRUST



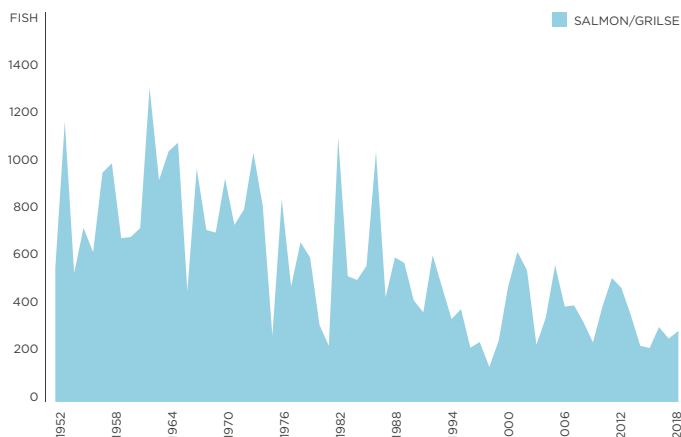
GRIMERSTA

Jason Laing
Grimersta Estate Manager

This was a reasonable catch, given the poor run elsewhere in the Hebrides and the fact that low water and high temperatures made fishing early in the summer difficult. While there was enough water for fish to enter the river, many chose not to, and shoals gathered in the estuary in June and early July. During this period, in particular, salmon mortalities and the very high lice numbers in the fish farms in Loch Roag posed major concerns. Rain came in mid-July and fishing was steady but not exceptional thereafter.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	300	3	297	n/a	333	100/93/94%*	16lb
Sea Trout	104	n/a	n/a	n/a	254	100%	3lb

Season: 11 Feb – 15 Oct. *Spring/rest of season/overall.



GRIMERSTA ROD CATCH STATISTICS 1952-2018

SOURCE – WESTERN ISLES DSFB



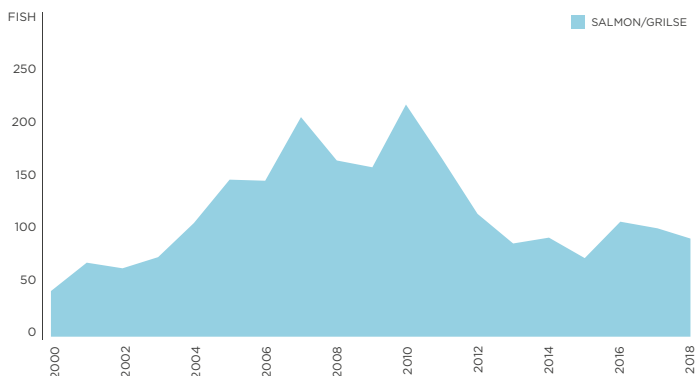
SNIZORT

Derek Dowsett
Snizort River Manager

Although the average catch over the past decade exceeds the average of the previous ten years, the past five seasons have produced much drier conditions – the longest dry period in 2018 occurring from early June to mid-July. A full catch and release regime has been in operation since 2005 and there were no mortalities reported for either salmon or sea trout. The sea trout catch continued a five-year downward trend, although the largest fish recorded was 4lb, the largest for many years. Catch totals are giving great cause for concern but the fish caught showed little evidence of sea louse infestation and appeared to be well-fed. In contrast to the fishing season the increasingly wet weather patterns during the winter mean an increased likelihood of redd wash-out.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	88	1	87	n/a	112	100%	16lb
Sea Trout	29	n/a	n/a	n/a	50	100%	4lb

Season: 11 Feb – 15 Oct.



SNIZORT ROD CATCH STATISTICS 2000-2018

SOURCE – SKYE DSFB



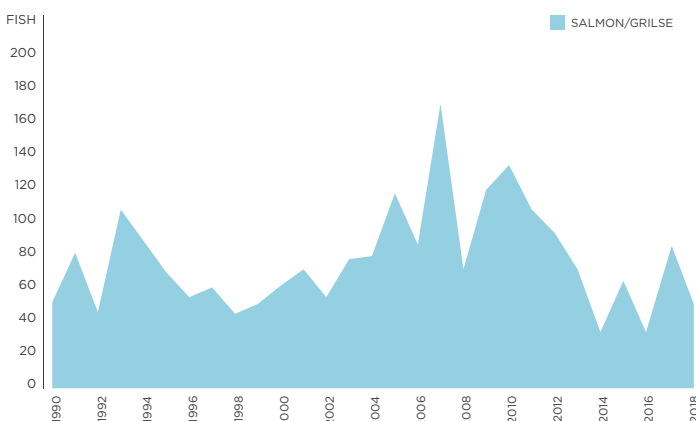
LITTLE GRUINARD

Stuart Allison
Head Keeper, Eilean Darach Estates

The 2018 season was very similar to the past two years – it was very dry, very few grilse were in evidence and there were a lot of blank days. The start of the year was extremely wet, which resulted in a lot of large floods that may have had an effect on the juvenile salmon. It was followed by an exceptionally dry summer – from the last week of June until August water levels made it physically impossible for salmon to make it into the system. The adverse weather conditions may have a more pronounced effect on returning fish in the years to come. The 10-year average catch has dropped by 45 salmon in the past four years and I believe we are now in a downward spiral, due to the effects of aquaculture and predation at sea – 2016 was the worst season on record and 2018 is close behind.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	52	0	52	n/a	78	100%	16.5lb
Sea Trout	5	n/a	n/a	n/a	15	100%	3lb

Season: 11 Feb – 31 Oct.



LITTLE GRUINARD ROD CATCH STATISTICS 1990-2018

SOURCE – LITTLE GRUINARD MANAGEMENT



EW E & LOCH MAREE

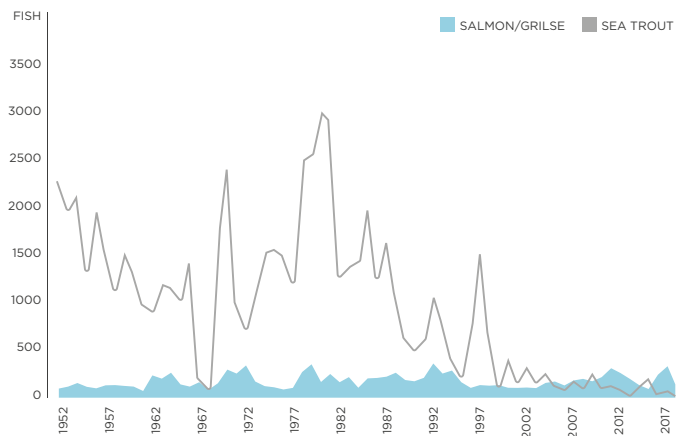
Peter Cunningham

Biologist, Skye and Wester Ross Fisheries Trust

Sea trout catches in 2018 were the lowest on record and salmon were also scarce throughout the season. Anglers fishing Loch Maree recorded increasing numbers of brown trout rather than sea trout. Sea lice remain a concern. In addition to the threat from the local salmon farm, larval lice may drift towards Loch Ewe from new, much larger, farms around Skye and these parasites need to be more tightly regulated. Juvenile salmon were found in the River Ewe headwaters above a new hydropower scheme. Adult salmon were also seen above the Bruachaig Falls, confirming that salmon are able to ascend the fish pass over the intake weir for the hydro scheme. A 100 percent catch and release policy is to be retained on the Ewe, despite it being re-graded to a provisional Category 1.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	154	13	141	n/a	234	100%	18lb
Sea Trout	11	n/a	n/a	n/a	80	100%	2lb

Season: 11 Feb – 31 Oct.



RIVER EWE AND LOCH MAREE ROD CATCH STATISTICS 1952-2018

SOURCE – WESTER ROSS FISHERIES TRUST



CARRON (WEST COAST)

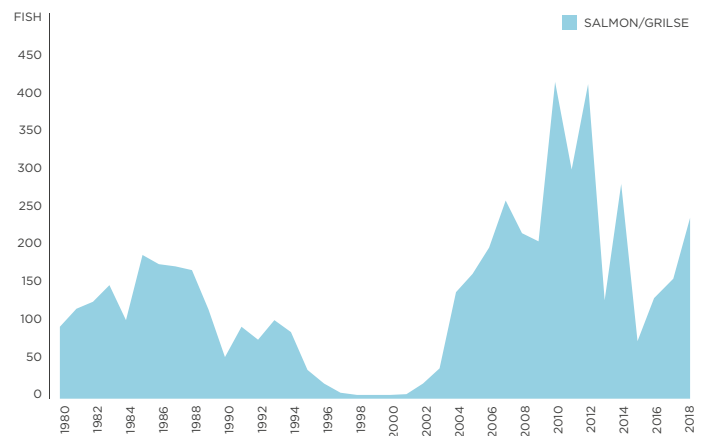
Bob Kindness

Carron River Manager

Despite the dry, hot summer, the season was a good one for salmon, sea trout and finnock. Salmon and grilse were present throughout the river in good numbers in the later part of the season. Sea trout, although small, were in excellent condition and were almost completely devoid of sea lice for the second season in succession. The salmon and grilse catch since the stocking programme took effect in 2004 are significantly higher than in any season prior to stocking. It seems clear that ongoing stocking mitigates against the winter spates and moving gravel and the increasing seal population in the neighbouring sea loch. Migrating smolts have now been monitored for more than 10 years, which indicates at least twice as many as predicted for the river if it only relied on natural production.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	243	2	241	n/a	237	100%	18lb
Sea Trout	101	n/a	n/a	n/a	114	99%	3lb

Season: 15 Feb – 31 Oct.



CARRON (W.COAST) ROD CATCH 1980-2018

SOURCE – RIVER CARRON MANAGEMENT



LOCHY

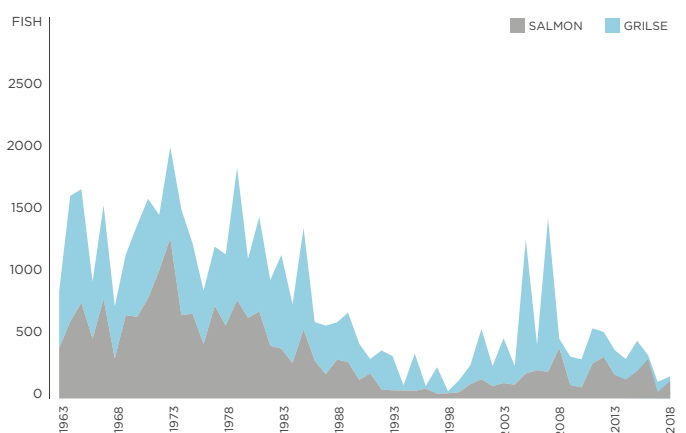
Jon Gibb

Fishery Manager, River Lochy

Another disappointing season, hampered by the prolonged summer drought and another year of no grilse. As has been the pattern for the last few years, the multi-sea winter salmon made a good showing when water conditions allowed, and the vast majority of spawners in the river by late autumn were salmon of 12-18lb. It seems clear on the Lochy that whatever is affecting salmon at sea is disproportionately affecting grilse. The lice-protected smolt release programme has now finished and the hatchery focus is now on using the 'doomed majority' of smolts that are likely to die at sea anyway. These fish are trapped on their way to sea and developed into captive indigenous broodstocks, whose ova is used to reseed barren but quality areas of habitat.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	174	19	155	n/a	335	100/98/99%*	28lb
Sea Trout	95	n/a	n/a	n/a	169	100%	4lb

Season: 1 Apr – 15 Oct. *Spring/rest of season/overall.



LOCHY ROD CATCH STATISTICS 1963-2018

SOURCE – LOCHY ASSOCIATION



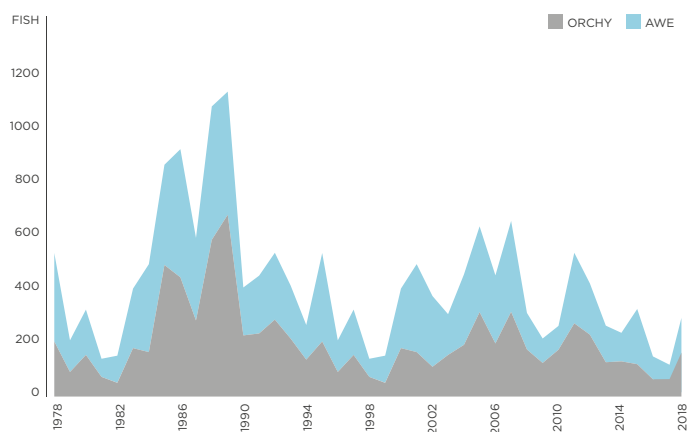
AWE & ORCHY

Roger Brook
Chairman, Argyll DSFB

Catches were 150 percent up on the previous year, which is in line with the increased numbers through the fish counter. However, 2017 had been the worst year on record and this year's catch has merely returned to the 10-year average, which is – historically – very poor. The returns were boosted by late season catches at the top of the Awe system, when fishing conditions were much more suitable.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	300	16	284	n/a	285	100%	n/a
Sea Trout	0	n/a	n/a	n/a	0	n/a	n/a

Season: 11 Feb – 31 Oct.



AWE & ORCHY ROD CATCH STATISTICS 1978-2018

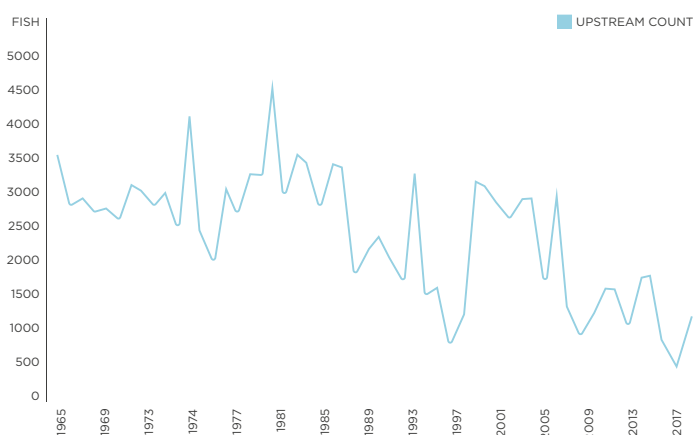
SOURCE - ARGYLL DSFB



AWE COUNTER

Roger Brook
Chairman, Argyll DSFB

The Awe counter developed some faults in 2018 but we have confidence in our final estimated total of 1,181 salmon. This is a significant increase on the two previous years but is still the seventh worst total since records began in 1964. The weekly counts are showing a change in the distribution of fish through the season. The early summer run has been significantly reduced and there are isolated peaks later in the summer. It is too early to say whether this is a long-term trend.



AWE BARRAGE UPSTREAM COUNT 1964-2018

SOURCE - SCOTTISH AND SOUTHERN ENERGY



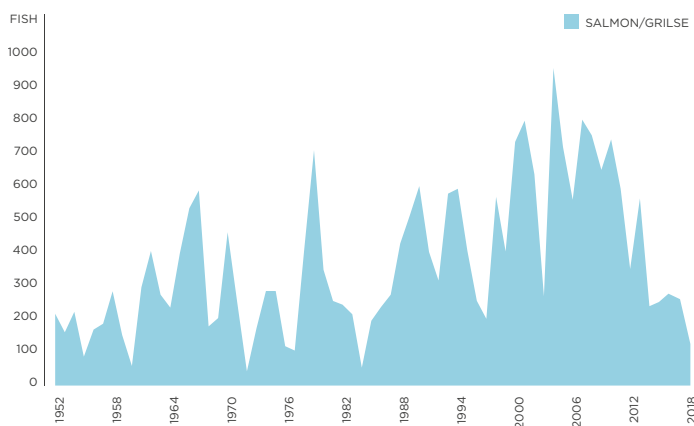
AYR

Stuart Brabbs
Ayrshire Rivers Trust

As in previous years, several larger angling clubs and beats failed to provide catch returns, making the total reported catch a gross underestimation. This is detrimental to river management and penalises honest beats. Overall 2018 was a dry year, with rainfall approximately 25 percent below average. August and September were the most productive months for fishing. The smolt run again suffered delays at Catrine Dam during the drought, which leads to increased predation. Upstream migration through Catrine Dam appears to have improved over recent years, following alterations, but further improvements could yet be achieved. Another hydro scheme is expected to go ahead in summer 2020, at Nethermills. However, as it's at the tidal limit, it will hopefully have little impact on migration.

	2016 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	128	0	128	n/a	n/a	100%	n/a
Sea Trout	1	n/a	n/a	n/a	n/a	100%	n/a

Season: 15 Feb – 31 Oct.



AYR ROD CATCH STATISTICS 1952-2018

SOURCE - AYRSHIRE RIVERS TRUST



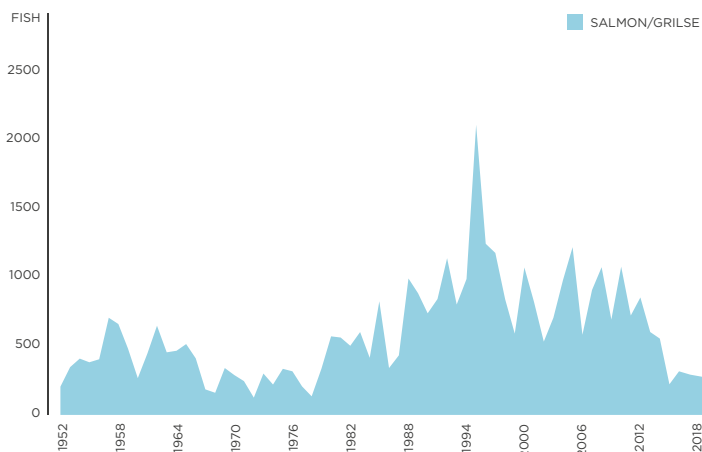
DOON

David Cosh
Doon DSFB

Another poor season – it seems that the same story has been repeated for the last seven or eight years – produced 286 salmon. It could have been worse, but the compensation flow from Loch Doon helped during the dry summer. By all accounts the July and August fish tended to head up the river and were caught in September and October, when very few fresh fish entered the system. The weight of the salmon has increased slightly this season, as has the number of sea trout caught, albeit from a very low base. At long last there is hope on the horizon for the west coast rivers after the Government's REC committee said that the currently self-regulating fish farms will have to bow to tougher regulation on fish health, sea lice and environmental damage – let's hope the regulatory bodies do their job.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	286	0	286	n/a	n/a	94%	15lb
Sea Trout	19	n/a	n/a	n/a	n/a	100%	6lb

Season: 11 Feb – 31 Oct.



DOON ROD CATCH STATISTICS 1952-2018

SOURCE – AYRSHIRE RIVERS TRUST



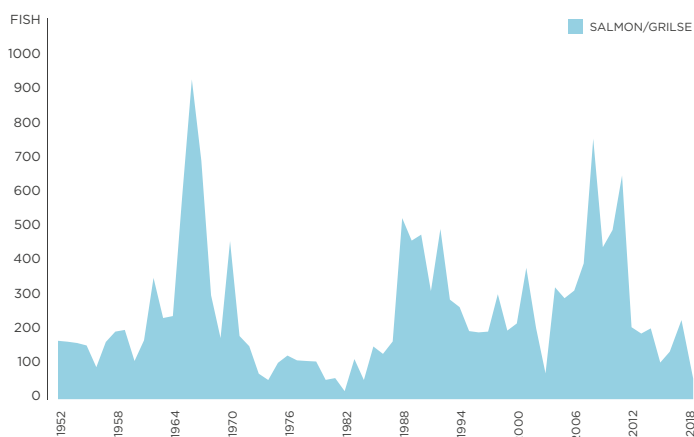
GIRVAN

Stuart Brabbs
Ayrshire Rivers Trust

At the time of writing the 2018 catch returns were still incomplete, which undermines management and devalues this river, but there's no doubt it was a poor season regardless. Typically the Girvan produces the first Ayrshire salmon most years and, true to form, two springers were reported from a lower river beat in March. A prolonged drought set in by April and angling suffered across Ayrshire. The Girvan's reported catch was the worst in years – due not only to a lack of water but also to the presence of fewer anglers. The Girvan records more sea trout than other local rivers and they provide sport to the few dedicated anglers targeting this species. Work continues to reduce diffuse pollution and improve bank stability. Ayrshire Rivers Trust is leading the way with green engineering projects.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	64	0	64	n/a	n/a	100/88/88%*	15lb
Sea Trout	36	n/a	n/a	n/a	n/a	100%	6lb

Season: 21 Feb – 31 Oct. *Spring/rest of season/overall.



GIRVAN ROD CATCH STATISTICS 1952-2018

SOURCE – AYRSHIRE RIVERS TRUST



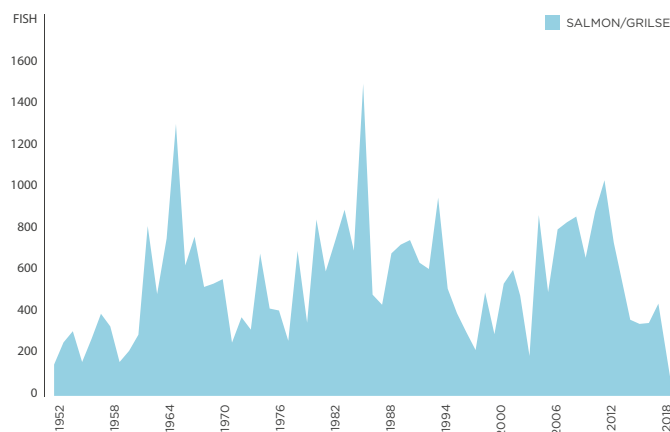
STINCHAR

Stuart Brabbs
Ayrshire Rivers Trust

Missing catch returns haven't helped what was a very poor season. A prolonged drought, followed by few significant spates, led to extremely difficult angling conditions. Anglers reported seeing few fish and we can only hope a late run entered following the close. There's little doubt that the Category 1 status is now in jeopardy, but that can only help with conservation measures, as catch and release statistics could still be improved. During the drought the Stinchar suffered a serious loss of juvenile stocks, as oxygen levels plummeted and water temperatures rose. This last occurred in 2014 and has yet to be satisfactorily explained, despite SEPA and FHI investigations. Electro-fishing shows excellent juvenile stocks but, following such a poor angling season, the 2019 surveys are awaited with trepidation.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	73	2	71	n/a	n/a	100/82/82%*	15lb
Sea Trout	23	n/a	n/a	n/a	n/a	100%	6lb

Season: 25 Feb – 31 Oct. *Spring/rest of season/overall.



STINCHAR ROD CATCH STATISTICS 1952-2018

SOURCE – AYRSHIRE RIVERS TRUST



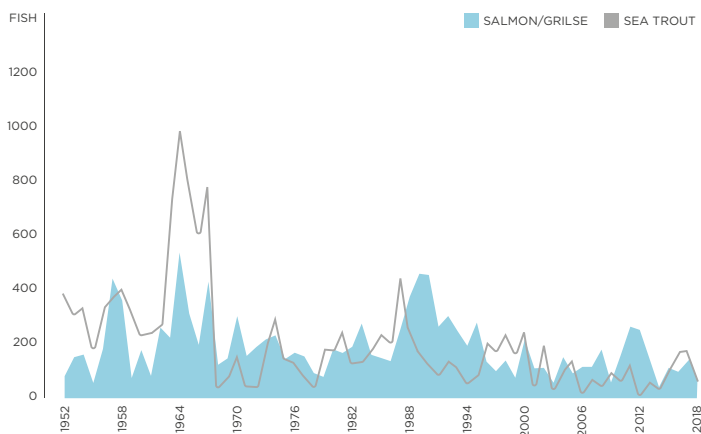
LUCE

Jessica Rodger
Galloway Fisheries Trust

The season got off to a slow start, due to high river temperatures and very little rain for most of the summer. And fairly light fishing pressure combined with low flows for most of the season led to a poor final catch. Even when the rain came, in the autumn, the floods were relatively minor and did not appear to draw many salmon in to the river. Sea trout, on the other hand, which were difficult to catch in the summer, did improve in parallel with rises in fresh water. An active management and conservation plan is implemented annually on the river by Galloway Fisheries Trust and the Luce DSFB. The Luce is a Category 3 river for the 2019 season, meaning that all salmon must be returned.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	78	0	78	n/a	137	81%	19lb
Sea Trout	75	n/a	n/a	n/a	114	91%	7lb

Season: 25 Feb – 31 Oct.



LUCE ROD CATCH STATISTICS 1952-2018

SOURCE – GALLOWAY FISHERIES TRUST



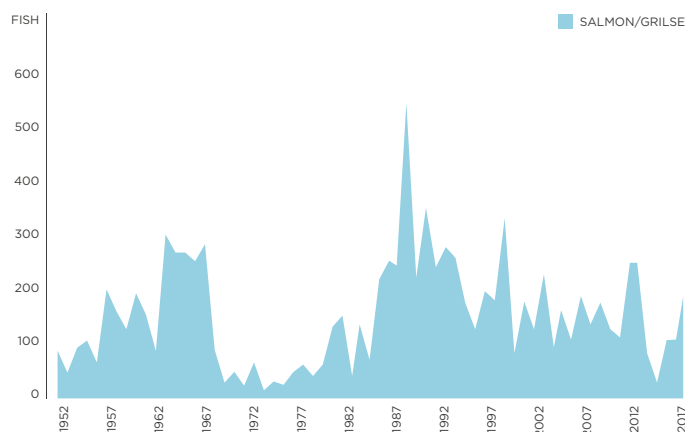
BLADNOCH

Jessica Rodger
Galloway Fisheries Trust

Exact figures for the 2018 season are not available at the time of writing, but it got off to a slow start, with low temperatures followed by a summer drought. Some salmon were caught once the river rose in the autumn but, overall, not many were seen entering the river and thus catches were low. This was particularly disappointing following the 2017 season, which good rod catches. The main concern is acidification in the headwaters. A programme of conifer removal and peatland restoration is being undertaken to improve water quality, supported by the Board and by Galloway Fisheries Trust (GFT). In 2018, GFT completed a study which makes recommendations regarding how best to improve water quality and salmon stocks in the headwaters and a range of works should be starting in 2019.

	2017 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	182	14	168	n/a	144	100/92/93%*	15lb
Sea Trout	1	n/a	n/a	n/a	1	100%	n/a

Season: 11 Feb – 31 Oct. *Spring/rest of season/overall.



BLADNOCH ROD CATCH STATISTICS 1952-2017

SOURCE – GALLOWAY FISHERIES TRUST



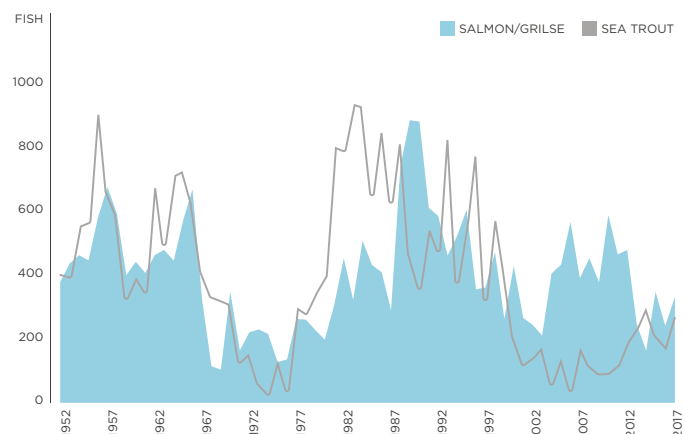
CREE

Terence Flanagan
Chairman, Cree DSFB

Although exact figures are not to hand for the 2018 season, it appears the rod catch was approximately 270 salmon and grilse and 190 sea trout – much higher than expected after a very slow first two thirds of the season. A cold dry spring turned into a hot dry summer, with little angling effort and low catches. The first appreciable rain arrived at the end of July and with it came the salmon. Occasional small rises in water during August continued to produce fish. More sustained rainfall during September made this the peak month for catches, unlike the previous two seasons when early summer had been the most productive period. A programme of environmental improvements continues, including the removal of Sitka spruce close to spawning burns and re-planting with native broadleaf trees.

	2017 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	325	21	304	32	n/a	100/81/82%*	n/a
Sea Trout	263	n/a	n/a	n/a	n/a	88%	n/a

Season: 1 Mar – 14 Oct. *Spring/rest of season/overall.



CREE ROD CATCH STATISTICS 1952-2017

SOURCE – CREE DSFB



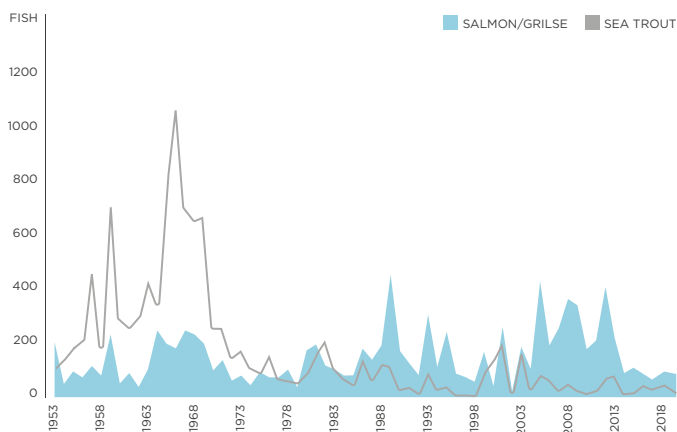
URR

Will Marshall - Secretary, Dalbeattie Angling Association
Kenny Irvine - Chairman, Castle Douglas Angling Association

It was an average salmon year by recent form, but the Dalbeattie Angling Association still struggles with membership. The reservoir, closed to remove North American signal crayfish, has not had its works completed, but we hope its reopening in 2019 will buoy membership. Pipeline siltation damage to the river was confirmed by a report from Galloway Fisheries Trust and remedial action, if required, is to be carried out in the spring. Meanwhile at Castle Douglas the first run of fish – mainly summer salmon – came at the very end of June, at the end of the heatwave, although a few sea trout were caught in mid-May, before the water dropped too low. Sporadic runs of fish came with each spate throughout August and September, but they appeared to run on through rather than linger in the pools.

	2018 total	Pre June 1	Post June 1	Total nets	5yr Av	Release rate	Largest Fish
Salmon	88	0	88	n/a	94	82%	16lb
Sea Trout	21	n/a	n/a	n/a	32	91%	3lb

Season: 25 Feb – 30 Nov.



URR ROD CATCH STATISTICS 1952-2018

SOURCE – DALBEATTIE AA & CASTLE DOUGLAS AA



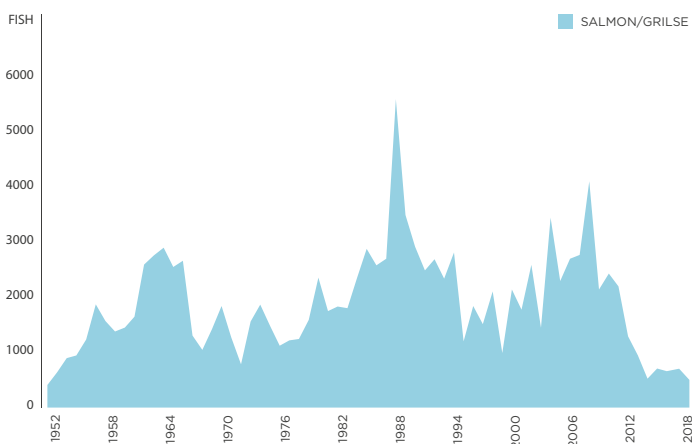
NITH

Jim Henderson
 Fishery Director, Nith DSFB

Catches of salmon were low during the 2018 season, and so was fishing effort, due to the prolonged drought which extended through the summer months. Many beats were unfishable and only the tidal Burgh section produced catches during this period. Once the rains came fish made a speedy ascent of the system and the upper river fished well for a period. The low water conditions assisted our electrofishing surveying programme and numbers of juvenile fry and parr both remain strong and widespread throughout the catchment. Although the Nith was assigned a Category 1 status for the 2018 season, the Board still recommended that all salmon and grilse were returned. However, we also suggested that those who did want to take a fish limit themselves to a maximum of two per season.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	520	35	485	110	1,138	100/91/92%*	20lb
Sea Trout	479	n/a	n/a	111	822	78%	10lb

Season: 25 Feb – 30 Nov. *Spring/rest of season/overall.



NITH ROD CATCH STATISTICS 1952-2018

SOURCE – NITH DSFB



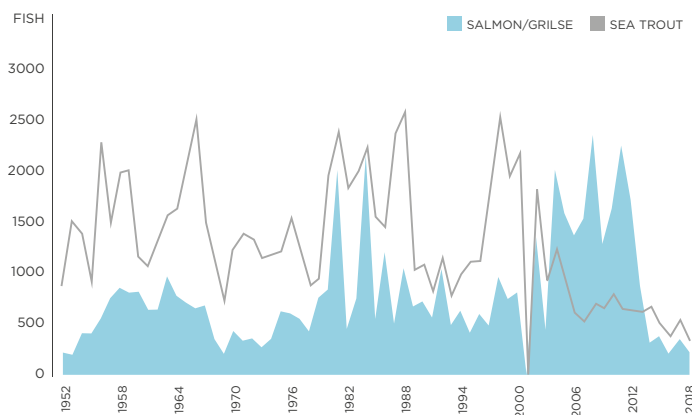
ANNAN

Antony Donnelly
 Director, Annan Board and Trust

The season got off to a good start, with a 16lb fish landed on the opening morning. Six more spring salmon followed, before the weather began to wreak havoc. Spring trout fishing was plagued by the 'Beast from the East'. By late June sea trout were running in good numbers and our main run of salmon arrived in the Solway, coinciding with the start of the drought. We then endured six weeks without a drop of rain, before a series of small, dirty spates in August. Salmon entered the river, despite the conditions, but it was mid-September before conditions were conducive to catching and we are relatively satisfied with the returns in the face of these challenges. Board staff completed an impressive 183 electro-fishing surveys and, for the first time since 2014, fry numbers achieved adequate densities.

	2018 total	Pre June 1	Post June 1	Total nets	10yr Av	Release rate	Largest Fish
Salmon	225	7	218	n/a	927	100%	26lb
Sea Trout	308	n/a	n/a	n/a	575	90%	6lb

Season: 25 Feb – 15 Nov.



ANNAN ROD CATCH STATISTICS 1952-2018

SOURCE – ANNAN DSFB

District Salmon Fishery Boards

- 1 Caithness

2 Helmsdale

3 Brora

4 Kyle of Sutherland

5 Cromarty

6 Beauly

7 Ness

8 Nairn

9 Findhorn

10 Lossie

11 Spey

12 Deveron

13 Ugie

14 Ythan

15 Don

16 Dee (Aberdeen)

17 Esk

18 Tay

19 Forth

20 Tweed

21 Annan
- 22 Nith

23 Urr

24 Dee (Kircudbright)

25 Fleet (Kircudbright)

26 Cree

27 Bladnoch

28 Luce

29 Stinchar

30 Girvan

31 Doon

32 Ayr

33 Eachaig

34 Argyll

35 Laggan and Sorn

36 Lochaber

37 Skye

38 Wester Ross

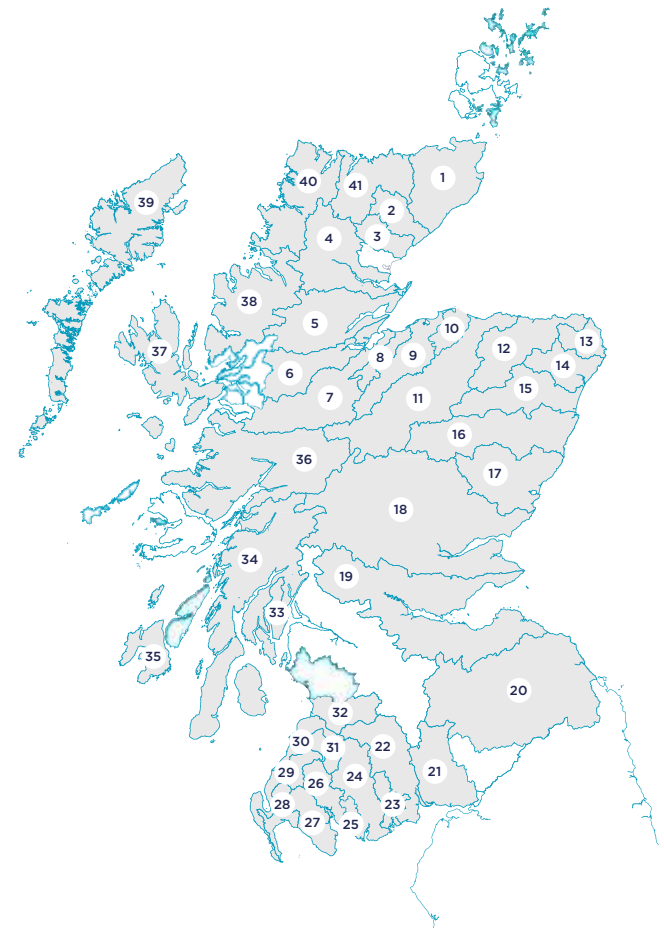
39 Western Isles

40 North and West

41 Northern

Sources:

SFD / DSFB boundaries, SEPA (2009) & SG MS (2017)
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Projection: British National Grid. Marine Scotland GIS ref: gj0679



Fisheries Trusts

1. Kyle of Sutherland Fisheries Trust

2. Cromarty Firth Fisheries Trust

3. Ness & Beauly Fisheries Trust

4. Findhorn, Nairn & Lossie Trust

5. Spey Foundation

6. Deveron, Bogie & Isla Rivers Charitable Trust

7. River Ythan Trust

8. River Don Trust

9. River Dee Trust

10. The Esks Rivers Fisheries Trust

11. Tay Foundation

12. Forth Fisheries Trust

13. Tweed Foundation

14. River Annan Trust

15. Nith Catchment Fisheries Trust

16. Galloway Fisheries Trust

17. Ayrshire Rivers Trust

18. Clyde River Foundation

19. Loch Lomond Fisheries Trust

20. Argyll Fisheries Trust

21. Lochaber Fisheries Trust

22. Outer Hebrides Fisheries Trust

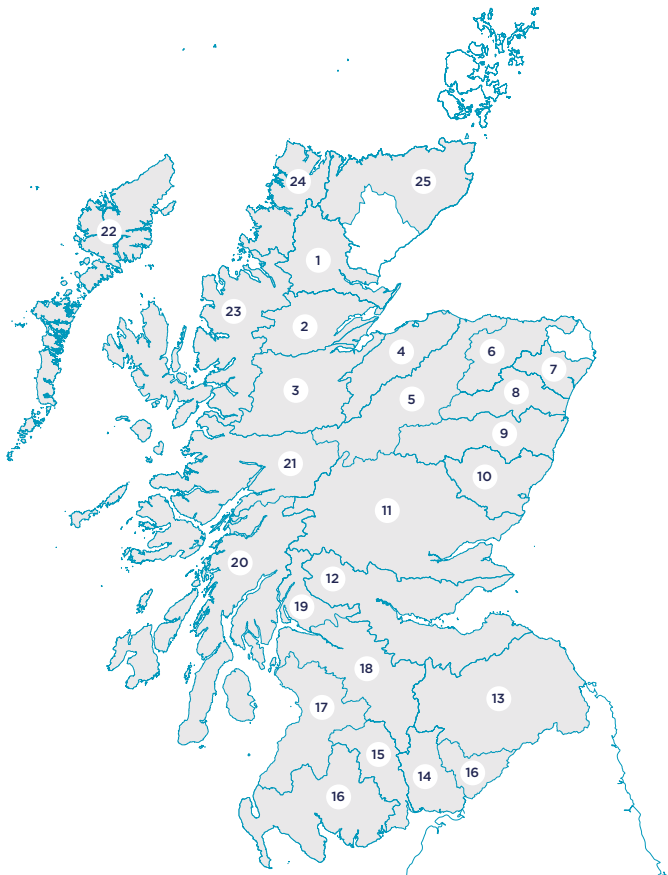
23. Skye & Wester Ross Fisheries Trust

24. West Sutherland Fisheries Trust

25. Flow Country Rivers Trust

Sources:

Fisheries Trust Boundaries, SEPA (2009) & SG MS (2017)
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